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# *The Miami Bulletin*

General Bulletin of Program Requirements and Course Descriptions

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MIAMI UNIVERSITY

2019-2020

# Miami University

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## General Bulletin of Program Requirements and Course Descriptions 2019-2020

### To All New Students

This Bulletin contains the academic requirements that you must meet regarding admission, academic program requirements and graduation requirements, as you enter Miami University in 2019-2020. Miami, however, reserves the right to make changes to its admission and academic program requirements and to graduation requirements. You are encouraged to check regularly with your academic program advisor for up-to-date information.

**The information contained in this Bulletin is subject to change. No part of this Bulletin should be construed as a contract or offer to contract. This Bulletin is intended only as an informational guide to Miami University. It is the student's responsibility to know and follow current requirements and procedures at the departmental, divisional, and university levels.**

### Accreditation and Policies

Miami University is accredited by the Higher Learning Commission, (Higher Learning Commission (HLC) or 800-621-7440 or [info@hlcommission.org](mailto:info@hlcommission.org)).

Miami University is approved by the State of Ohio Approving Agency for the training of veterans.

Miami University is authorized under Federal law to enroll non-immigrant alien students.

### University Statement Asserting Respect for Human Diversity

Miami University is a community dedicated to intellectual engagement. Our campuses consist of students, faculty, and staff from a variety of backgrounds and cultures. By living, working, studying, and teaching, we bring our unique viewpoints and life experiences together for the benefit of all. This inclusive learning environment, based upon an atmosphere of mutual respect and positive engagement, invites all campus citizens to explore how they think about knowledge, about themselves, and about how they see themselves in relation to others. Our intellectual and social development and daily educational interactions, whether co-curricular or classroom related, are greatly enriched by our acceptance of one another as members of the Miami University community. Through valuing our own diversity, and the diversity of others, we seek to learn from one another, foster a sense of shared experience, and commit to making the university the intellectual home for us all.

We recognize that we must uphold and abide by University policies and procedures protecting individual rights and guiding democratic engagement. Any actions disregarding these policies and procedures, particularly those resulting in discrimination, harassment, or bigoted acts, will be challenged swiftly and collectively.

All who work, live, study, and teach in the Miami community must be committed to these principles of mutual respect and positive engagement that are an integral part of Miami's focus, goals, and mission.

### University Statement of Non-Discrimination

Building and maintaining a diverse and inclusive community is an integral part of Miami University's mission and success. The University is committed to equal opportunity, affirmative action, and eliminating discrimination and harassment. Miami University does not discriminate on the basis of age, color, disability, gender identity or expression, genetic information, military status, national origin, pregnancy, race, religion, sex, sexual orientation or protected veteran status in its application and admission processes, educational programs and activities, facilities, programs or employment practices.

Miami University does not permit and takes action to prevent harassment, discrimination and retaliation. Miami University immediately investigates and if it determines that a hostile environment has been created or discrimination or retaliation has occurred, takes action to prevent its recurrence and remedy its effects.

Requests for reasonable accommodations for disabilities related to employment should be directed to [ADAFacultyStaff@miamioh.edu](mailto:ADAFacultyStaff@miamioh.edu) or 513-529-3560. Students with disabilities may contact the Office of Student Disability Services, 19 Campus Avenue Building, 513-529-1541 (V/TTY) and 513-529-8595 (fax). All other requests should be directed to the Section 504 and ADA Coordinator, Ms. Kenya Ash, Hanna House, Miami University Oxford, Ohio 45056, 513-529-7157 or [ashkd@miamioh.edu](mailto:ashkd@miamioh.edu).

Miami University is committed to Web accessibility and strives to provide an accessible Web presence that enables all University community members and visitors full access to information provided on its websites. If you have questions or need assistance, contact Sean Poley, Director of Accessible Technology, 312X Hoyt Hall, Miami University, Oxford, Ohio 45056, 513-529-1225 or [poleysa@miamioh.edu](mailto:poleysa@miamioh.edu).

**Title IX Coordinator-** Title IX of the Education Amendments of 1972 is a federal law prohibiting discrimination on the basis of sex in higher education. Sex discrimination includes sexual harassment and sexual violence. The University's Title IX Coordinator is Ms. Kenya Ash, Director of the Office of Equity and Equal Opportunity, Hanna House, Miami University, Oxford, Ohio 45056, 513-529-7157 or [ashkd@MiamiOH.edu](mailto:ashkd@MiamiOH.edu).

**Deputy Title IX Coordinator for Athletics-** Ms. Jennifer A. Gilbert, Associate Athletic Director/Senior Woman Administrator is the University's Deputy Title IX Coordinator for matters related to equality of treatment and opportunity in Intercollegiate Athletics. This includes athletic financial assistance, accommodation of interest and abilities and equity of athletic program benefits. Ms. Gilbert may be reached at Millett Assembly Hall, Miami University, Oxford, Ohio 45056, 513-529-3113 or gilberj2@MiamiOH.edu.

**Deputy Title IX Coordinator for Student Sexual Assault-** Ms. Gabrielle Dralle, the Sexual and Interpersonal Violence Response Coordinator, is the University's Deputy Title IX Coordinator for matters related to student sexual and interpersonal violence. This includes sexual misconduct, sexual violence, and sexual coercion of students. Ms. Dralle also serves as the coordinator for matters relating to student domestic violence, dating violence, and stalking. Ms. Dralle may be reached at 104 Health Services Center, Miami University, Oxford, Ohio 45056, 513-529-5586 or dralleg@miamioh.edu.

**Deputy Title IX Coordinator for Regional Students-** Ms. Bennyce Hamilton, Regional Director of Diversity and Multicultural Services, is the University's Deputy Title IX Coordinator for matters related to regional student sexual violence. This includes sexual misconduct, sexual violence, and sexual coercion of students. Ms. Hamilton also serves as the coordinator for matters relating to regional student domestic violence, dating violence, and stalking. Ms. Hamilton may be reached at 117 Rentschler Hall, 1601 University Boulevard, Hamilton, Ohio 45011, or 144 Johnston Hall, 4200 N. University Boulevard, Middletown, Ohio 45042, 513-785-3283 or hamiltbe@miamioh.edu.

**Sections 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act Coordinator-** Section 504 and the ADA are federal laws prohibiting discrimination on the basis of disability. The University's Section 504 and ADA Coordinator is Ms. Kenya Ash, Director of the Office of Equity and Equal Opportunity, Hanna House, Miami University, Oxford, Ohio 45056, 513-529-7157 or ashkd@MiamiOH.edu.

## **Smoke- and Tobacco-Free Environment**

All Miami University campuses are designated as smoke- and tobacco-free environments. Smoking and tobacco use are prohibited in all Miami University-owned facilities and on the grounds of any University-owned property, including street parking and garages controlled by the University (will include inside personal vehicles parked on University property as of January 1, 2014), and sidewalks that adjoin University property. Refer to Part 4, Chapter 10, of The Student Handbook for the full text of Miami's smoke- and tobacco-free policy.

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# General Information

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## Introduction

The *General Bulletin 2018-2019* is the academic guide for new students at Miami University.

The *Student Handbook* contains the official policies of the University.

**This Bulletin contains the requirements that you must meet for graduation as you enter Miami University in 2018-2019.** Miami, however, reserves the right to make changes to its programs. It is your responsibility to check regularly with your academic program advisor for up-to-date information. Consult your academic division's advising office for specific information on academic policies and procedures, degree programs, and requirements.

## Mission of Miami University

### "The Engaged University"

Miami University, a student-centered public university founded in 1809, has built its success through an unwavering commitment to liberal arts undergraduate education and the active engagement of its students in both curricular and co-curricular life. It is deeply committed to student success, builds great student and alumni loyalty, and empowers its students, faculty and staff to become engaged citizens who use their knowledge and skills with integrity and compassion to improve the future of our global society.

Miami provides the opportunities of a major university while offering the personalized attention found in the best small colleges. It values teaching and intense engagement of faculty with students through its teacher-scholar model, by inviting students into the excitement of research and discovery. Miami's faculty are nationally prominent scholars and artists who contribute to Miami, their own disciplines and to society by the creation of new knowledge and art. The University supports students in a highly involved residential experience on the Oxford campus and provides access to students, including those who are time-and-place bound, on its regional campuses. Miami provides a strong foundation in the traditional liberal arts for all students, and it offers nationally recognized majors in arts and sciences, business, education, engineering, and fine arts, as well as select graduate programs of excellence. As an inclusive community, Miami strives to cultivate an environment where diversity and difference are appreciated and respected.

Miami instills in its students intellectual depth and curiosity, the importance of personal values as a measure of character, and a commitment to life-long learning. Miami emphasizes critical thinking and independent thought, an appreciation of diverse views, and a sense of responsibility to our global future.

## Miami University Values Statement

Miami University is a scholarly community whose members believe that a liberal education is grounded in qualities of character as well as intellect. We respect the dignity of other persons, the rights and property of others, and the right of others to hold and express disparate beliefs. We believe in honesty, integrity, and the importance of moral conduct. We defend the freedom of inquiry that is the heart

of learning and combine that freedom with the exercise of judgment and the acceptance of personal responsibility.

## I Am Miami

For more than 200 years, Miami has strived to create a sense of place that goes well beyond its stunningly beautiful environment. A place where all who come know they are experiencing something special and where all feel welcome. Miami is a place where people can develop a sense of who they are and what they value by working and studying with, listening to and caring for others.

"I Am Miami" is the phrase we use to define the culture to which we aspire and who we are as Miamians.

In 2002, the Miami Board of Trustees endorsed the Values Statement presented above, which that has since inspired an expanded version, that today, is our Code of Love and Honor. Named for our traditional Love and Honor greeting, which, in turn comes from our fight song chorus, "Love and Honor to Miami ... " Our code begins with the words, "I Am Miami," thus uniting Miami tradition and values.

## Code of Love and Honor

### I Am Miami.

**I believe** that a liberal education is grounded in qualities of character and intellect.

**I stand** for honesty, integrity, and the importance of moral conduct.

**I respect** the dignity, rights, and property of others and their right to hold and express disparate beliefs.

**I defend** the freedom of inquiry that is the heart of learning.

**I exercise** good judgment and believe in personal responsibility.

**I welcome** a diversity of people, ideas, and experiences.

**I embrace** the spirit, academic rigor, opportunities, and challenges of a Miami Experience, preparing me to make the world a better place.

**I demonstrate** Love and Honor by supporting my fellow Miamians.

And because I Am Miami,

**I act** through my words and deeds in ways that reflect these values and beliefs.

With a deep sense of accomplishment and gratitude,

I will Love, Honor, and make proud those who help me earn the joy and privilege of saying,

**"To think that in such a place, I led such a life."**

## Brief History

An act of Congress signed by George Washington in 1792 stipulated that a university be located in the Miami Valley north of the Ohio River. The official act to establish Miami University was passed on February 17, 1809. Miami is the tenth oldest public university in

the nation and its name reflects the history of the tribe that once inhabited the area known as Ohio's Miami Valley.

Delayed by the War of 1812, instruction began in 1824 with a president, two faculty, and 20 students. Enrollment grew rapidly, reaching 250 by 1839.

In the 1830s, William Holmes McGuffey wrote the first of his *Eclectic Readers* while a Miami professor. Among the many talented young students was Benjamin Harrison, who graduated in 1852; he was elected the 23rd president of the United States in 1888.

A few years after the Civil War, with changed conditions and advancing prices, the income of the university became insufficient to support its work. Miami closed in 1873, opening 12 years later when resources had accumulated and the state of Ohio began a policy of appropriating public funds for support.

Coeducation began in 1888; by 1903 there were more than 100 women on campus - one third of the total enrollment. Our first African American student, Nelly Craig, graduated in 1905.

Many other milestones have been reached. The concept of artist-in-residence began here. Beginning in 1835, four national fraternities were founded here, giving Miami a nickname, "Mother of Fraternities." Another nickname is "Cradle of Coaches," referring to the coaching success of so many former players and coaches. Ohio's first intercollegiate football game was played at Miami in 1888 against the University of Cincinnati.

In the beginning, the course of study at Miami was strictly classical. Over the years, new academic divisions were added to meet the changing needs of students and society: education in 1902, business in 1927, fine arts in 1929, graduate programs in 1947, engineering and applied science in 1959, interdisciplinary studies in 1974, and professional studies and applied sciences in 2013.

In 1974, Miami acquired the Western College for Women, a 120-year-old private institution adjoining the Oxford campus.

Miami's Middletown and Hamilton campuses opened in 1966 and 1968, respectively. Also in 1968, Miami opened a European center, now named John E. Dolibois European Campus, in Luxembourg. Miami's Voice of America Learning Center in West Chester opened in 2009.

A number of campus buildings are listed in the National Register of Historic Places, including Elliott, Stoddard, and Peabody halls, and the Western College for Women Historic District. The McGuffey Museum is a National Historic Landmark.

## About Miami

Miami is a public university of Ohio. Approximately 15,000 undergraduates and 2,600 graduate students are enrolled at the Oxford campus. Each year about 220 of the undergraduates attend one or two semesters at the John E. Dolibois European campus in Differdange, Luxembourg. Two commuter campuses in the nearby cities of Hamilton and Middletown enroll nearly 5,500 additional students.

Miami's Voice of America Learning Center services several hundred undergraduates and graduate students each session in a multipurpose instructional facility that also offers customized training

opportunities for business, industry, school districts, and government agencies.

The Greentree Health Science Academy, a public/private collaboration connecting students of all ages to health-care careers, opened on the campus of the Atrium Medical Center near I-75 in Middletown in August 2011. It is home to many of Miami nursing and health science-related courses.

## Academic Divisions and Programs

Miami has seven academic divisions: College of Arts and Science; Farmer School of Business; College of Creative Arts, College of Education, Health and Society; College of Engineering and Computing, College of Liberal Arts and Applied Science, and the Graduate School. Programs leading to associate, bachelor's, master's, Specialist in Education, and doctoral degrees are offered. Major areas, degrees, and certificates are listed beginning later in this section. Graduate certificates are also available.

## Location

The main campus of Miami University is in Oxford, Ohio, just 35 miles northwest of Cincinnati and 45 miles southwest of Dayton. Both Cincinnati and Dayton international airports are within an hour's drive. U.S. Route 27 and S.R. 73 are the main highways to Oxford.

Oxford is a classic college town with a population of about 8,000 (excluding students). Uptown, adjacent to campus, are small shops and local eateries.

The university covers more than 2,400 acres in Oxford. Preservation of nature throughout the campus and community coupled with Miami's architectural continuity - modified Georgian design - explains why the campus is regarded as one of the most beautiful in the nation.

## Resources

### Center for Student Diversity and Inclusion

2030 Armstrong Student Center, 513-529-6504  
<http://miamioh.edu/student-life/diversity-affairs/>

In support of Miami University's mission, the Office of Diversity Affairs actively creates an inclusive, welcoming, and affirming environment by providing direct services, support, and resources to students. We foster holistic development through transformational learning opportunities, one on one mentorship, and programs that empower students to explore and celebrate their identity, engage in intercultural dialogue, and build leadership skills. The office also collaborates with campus partners to cultivate cultural awareness and diversity competency through education. We advocate for equity in order for all identities to learn, grow, and succeed.

### Computer and Information Technology Services

Information Technology Services (IT Services)  
 Main office: 200 Hoyt Hall, 513-529-5322  
 IT Help: 513-529-7900  
 IT Help Self Service: [MiamiOH.edu/KnowIT](http://MiamiOH.edu/KnowIT)  
 myMiami web portal: [mymiami.MiamiOH.edu](http://mymiami.MiamiOH.edu)

IT Services is the central IT organization at Miami, providing infrastructure and services to all Miami students, faculty, and staff. Visit their site at [MiamiOH.edu/IT](http://MiamiOH.edu/IT).

## Technology Support

Students can find technology and do-it-yourself support information via Miami's searchable, self-serve Knowledge Base ([MiamiOH.edu/KnowIT](http://MiamiOH.edu/KnowIT)). IT Help also provides 24/7 support via phone (513 529-7900) or chat ([MiamiOH.edu/ITChat](http://MiamiOH.edu/ITChat)). System status can be checked at [MiamiOH.edu/ITStatus](http://MiamiOH.edu/ITStatus).

## Web-Based Services

myMiami ([mymiami.MiamiOH.edu](http://mymiami.MiamiOH.edu)), the university's web portal, allows students to register for classes, pay bills, check email, access course materials, view university announcements, and much more. Students are encouraged to set myMiami as their browser's home page. You can also set permissions for your parents or other family members to view your bills, class schedule, grades, or other records.

## Student Computers

Laptop computers are available through the Student Laptop Program ([MiamiOH.edu/miaminotebook](http://MiamiOH.edu/miaminotebook)) managed by the Brick & Ivy Campus Store. These laptops are designed and configured to provide easy access to the Miami network and other services. On-campus warranty support and other services are provided free or at a discount for computers purchased through the Student Laptop Program. Students who purchase computers outside of the program can still download free software provided by IT Services, including VPN and uPrint, from [software.MiamiOH.edu](http://software.MiamiOH.edu). In addition, students can go to [MiamiOH.edu/GetOffice](http://MiamiOH.edu/GetOffice) to download a free copy of the latest version of Microsoft Office.

## Printing

Miami provides "Pay4Print" printers in many labs and other locations on campus. Please see the IT Help Knowledge Base for details.

## Global Initiatives

214 MacMillan, 513-529-8600  
[Global@MiamiOH.edu](mailto:Global@MiamiOH.edu)

The mission of Global Initiatives is aligned with Miami University's commitment to advance global learning. Global Initiatives promotes the dynamic, comprehensive internationalization of the University through the infusion of multicultural and comparative perspectives in scholarship, teaching, and service. Support focuses on user- and constituent-friendly services with a commitment to efficiency, and acts as the connective tissue for all internationalization realms.

Global Initiatives administers a broad array of credit and non-credit programs and services that broaden the traditional Miami classroom experience. Credit programs are led by Miami University faculty and include local, online, domestic and study-abroad/study-away credit workshops. Non-credit opportunities include online courses and serving as the administrative home for the Institute for Learning in Retirement

Units include Education Abroad, which includes Miami University John, E. Dolibois European Center (MUDEC), International Student and Scholar Services, Continuing Education, Center for American and World Cultures, and a Confucius Institute. The Global Initiatives office is also an authorized passport application acceptance agency.

## Graduate Student Associations

Graduate School  
102 Roudebush Hall, 513-529-3734  
[www.MiamiOH.edu/graduate-studies/](http://www.MiamiOH.edu/graduate-studies/)

The **Graduate Student Association (GSA)** represents all graduate students and promotes their academic, social, and economic aims. It maintains open channels of communication with other student organizations and with academic and administrative units of the university.

The association sponsors a Travel Assistance Fund to reimburse graduate students for travel expenses to professional meetings, conventions, conferences, and workshops.

The **Graduate Students of Color Association (GSCA)** aids graduate students by sponsoring academic programming, social, and cultural events from a diverse perspective. It also serves as an avenue of communication with the Graduate School and as a liaison between students of color and the university.

The **Latin American Graduate Student Association** provides mentorship and support to Latin American graduate students. The association provides safe, supportive, and enriching social and cultural experiences and works to increase the Latino graduate student population. Students involved in the association also develop programming to educate the local community about the Latino culture.

## Housing

Campus Services Center  
34 Campus Avenue Building, 513-529-5000  
[www.MiamiOH.edu/Housing](http://www.MiamiOH.edu/Housing)

Limited on-campus housing is available for graduate students. Single graduate students may also apply to live in a residence hall or in Heritage Commons; provisions are the same for graduate and undergraduate students.

Heritage Commons provides apartment-style university housing for upper-class students. The complex is comprised of 108 fully furnished apartments featuring four private bedrooms, two bathrooms, a living room, and an equipped kitchen. Exclusive parking is available for Heritage Commons residents.

Many graduate students rent private apartments in Oxford or neighboring areas.

## Contract and Deposit

All students living in university housing sign a housing contract, an agreement to pay room rent and board, pay a per semester residential fee, and pay a one-time \$330 University Contract Confirmation deposit.

## Dining Facilities

Our residence halls are served by multiple "all you care to eat" buffets, as well as several à la carte, food service locations operated by the University.

## Roger and Joyce Howe Writing Center for Writing Excellence

King Library, 513-529-6100  
<http://MiamiOH.edu/hcwe/>

The mission of the HCWE is to ensure that Miami supports its students in developing as effective writers in college, across varied contexts and genres, and fully prepares all of its graduates to excel as purposeful and persuasive writers in their careers, communities, and personal lives. The Howe Writing Center provides one-to-one consultations for all students at all stages of the writing process, whether they are first-semester undergraduates, seniors completing their honors theses, or graduate students preparing their dissertations. We also support student writing through weekly drop-in writing hours, writing for social action and much more. Our website provides more information about all of our programs, upcoming events, and consultation availabilities at King Library, the Howe Center for Business Writing, the Gross Center, Peabody, and B.E.S.T.

## Libraries

[www.lib.MiamiOH.edu](http://www.lib.MiamiOH.edu)  
 King Library: 513-529-4141, 513-529-2800  
 B.E.S.T. Library: Laws Hall, 513-529-6886  
 Amos Music Library: 120 Center for Performing Arts, 513-529-2299  
 Gardner-Harvey Library: Middletown campus, 513-727-3221, 513-529-4936  
 Rentschler Library: Hamilton campus, 513-785-3235  
 Southwest Ohio Regional Depository: Middletown campus, 513-727-3474  
 Wertz Art and Architecture Library: 7 Alumni Hall, 513-529-6638  
 University Archives: Withrow Court, 513-529-6720  
 Western College Memorial Archives: Peabody Hall, 513-529-9695

Miami University Libraries, which include four libraries on the Oxford campus and one on each regional campus, have many services and facilities of interest to students. Each library specializes in specific fields or departments, so you can find a place to research, study, or talk with a librarian who specializes in your area of study.

Extended hours, including the 24-hour King Library, allow students to get the information they need any time of day. Our facilities offer wireless Internet access, laptop computer and iPad study rooms, a graduate reading room, computer labs, cafe and much more.

You can access thousands of thousands of books, e-books and audiovisual materials for your papers and projects, many of which can be accessed online without having to leave home.

Research help is available via email, phone, text, instant messaging or by just dropping in.

## Museums

**Art Museum:** 801 S. Patterson Ave., 513-529-2232

The angular limestone and glass Art Museum, designed by Walter Netsch of Skidmore, Owings and Merrill, houses the university's permanent collection of more than 17,000 art objects from all parts of the world by internationally known artists. Rotating exhibitions, public lectures, gallery talks, performances, and other special events are offered throughout the year. The museum is accredited by the American Alliance of Museums.

Internships and independent studies are available through several academic departments. You can also volunteer to assist with events and activities at the museum.

**McGuffey House and Museum:** 401 E. Spring St., 513-529-8380

William Holmes McGuffey compiled the first four volumes of the *Eclectic Readers* while a Miami faculty member from 1826 to 1836. His National Historic Landmark house serves as a teaching museum for University and regional history, nineteenth-century domestic architecture and material culture, personal items of the McGuffey family, a rare collection of *McGuffey Readers*, and for the history of literacy, reading and schooling.

**Science Museums** include:

Karl E. Limper Geology Museum, 8 Shideler Hall, 513-529-3220  
 Willard Sherman Turrell Herbarium, 79 Upham Hall, 513-529-2755

**Hefner Museum of Natural History,** 100 Upham Hall, 513-529-4617

The mission of the Museum is to inspire global stewardship by exploring the connections between people, the nature of their neighborhood, and the world. We serve students of all majors through tours, classroom presentations, and special events. The Museum also provides opportunities to earn a range of certifications, conduct real-world capstone projects, develop practical skills through independent study, and participate in volunteer and intern activities that generate exciting resume lines.

**Western College Museum:** Patterson Place, Patterson Ave., 513-529-4400

Western College Museum houses a permanent collection of paintings, silver, and furnishings. Patterson Place, located on the northwest corner of the Western College for Women Historic District, also serves as the office for Western College Alumnae Association, Inc.

## Office of Equity and Equal Opportunity

Hanna House  
 219 E. Spring Street  
 Oxford, Ohio 45056  
 513 529-7157 - Office  
 513 529-7158 - Fax  
 Office Hours - M-F 8:00a-5:00p  
 Summer Office Hours - M-F 7:30a-4:30p

The mission of the Office of Equity and Equal Opportunity (OEEO) is to advance and sustain an environment of internal equity, diversity, and inclusiveness for all members of the Miami University Community by ensuring equal access to employment and educational opportunities; promoting fairness and equity; being respectful, impartial, and non-judgmental.

## Ohio Writing Project

Department of English  
 302 Bachelor Hall, 513-529-5245  
[www.MiamiOH.edu/owp](http://www.MiamiOH.edu/owp)

The Ohio Writing Project (OWP) is part of the National Writing Project, a network of nearly 200 sites around the country designed to train teachers of writing and improve student writing. The OWP offers

summer workshops, oversees the English Department's Master of Arts in Teaching degree program, and conducts year-round in-service programs in Ohio's schools.

## One Stop

100 Campus Avenue Bldg., 513-529-0001  
MiamiOH.edu/OneStop

The One Stop serves as the virtual and in-person one stop service center for the Miami University community by providing best in class in-person, telephone, email, online and outreach student-centric services. The One Stop provides essential information, answers questions, counsels and provides problem resolution for current and former students, parents/families, alumni, faculty, staff, various departments, and the broader university community in the areas of registration, enrollment, financial aid, student records, billing, and payment. For questions about Veteran Benefits or Eligible Dependent Benefits, Miami's Veteran Point of Contact can be located also at the One Stop.

## Parking

Campus Services Center  
34 Campus Avenue Building, 513-529-2224  
<http://www.miamioh.edu/parking/>

The University and the City of Oxford are compact and interdependent, with most locations accessible to pedestrians. Miami University discourages students from bringing cars to Oxford. Students who desire transportation will find that transit services provided by the Butler County Regional Transit Authority provide an efficient alternative to a personal vehicle (see Transportation).

A parking permit is required to park on Miami University's campus at all times. Please contact Parking and Transportation Services for questions concerning eligibility for or to purchase a parking permit. Visitors to campus may purchase daily parking permits online or use the parking garages or meters on campus.

## Psychology Clinic

Department of Psychology  
39 Psychology Bldg., 513-529-2423

The Department of Psychology, as part of its doctoral program in clinical psychology, operates this clinic. Psychotherapy, psychological assessment, and other mental health services are offered. There are modest fees for services.

## Safety

University Police: Police Services Center,  
4945 Oxford Trenton Road  
Non-Emergency/24 Hours: 513-529-2222  
EMERGENCY (police, fire, medical): 911  
Lost-and-Found Property: 513-529-8135  
Fingerprinting Services: 513-529-2226

Miami is committed to maintaining a safe learning environment for all students and members of the university community. While Miami's campus is relatively safe, crime does occur on campus. Each member of the university community has a responsibility to contribute to the well-being of the community.

## Emergency Notification and Response

In the event of an emergency, contact Miami University Police at 911 to initiate the emergency messaging system.

## Emergency Messaging System— Notification of an Immediate Threat

Miami University maintains multiple systems for alerting the Miami community about campus emergencies and will use some or all of those systems, depending on the circumstances. The Miami Emergency Text Messaging System is available to all Miami University students, faculty, and staff.

To receive this service, individuals must sign up through the University Police at [www.units.MiamiOH.edu/psf/police/emergencytextmessaging](http://www.units.MiamiOH.edu/psf/police/emergencytextmessaging).

## Annual Safety and Security Report/Annual Fire Safety Report

As part of the University's commitment to maintaining a healthy and safe living, learning, and working environment, we encourage you to read our Annual Security & Fire Safety Report <http://miamioh.edu/campus-safety/annual-report/index.html> which contains information about campus safety, crime statistics and our drug and alcohol abuse and prevention program designed to prevent the unlawful possession, use and distribution of drugs and alcohol on campus and at university events and activities. This report also contains information on programs and policies designed to prevent and address sexual violence, domestic violence, dating violence and stalking. Each year, email notification of this website is made to all faculty, staff, and enrolled students. Written notification is provided to prospective students and employees. Copies of the report may be obtained from University Police, 513-529-2225.

**Miami University Police** officers are fully sworn and armed law enforcement officers, empowered to investigate alleged criminal activity, search and arrest as authorized by law, and use necessary and reasonable force to enforce the law and protect persons and property. They evaluate reported crimes, conduct investigations, and effect arrests.

## Emergency Procedures

Miami University has established emergency procedures for a number of events that range from chemical spills to severe weather that involve individual as well as collective action to respond safely. Information to guide responses to a variety of potential dangers is available at Emergency Preparedness. For more information contact Environmental Health and Safety: 55 Hughes Hall, 513-529-2829.

## Scripps Gerontology Center

396 Upham Hall, 513-529-2914  
[www.scripps.MiamiOH.edu](http://www.scripps.MiamiOH.edu)

Scripps Gerontology Center is a leading source of local, state, national, and international information about the impact of aging on society, and effective solutions to the challenges associated with aging populations. Recognized as an Ohio Center of Excellence, the mission of Scripps Gerontology Center is to provide research and education that make a positive difference in the lives of older people, their families, and their communities.

Scripps works with the Department of Sociology & Gerontology providing core leadership, administrative support, and hands-on research experience to students. This unique relationship with the gerontology graduate programs helps provide a vigorous academic learning environment led by engaged, innovative faculty and research scholars. For information about graduate degrees and research opportunities, contact the Center's main office.

## Speech and Hearing Clinic

Department of Speech Pathology and Audiology  
2 Bachelor Hall, 513-529-2500  
[www.MiamiOH.edu/spa](http://www.MiamiOH.edu/spa)

The Department of Speech Pathology and Audiology operates this clinic. The Clinic's mission is to promote excellence in clinical training of future speech-language-hearing professionals and to provide comprehensive assessment and treatment services for individuals with speech, language, or hearing disorders. There is a fee for services. Patient records are confidential. The clinic complies with the Health Information and Patient Privacy Act (HIPPA) regulations regarding patient records.

## Student Counseling Service

195 Health Services Center, 513-529-4634  
<http://MiamiOH.edu/student-life/student-counseling-service/>

The Student Counseling Service provides assessment and psychological services to full-time Oxford campus students. The services include initial consultations (first appointment), individual counseling, group counseling and skill building workshops, alcohol and drug assessments, outreach programs, and consultation services. There is a nominal fee for students after the 3rd individual session. All records are confidential and all staff licensed or supervised by licensed mental health professionals.

## Student Health Services

Health Services  
Student Health Services Building  
421 S. Campus Ave., 513-529-3000

The Student Health Service (SHS) provides general outpatient and primary care for registered Miami University Students of all three campuses. Services provided include examination and treatment for illness and minor injuries, women's health and immunizations. We provide in house pharmacy and laboratory services to our students and also accept outside orders from other providers. The health center will submit claims to the student's insurance company for all medical and laboratory services provided. Your insurance card and Student ID card are required when visiting the SHS.

Hospitalization and emergency care is available at McCullough-Hyde Memorial Hospital (513-523-2111). Emergency medical assistance, call 911. Non emergent, urgent care needs can be met after hours via Oxford Urgent Care or Urgent Care of Hamilton.

For immunization, health form completion and health screening requirements, please refer to the Miami Student Handbook.

Hours of operation are M-F with Saturday hours during fall and spring sessions with minor variations per academic session. Please refer to the SHS website @shsMiamiOH.edu.

## Student Wellness

Office of Student Wellness  
102 Health Services Center  
513-529-8544  
<http://MiamiOH.edu/student-life/student-wellness>

The Office of Student Wellness offers programs to students on the Oxford campus related to Alcohol and Substance Abuse; Sexual Assault; Healthy Relationships; Sexual Health; Mental and Emotional Health, and building lifelong wellness. Sanctioned education classes are facilitated by staff for students found in violation of the Student Code of Conduct regarding alcohol and drug use. The Office of Student Wellness is also home to the student organizations HAWKS and BACCHUS. HAWKS (Health Advocates for Wellness, Knowledge and Skills) is a peer education team that present programs on a variety of requested health related topics to student groups, residence halls, and academic classes. Members of BACCHUS-Miami serve as representatives on campus and in the greater community to promote comprehensive health and safety initiatives and to serve as advocates for overall health and wellness and as role models for peers - encouraging students and administrators to voice their opinions and needs to create healthier and safer campus communities.

## Transportation

Campus Services Center  
34 Campus Avenue Building, 513-529-2224  
[www.MiamiOH.edu/parking](http://www.MiamiOH.edu/parking)

Students, faculty and staff may use the regional and campus routes of the Butler County Transit Authority (BCRTA) for no fare when they present their valid Miami ID card upon boarding. See BCRTA's web site at <http://www.butlercountyrta.com/> for routes and times.

- BCRTA provides daily bus service, including weekends and evenings, throughout campus and to off-campus areas in Oxford. Call the Bus Information Hotline at 513-785-5237 or toll-free 855-42-BCRTA for information.
- Miami's Regional campuses are also served by regional routes in the BCRTA system.
- BCRTA provides ADA transport service for students unable to ride fixed bus routes due to temporary or permanent disabilities daily when the bus service is in operation. Call 513-785-5237 or toll-free 855-42-BCRTA for ADA service.
- BCRTA SafeRide provides service to and from campus during evening hours. Call 513-785-5237 or toll-free 855-42-BCRTA for SafeRide service.
- Airport transportation to the Northern Kentucky/Cincinnati airport is available for Thanksgiving, winter, and spring breaks. For more information, contact the Miami University Box Office at ([www.MiamiOH.edu/BoxOffice](http://www.MiamiOH.edu/BoxOffice), or 513-529-3200).

## For More Information

Except for the regional campuses, all addresses are:

**Miami University**  
**Oxford, OH 45056**  
Phone: 513-529-1809 (general information)  
[www.MiamiOH.edu](http://www.MiamiOH.edu)

**Admission, Undergraduate:** Office of Admission, 301 S. Campus Ave., 513-529-2531.

**Admission, Graduate:** Graduate School, 102 Roudebush, 513-529-3734.

**Center for Student Diversity and Inclusion:** 2030 Armstrong Student Center, 513-529-6504.

**Community Service:** Office of Community Engagement and Service, Hannah House, 513-529-2961.

**Cultural Center:** 2030 Armstrong Student Center, 513-529-6504.

**Disability Services:** Office of Disability Resources, 304 Shriver Center, 513-529-1541.

**Education Abroad:** Education Abroad Office, 214 MacMillan, 513-529-8600, EducationAbroad@MiamiOH.edu.

**Equity and Equal Opportunity:** Office of Equity and Equal Opportunity, Hanna House, 219 E. Spring Street, 513-529-7157.

**Fees and Expenses:** One Stop, 100 Campus Avenue Building, MiamiOH.edu/OneStop.

**Financial Aid, Loans, Grants, Scholarships:** One Stop, 100 Campus Avenue Building, MiamiOH.edu/OneStop.

**Global Initiatives:** 214 MacMillan Hall, 513-529-8600, Global@MiamiOH.edu.

**Greentree Health Science Academy:** 5757 Innovative Drive, Middletown, OH 45005, 513-933-3960.

**Hamilton Campus:** Miami University Hamilton, 1601 University Blvd., Hamilton, OH 45011, 513-785-3000.

**Honors Program:** 101 Old Manse, 410 E. High Street, 513-529-3399.

**Intercollegiate Athletics:** 230 Millett Hall, 513-529-3113.

**International Students:** International Student and Scholar Services, 214 MacMillan, 513-529-8600, MiamiOH.edu/international.

**I.T. Services:** Support Desk: 513-529-7900 or ITHelp@MiamiOH.edu (ithelp@miamioh.edu).

**LGBTQ+ Services:** 2030 Armstrong Student Center, 513-529-6510.

**Liberal Education Office:** 103 Campus Avenue Building, 513-529-7135.

**Middletown Campus:** Miami University Middletown, 4200 N. University Blvd., Middletown, OH 45042, 513-727-3200 or 1-86-MIAMI-MID (Toll free).

**MiTech Walk in Support:** Located in the Miami University Bookstore, ground floor.

**Miami University Dolibois European Center (MUDEC):** Oxford Office, 214 MacMillan Hall, 513-529-8600, Luxembourg@MiamiOH.edu.

**Parking, Motor Vehicle, and Bicycle Regulations:** Campus Services Center, 34 Campus Avenue Building, 513-529-2224.

**Recreational Sports:** Recreational Sports Center, 513-529-4732.

**Registration:** One Stop, 100 Campus Avenue Building, MiamiOH.edu/OneStop.

**Residence and Dining Halls:** Campus Services Center, 34 Campus Avenue Building, 513-529-5000.

**Residency:** One Stop, 100 Campus Avenue Building, MiamiOH.edu/OneStop.

**Student Employment:** Department of Human Resources, 15 Roudebush Hall, 513-529-8722.

**Student Organizations:** Student Activities Office, 2026 Armstrong Student Center, 513-529-2266.

**Student Responsibility and Regulations:** See *The Student Handbook*, published online each academic year and available at [www.MiamiOH.edu/handbook](http://www.MiamiOH.edu/handbook).

**Veterans Certifying Official:** One Stop, 100 Campus Avenue Building, MiamiOH.edu/OneStop.

**Voice of America Learning Center:** 7847 VOA Park Drive, West Chester, OH 45069, 513-895-8862.

**Women\*s Center:** 2030 Armstrong Student Center, 513-529-1510.

## Undergraduate and Graduate Majors and Degrees

The following charts list all majors and degrees, minors, and certificate programs offered by Miami University. Descriptions appear elsewhere in this Bulletin. **Note:** Returning former students whose degree programs have been discontinued should consult with their academic departments or divisions.

### Undergraduate and Graduate Majors and Degrees

Major	Undergraduate Degree(s)	Graduate Degree(s)
Accountancy	Bachelor of Science in Business	Master of Accountancy
American Studies	Bachelor of Arts	
Anthropology	Bachelor of Arts	
Applied Biology	Bachelor of Science	
Applied Social Research	Bachelor of Science in Applied Social Science	
Architecture	Bachelor of Arts in Architecture	Master of Architecture
Art	Bachelor of Fine Arts	Master of Fine Arts
Art and Architecture History	Bachelor of Arts in the History of Art and Architecture	
Art Education	Bachelor of Science in Art	Master of Arts
Biochemistry	Bachelor of Arts, Bachelor of Science	
Bioengineering	Bachelor of Science in Engineering	
Biological Physics	Bachelor of Science	
Biological Science		Master of Arts in Teaching
Biology	Bachelor of Arts, Bachelor of Science	Master of Arts, Master of Science, Doctor of Philosophy
Botany	Bachelor of Arts, Bachelor of Science	Master of Arts, Master of Science, Doctor of Philosophy
Business Administration (part-time)		Master of Business Administration
Business Analytics		Master of Science in Business Analytics
Business Economics	Bachelor of Science in Business	
Cell, Molecular and Structural Biology (CMSB)		Master of Science, Doctor of Philosophy
Chemical and Paper Engineering		Master of Science in Chemical Engineering
Chemical Engineering	Bachelor of Science in Engineering	
Chemistry	Bachelor of Arts, Bachelor of Science	Master of Science, Doctor of Philosophy
Chinese Education	Bachelor of Science in Education	
Classical Humanities	Bachelor of Arts	
Classical Languages	Bachelor of Arts	
Communication Design	Bachelor of Fine Arts	
Communication Studies	Bachelor of Arts in Applied Communication	
Community Arts	Bachelor of Arts	
Computational Electrical and Computer Engineering		Master of Science
Computer Engineering	Bachelor of Science in Engineering	
Computer Science	Bachelor of Science in Computer Science	Master of Computer Science
Criminal Justice	Bachelor of Science in Criminal Justice	Master of Science
Critical Race and Ethnic Studies	Bachelor of Arts	
Data Science and Statistics	Bachelor of Science	
Diplomacy and Global Politics	Bachelor of Arts	
Early Childhood Education	Bachelor of Science in Education	
East Asian Language and Cultures	Bachelor of Arts	
Ecology, Evolution and Environmental Biology (EEEB)		Doctor of Philosophy
Economics	Bachelor of Arts	Master of Arts
Educational Leadership		Doctor of Education, Doctor of Philosophy

Educational Psychology		Master of Education
Educational Technology		Master of Education
Electrical Engineering	Bachelor of Science in Engineering	
Elementary Education		Master of Education
Elementary Mathematics Education		Master of Education
Engineering Management	Bachelor of Science in Engineering	
Engineering Physics (pre-professional)	Bachelor of Science	
Engineering Technology	Bachelor of Science in Applied Science	
English		Master of Arts, Master of Arts in Teaching, Doctor of Philosophy
English/Creative Writing	Bachelor of Arts	Master of Fine Arts
English/Literature	Bachelor of Arts	
English Studies	Bachelor of Arts	
Environmental Earth Science	Bachelor of Arts	
Environmental Science		Master of Environmental Science
Family Science	Bachelor of Science in Family Science	
Finance	Bachelor of Science in Business	
Foreign Language Education		Master of Arts in Teaching
Forensic Investigation	Bachelor of Science in Forensic Science and Investigation	
Forensic Science	Bachelor of Science in Forensic Science and Investigation	
French	Bachelor of Arts	Master of Arts
French Education	Bachelor of Science in Education	
General Engineering	Bachelor of Science in Engineering	
Geography		Master of Arts
Geography and Sustainable Development	Bachelor of Arts	
Geology	Bachelor of Arts, Bachelor of Science	Master of Arts, Master of Science, Doctor of Philosophy
German	Bachelor of Arts	
German Education	Bachelor of Science in Education	
Gerontology	Bachelor of Arts	
Gerontological Studies		Master of Gerontological Studies
Health Communication	Bachelor of Science in Applied Communication	
Health Information Technology	Bachelor of Science in Information Technology	
History	Bachelor of Arts	Master of Arts
Human Capital Management and Leadership	Bachelor of Science in Business	
Inclusive Special Education	Bachelor of Science in Education	
Individualized Studies	Bachelor of Arts	
Information Systems & Analytics	Bachelor of Science in Business	
Information Technology	Bachelor of Science in Information Technology	
Instructional Design & Technology		Master of Arts
Integrated English Language Arts Education	Bachelor of Science in Education	
Integrated Mathematics Education	Bachelor of Science in Education	
Integrated Science Education	Bachelor of Science in Education	
Integrated Social Studies Education	Bachelor of Science in Education	
Integrative Studies	Bachelor of Integrative Studies	
Interactive Media Studies	Bachelor of Arts in Interactive Media Studies	
Interdisciplinary Business Management	Bachelor of Science in Business	
Interior Design	Bachelor of Fine Arts	
International Studies	Bachelor of Arts in International Studies	
Italian Studies	Bachelor of Arts	
Journalism	Bachelor of Arts	

Kinesiology	Bachelor of Science in Kinesiology & Health	
Kinesiology and Health		Master of Science in Kinesiology & Health
Language and Literacy		Master of Education
Latin American Latino/a and Caribbean Studies	Bachelor of Arts	
Latin Education	Bachelor of Science in Education	
Liberal Studies	Bachelor of Arts, Bachelor of Science	
Linguistics	Bachelor of Arts	
Manufacturing Engineering	Bachelor of Science in Engineering	
Marketing	Bachelor of Science in Business	
Mathematics	Bachelor of Arts, Bachelor of Science	Master of Arts, Master of Arts in Teaching, Master of Science
Mathematics and Statistics	Bachelor of Arts, Bachelor of Science	
Mechanical Engineering	Bachelor of Science in Engineering	Master of Science
Media and Culture	Bachelor of Arts	
Medical Laboratory Science	Bachelor of Science	
Microbiology	Bachelor of Arts, Bachelor of Science	Master of Science, Doctor of Philosophy
Middle Childhood Education	Bachelor of Science in Education	
Music	Bachelor of Arts in Music	
Music Education	Bachelor of Music	Master of Music
Music Performance	Bachelor of Music	Master of Music
Nonprofit and Community Studies	Bachelor of Science in Nonprofit and Community Studies	
Nursing	Bachelor of Science in Nursing	
Nutrition	Bachelor of Science in Kinesiology & Health	
Philosophy	Bachelor of Arts	Master of Arts
Physics	Bachelor of Arts, Bachelor of Science	Master of Science
Political Science	Bachelor of Arts	Master of Arts, Master of Arts in Teaching
Professional Writing	Bachelor of Arts	
Psychological Science	Bachelor of Arts	
Psychology	Bachelor of Arts	Doctor of Philosophy (Master of Arts required)
Public Administration	Bachelor of Arts	
Public Health	Bachelor of Science in Kinesiology & Health	
Quantitative Economics	Bachelor of Science	
Reading Education		Master of Education
Religion	Bachelor of Arts	
Russian, Eastern European, and Eurasian Studies	Bachelor of Arts	
School Leadership		Master of Education
School Psychology		Master of Science, Specialist in Education
Secondary Education		Master of Education
Small Business Management	Bachelor of Science in Commerce	
Social Gerontology		Doctor of Philosophy
Social Justice Studies	Bachelor of Arts	
Social Work	Bachelor of Science in Social Work	Master of Arts
Sociology	Bachelor of Arts	
Software Engineering	Bachelor of Science in Software Engineering	
Spanish	Bachelor of Arts	Master of Arts
Spanish Education	Bachelor of Science in Education	
Special Education		Master of Education
Speech-Language Pathology		Master of Arts, Master of Science
Speech Pathology and Audiology	Bachelor of Science	
Sport Leadership and Management	Bachelor of Science in Kinesiology & Health	
Statistics		Master of Science in Statistics

Strategic Communication	Bachelor of Arts	
Supply Chain and Operations Management	Bachelor of Science in Business	
Student Affairs in Higher Education		Master of Science, Doctor of Philosophy
Theatre	Bachelor of Arts in Theatre	
Theatre and Practice		Master of Arts
Transformative Education		Master of Education
Urban and Regional Planning	Bachelor of Arts	
Women's Gender, and Sexuality Studies	Bachelor of Arts	
Zoology	Bachelor of Arts, Bachelor of Science	

## Minors

Information about these programs is available in the academic division chapters.

Minor	Academic Division
Accountancy	Business
Actuarial Science	Arts and Science
Aerospace Studies	Arts and Science
American Studies	Arts and Science
Anthropology	Arts and Science
Arabic	Arts and Science
Archaeology	Arts and Science
Architecture and Interior Design Studies	Creative Arts
Art and Architecture History	Creative Arts
Art, 2-Dimensional Media Studies	Creative Arts
Arts Entrepreneurship	Creative Arts
Arts Management	Business; Creative Arts
Art Therapy	Creative Arts
Bioinformatics	Engineering and Computing
Biomedical Engineering	Engineering and Computing
Business Analytics	Business
Chemical Engineering	Engineering and Computing
Child Studies and Youth Development	Education, Health, and Society
Chinese	Arts and Science
Classical Humanities	Arts and Science
Coaching	Education, Health, and Society
Commerce	Commerce
Communication Design	Creative Arts
Community-Based Leadership	Education, Health, and Society
Computer Science	Engineering and Computing
Creative Writing	Arts and Science
Criminal Justice	Liberal Arts and Applied Science
Criminology	Arts and Science
Critical Race and Ethnic Studies	Arts and Science
Dance	Creative Arts
Data Intelligence Through Information Technology	Liberal Arts and Applied Science
Digital Innovation	Business
Disability Studies	Arts and Science
East Asian Studies	Arts and Science
Economics	Arts and Science, Business
Education, Teaching and Learning	Education, Health, and Society
Electrical Engineering	Engineering and Computing
English Literature	Arts and Science
English Studies	Liberal Arts and Applied Science

Entrepreneurship	Business
Environmental Engineering	Engineering and Computing
Ethics, Society, and Culture	Arts and Science
European Studies	Arts and Science
Family Relationships	Education, Health, and Society
Fashion	Creative Arts
Film Studies	Arts and Science
Finance	Business
Forensic Investigation	Liberal Arts and Applied Science
French	Arts and Science
Games + Simulation	Creative Arts
General Business	Business
Geography	Arts and Science
Geology	Arts and Science
German	Arts and Science
Gerontology	Arts and Science
Global Health	Arts and Science
Global Perspectives on Sustainability	Arts and Science
History	Arts and Science
Horticulture	Arts and Science
Human Capital Management and Leadership	Business
Humanitarian Engineering and Computing	Engineering and Computing
Individualized Studies	Arts and Science
Information Systems	Business
Information Security	Business
Interactive Media Studies	Arts and Science
International Business	Business
Italian	Arts and Science
Japanese	Arts and Science
Latin American Latino/a and Caribbean Studies	Arts and Science
Linguistics	Arts and Science
Lusophone Studies	Arts and Science
Management	Business
Manufacturing Engineering	Engineering and Computing
Marketing	Business
Mathematics	Arts and Science
Mechanical Engineering	Engineering and Computing
Medical Humanities	Arts and Science
Middle East, Jewish, and Islamic Studies	Arts and Science
Molecular Biology	Arts and Science
Museums and Society	Creative Arts
Music Composition	Creative Arts
Music Performance	Creative Arts
Music Theatre	Creative Arts
Music Theatre for Non-Majors	Creative Arts
Naval Science	Arts and Science
Neuroscience	Arts and Science
Nutrition	Education, Health, and Society
Paper Engineering	Engineering and Computing
Philosophy and Law	Arts and Science
Photography	Creative Arts
Physics	Arts and Science

Plant Sciences	Arts and Science
Political Science	Arts and Science
Process Control	Engineering and Computing
Psychological Science	Liberal Arts and Applied Science
Religion	Arts and Science
Rhetoric/Writing	Arts and Science
Russian	Arts and Science
Social Justice and Inequalities	Arts and Science
Sociology	Arts and Science
Spanish	Arts and Science
Special Education	Education, Health, and Society
Sport Management	Education, Health, and Society
Statistical Methods	Arts and Science
Statistics	Arts and Science
Supply Chain Management	Business
Theatre Arts	Creative Arts
Urban and Regional Analysis	Arts and Science
Urban Design	Creative Arts
Women's, Gender, and Sexuality Studies	Arts and Science

## Associate's Degree Programs

Except for the Associate in Arts, these programs are available only on the regional campuses in Hamilton and Middletown.

Program	Associate's Degree
Business Management Technology	Associate of Applied Business
Computer and Information Technology	Associate in Applied Science
Computer Technology (continuation option for CSE)	Associate in Applied Science
Criminal Justice	Associate in Applied Science
Digital Business Systems	Associate of Applied Business
Electrical and Computer Engineering Technology	Associate in Applied Science
General Studies	Associate in Arts
Marketing Management Technology	Associate of Applied Business
Mechanical Engineering Technology	Associate in Applied Science
Prekindergarten Education	Associate in Applied Science
Technical Study	Associate of Technical Study

## Undergraduate Certificate Programs

Programs available on all campuses:

Program	Academic Division
Autism Spectrum Disorders	Education, Health and Society
China Business	Business
Creativity Entrepreneurship Certificate	Business
Customer Service	Liberal Arts and Applied Science
Fostering Just Communities	Education, Health and Society
Geographic Information Science	Arts and Science
Global Readiness	Global Initiatives
Leadership	Engineering and Computing
Outdoor Leadership	Education, Health and Society
Social Entrepreneurship Certificate	Business
StartUp Entrepreneurship Certificate	Business
Teaching English Language Learners (TELLs)	Education, Health and Society
Undergraduate Certificate in Foundations of Analytics	Business

## Graduate Certificate/Endorsement Programs

Program	Academic Area
Adult TESOL	Department of English
Advanced Studio Art	College of Creative Arts
Analytics for Professionals	Departments of Statistics, Information Systems & Analytics
Applied Statistics	Department of Statistics
Assessment and Evaluation	Department of Educational Psychology
Autism Spectrum Disorders	Department of Educational Psychology
College Teaching	Departments of Graduate School and CELTUA
Conservation Biology	Department of Biology
Criminal Justice Administration	Department of Justice and Community Studies
Ecology	Departments of Biology, Geography, Geology & Environmental Earth Science, Microbiology
Geographic Information Science	Department of Geography
Instructional Design and Educational Technolog	Department of Educational Psychology
Interactive Media Studies	College of Creative Arts
Quantitative Data Analysis in Education and Social Sciences	Department of Educational Psychology
Reading Endorsement	Department of Teacher Education
Russian, Eastern European and Eurasian Studies	Departments of History, Political Science and Religion
Social Entrepreneurship and Aging	Departments of Sociology and Gerontology; Scripps Gerontology Center
Sport Management	Department of Kinesiology and Health
Sport Psychology	Department of Kinesiology and Health
TESOL Endorsement	Department of Teacher Education
Women's, Gender, and Sexuality Studies	Department of Women's, Gender, and Sexuality Studies

# Admission for Undergraduate Students

## Office of Admission

Campus Avenue Building  
TTY accessible: 513-529-2531  
[www.MiamiOH.edu/admission/](http://www.MiamiOH.edu/admission/)

## About Admission

Miami's official admission policy is in The Student Handbook, available online at [www.MiamiOH.edu/handbook](http://www.MiamiOH.edu/handbook).

Miami's Oxford campus is selective in admissions accepting only a portion of those who apply.

Admission information for international students and for Hamilton and Middletown campuses appears later in this chapter.

## Freshman Admission Standards

First-year admission to the Oxford campus is based upon many variables including but not limited to: high school performance (curriculum, grade point average, and class rank), test scores (ACT and/or SAT), essay, extracurricular/work experiences, and letters of recommendation. Personal interviews are not utilized.

Students who have not earned a state-certified high school diploma or have not earned a General Educational Development (GED) certificate must submit descriptions of their curriculum and educational resources used during the last four years. If sufficient information to assess academic achievement and ability is not provided, samples of work in such areas as English, mathematics, natural science, social studies, foreign language, and fine arts may be requested.

Special abilities, talents, and achievements, as well as diversity of the student body, are also considered in making admission decisions. The university believes that diversity enhances the quality of education its students receive. Diversity may include socioeconomic factors, under-enrolled minority group members, career interests, artistic abilities, geographical backgrounds, and other special characteristics.

For information about open admission for first-time students to Hamilton and Middletown campuses, see that section in this chapter and the Hamilton and Middletown Campuses section.

## High School Preparation

To be admitted to Miami, you must have ordinarily earned a state-certified high school diploma or have a General Educational Development (GED) certificate. Alternatively educated students without a GED certificate can be considered for admission by presenting credentials that demonstrate equivalent levels of academic achievement, ability, and performance. (Please contact the appropriate admission office for guidelines.)

All candidates are also expected to have completed:

- four units of college preparatory English
- four units of college preparatory mathematics

- four units of college preparatory natural science (including both a physical and a biological science)
- three units of college preparatory social studies (including one unit of history)
- two units of foreign language, both in the same language
- one unit of fine arts, including art, drama, dance, or music, either appreciation or performance

## Making up Requirements

If you have otherwise qualified for admission, but not fulfilled these unit prerequisites, you must complete them before you graduate with a baccalaureate degree from Miami. These regular courses will count toward graduation, and many of them can fulfill other university requirements. Normally, students complete these prerequisites within their first 64 credit hours of college work.

### The following courses will fulfill the requirements:

**English:** Complete the English composition requirement of the Global Miami Plan; no additional courses are required.

**Natural Science, Social Studies:** Complete natural science and social science requirements of the Global Miami Plan; no additional courses are required.

**Mathematics:** Complete a mathematics course of at least three credit hours at the level of MTH 104 or higher, or complete a statistics course of at least three credit hours at the level of STA 125 or higher.

**Fine Arts:** Complete the fine arts requirement of the Global Miami Plan; no additional courses are required.

**Foreign Language:** Take one year of foreign language selected from the following beginning level sequences (or higher level courses):

Code	Title	Credit Hours
SPA 101 & SPA 102	Beginning ASL I and Beginning ASL II	8
ARB 101 & ARB 102	Elementary Arabic I and Elementary Arabic II	8
CHI 101 & CHI 102	Elementary Chinese and Elementary Chinese	8
FRE 101 & FRE 102	Elementary French and Elementary French	8
GER 101 & GER 102	Beginning German and Beginning German	8
GER 111 & GER 201	Review of Basic German and Second Year German	6
HBW 101 & HBW 102	Beginning Modern Hebrew and Beginning Modern Hebrew	8
KOR 101 & KOR 102	Beginning Korean I and Beginning Korean 2	8
LAT 101 & LAT 102	Beginning Latin and Beginning Latin	8
POR 111	Accelerated Introduction to Portuguese	4
RUS 101 & RUS 102	Beginner's Course and Beginner's Course	8

SPN 101 & SPN 102	Beginner's Course and Beginner's Course	8
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## Exceptions

These prerequisites are not required in order to earn a two-year degree. Students who continue their studies to earn a baccalaureate degree, however, are required to fulfill these standards.

Students graduating from high school prior to 1986 must have completed 17 units of study; at least 10 of those units must include any combination of English, speech, mathematics, science, history, social studies, and foreign language.

Students who qualify for admission by earning the General Educational Development (GED) certificate must submit a transcript of completed high school course work to evaluate fulfillment of these standards. Credentials of alternatively educated students will be evaluated to determine fulfillment of these standards.

## ACT or SAT Test Scores

Miami requires official ACT or SAT test scores sent directly from the testing agency. Exceptions to this policy will be granted to applicants who have been out of high school five or more years or have already completed 20 transfer credits.

No preference is given for ACT or SAT.

## Housing Requirement

First- and second-year students admitted to the Oxford campus (except those who reside with their parents or legal guardians; are at least 21 years of age; or are married or reside with dependent children) must live in a university residence hall. For information, about the housing requirement for transfer students, see "Transfer Student Admission."

See more about residence halls in the General Information section.

## Medical and Insurance Requirements

Students under age 30 must present proof of Ohio K-12 grade immunization requirements (please refer to our website at [www.miamioh.edu/health](http://www.miamioh.edu/health) for a list of requirements). Failure to meet immunization requirements will prevent course registration. TB screening is required annually for students who are arriving from or have recently traveled to a high risk country for longer than 6 weeks. High burden countries are as defined by the World Health Organization. Screening will be scheduled by Student Health Services and completed after arrival to campus.

You must provide proof of health insurance coverage every year by completing the electronic Health Insurance Waiver form between June 1st and August 1st. If you are not covered by another policy, you will be charged for the insurance the university makes available. The insurance rate is in the Fees and Expenses chapter.

## Commuters

Freshmen who live within commuting distance and live in the home of their parents, legal guardians, or spouses may apply to the

Oxford campus. See Freshmen Admission Standards for information regarding admission.

Miami Regionals in Hamilton, Middletown and West Chester are commuter campuses and have an open enrollment policy for first-time freshmen. Local area residents who are not accepted to the Oxford campus can begin their Miami studies by commuting to one of the Regional locations. After fulfilling the minimum requirements to fully or partially relocate, they can continue at the Oxford campus or complete one of the degrees offered at the Regionals.

### Spring Semester, Summer and Winter Admission

Freshmen may be admitted for fall and spring semesters and are eligible for early enrollment the preceding summer or winter terms. Admission to some programs in the College of Creative Arts is available only in the fall semester except by special permission.

## Notification and Acceptance

Dates for notification of admission and your confirmation of acceptance are listed online ([www.MiamiOH.edu/admission/](http://www.MiamiOH.edu/admission/)) and in your admission acceptance packet.

As a member of the National Association of College Admission Counseling, Miami University supports the *Statement of Principles of Good Practice* and "permits candidates to choose, without penalty, among offers of admission and financial aid until May 1. Candidates admitted under an early decision program are recognized exceptions to this provision." (Section II, A, 6).

Dates for transfer student notification of admission and confirmation of enrollment are listed online ([www.MiamiOH.edu/admission/transfer](http://www.MiamiOH.edu/admission/transfer)) and in the transfer admission acceptance packet.

## Summer Orientation

All first-year students and their families are invited to a one -and-a-half day orientation program. Held during June, the program provides an opportunity to learn more about the university and to register for classes.

Orientation program information is mailed to all incoming first-year students after they have confirmed their enrollment. Students register online for the program through their myMiami portal at <http://mymiami.MiamiOH.edu>.

If a student cannot attend a Summer Orientation session in June, the student must attend August Orientation and participate in advising and registration at that time. Please direct all questions about Orientation, please call 513-529-9771 or email [orientation@MiamiOH.edu](mailto:orientation@MiamiOH.edu). Also, visit our website for complete dates and details about all Orientation programs ([www.MiamiOH.edu/orientation](http://www.MiamiOH.edu/orientation)).

International students attend orientation approximately 1-2 weeks prior to the start of classes. Contact [international@MiamiOH.edu](mailto:international@MiamiOH.edu) for more information.

### Non-degree Student Admission

**High school students** (College Credit Plus program): This state program provides opportunity for eligible middle and high school students (grades 7-12) to earn high school and college graduation credit through successful completion of college courses. Courses are

open on a space-available basis. Questions regarding eligibility and admission should be directed to the appropriate admission office (Hamilton, Middletown, or Oxford). University housing is not available to students in this program. Prospective students should consult with their high school guidance counselors.

**Senior citizens:** Individuals who are 60 years of age or older and have resided in the state of Ohio for at least one year can audit any course without charge if permission is granted by the instructor and facilities are available. Any special course requirements or fees are the responsibility of the student. Formal admission and registration are not required.

**Visiting (transient) students:** A student who attends another college or university, has been in attendance at the school during the past 12 months, is in good standing, and receives permission from that institution to attend Miami University.

**Unclassified students:** Students who have bachelor's degrees from other colleges or universities and do not want to get an additional degree from Miami may apply as unclassified students. Admission is granted as facilities are available.

## International Student Admission

Basic requirements for admission of international students to undergraduate study include:

- Completion of formal secondary education in a pre-university curriculum that culminates in the award of a secondary school diploma or certificate which is generally recognized as the educational qualification necessary to gain admission to higher studies in your own country.
- Adequate financial support
- English language ability sufficient for you to undertake a full course of study. See the following section, "English Proficiency."
- SAT or ACT tests scores are required for admission of international students who are attending U.S. secondary schools or secondary schools in another country that follow a U.S. high school curriculum, and those who intend to participate in the intercollegiate athletic program and need to comply with NCAA eligibility requirements.

## English Proficiency

International applicants (non-immigrants) whose native language is not English are required to submit evidence of English proficiency prior to their admission. In most cases, applicants will need to present satisfactory scores on the Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS). Information concerning these examinations and location of test centers can be obtained at [www.toefl.org](http://www.toefl.org) or [www.ielts.org](http://www.ielts.org).

Students admitted through the American Culture and English (ACE) Program are conditionally admitted to Miami University as non-degree seeking students. For a student's status to change from conditional admission to regular, degree-seeking enrollment, students must complete the ACE core curriculum with a B- or higher in each of the required English language classes (ACE 112 and ACE 113) and with a passing grade (C or higher) in the American culture course. If a student does not achieve a grade of B- or higher in both ACE 112 and ACE 113, or does not receive a grade of C or higher in the American culture course, the student's enrollment status will

remain conditional and the student will be required to retake the pertinent course(s) during his/her second semester. If the student does not earn grades of B- or higher in ACE 112 and ACE 113 and does not receive a grade of C or higher in the American culture course at the conclusion of the second semester, that student has not met the requirements of conditional admission and will not be allowed further enrollment at any Miami University campus.

Undergraduate international students, like all Miami undergraduates, must satisfy the freshman English requirement. Students will initially be placed in the appropriate English courses based on test scores or other English proof of proficiency received at the time of admission. Additional proficiency tests will be administered before or during international student orientation to determine English course placement.

ENG 107 (4) is designed to provide foundational skills for international students in written English. Upon successful completion, students will be placed in ENG 108 or 109. ENG 108 is a pre-freshman level course designed to provide international students with basic competence in written academic English. ENG 108 is followed by ENG 109, a first-year composition course that is similar to ENG 111 except ENG 109 concentrates on special needs of non-native speakers.

An additional speaking proficiency test will be administered either before or during international student orientation to determine whether or not the student is in need of speaking support within the context of the student's required acculturation course. Upon review of each student's speaking sample, students will be assigned to one of the following courses. These courses are NOT part of a sequence, and students will take only one of these courses in their time at Miami. CAS 116 (3) is designed to support academic English speaking and listening skills, while supporting students in acclimation and acculturation to US educational culture as well as Miami University culture. EDL 151 (2) is intended to acclimate and acculturate first year International students to the U.S. educational culture and in particular to the Miami University culture.

Non-native English speakers may pursue additional practice in the use of written and spoken English through electives offered through the College of Arts & Science (CAS 131, CAS 133, CAS 134), as well as targeted support in writing through the English Language Learners Writing Center located at the Howe Writing Center in King Library.

## Selective Admission

Student Handbook, under Selective Admission.

### Conditional Admission

A student who is competitive for admission, but does not meet the minimum English language proficiency requirement, may be offered conditional admission. Conditional admission is only granted through approved intensive English language programs, including the Miami University American Culture and English (ACE) Program. For a student's status to be changed from conditional admission to regular enrollment, the student must complete and fulfill all criteria established by the approved program.

## Information and Application

Information and application forms for prospective international undergraduate students are available online at [MiamiOH.edu/admission/international](http://MiamiOH.edu/admission/international). Students can also contact the office at:

Office of International and Transfer Admission  
 301 S. Campus Ave.  
 Miami University  
 Oxford, Ohio 45056-3434  
 U.S.A.  
 Phone: 513-529-2531  
 Fax: 513-529-0682  
 E-mail: goglobal@MiamiOH.edu

## Miami University Regionals Locations

Miami University Regionals includes Miami Hamilton and Miami Middletown, two community-based campuses of Miami University, a highly-regarded public university with a national reputation. Other regional locations include the Voice of America Learning Center (VOALC) in West Chester and the Greentree Health Sciences Academy (GHSA) in Middletown.

Many students earn their bachelor's degree taking classes entirely at the regional locations. Students may also earn select degrees online through Miami University Regionals. Other students begin on the regional campuses and, after meeting required criteria to relocate, complete their degree on the Oxford campus.

## Miami University Regionals Admission Standards

Miami University Regionals have an open admission policy for first-time freshmen. To be admitted, you must have graduated from a state-chartered high school or have a General Educational Development (GED) certificate. Alternatively educated students without a GED certificate can demonstrate academic achievement by submitting a description of curriculum and educational resources used during the last four years and other information necessary to assess ability. ACT or SAT test scores are required for new and recent high school grads.

A beginning freshman or transfer student admitted to Miami University Regionals may partially or fully relocate (take the majority of credit hours in Oxford) as a matriculated Miami University student with at least a 2.00 cumulative grade point average, an acceptable conduct record, and after earning at least 16 hours of graded Miami University college-level coursework (not including developmental 00\_classes, CLEP, AP and College Credit Plus credit). At least one Fall or Spring semester must be completed on a regional campus. Winter term credits and grades can not be utilized for Spring relocation as they are not posted until after Spring semester begins. Students who want exceptions to these requirements granted must submit their request on the relocation application form.

More information is available in the chapter about Miami University Regionals (College of Liberal Arts and Applied Science). To receive further details about admission contact:

Office of Admission  
 Miami University Hamilton  
 1601 University Blvd.  
 Hamilton, OH 45011  
 513-785-3111(Admission)  
 TTY accessible: 513-785-3211  
 MiamiOH.edu/regionals/

Office of Admission  
 Miami University Middletown  
 4200 N. University Blvd.  
 Middletown, OH 45042  
 513-727-3216 (Admission)  
 TTY accessible: 513-727-3308  
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## Transfer Student Admission

A transfer student is anyone who wishes to enroll in an undergraduate degree program at Miami and who has attended a college or university other than Miami after graduating from high school. If you have registered for one or more courses at another college after high school regardless of whether or not credit was granted, or entered the military, you must apply for admission as a transfer student. If you have earned Advanced Placement credit or college credit while attending high school or during the summer following your admission to Miami, you are not considered a transfer student.

Information on transfer admission and services can be found in the *Transfer Viewbook*, available from the Office of International and Transfer Admission.

## Admission Requirements

You are required to have earned a high school diploma, be in good standing in all respects at your prior institution(s), and have a minimum of 2.00 GPA on your college courses to be eligible for transfer admission. Transfer students are responsible for meeting all requirements that are in effect when they first enroll as degree candidates.

## Admission Prerequisites

If you graduated from high school after 1985, you are required to complete admission prerequisites to earn a baccalaureate degree. These are listed under "High School Preparation" in this chapter. If you did not complete these specific curriculum standards in high school or at the college(s) you attended, you must fulfill them in the same manner described for beginning freshmen.

## Housing Requirement

If you are a freshman or sophomore transfer student who has registered for twelve or more credit hours, you are required to live in university housing. You are not *required* to live in university housing if you will commute from your parents' or legal guardian's home; if you are married or live with dependent children; have matriculated full-time for at least two years at another institution, or if you are at least 21 years of age before the first day of classes. For students not required to live in University housing, University housing is not guaranteed.

## Limited Admission to Programs

Transfer admission to some programs is limited, requiring perhaps a higher GPA and, in some cases, upperclass standing. These programs include:

- **College of Arts and Science**  
**Speech pathology and audiology:** Selective admission based on cumulative GPA (3.00) and pre-major courses GPA (3.00). Student

must complete SPA 127, SPA 222, and SPA 223, and SPA 225 before accepted to the major.

- **College of Creative Arts:** Contact the appropriate department as soon as possible for specific requirements.

**Architecture:** 3.00 GPA; submission of a portfolio; fall semester admission only (portfolio review in prior spring semester). Enrollment is on a space-available basis.

**Art education:** Completion of a minimum of six semester hours of studio art, enrollment in an additional six hours of studio art, completion of ART 195, and submission of a portfolio, written statement of intent and commitment to art education, and resume. Enrollment is on a space-available basis. Portfolio reviews occur both fall and spring semesters.

**Art (Studio):** Completion of a minimum of six semester hours of studio art, enrollment in an additional six hours of studio art, and submission of a portfolio. Enrollment is on a space-available basis. Contact the department as soon as possible for specific requirements. Portfolio reviews occur both fall and spring semesters.

**Communication design:** Completion of ART 151, completion of or enrollment in ART 102, ART105, ART 111, and ART121, and submission of a portfolio. Enrollment is on a space-available basis. Portfolio reviews occur during spring semester.

- **Interactive Media Studies:** 3.00 GPA; application includes creating a website; enrollment is on a space-available basis.
- **Interior Design:** 3.00 GPA; submission of a portfolio; fall semester admission only (portfolio review in prior spring semester). Enrollment is on a space-available basis.
- **Music, music composition, music education, and music performance:** Audition, application, or portfolio required; enrollment is on a space-available basis.
- **Theatre:** Audition/interview required; enrollment is on a space-available basis.

- **College of Education, Health and Society**

**Adolescent Young Adult and Foreign Language Education:** 45 semester hours with a 2.75 GPA at transfer institution and completion of courses equivalent to EDL 204, EDP 201, and EDT 190 and equal to 30 semester hours of specific equivalent content courses required in desired teaching area. Enrollment is on space-available basis. Science, mathematics, and foreign language majors are encouraged to apply. Contact the Department of Teacher Education for specific requirements.

**Early Childhood Education:** Not available; however, a transfer student may apply for admission as a pre-major.

**Middle Childhood Education:** 45 semester hours with 2.75 GPA at transfer institution and completion of courses equivalent to EDL 204 and equal to four content courses specifically required in each of the two desired concentration areas. Enrollment is on space-available basis. Contact the Department of Teacher Education for specific requirements.

**Inclusive Special Education admission requirement:** Minimum of 15 hours of coursework with a grade-point average of 2.75 or higher, completion of EDP 201 or equivalent, 100 hours of documented service work (volunteer or paid) with persons with disabilities, and a one-page essay. This one page essay should be a description of your current philosophy of and interest in educating learners with exceptionalities. Acceptance to the major is contingent on space available.

- **College of Engineering and Computing:** Admission is not limited for any programs in the College of Engineering and Computing. Transfer credit is evaluated as described on the

“Credit Evaluations” page. Note that coursework from technology programs (e.g. engineering technology, information technology) will generally not apply to requirements for engineering and computer science majors.

- **College of Liberal Arts and Applied Science**

**Nursing:** Admission to this program is selective and competitive. To be considered for admission to the program, you must meet the following minimum criteria:

- be a current high school student with a composite ACT of 23 or SAT of 1060, a cumulative GPA of 3.00, and a cumulative GPA of 3.00 GPA
- have completed 12 semester hours (100 level or higher) with a cumulative GPA of 2.70 and a grade of C or better in two of the following courses or their equivalents: BIO 171, BIO 172; CHM 131; or MBI 161.

For complete details on admission and progression criteria, please see the Bulletin at: BSN 4Year and RN-BSN completion.

- **Farmer School of Business:** To be admitted to the Farmer School of Business as a transfer student from another college/university, a student must have earned 30 graded credit hours of college or university transfer credit post high school graduation. Students must have also earned an overall GPA of 3.50 or higher in all graded credit hours earned after high school graduation, which must include MTH 151 and ECO 201 equivalents (via AP, college credit plus, or transfer courses). More information is available at: <http://miamioh.edu/fsb/admission/transfer/index.html>. Veteran students planning to apply to the Farmer School of Business are encouraged to consult with an advisor in the Farmer School of Business. Questions may be directed to the FSB Student Services Office at (513) 529-1712.

## Transfer and Articulation Policy

### Institutional Transfer

The Ohio Department of Higher Education in 1990, following a directive of the 119<sup>th</sup> Ohio General Assembly, developed the Ohio Articulation and Transfer Policy to facilitate students' ability to transfer credits from one Ohio public college or university to another in order to avoid duplication of course requirements. A subsequent policy review and recommendations produced by the Articulation and Transfer Advisory Council in 2004, together with mandates from the 125<sup>th</sup> Ohio General Assembly in the form of Amended Substitute House Bill 95, have prompted improvements of the original policy. Additional legislation from the 125<sup>th</sup> Ohio General Assembly also initiated the development of a statewide system for articulation agreements among state institutions of higher education for transfer students pursuing teacher education programs.

Action by the 126<sup>th</sup> Ohio General Assembly led to the establishment of criteria, policies, and procedures for the transfer of technical courses completed through a career-technical education institution; and standards for the awarding of college credit based on Advanced Placement (AP) test scores.

Legislation from the 130<sup>th</sup> Ohio General Assembly required public institutions of higher education to: use baseline standards and procedures in the granting of college credit for military training, experience, and coursework; establish an appeals process for resolving disputes over the awarding of credit for military experience; provide specific assistance and support to veterans and service members; adopt a common definition of a *service member* and

*veteran*; and establish a credit articulation system in which adult graduates of public career-technical institutions who complete a 900 clock-hour program of study and obtain an industry-recognized credential approved by the Chancellor shall receive 30 college technical credit hours toward a technical degree upon enrollment.

While all public colleges and universities are required to follow the Ohio Articulation and Transfer Policy, independent colleges and universities in Ohio may or may not participate in the transfer policy. Therefore, students interested in transferring to independent institutions are encouraged to check with the college or university of their choice regarding transfer agreements. In support of improved articulation and transfer processes, the Ohio Department of Higher Education Department of Higher Education has established an articulation and transfer clearinghouse to receive, annotate, and convey transcripts among public colleges and universities. This system is designed to provide standardized information and help colleges and universities reduce undesirable variability in the transfer credit evaluation process.

## Acceptance of Transfer and Articulated Credit

To recognize courses appropriately and provide equity in the treatment of incoming transfer students and students native to the receiving institution, transfer credit will be accepted for all successfully completed college-level courses completed in and after Fall 2005 from Ohio public institutions of higher education. Students who successfully completed Associate of Arts (AA) or Associate of Science (AS) degrees prior to Fall 2005 with a 2.00 or better overall grade-point average would also receive credit for all college-level courses they have passed). While this reflects the baseline policy requirement, individual institutions may set equitable institutional policies that are more accepting.

Pass/Fail courses, credit-by-examination credits, experiential learning courses, and other non-traditional credit courses that meet these conditions will also be accepted and posted to the student record.

## Application of Transfer and Articulated Credit

*Application of credit* is the decision process performed by the receiving institution to determine how the credits accepted and recorded on the student's official academic transcript will or will not apply toward program and degree requirements. While the receiving institution makes this decision, it will do so within the parameters of this Policy.

The following guidelines and requirements shall govern the application of transfer and articulated credit:

### Ohio Transfer Module

The Ohio Department of Higher Education's Articulation and Transfer Policy established the Ohio Transfer Module, which may be a subset or the entire set of a public higher education institution's general education curriculum in Associate of Arts (AA), Associate of Science (AS) and baccalaureate degree programs. Students in applied associate degree programs may complete some individual Ohio Transfer Module courses within their degree program or continue beyond the degree program to complete the entire Transfer Module. The Ohio Transfer Module contains 36-40 semester or 54-60 quarter hours of course credit in English composition (minimum of 3 semester or 5 quarter hours); mathematics, statistics and logic

(minimum of 3 semester or 3 quarter hours); arts and humanities (minimum of 6 semester or 9 quarter hours); social sciences (minimum of 6 semester or 9 quarter hours); and natural sciences (minimum of 6 semester or 9 quarter hours. Oral communication and interdisciplinary areas may be included as additional options. Additional elective hours from among these areas make up the total hours for a completed Ohio Transfer Module. Courses for the Ohio Transfer Module should be 100- and 200-level general education courses commonly completed in the first two years of a student's course of study. Each public university and technical and community college is required to establish and maintain an approved Ohio Transfer Module.

Ohio Transfer Module course(s) or the full module completed at one college or university will automatically meet the requirements of individual Ohio Transfer Module course(s) or the full Ohio Transfer Module at another college or university once the student is admitted. Students may be required, however, to meet additional general education requirements at the institution to which they transfer. For example, a student who completes the Ohio Transfer Module at Institution S (sending institution) and then transfers to Institution R (receiving institution) is said to have completed the Ohio Transfer Module portion of Institution R's general education program. Institution R, however, may have general education courses that go beyond its Ohio Transfer Module. State policy initially required that all courses in the Ohio Transfer Module be completed to receive its benefit in transfer. However, subsequent policy revisions have extended this benefit to the completion of individual Ohio Transfer Module courses on a course-by-course basis.

## Transfer Module (TM) for Miami University

**Important:** Please refer to the Courses of Instruction section for a full course description and other details.

Code	Title	Credit Hours
<b>English</b>		
ENG 111	Composition and Rhetoric	3
ENG 112	Composition and Literature	3
<b>Mathematics and Statistics</b>		
Select three hours of the following:		3
MTH 104	Precalculus with Algebra	
MTH 125	Precalculus	
MTH 151	Calculus I	
MTH 249	Calculus II	
MTH 251	Calculus II	
STA 261	Statistics	
<b>Arts/Humanities</b>		
Select at least three hours of the following:		3
ARC 188	Ideas in Architecture	
ARC 221	History of Architecture I	
ARC 222	History of Architecture II	
ART 181	Concepts in Art	
ART 187	History of Western Art: Prehistoric-Gothic	
ART 188	History of Western Art: Renaissance - Modern	

ART 189	History of Western Dress
ART 233	Global Perspectives on Dress
ART 286	History of Asian Art, China, Korea, and Japan
MUS 135	Understanding Jazz, Its History and Context
MUS 185	The Diverse Worlds of Music
MUS 189	Great Ideas in Western Music
THE 101	Introduction to Theatre: Drama and Analysis
THE 191	Experiencing Theatre
Select six hours from two different areas of the following:	6
AMS 205	Introduction to American Cultures
CHI 255	Drama in China and Japan in Translation
or JPN 255	Drama in China and Japan in English Translation
CLS 121	Introduction to Classical Mythology
EDL 204	Sociocultural Studies in Education
ENG 122	Popular Literature
ENG 123	Introduction to Poetry
ENG 124	Introduction to Fiction
ENG 125	Introduction to Drama
ENG 134	Introduction to Shakespeare
ENG 163	Literature and Travel
ENG 272	English Literature to 1660
ENG 273	English Literature 1660-1900
ENG 274	English Literature 1901 to Present
ENG 275	American Literature to 1900
FRE 131	Masterpieces of French Culture in Translation
FST 201	Film History and Analysis
GER 231	Folk and Literary Fairy Tales
HST 111	Survey of American History
HST 112	Survey of American History
HST 224	Africa to 1884
or BWS 224	Africa to 1884
PHL 103	Society and the Individual
PHL 104	Purpose or Chance in the Universe
PHL 105	Theories of Human Nature
PHL 131	Introduction to Ethics
REL 101	Introduction to the Study of Religion
REL 314	Social and Religious History of the Jewish People
RUS 137	Russian Folklore
RUS 255	Russian Literature in English Translation From Pushkin to Dostoevsky
or ENG 255	Russian Literature in English Translation From Pushkin to Dostoevsky

**Social Sciences**

Select six hours from two different areas of the following:

ATH 155	Introduction to Anthropology
CRE 151	Introduction to Critical Race and Ethnic Studies

ECO 201	Principles of Microeconomics
ECO 202	Principles of Macroeconomics
EDP 201	Human Development and Learning in Social and Educational Contexts
FSW 261	Diverse Family Systems Across the Life Cycle
GEO 101	Global Forces, Local Diversity
GEO 111	World Regional Geography: Patterns and Issues
GTU 154	Big Ideas in Aging
KNH 276	Current Issues in Leisure and Sport
MAC 143	Introduction to Media
POL 241	American Political System
POL 261	Public Administration
PSY 111	Introduction to Psychology
SOC 151	Social Relations
SPA 223	Theories of Language Development
WGS 201	Introduction to Women's Studies

**World Cultures**

Select three hours of the following: 3

ATH 175	Peoples of the World
GEO 208	The Rise of Industrialism in East Asia
or ITS 208	The Rise of Industrialism in East Asia
or SOC 208	The Rise of Industrialism in East Asia
CLS 101	Greek Civilization in its Mediterranean Context
GEO 111	World Regional Geography: Patterns and Issues
BWS 224	Africa to 1884
or HST 224	Africa to 1884
BWS 225	The Making of Modern Africa
or HST 225	The Making of Modern Africa
HST 197	World History to 1500
HST 198	World History Since 1500
IDS 159	Strength Through Cultural Diversity
ITS 201	Introduction to International Studies
LAS 207	Latin America before 1910
LAS 208	Introduction to Latin America
POL 221	Comparative Politics
POL 271	World Politics

**Natural Sciences**

Select nine hours. One course must include a laboratory. 9

**Biological Science**

Select at least three hours of the following: 3

BIO 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity
or MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity
or BIO 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology
or MBI 116	Biological Concepts: Structure, Function, Cellular and Molecular Biology
BIO 121	Environmental Biology
BIO 131	Plants, Humanity, and Environment

BIO 161	Principles of Human Physiology
BIO 171	Human Anatomy and Physiology
BIO 176	Ecology of North America
BIO 191	Plant Biology
MBI 111	Microorganisms and Human Disease
MBI 121	The Microbial World
MBI 123	Experimenting with Microbes
<b>Physical Science</b>	
Select at least three hours of the following: 3	
CHM 111	Chemistry in Modern Society
CHM 111L	Chemistry in Modern Society Laboratory
CHM 141	College Chemistry
CHM 144	College Chemistry Laboratory
EDT 181	Physical Science
EDT 182	Physical Science
GEO 121	Earth's Physical Environment
GLG 111	The Dynamic Earth
GLG 115L	Understanding the Earth
GLG 121	Environmental Geology
GLG 141	Geology of U.S. National Parks
PHY 101	Physics and Society
PHY 103	Concepts in Physics Laboratory
PHY 111	Astronomy and Space Physics
PHY 118	Introduction to Atmospheric Science
PHY 121	Energy and Environment
PHY 191	General Physics with Laboratory I
PHY 192	General Physics with Laboratory II

## Transfer Assurance Guides (TAGS)

Transfer Assurance Guides (TAGs) comprise Ohio Transfer Module courses and additional courses required for an academic major called TAG courses. A TAG is an advising tool to assist Ohio University and community and technical college students in planning for specific majors and making course selections that will ensure comparable, compatible, and equivalent learning experiences across Ohio's public higher education system. A number of area-specific TAG pathways in meta majors including the arts, humanities, business, communication, education, health, mathematics, science, engineering, engineering technologies, and the social sciences, and foreign languages have been developed by faculty teams.

TAGs empower students to make informed course selection decisions and plans for their future transfer. Advisors at the institution to which a student wishes to transfer should also be consulted during the transfer process. Students may elect to complete the full TAG or any subset of courses from the TAG. Because of specific major requirements, early identification of a student's intended major is encouraged. More information can be found on the Ohio Department of Higher Education website <http://www.ohiohighered.org/transfer/tag>.

## Career-Technical Assurance Guides (CTAGS)

Collaboration among the Ohio Department of Higher Education, the Ohio Department of Education, and other key stakeholders led to the

development of policies and procedures to create statewide discipline specific articulation agreements and further ensure that students completing coursework at an adult or secondary career-technical institution can transfer agreed-upon technical courses/programs to any Ohio public institution of higher education "without unnecessary duplication or institutional barriers."

Career-Technical Assurance Guides (CTAGs) are statewide articulation agreements that guarantee the recognition of learning which occurs at public adult and secondary career-technical institutions and have the opportunity for the award of college credit toward technical courses/programs at any public higher education institution. CTAGs serve as advising tools, identifying the statewide content guarantee and describing other conditions or obligations (e.g., program accreditation or industry credential) associated with the guarantee. For more information, visit the Ohio Board of Regents website <http://www.ohiohighered.org/transfer/ct2>.

## One-Year Option Credit Award

The One-Year Option builds upon Ohio's articulation and transfer system to help more adults accelerate their preparation for work by earning a technical associate degree. Consistent with the philosophy of the Career-Technical Assurance Guides (CTAGs), the One-Year Option guarantees that college credit will be awarded for college-level learning that occurs through adult programs at career-technical centers.

Adults who complete a career-technical education program of study consisting of a minimum of 900 clock-hours and achieve an industry-recognized credential approved by the Chancellor shall receive thirty (30) semester hours of technical course credit toward a standardized Associate of Technical Study Degree (ATS) upon matriculation at a public institution of higher education that confers such a degree. The 30 semester hours will be awarded as a block of credit rather than credit for specific courses. Proportional credit is awarded toward the ATS degree for adults who complete a program of study between 600 and 899 clock hours.

The credit earned through the One-Year Option will be applied to ATS degrees bearing the following standardized degree titles:

1. Associate of Technical Study in Building and Industrial Technology
2. Associate of Technical Study in Business Technology
3. Associate of Technical Study in Health and Allied Health Technology
4. Associate of Technical Study in Information Technology
5. Associate of Technical Study in Services Technology

## Military Transfer Assurance Guides (MTAGs)

In response to the legislative requirement (Ohio Revised Code 3333.164) to create a military articulation and transfer assurance guide for college credit that is earned through military training, experience, and coursework, college credit will be granted to students with military training, experience, and/or coursework that is recognized by the American Council on Education (ACE) or regionally accredited military institutions, such as the Community College of the Air Force.

In order to streamline the awarding, transferability, and applicability of college credit, service members and veterans are guaranteed to

earn certain types of credit(s) or course(s) as specified in the Military Transfer Assurance Guides (MTAGs), which are based on the endorsed baseline standards and procedures by the Chancellor. Equivalent course(s), credits for courses, or block of credit is to be awarded and applied towards general education and/or major course requirements at the receiving institution in accordance with the MTAG guarantee. There is some training, experience, and coursework that the receiving institution may be able to award college credit only toward general or free electives.

In addition, public institutions of higher education shall ensure that appropriate equivalent credit is awarded for military training, experience, and coursework that meet the baseline standards and procedures according to the Ohio Revised Code 3333.164. This requirement goes beyond credit/course awarded based on the MTAG alignment process. More information will be forthcoming and posted on the Ohio Department of Higher Education website <http://www.ohiohighered.org>.

## Apprenticeship Pathway Programs

The Apprenticeship Pathways initiative advocates for individuals completing apprenticeships by incorporating their learning into academic credit, thereby saving them time and money and encouraging them to advance their academic credentials to contribute to a strong, educated workforce.

Ohio apprenticeship programs partner with public community colleges to provide technology-specific statewide articulation agreements that recognize non-traditional prior learning. College credit is awarded toward a technical associate degree. Each agreement simplifies student advising by outlining how apprenticeship training in a certain pathway applies to an applied associate degree and lists remaining courses required to complete the degree. The application of the credit toward a technical associate degree in these agreements is guaranteed at the participating receiving institution.

## Conditions for Transfer Admission

1. Graduates with associate degrees from Ohio's public institutions of higher education and a completed, approved Ohio Transfer Module shall be admitted to a public institution of higher education in Ohio, provided their cumulative grade-point average is at least 2.0 for all previous college-level courses. Further, these students shall have admission priority over graduates with an out-of-state associate degree and other transfer students with transferable and/or articulated college credit.
2. Associate degree holders who have not completed the Ohio Transfer Module from an Ohio public institution of higher education will be eligible for preferential consideration for admission as transfer students as long as the institution's admission criteria, such as the minimum academic standards, space availability, adherence to deadlines, and payment of fees, are fairly and equally applied to all undergraduate students.
3. In order to encourage completion of the baccalaureate degree, students who are not enrolled in or who have not earned an Associate of Arts (AA) or Associate of Science (AS) degree but have earned 60 semester/90 quarter hours or more of credit toward a baccalaureate degree with a cumulative grade-point average of at least a 2.0 for all previous college-level courses will be eligible for preferential consideration for admission as transfer students as long as the institution's admission criteria, such as the

minimum academic standards, space availability, adherence to deadlines, and payment of fees, are fairly and equally applied to all undergraduate students.

4. Students who have not earned an associate degree or who have not earned 60 semester/90 quarter hours of credit with a grade-point average of at least a 2.0 for all previous college-level courses will be eligible for admission as transfer students on a competitive basis.
5. Incoming transfer students admitted to a college or university shall compete for admission to selective programs, majors, and units on an equal basis with students native to the receiving institution.

Admission to a given institution, however, does not guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at the institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as native students. Furthermore, transfer students shall be accorded the same class standing and other privileges as native students on the basis of the number of credits earned. All residency requirements must be completed at the receiving institution.

## Responsibilities of Students

To maximize transfer credit application, prospective transfer students must take responsibility for planning their course of study to meet both the academic and non-academic requirements of the institution to which they desire to articulate or transfer credit as early as possible. The student is responsible to investigate and use the information, advising, and other available resources to develop such a plan. Students should actively seek program, degree, and transfer information; meet with an advisor from both the current and receiving institutions to assist them in preparing a course of study that meets the academic requirements for the program/degree to which they plan to transfer; use the various electronic course/program transfer and applicability database systems, including Ohio Transfer to Degree Guarantee web resources; and select courses/programs at their current institution that satisfy requirements at the receiving institution to maximize the application of transfer credit. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are foreign language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will better articulate with the receiving institution's major.

## Appeals Process

Following the evaluation of a student transcript from another institution, the receiving college institution will provide the student with a Statement of Transfer Credit Applicability (Degree Audit Report). A student disagreeing with the application of transfer credit by the receiving institution must file his/her appeal in writing within ninety (90) days of receipt of the statement of transfer credit applicability. The institution shall respond to the appeal within 30 days of the receipt of the appeal at each appeal level.

## Student Complaints Following Transfer Appeals at the Receiving Institution

After a student exhausts the appeals process at the receiving institution and chooses to pursue further action, the Ohio Department of Higher Education (ODHE) responds to formal written complaints related to Ohio Articulation and Transfer Policy against public, independent non-profit, and proprietary institutions of higher education in Ohio. While the ODHE has limited authority over colleges and universities and cannot offer legal advice or initiate civil court cases, staff will review written complaints submitted through its established process and work with student complainants and institutions.

## Credit Evaluations

Undergraduate evaluations are done by the Office of the University Registrar.

Most college level courses taken fall term 2010 or after at regionally accredited institutions across the United States will be transferable to Miami University if the student earns a grade of D- or better. Prior to fall term 2015, credit earned on a pass/fail basis, credit/no-credit basis, etc., is also transferable if it can be determined the student earned a C or better. Credit earned on a pass/fail basis, credit/no-credit basis, etc. taken fall term 2015 or after is transferable. Courses taken prior to fall term 2010 are accepted for transfer credit from non-Ohio regionally accredited institutions for grades of C or better. All transferred credit is posted on the student's Miami record without grade.

A course which is not applicable for general education and/or department requirements will transfer as elective credit but may count in the total credits required for the degree. This does not supersede divisional limits on electives.

Students who have attended U.S. institutions in regional accreditation candidacy status must validate their previous coursework by earning 32 semester credits toward a baccalaureate degree or 16 semester credits toward an associate degree with a 2.00 cumulative average at Miami. The credit for any grade reported as a D- or better will be given upon completion of the 32 or 16 hours. Once an institution achieves regional accreditation, only those credits earned while the institution was in candidacy status and afterwards will be transferable.

All credits earned at two-year institutions can transfer only as introductory or lower division (typically 100 and 200 level) credit, except that a course taken at the lower division level which bears the same title as an upper division course at Miami will be considered equivalent if validated by the division and/or department in which the course has applicability.

Students who earn credit at institutions outside the United States must provide (in addition to their academic records) course descriptions or course syllabi that include a list of required reading for the course, number of class hours required in each course, and the length of the academic term(s) when enrolled. Provide course descriptions or syllabi in the English language at least 1 month before the semester begins, if offered admission. Credit can be transferred only for studies completed at a degree-granting institution that is recognized by that country's Ministry of Education or equivalent

organization. These credits are evaluated by the University Registrar's Office in consultation with the Academic Divisions.

Students who intend to study abroad are expected to consult with the Study Abroad Office in advance of their departure to make certain that the credits earned will transfer to Miami University.

Acceptance of extra-institutional or nontraditional credit, such as credit by examination, correspondence credit, and armed forces credit, is limited to 32 semester hours. Only 20 of the 32 hours may be in correspondence.

You can receive credit for courses sponsored by the Defense Activity for Non-Traditional Educational Support (DANTES) program that are college level and completed with satisfactory final examinations. Credit earned through non-collegiate sponsored instruction, evaluated by the American Council on Education (ACE) (listed in the *National Guide*), will be accepted for transfer. The appropriate academic department may evaluate the course for Miami equivalent credit.

Whenever possible, transfer credits are assigned corresponding Miami course numbers. The appropriate Miami department determines where credit applies. Courses that do not fulfill the Miami Plan for Liberal Education, divisional requirements, or major requirements transfer as electives.

## Quarter-Semester Conversion

A quarter hour is two-thirds (0.6667) of a semester hour. To convert to semester hours, multiply the quarter hours by 0.6667. To convert semester to quarter hours, multiply by 1.50.

## Armed Forces Credit

Credit for courses taken at U.S. military services schools will be given on the basis of the (ACE) American Council on Education publication, "*Guide to the Evaluation of Educational Experience in the Armed Services*". To receive transfer credit, you must submit a Joint Services transcript. Students entering the university fall 2012 or after will also be awarded for military training and experience. Also, see "Credit Evaluations" earlier in this section.

Recipients of VA education benefits should note that sprint courses are not considered full semester courses for VA entitlement (pay) purposes.

## Nursing Credit

Graduates of diploma and non-NLNAC accredited associate's degree programs are required to complete 32 Miami hours and pass NSG 301, NSG 311, and NSG 313 before their 28 hours of transfer credit will be validated. Graduates of accredited associate's degree programs can transfer 28 semester hours of nursing from a regionally accredited two year college. Additional transfer hours may be used as elective credit.

If you are a registered nurse with credits from a college nursing program, your credits are evaluated on the same basis as other transfer students' credits, described earlier.

See the College of Professional Studies and Applied Sciences chapter for information about degrees in nursing.

## **Applying a Transfer Course to the Global Miami Plan**

If you believe a course taken at another university or college satisfies the spirit of the Global Miami Plan for Liberal Education requirement, but does not correspond to a specific course, you may petition the Liberal Education Council to apply the course toward the Global Miami Plan. Obtain a petition from the Office of Liberal Education or its website ([www.MiamiOH.edu/liberal-ed](http://www.MiamiOH.edu/liberal-ed)), request the chair of the appropriate Miami department to evaluate your transfer course, and then present the petition to the Office of Liberal Education. A syllabus of the course must be attached to the petition.

Capstones are designed to culminate your baccalaureate study and are rarely taken off-campus or transferred from another institution. Students who plan to transfer any course to meet the Capstone requirement must obtain permission from the Office of Liberal Education before they take the course.

If the English composition requirement (Foundation I) was waived for you by another school, Miami's English department will evaluate your eligibility for a similar waiver. In most cases, students are asked to submit a portfolio of their writing. Contact the English department for detailed instructions on preparing your portfolio. The department will notify the University Registrar and the Office of Liberal Education of its decision. No petition is required for this procedure.

# Liberal Education at Miami

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Office of Liberal Education  
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www.MiamiOH.edu/liberal-ed

## Global Miami Plan for Liberal Education

Miami University was founded on the belief that a liberal education provides the best possible framework for life in a changing world. At Miami, liberal education complements specialized studies in the major. It is designed to help students understand and creatively transform human culture and society by giving students the tools to ask questions, examine assumptions, exchange views with others, and become better global citizens.

Toward that end, from 2012-2014, the university devoted considerable energy and time to revising its Global Miami Plan requirements. Key goals of the revision were to:

- Advance 21st century learning outcomes (based on employer studies);
- Enable greater flexibility in degree options and ease advisement; and
- Include a meaningful and efficient assessment plan so that we can ensure we are reaching our goals.

**All** Miami undergraduate students who enter in fall 2015 and thereafter will be required to complete the GMP requirements.

Grounded in the "Liberal Education & America's Promise (LEAP)" framework developed by the Association of American Colleges & Universities (AAC&U), the newly revised Global Miami Plan is comprehensive, spanning all four years of a student's undergraduate education and involving:

- foundation courses that focus on the humanities, arts, natural science, mathematics & quantitative reasoning, composition, and global perspectives;
- a thematic sequence (or a series of courses which include some upper-level ones) focused on a topic of study;
- an advanced writing course, an intercultural perspectives course, and an experiential learning requirement; and
- a culminating capstone experience that includes a student-led project.

The signature feature of the revised Global Miami Plan is its emphasis on critical thinking and written communication, which are embedded in all components of the plan. Critical thinking is defined as the habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion. Written communication is the development and expression of ideas in writing in many genres and styles.

The Global Miami Plan also advances other learning objectives and competencies such as:

- Civic Knowledge & Engagement
- Creative Thinking
- Ethical Reasoning
- Global Learning
- Intercultural Knowledge & Competence
- Integrative Learning
- Information Literacy
- Inquiry and Analysis
- Lifelong Learning
- Oral Communication
- Problem-Solving
- Teamwork
- Quantitative Literacy

## Requirements of the Global Miami Plan

**All** students must complete liberal education requirements as well as courses in the major. The Global Miami Plan has six parts: Foundation Courses, a Thematic Sequence, Advanced Writing, Intercultural Perspectives, Experiential Learning and a Capstone Course.

The **Foundation (MPF)** requirement is met by taking a minimum of 27 semester hours of Foundation courses across five specific areas:

- I. English Composition (3 hours)
- II. Creative Arts, Humanities, Social Science (9 hours)
  - A. Creative Arts (3 hours)
  - B. Humanities (3 hours)
  - C. Social Science (3 hours)
- III. Global Perspectives (6 hours)
  - A. Study Abroad (6 hours fulfills requirement), or
  - B. Global Courses (6 hours)
- IV. Natural Science (6 hours, must include one laboratory course)
  - A. Biological Science (3 hours minimum)
  - B. Physical Science (3 hours minimum)
- V. Mathematics, Formal Reasoning, Technology (3 hours)

The **Thematic Sequence (MPT)** requirement is met by completing related courses (at least nine hours) in an approved Thematic Sequence outside the student's department of major. This requirement can also be fulfilled by a second major or a minor outside the student's department of major.

The **Advanced Writing Course** requirement is fulfilled by completing three hours in an approved advanced writing course or a series of courses per department requirements. These courses are typically at the 200-300 level and focus on writing instruction.

The **Experiential Learning Requirement** carries no specific credit hour minimum and can be fulfilled by coursework, service learning, independent study, internships, student teaching, performance or portfolio projects.

The **Intercultural Perspectives Requirement** is fulfilled by completing three hours in an approved Intercultural Perspectives course.

The **Capstone Course (MPC)** requirement is met by completing three hours in an approved Capstone course during a student's senior year.

## Extended Study and Service-Learning in Global Miami Plan Courses

Students may gain an extra credit hour in any Foundation course, Thematic Sequence course, or Capstone for extended academic work and/or Service-Learning activities directly connected to the content and objectives of these courses. Students are responsible for initiating the extra-hour proposals. Instructors will determine whether the proposed work represents an extra credit hour and if their teaching schedules and related professional activities will permit them to sponsor and monitor these projects. The maximum number of hours of extended study or Service-Learning that can be applied to graduation is four; students may propose and enroll in such courses no more than once each semester.

Extended study and/or Plus One Option forms, which must be completed by students and endorsed by sponsoring instructors and department chairs, are available from the Office of Community Engagement and Service. For more information, consult the Office of Liberal Education, the Office of Community Engagement and Service or [www.MiamiOH.edu/servicelearning](http://www.MiamiOH.edu/servicelearning).

## Foundation Courses

### Course Descriptions and Abbreviations

Foundation courses are listed below according to the area they satisfy (English composition; fine arts, humanities; etc.). Some Foundation courses will appear in two or more Foundation areas. For example, ARC 188 is classified as a course in the fine arts as well as one in the humanities; it appears, then, in Foundation IIA (fine arts) and Foundation IIB (humanities). Students who take such courses may use them to fulfill **one** Foundation area requirement only.

**I, II, III, IV, V:** (Refers to Foundation courses outline.) Course fulfills a part of one of the five major Foundation area requirements (for example, I. English Composition).

**A, B, or C:** (Refers to Foundation courses outline.) Course fulfills a part of a sub-area of one of the Foundation requirements (for example: IIA. Fine Arts; IIB. Humanities; IIC. Social Science).

**LAB:** (all uppercase letters): Fulfills the laboratory course requirement for the Global Miami Plan.

**Note:** Other abbreviations and terms are explained in the Registering for Courses and Courses of Instruction chapters.

## Foundation Courses

### Foundation I. English Composition (3 hours minimum)

Code	Title	Credit Hours
ENG 109	Composition and Rhetoric for Second-Language Writers	4
ENG 111	Composition and Rhetoric	3

## Foundation II. Creative Arts, Humanities, Social Science (9 semester hours)

### IIA. Creative Arts (3 hours minimum)

Code	Title	Credit Hours
ARC 107	Global Design	3
ARC 188	Ideas in Architecture	3
ARC 221	History of Architecture I	3
ARC 222	History of Architecture II	3
ART 162	Arts of Africa, Oceania and Native America	3
ART 181	Concepts in Art	3
ART/AMS 183	Images of America	3
ART 187	History of Western Art: Prehistoric-Gothic	3
ART 188	History of Western Art: Renaissance - Modern	3
ART 189	History of Western Dress	3
ART 195	Introduction to Art Education	3
ART 233	Global Perspectives on Dress	3
ART 256	Design, Perception & Audience	3
ART/BWS 276	Introduction to the Art of the Black Diaspora	3
ART 283	Modern America	3
ART 286	History of Asian Art, China, Korea, and Japan	3
CCA 111	Innovation, Creativity and Design Thinking	3
CCA 121	Introduction to the Integrated Arts and Culture	3
MUS/AMS 135	Understanding Jazz, Its History and Context	3
MUS 182	Discovering Italian Opera	3
MUS 184	Opera: Passport to the Liberal Arts	3
MUS 185	The Diverse Worlds of Music	3
MUS 186	Global Popular Music	3
MUS 189	Great Ideas in Western Music	3
MUS 206	Tracking Sounds: A History of Film Music	3
MUS 211	History of Western Music	3
MUS/IMS 221	Music Technologies	3
MUS 225	And the Beat Goes On. . . The History of Rock and Roll	3
MUS 285	Introduction to African American Music	3
MUS 287	Enter the Diva: Women in Music	3
POR/BWS/FST/LAS/MUS 204	Brazilian Culture Through Music and Film	3
THE 101	Introduction to Theatre: Drama and Analysis <sup>1</sup>	3
THE 123	Acting for the Non-Major: Text and Performance	3
THE 191	Experiencing Theatre	3
THE 257	Stagecraft and Theatre Technologies	3

**IIB. Humanities (3 hours minimum)**

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
AAA 201	Introduction to Asian/ Asian American Studies	3
AAA/REL 203	Global Religions of India	3
AMS 205	Introduction to American Cultures	3
AMS 207	America: Global and Intercultural Perspectives	3
AMS/AAA/ENG 248	Asian American Literature	3
ARC 188	Ideas in Architecture	3
ARC 221	History of Architecture I	3
ARC 222	History of Architecture II	3
ART/AMS 183	Images of America	3
ART 187	History of Western Art: Prehistoric-Gothic	3
ART 188	History of Western Art: Renaissance - Modern	3
ART 189	History of Western Dress	3
ART 283	Modern America	3
ART 286	History of Asian Art, China, Korea, and Japan	3
ATH 235	Imagining and Encountering the Anthropological Other	3
CHI 251	Traditional Chinese Literature in English Translation	3
CHI 252	Modern Chinese Literature in English Translation	3
CHI/JPN 255	Drama in China and Japan in Translation	3
CHI 257	Chinese Satire	3
CIT/CSE 262	Technology, Ethics, and Global Society	3
CLS 101	Greek Civilization in its Mediterranean Context	3
CLS 102	Roman Civilization	3
CLS 121	Introduction to Classical Mythology	3
EDL 204	Sociocultural Studies in Education	3
ENG 122	Popular Literature	3
ENG 123	Introduction to Poetry	3
ENG 124	Introduction to Fiction	3
ENG 125	Introduction to Drama	3
ENG 129	Books You Need To Read	3
ENG 134	Introduction to Shakespeare	3
ENG 163	Literature and Travel	3
ENG/IMS 171	Humanities and Technology	3
ENG 202	Varieties of English: Dialect Diversity and Language Change	3
ENG/FST 220	Literature and Film	3
ENG/FST 221	Shakespeare and Film	3
ENG 237	GLBTQ Literature	3
ENG/IMS 238	Narrative and Digital Technology	3
ENG 251	Introduction to European Literature	3
ENG/LAS 254	Latino/a Literature and the Americas	3
ENG/RUS 256	Russian Literature in English Translation: From Tolstoy to Nabokov	3
ENG 269	Colonial & Postcolonial Literature	3
ENG 272	English Literature to 1660	3
ENG 273	English Literature 1660-1900	3
ENG 274	English Literature 1901 to Present	3
ENG 275	American Literature to 1900	3
ENG 276	American Literature 1900 to the Present	3
ENG/FST/WGS 356	Women and Gender in Film	3
FRE 131	Masterpieces of French Culture in Translation	3
FRE 202	Critical Analysis of French Culture	3
FST 201	Film History and Analysis	3
FST/IDS 206	Diversity and Culture in American Film	3
GER 151	The German-American Experience	3
GER 231	Folk and Literary Fairy Tales	3
GER 232	The Holocaust in German Literature, History, and Film	3
GER 252	The German-Jewish Experience	3
GER/FST 261	German Film in Global Context	3
GER 321	Cultural Topics in German-Speaking Europe Since 1870	3
GER 322	Comparative Study of Everyday Culture: German-Speaking Europe and the U.S.A.	3
GIC 101	Global and Intercultural Studies	3
HST 111	Survey of American History	3
HST 112	Survey of American History	3
HST 197	World History to 1500	3
HST 198	World History Since 1500	3
HST/BWS 224	Africa to 1884	3
HST/BWS 225	The Making of Modern Africa	3
HST 231	Genocides in the 20th Century	3
HST 245	Making of Modern Europe, 1450-1750	3
HST 254	Introduction to Russian and Eurasian Studies	3
HST/LAS 260	Latin America in the United States	3
HST 296	World History Since 1945	3
IMS 201	Information Studies and Digital Citizenship	3
IMS 203	Applied Digital Humanities	3
IMS 211	Introduction to Game Studies	3
ITL 221	Italy, Matrix of Civilization	3
ITL/AMS/FST 222	Italian American Culture	3
JPN 231	Japanese Tales of the Supernatural in English Translation	3
JRN 101	Introduction to Journalism	3
MAC 143	Introduction to Media	3
MUS/AMS 135	Understanding Jazz, Its History and Context	3
MUS 182	Discovering Italian Opera	3
MUS 184	Opera: Passport to the Liberal Arts	3
MUS 185	The Diverse Worlds of Music	3

MUS 186	Global Popular Music	3	ATH 235	Imagining and Encountering the Anthropological Other	3
MUS 206	Tracking Sounds: A History of Film Music	3	ATH 313	Latin American Archaeology	3
MUS 225	And the Beat Goes On. . . The History of Rock and Roll	3	ATH 405/ATH 505	Food, Taste, and Desire	3
MUS 285	Introduction to African American Music	3	CIT/CSE 262	Technology, Ethics, and Global Society	3
MUS/WGS 287	Enter the Diva: Women in Music	3	CJS 101	Introduction to the Criminal Justice Studies	3
PHL 103	Society and the Individual	3	CJS 451/CJS 551	Comparative Justice Systems	3
PHL 104	Purpose or Chance in the Universe	3	CMR 106	Introduction to Business and the Economy	3
PHL 105	Theories of Human Nature	3	CMR 117	Personal Finance, An Introduction	3
PHL 106	Thought and Culture of India	3	CRE 151	Introduction to Critical Race and Ethnic Studies	3
PHL 131	Introduction to Ethics	3	ECO 131	Economic Perspectives on Inequality in America	3
POR/BWS/FST/LAS/MUS 204	Brazilian Culture Through Music and Film	3	ECO 201	Principles of Microeconomics	3
POR/BWS/ENG/WGS/FST 383	Brazilian Women through Literature and Film	3	ECO 202	Principles of Macroeconomics	3
REL 101	Introduction to the Study of Religion	3	EDL 203	Introduction to Critical Youth Studies	3
REL/BIO 128	Religion, Science, and Origins	3	EDL 232	Introduction to Community-Based Leadership	3
REL/RUS 133	Imagining Russia	3	EDP 101	Psychology Of The Learner	3
REL 275	Introduction to the Critical Study of Biblical Literature	3	EDP 201	Human Development and Learning in Social and Educational Contexts	3
REL 286	Global Jewish Civilization	3	EDP 256	Psychology of the Exceptional Learner	3
REL 314	Social and Religious History of the Jewish People	3	EDP/DST/SOC 272	Introduction to Disability Studies	3
RUS 137	Russian Folklore	3	EDP 279	Technology + Media Literacy and Learning	3
RUS/ENG 255	Russian Literature in English Translation From Pushkin to Dostoevsky	3	ENG/STC 201	Special Topics in Language Awareness	3
RUS/ENG 256	Russian Literature in English Translation: From Tolstoy to Nabokov	3	FSW 142	Exploring Helping Professions	3
RUS 257/ENG 267	Russian Literature in English Translation: From Pasternak to the Present	3	FSW 206	Social Welfare: Impact on Diverse Groups	4
RUS/FST/GER 272	Cinemas and Cultures of Central and Eastern Europe	3	FSW 245	Children and Families: Ages Conception - 12	3
SPN 315	Intro to Hispanic Literatures	3	FSW 261	Diverse Family Systems Across the Life Cycle	3
THE 123	Acting for the Non-Major: Text and Performance	3	GEO 101	Global Forces, Local Diversity	3
WGS 202	Introduction to GLBT Studies	3	GEO 111	World Regional Geography: Patterns and Issues	3
WST 201	Self and Place	3	GEO/SJS 159	Creating Global Peace	3
<b>IIC. Social Science (3 hours minimum)</b>			GEO 201	Geography of Urban Diversity	3
<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>	GEO/ITS/SOC 208	The Rise of Industrialism in East Asia	3
AAA 201	Introduction to Asian/ Asian American Studies	3	GER 322	Comparative Study of Everyday Culture: German-Speaking Europe and the U.S.A.	3
AAA 207	Asia and Globalization	3	GIC 101	Global and Intercultural Studies	3
AAA/PSY 210	Psychology Across Cultures	3	GTY 154	Big Ideas in Aging	3
ATH 145	Lost Cities & Ancient Civilizations	3	IDS 159	Strength Through Cultural Diversity	3
ATH 155	Introduction to Anthropology	3	IDS 259	Introduction to the Miami Tribe of Oklahoma	3
ATH 175	Peoples of the World	3	or HST 259	Introduction to the Miami Tribe of Oklahoma	
ATH 180F	Great Ape Biology and Behavior	3	ITS 201	Introduction to International Studies	3
ATH 185	Cultural Diversity in the U.S.	3	KNH 125	Introduction to Public Health	3
			KNH 188	Physical Activity and Health	3
			KNH 206	AIDS: Etiology, Prevalence, and Prevention	3

KNH 214	Global Well-Being	3
KNH 242	Personal Health	3
KNH 276	Current Issues in Leisure and Sport	3
KNH/BWS/SOC 279	African Americans in Sport	3
LAS 207	Latin America before 1910	3
LAS 208/ATH 206	Introduction to Latin America	3
MGT 111	Introduction to Business	3
POL 142	American Politics and Diversity	3
POL 221	Comparative Politics	3
POL 241	American Political System	3
POL 271	World Politics	3
PSY 111	Introduction to Psychology	3
SJS/SOC 165	Introduction to Social Justice Studies	3
SOC 151	Social Relations	4
SOC 153	Sociology in a Global Context	3
SPA 127	Introduction to Communication Disorders	3
SPA 223	Theories of Language Development	3
SPA/DST 312	Deaf Culture: Global, National and Local Issues	3
STC 136	Introduction to Interpersonal Communication	3
WGS 201	Introduction to Women's Studies	3

## Foundation III. Global Perspectives (6 hours)

### IIIA. Study Abroad (6 hours)

Six hours of Foundation credit from any Miami-approved Study Abroad program.

OR

### IIIB. Global Courses (6 hours minimum)

**G-Courses are specially designed to have a global perspective and help students develop the ability to communicate and act respectfully across linguistic and cultural differences.**

Code	Title	Credit Hours
AAA 201	Introduction to Asian/ Asian American Studies	3
AAA/REL 203	Global Religions of India	3
AAA 207	Asia and Globalization	3
AAA/PSY 210	Psychology Across Cultures	3
AAA/AMS/ENG 248	Asian American Literature	3
AMS 207	America: Global and Intercultural Perspectives	3
ARC 107	Global Design	3
ART 162	Arts of Africa, Oceania and Native America	3
ART/BWS 276	Introduction to the Art of the Black Diaspora	3
ART 335	Arts of West Africa	3

ASO 201	Introduction to Applied Social Research	3
ATH/FST 135	Film as Ethnography	1
ATH 145	Lost Cities & Ancient Civilizations	3
ATH 155	Introduction to Anthropology	3
ATH 175	Peoples of the World	3
ATH 185	Cultural Diversity in the U.S.	3
ATH 307	The Middle East: Anthropological Perspectives	3
or BWS 307	The Middle East: Anthropological Perspectives	
ATH 358	Travelers, Migrants, and Refugees: Transnational Migration and Diasporic Communities	3
ATH 361	Language and Power	3
ATH 390Z	Pokman: Local and Global Cultures	3
ATH 405/ATH 505	Food, Taste, and Desire	3
ATH 426	Field Research	4-6
BWS 156	Introduction to Africa	4
CEC 266	Metal on Metal: Engineering and Globalization in Heavy Metal Music	3
CHI 257	Chinese Satire	3
CIT 448	Global and Strategic Issues in Information Technology	3
CJS 451/CJS 551	Comparative Justice Systems	3
CMR 244	Introduction to Global Business	3
CMR 402	Cross Cultural Leadership Skills	3
EDL/AAA 334	Transnational Youth Cultures	3
EDP 366	Cross-cultural Examination of the United States and China within an Educational Context	3
EDT 202	Global Childhood Education: Diversity, Education & Society	3
EDT 205	Race, Cultural Diversity, and Equity in Education	3
EDT 221	Teaching English Language Learners in PK-12: Culture & Second Language Acquisition	3
EDT 323	Teaching English Language Learners in PK-12: Instructional Theories & Practices	3
EDT 425	Teaching English Language Learners in PK-12: Active Learning & Literacy	3
ENG 108	U.S. Cultures & Composition for Second-Language Writers	4
ENG/LAS 254	Latino/a Literature and the Americas	3
ENG/AAA 269	Colonial & Postcolonial Literature	3
ENG 410	Selected Topics in Linguistics	3
FRE 131	Masterpieces of French Culture in Translation	3
FRE 202	Critical Analysis of French Culture	3
GEO 101	Global Forces, Local Diversity	3
GEO 111	World Regional Geography: Patterns and Issues	3
GEO/SJS 159	Creating Global Peace	3
GEO/ITS/SOC 208	The Rise of Industrialism in East Asia	3

GER 232	The Holocaust in German Literature, History, and Film	3
GER/FST 261	German Film in Global Context	3
GER 322	Comparative Study of Everyday Culture: German-Speaking Europe and the U.S.A.	3
GHS 101	Introduction to Global Health	3
GIC 101	Global and Intercultural Studies	3
GIC 228	Cuba In Transition	6
GTU 260	Global Aging	3
HST 197	World History to 1500	3
HST 198	World History Since 1500	3
HST 231	Genocides in the 20th Century	3
HST 245	Making of Modern Europe, 1450-1750	3
HST/LAS 260	Latin America in the United States	3
HST 296	World History Since 1945	3
IDS 159	Strength Through Cultural Diversity	3
IMS 397	Inside the Startup Environment (SF)	3
ITS 201	Introduction to International Studies	3
KNH 213	Global and Community Nutrition	3
KNH 214	Global Well-Being	3
LAS 208/ATH 206	Introduction to Latin America	3
MUS 185	The Diverse Worlds of Music	3
MUS 186	Global Popular Music	3
MUS/AMS 285	Introduction to African American Music	3
POL 221	Comparative Politics	3
POL 271	World Politics	3
POR/BWS/FST/LAS/MUS 204	Brazilian Culture Through Music and Film	3
POR/BWS/ENG/WGS/FST 383	Brazilian Women through Literature and Film	3
REL/RUS 133	Imagining Russia	3
REL 286	Global Jewish Civilization	3
RUS 137	Russian Folklore	3
RUS 255	Russian Literature in English Translation From Pushkin to Dostoevsky	3
RUS/ENG 256	Russian Literature in English Translation: From Tolstoy to Nabokov	3
RUS 257/ENG 267	Russian Literature in English Translation: From Pasternak to the Present	3
SJS/SOC 487	Globalization, Social Justice and Human Rights	3
SOC 153	Sociology in a Global Context	3
SOC 165	Introduction to Social Justice Studies	3
or SJS 165	Introduction to Social Justice Studies	
SPA/DST 312	Deaf Culture: Global, National and Local Issues	3
SPN 392	Language and the Latin American Diaspora	3
WGS 201	Introduction to Women's Studies	3

## Foundation IV. Natural Science (6 hours, must include one laboratory course)

### IVA. Biological Science (3 hours minimum)

Code	Title	Credit Hours
BIO 101	Biotechnology: Coming of Age in the 21st Century	3
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO 121	Environmental Biology	3
BIO 126	Evolution: Just a theory?	3
BIO 131	Plants, Humanity, and Environment	3
BIO 155	Field Botany	3
BIO 161	Principles of Human Physiology	4
BIO 171	Human Anatomy and Physiology	4
BIO 176	Ecology of North America	3
BIO 181	Medicinal and Therapeutic Plants	3
BIO 191	Plant Biology	4
MBI 111	Microorganisms and Human Disease	3
MBI 121	The Microbial World	3
MBI 123	Experimenting with Microbes	1
MBI 131	Community Health Perspectives	3
MBI 143	Parasitology and Mycology Labs	1
MBI 161	Elementary Medical Microbiology	4

### IVB. Physical Science (3 hours minimum)

Code	Title	Credit Hours
CHM 111	Chemistry in Modern Society	3
CHM 111L	Chemistry in Modern Society Laboratory	1
CHM 121	Introduction to Forensic Chemistry	4
CHM 131	Chemistry of Life Processes	4
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
CHM 141R & CHM 144	College Chemistry and College Chemistry Laboratory	6
CHM 144	College Chemistry Laboratory	2
CHM 144M	College Chemistry Laboratory for Majors	2
EDT 181	Physical Science	4
EDT 182	Physical Science	4
GEO 121	Earth's Physical Environment	4
GEO 122	Geographic Perspectives on the Environment	3
GLG 111	The Dynamic Earth	3
GLG 115L	Understanding the Earth	1
GLG 121	Environmental Geology	3
GLG 141	Geology of U.S. National Parks	3
PHY 101	Physics and Society	3
PHY 103	Concepts in Physics Laboratory	1

PHY 111	Astronomy and Space Physics	3
PHY 118	Introduction to Atmospheric Science	3
PHY 121	Energy and Environment	3
PHY 131	Physics for Music	3
PHY 141	Physics in Sports	3
PHY 161	Physics for the Life Sciences with Laboratory I	4
PHY 162	Physics for the Life Sciences with Laboratory II	4
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5

## Foundation V. Mathematics, Formal Reasoning, Technology (3 hours minimum)

Code	Title	Credit Hours
ARC 212	Principles of Environmental Systems	3
ATH/ENG/GER 219	Introduction to Linguistics	3
CCA 111	Innovation, Creativity and Design Thinking	3
CEC 266	Metal on Metal: Engineering and Globalization in Heavy Metal Music	3
CMR 282	Computer-Based Business Analysis	3
CSE 151	Computers, Computer Science, and Society	3
CSE 163	Introduction to Computer Concepts and Programming	3
CSE 243	Problem Analysis Using Computer Tools	3
IMS 222	Introduction to Interaction Design and Development	3
MTH 115	Mathematics for Teachers of Grades P-6	4
MTH 121	Finite Mathematical Models	3
MTH 151	Calculus I	5
MTH 249	Calculus II	5
MUS/IMS 221	Music Technologies	3
PHL 273	Formal Logic	4
STA 261	Statistics	4
THE 257	Stagecraft and Theatre Technologies	3

## Thematic Sequence

A Thematic Sequence is a series of related courses (usually three) that focuses on a theme or subject in a developmental way. Each course builds or expands upon knowledge or perspective gained from preceding courses, and some sequences prepare students for Capstone experiences. The first course may be a Foundation course and may count as hours in both Foundation and Thematic Sequence requirements. (Should the Thematic Sequence contain more than one Foundation course, only one of those courses can be counted for both requirements.) In interdepartmental Thematic Sequences, students must select those courses that are offered outside their department of major. For example, English majors who enroll in a

Thematic Sequence comprised of English and history courses must sign up for the history courses.

Students who are completing the Global Miami Plan for Liberal Education must complete at least one Thematic Sequence outside the department of their major. Exceptions to this requirement include either students with majors in two different academic departments or students with minors outside their department of major. Students should consult divisional requirements for further restrictions on Thematic Sequences.

Students who wish to meet the Thematic Sequence requirement through a double major or a minor must complete the second major or minor outside their department of major. A student who uses a minor to complete the thematic sequence requirement must have 9 hours in the minor outside the department/program of his/her major, and at least 6 hours of these courses at the 200 level or above.

Typically, you are expected to complete most of your Foundation courses before beginning a Thematic Sequence. To **enroll in a sequence**, contact the department.

The Office of Liberal Education website ([www.MiamiOH.edu/liberal-ed](http://www.MiamiOH.edu/liberal-ed)) provides a current listing of Thematic Sequences. Students may propose their own Thematic Sequences. See the Office of Liberal Education website for details.

## Thematic Sequences (9 hours minimum)

ACC 1 A Language of Accounting  
 ACC 2 Financial Accounting and Reporting  
 AMS 1 Global and Intercultural Perspectives  
 AMS 2 Popular Culture and Intercultural Analysis  
 ART 2 Ceramics Studio  
 ART 4 Sculpture Studio  
 ART 5 Three-Dimensional Art Studio  
 ART 8 Art Education Methods  
 ATH 3 World Cultures  
 ATH 4 World Cultures, Policy, and Ecology  
 ATH 5 World Cultures and Social Relations  
 BIO 1 Conservation and the Environment  
 BIO 2 Molecular Processes: From Cells to Whole Plants  
 BIO 5 Concepts in Physiology  
 BIO 6 Animal Diversity  
 BLS 1 Law and Commerce  
 BUS 1 Miami's Professional Institute for Management Education (PRIME)  
 BWS 1 Africa: Culture/Power/History  
 CCA 1 Experiencing Arts and Culture  
 CCA 2 Principles in Innovation, Creativity, and Design Thinking  
 CHI 1 Developing Language Skills in Chinese  
 CHM 1 Chemistry of Environmental Measurements  
 CHM 2 Chemistry of Life Processes  
 CIT 1 Social and Global Computing  
 CIT 2 Increasing Productivity Through Agile  
 CIT 3 Data Driven Decision Making  
 CJS 1 Race and Criminal Justice  
 CLS 1 Classical Civilization  
 CLS 2 Classical Literature  
 CLS 4 The Classical World: Identify and Experience  
 CMR 1 Perspective in Sales and Customer Service  
 CMR 2 Organizational Leadership

CSE 2 Computer Systems  
 CSE 4 Website and Game Technology  
 DST 1 Disability Studies  
 ECO 2 Markets, Institutions, and the Role of Government  
 EDL 2 Critical Youth Studies  
 EDP 1 Cultural Patterns in Education and the Law Affecting Persons with Disability  
 EDP 2 Educational Technology and Instructional Design  
 EDP 3 Technology and Learning  
 EDP 4 Learning Research and Assessment  
 EDT 1 Exploring STEM in Society  
 EDT 2 Teaching English as a Foreign Language Abroad (TEFLA)  
 EGS 1 Writing for Diverse Contexts  
 ENG 2 Women and Literature  
 ENG 3 American Life and Culture Since World War II  
 ENG 4 Film in Popular Culture  
 ENG 5 Language and Literacy  
 ENG 8 African American History and Literature  
 ESP 1 Entrepreneurship in Different Contexts  
 FRE 3 European Cinema  
 FSW 3 Families and Sexuality Across the Life Course  
 FSW 4 Children in Families  
 FSW 6 Social Inequality and Social Welfare for Diverse Families and Groups  
 GEO 1 Urban Geography  
 GEO 2 Earth's Physical Environment: Geographic Patterns and Processes  
 GEO 3 Geographic Change  
 GEO 4 Global Forces in Regional Contexts  
 GEO 5 Geospatial Techniques  
 GER 3 Developing Language Skills in German  
 GLG 1 Oceanography  
 GLG 2 The Water Planet  
 GLG 3 Geohazards and Plate Tectonics  
 GTY 2 Aging in Diverse Contexts  
 GTY 3 Health and Aging  
 GTY 4 Aging and Policy  
 HST 3 Russian, East European and Eurasian Studies  
 ISA 2 Applied Business Statistics  
 ITL 1 Italy in the Renaissance  
 JPN 1 Developing Language Skills in Japanese  
 JRN 1 Journalism and American Life  
 JRN 2 Reporting Your World  
 LAS 3 Latino Studies: Cultures and Histories of Latinos in the United States  
 LED 1 Urban Culture and Service-Learning  
 MBI 1 Biomedical Science  
 MGT 1 Dynamics of Human Behavior in Organizations  
 MTH 1 Axioms, Theorems, and Proof in Geometry and Algebra  
 MTH 2 Basic Mathematical Tools for Science  
 MTH 3 Almost Linear Structures: Models for Physical Science  
 NSC 1 Naval Science: History of Warfare  
 NSC 2 Naval Science: War-An Extension of Politics  
 PHL 1 Ethics  
 PHL 4 Metaphysics and Epistemology  
 PHL 5 Reasoning  
 PHY 1 The Physical World: Contemporary Physics  
 PHY 2 Your Place in the Universe  
 POL 3 National Political Institutions  
 POL 6 Public Management and Leadership  
 PSY 1 Perspectives on Psychopathology  
 PSY 2 Patterns in Human Development

PSY 5 Cognition: Understanding and Improving Thought  
 PSY 6 Applied Leadership and Pedagogy  
 REL 1 Religion and American Life  
 REL 2 Historical and Comparative Study of Religion  
 SDT 1 Self-Designed Thematic Sequence  
 SJS 1 Social Justice and Inequalities  
 SJS 2 Social Justice, Law and Crime  
 SOC 3 Sociological Perspectives on Inequality  
 SOC 4 Sociological Perspectives on Criminality and Deviance  
 SOC 5 Gender and Family Issues  
 SOC 6 Medical Sociology  
 SPA 2 Exploring Social, Emotional, and Communication Consequences in Special Populations  
 SPN 1 Literature and Culture in Spain  
 SPN 2 Literature and Culture in Spanish America  
 STA 1 Quality Issues in Contemporary Business and Industry  
 STA 2 Applied Statistics  
 THE 1 Modern Theatre and Drama  
 THE 3 Theatre Design and Technology  
 WGS 1 Gender in Global Context  
 WGS 2 Scholarly Studies of Gender and Sexuality

## Thematic Sequences Available at Dolibois European Campus in Luxembourg

For information, contact the Oxford campus coordinator, 513-529-5050.

**LUX 3 European Culture and Society** (Offered during the semester programs and summer workshop)

## Descriptions of Thematic Sequences

### ACC 1 A Language of Accounting

Develops in non-business majors an ability to read and understand general-purpose external financial statements and internal managerial accounting reports for businesses and not-for-profit organizations. As such financial data are widely disseminated across all contexts in our society, a knowledge of the language of accounting is useful in a professional career and personal life. The focus is on using and interpreting, rather than preparing, financial statements and internal accounting reports.

Code	Title	Credit Hours
ACC 221	Introduction to Financial Accounting	3
ACC 222	Introduction to Managerial Accounting	3
ACC 468/ACC 568	Accounting for Governmental and Not-for-Profit Organizations	3
Total Credit Hours		9

**Note:** Not open to business majors.

### ACC 2 Financial Accounting and Reporting

Develops in business majors as well as non-business majors an ability to read and understand general-purpose financial statements of businesses, ranging from large publicly traded corporations to small privately held companies. As such financial information is widely disseminated, an understanding of financial statements is useful in a professional career and personal life. The sequence progresses

from an introductory level, which focuses on using and interpreting financial statements, through intermediate and advanced levels, which examine the impact of more complex transactions and events on financial statements.

Code	Title	Credit Hours
ACC 221	Introduction to Financial Accounting	3
ACC 321	Intermediate Financial Accounting	3
ACC 422/ACC 522	Financial Accounting Research	3
Total Credit Hours		9

**Note:** Not open to business majors.

## AMS 1 Global and Intercultural Perspectives

Students in AMS 1 explore Global and Intercultural Perspectives in theoretical, practical, and experiential ways. This thematic sequence progresses from an introduction to globalization and American culture in AMS207, to an in depth exploration of immigration in AMS302, to an experiential class (AMS301) that requires students to apply critical self-awareness and intercultural understanding to concrete projects related to civic engagement and social stewardship in a global context.

Code	Title	Credit Hours
AMS 207	America: Global and Intercultural Perspectives	3
AMS 301	American Identities	3
AMS 302	Immigrant America	3
Total Credit Hours		9

## AMS 2 Popular Culture and Intercultural Analysis

Students in AMS 2 analysis popular culture from an intercultural perspective. In AMS206, students are introduced to AMS methods including close reading, putting texts in context, and interdisciplinary research. In AMS303 students focus on understanding American consumer culture from an interdisciplinary perspective. AMS305 analyzes American icons (historical and current) in a global context. This thematic sequence emphasizes critical thinking, writing, information literacy, and cultural analysis.

Code	Title	Credit Hours
AMS 206	Approaches to American Culture	3
AMS 303	Consumer Culture	3
AMS 305	American Icons	3
Total Credit Hours		9

## ART 2 Ceramics Studio

Explores and develops concepts, techniques, materials, methods, and critical aesthetic thinking as applied to the process of making utilitarian or sculptural ceramics. Ceramics as a nonverbal visual language is taught through research, production, viewing, interaction, and verbal critique with a focus on further development toward a significant personal expression at the 300 level.

Code	Title	Credit Hours
ART 261	Ceramics I	3
ART 361	Ceramics II	3
ART 362	Ceramics III	3
Total Credit Hours		9

**Note:** Not open to majors in the Department of Art.

## ART 4 Sculpture Studio

Explores concepts and develops critical aesthetic thinking, methods, techniques, and materials as applied to the process of making sculpture. Sculpture, as a visual language, is taught through viewing, research, interaction, production, and verbal critique with focus on further development toward significant personal expression at the 300 level.

Code	Title	Credit Hours
ART 271	Sculpture I	3
ART 371	Sculpture II	3
ART 372	Sculpture III	3
Total Credit Hours		9

**Note:** Not open to majors in the Department of Art.

## ART 5 Three-Dimensional Art Studio

Explores and develops concepts, techniques, materials, methods, and critical aesthetic thinking as applied to the process of making three-dimensional objects. Three-dimensional art as a nonverbal language is taught through research, production, viewing, interaction, and verbal critique with a focus on further development toward a significant personal expression. Begins with the departmental core course then provides a broad experience of working in three disciplines: metals, ceramics, and sculpture.

Courses may be taken in any order:

Code	Title	Credit Hours
ART 261	Ceramics I	3
ART 264	Jewelry Design and Metals I	3
ART 271	Sculpture I	3
Total Credit Hours		9

**Note:** Not open to majors in the Department of Art.

## ART 8 Art Education Methods

This sequence allows students to explore how visual art can and should be infused into other disciplinary areas and how other disciplines add to the depth and content of visual art. Focus is given to various settings for art education, including PK-12, community-based and art museums. Students will progressively grow in their knowledge and appreciation for how PK-12 students learn art from a young age and how pedagogical and environmental methodologies and issues affect learning. The sequence assumes no prior knowledge of art education and welcomes anyone interested in learning more about the visual arts in a PK-12 grade educative, community-based or art museum setting.

Code	Title	Credit Hours
ART 195	Introduction to Art Education	3
Select two of the following:		6
ART 295	Elementary Art Methods	
ART 296	Secondary Art Methods	
ART 395	Art Across the Curriculum	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Art.

### ATH 3 World Cultures

Provides an appreciation of human cultural diversity and how anthropologists interpret that diversity in marriage and family patterns, political and economic organizations, and symbol systems. Acquaints you with various perspectives anthropologists use to understand human cultural variability. The final course allows you to pursue cultural diversity in one of the world's major culture areas or in the relations between culture and one specific aspect of life for all people, such as personality, environment, or cognition.

Code	Title	Credit Hours
Select one of the following:		3
ATH 145	Lost Cities & Ancient Civilizations	
ATH 175	Peoples of the World	
ATH 185	Cultural Diversity in the U.S.	
Select the following:		4
ATH 231	Foundations of Cultural Anthropology	4
Select one of the following:		3-4
ATH 302	Africa: Anthropological Perspectives	
ATH 304	Native North America: Anthropological Perspectives	
ATH 305	Latin America: Anthropological Perspectives	
ATH 306	Russia and Eurasia: Anthropological Perspectives	
ATH 307	The Middle East: Anthropological Perspectives	
ATH 308	South Asia: Anthropological Perspectives	
ATH/BWS/LAS/WGS 325	Identity, Race, Gender, Class	
ATH 331	Social Anthropology	
ATH 335L	Multiculturalism in Europe: Anthropological Perspectives	
ATH 348	Introduction to Medical Anthropology	
ATH 358	Travelers, Migrants, and Refugees: Transnational Migration and Diasporic Communities	
ATH 361	Language and Power	
ATH 366	African Oral Traditions	
ATH 368	Key Questions in Psychological Anthropology	
ATH 378	Doctors, Clinics, and Epidemics	
ATH 384	Anthropology of Capitalism: Russia	

ATH 388	Culture, Art, and Artifacts	
ATH 405/ ATH 505	Food, Taste, and Desire	
ATH 428	Anthropology of Women's Health	
ATH 471/ ATH 571	Ecological Anthropology	
Total Credit Hours		10-11

**Note:** Not open to majors in the Anthropology Department.

### ATH 4 World Cultures, Policy, and Ecology

Provides an appreciation of human cultural diversity and envelops anthropological approaches to understanding diversity in political, economic and environmental organization and practice.

Code	Title	Credit Hours
Select one of the following:		3
ATH 145	Lost Cities & Ancient Civilizations	
ATH 155	Introduction to Anthropology	
ATH 175	Peoples of the World	
ATH 185	Cultural Diversity in the U.S.	
Select one of the following courses on a World Area:		3-4
ATH 302	Africa: Anthropological Perspectives	
ATH 304	Native North America: Anthropological Perspectives	
ATH 305	Latin America: Anthropological Perspectives	
ATH 306	Russia and Eurasia: Anthropological Perspectives	
ATH 307	The Middle East: Anthropological Perspectives	
ATH 308	South Asia: Anthropological Perspectives	
ATH 329	Religions of Africa	
ATH 364	Language and Culture in Native North America	
ATH 366	African Oral Traditions	
Select one of the following courses on anthropological topics in world cultures:		3
ATH 411	Applied Anthropology	
ATH 431/ ATH 531	Archaeology of Power	
ATH 471/ ATH 571	Ecological Anthropology	
Total Credit Hours		9-10

**Note:** Not open to majors in the Anthropology Department.

### ATH 5 World Cultures and Social Relations

Provides an appreciation of human cultural diversity and develops anthropological approaches to understanding diversity in social and economic organization, marriage and family patterns, and other facets and forums for social relations.

Code	Title	Credit Hours
Select one of the following:		3
ATH 145	Lost Cities & Ancient Civilizations	
ATH 175	Peoples of the World	
ATH 185	Cultural Diversity in the U.S.	
Select one of the following courses on a World Area:		3-4
ATH 302	Africa: Anthropological Perspectives	
ATH 304	Native North America: Anthropological Perspectives	
ATH 305	Latin America: Anthropological Perspectives	
ATH 306	Russia and Eurasia: Anthropological Perspectives	
ATH 307	The Middle East: Anthropological Perspectives	
ATH 308	South Asia: Anthropological Perspectives	
ATH 329	Religions of Africa	
ATH 335L	Multiculturalism in Europe: Anthropological Perspectives	
ATH 364	Language and Culture in Native North America	
ATH 366	African Oral Traditions	
Select one of the following courses on anthropological topics in world cultures:		3
ATH/ITS 301	Intercultural Relations	
ATH/BWS/LAS/WGS 325	Identity, Race, Gender, Class	
ATH 331	Social Anthropology	
ATH 348	Introduction to Medical Anthropology	
ATH 358	Travelers, Migrants, and Refugees: Transnational Migration and Diasporic Communities	
ATH 361	Language and Power	
ATH 368	Key Questions in Psychological Anthropology	
ATH 384	Anthropology of Capitalism: Russia	
ATH 388	Culture, Art, and Artifacts	
ATH 403/ATH 503	Anthropology of Religion	
ATH 405/ATH 505	Food, Taste, and Desire	
ATH 428	Anthropology of Women's Health	
Total Credit Hours		9-10

**Note:** Not open to majors in the Anthropology Department.

## BIO 1 Conservation and the Environment

Focuses on the challenge of reconciling increasing demands on resources with limitations on resource availability, and explores conservation as it pertains to the environment from a biological and social science perspective, including a historical overview. The first course, chosen from three options, is also a Foundation course in the biological science area. The second course integrates ecological, socioeconomic, and policy perspectives on the use and management

of natural resources. The third course focuses on applied problem solving.

Code	Title	Credit Hours
Select one of the following:		3
BIO 131	Plants, Humanity, and Environment	
BIO 121	Environmental Biology	
BIO 176	Ecology of North America	
Select the following:		
GEO 271	Human Dimensions of Natural Resource Conservation	3
IES 431/IES 531	Principles and Applications of Environmental Science	3
Total Credit Hours		9

**Note:** Not open to majors in the Departments of Geography or Biology.

## BIO 2 Molecular Processes: From Cells to Whole Plants

A contemporary consideration of how plants work mechanistically. Combines molecular and subcellular structure and function with physical and chemical measurements of underlying genetic and physiological controls. Deals with establishment, replication, maintenance, coordination, and adaptive responses of plants at organizational levels ranging from molecules to whole plants.

Code	Title	Credit Hours
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
or BIO 191	Plant Biology	
BIO 203	Introduction to Cell Biology	3
BIO 342	Genetics	3-4
or BIO 425/BIO 525	Environmental Plant Physiology	
Total Credit Hours		10-11

**Note:** Not open to majors in the Department of Biology.

## BIO 5 Concepts in Physiology

Provides an understanding of cellular and molecular mechanisms involved in physiological systems. Begins with a Foundation course then provides more depth to cellular and molecular mechanisms of action in physiological processes.

Code	Title	Credit Hours
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO 203	Introduction to Cell Biology	3
BIO 305	Human Physiology	4
Total Credit Hours		11

**Note:** Not open to majors in the Department of Biology.

## BIO 6 Animal Diversity

Illustrates the diversity of organisms within the Kingdom Animalia. This diversity includes variation in body structure and function, life history traits, and ecological roles. Upon completion, students will be able to describe major patterns in variation among animal taxa, understand mechanisms that lead to creation of such variation, and provide detailed examples of animal diversity.

Code	Title	Credit Hours
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO 209 or BIO 206	Fundamentals of Ecology Evolutionary Biology	3
BIO 311 or BIO 312	Vertebrate Zoology Invertebrate Zoology	4
Total Credit Hours		11

**Note:** Not open to majors in the Department of Biology.

## BLS 1 Law and Commerce

Examines legal theory, history, and institutions as they relate to American culture, society and business. Focuses on why and how "American law" developed, how and why it is applied, how and why the law is evolving, and how and why it impacts commerce. Applies legal principles to analyze, identify and solve legal problems arising in common business activity. Emphasizes in-depth study of legal rules, rationale, and application in substantive areas of law and commerce. Acquaints potential law students with legal thinking and application in substantive areas of law and commerce. Acquaints potential law students with legal thinking and concepts.

Code	Title	Credit Hours
BLS 342	Legal Environment of Business	3
BLS 442	Business Associations & Communal Law	3
Select one of the following:		3
ECO 385	Government and Business	
BLS 443	Property Law	
BLS 462	Estates, Wills & Trusts	
BLS 464	International Business Law	
MGT 402/ MGT 502	Employment Law	
POL 437	Cyberlaw	
Total Credit Hours		9

**Note:** Not open to majors in business.

## BUS 1 Miami's Professional Institute for Management Education (PRIME)

Students will acquire a basic understanding of how businesses and people work together, providing synergy with the student's chosen major. Four-week program is designed to help talented non-business students develop a clear advantage in the competitive job market. The sequence assumes that you have no prior knowledge of

business topics and is intended to make business learning interesting, accessible, and valuable to students in all majors.

**Prerequisite:** Students must have 60 hours of college credit and permission of the instructor.

Code	Title	Credit Hours
BUS 301	Basics of Business I	3
BUS 302	Basics of Business II	3
BUS 303	Business Process Integration	3
Total Credit Hours		9

**Note:** Not open to students with majors or minors in business or commerce.

## BWS 1 Africa: Culture/Power/History

Provides a multidisciplinary, global introduction to Africa that emphasizes cultural and economic production, social life, political diversity, and rich history. Students will critically reevaluate dominant representations but focus on how various Africans experience and represent culture, power, and history. Students will deepen their understanding of local, regional, and global processes that have shaped the world's second largest continent, past and present. Will help students hone intercultural skills for active, ethical, and productive participation in a global economy.

Code	Title	Credit Hours
Required course		
BWS 156	Introduction to Africa	4
Select two of the following: (at least one must be at the 300-level)		6
ATH 366	African Oral Traditions	
ATH 302	Africa: Anthropological Perspectives	
ATH 329	Religions of Africa	
BWS 224	Africa to 1884	
POL 338	Contemporary African Politics	
Total Credit Hours		10

**Note:** Not open to Critical Race and Ethnic Studies majors.

## CCA 1 Experiencing Arts and Culture

Students will travel domestically or abroad to a particular urban location(s) (e.g. New York, Paris, Milan, Prague, etc.) for an immersive thematic sequence focused on the global importance and impact of the integrated creative arts (e.g.: architecture, interior design, theatre, studio arts, graphic design, music, etc.). This intensive, experiential program will help a student from any major develop a general knowledge of cultural history, and an understanding of the theories and application of various forms of the creative arts. This sequence assumes no prior knowledge and is intended to make the creative arts interesting, accessible, and valuable for all majors. There are no prerequisites, but students need to have completed 30 hours, or have permission of the instructor. This will ensure that the sequence builds on the foundational liberal education knowledge gained in the first year. Instruction will be provided by a multi-disciplinary team of faculty from the College of Creative Arts.

Code	Title	Credit Hours
CCA 121	Introduction to the Integrated Arts and Culture	3
CCA 221	Immersion in the Integrated Arts and Culture	3
CCA 321	Application in the Integrated Arts and Culture	3
or ART 256	Design, Perception & Audience	
Total Credit Hours		9

## CCA 2 Principles in Innovation, Creativity, and Design Thinking

Sponsored by the Miami Design Collaborative, a multi-disciplinary network that brings together faculty and students from throughout Miami to study and practice principles in innovation and design process, this sequence: provides multi-disciplinary learning opportunities where students can experience different problem-solving orientations inherent in various disciplinary perspectives; offers learning opportunities focused on contemporary issues; fuses design thinking processes inherent in art, psychology, entrepreneurship, and interactive media; and balances theory and practice, allowing students to implement their ideas through project-based learning.

Code	Title	Credit Hours
CCA 111	Innovation, Creativity and Design Thinking <sup>1</sup>	3
Select one of the following:		3
ART 256	Design, Perception & Audience <sup>1</sup>	
PSY 271	Survey of Perception, Action, and Cognition	
Select one of the following:		3-4
ESP 331	Social Entrepreneurship	
ESP 341	Corporate Entrepreneurship	
Total Credit Hours		9-10

<sup>1</sup> Only one Foundation (MPF) course can count toward both a Foundation requirement and a Thematic Sequence.

## CHI 1 Developing Language Skills in Chinese

For students who have completed the first two semesters of college-level Chinese language or the equivalent. This sequence develops speaking, listening, reading and writing ability using a variety of materials drawn from textbooks as well as multimedia. The courses are characterized by small sections and in-class and out-of-class interaction. Courses may not be taken credit/no credit and must be taken in order.

Code	Title	Credit Hours
CHI 201	Second Year Chinese	3
CHI 202	Second Year Chinese	3
CHI 301	Third Year Chinese	3
Total Credit Hours		9

## CHM 1 Chemistry of Environmental Measurements

Enhances theoretical knowledge toward understanding environmental chemical issues and provides a foundation for learning followed by systematic investigation of advanced concepts in chemistry. Allows accomplished students to take alternative courses.

Code	Title	Credit Hours
Select one of the following:		5-6
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	
CHM 142M & CHM 145M	College Chemistry for Majors and College Chemistry Laboratory	
Select one of the following:		4-6
CHM 231	Fundamentals of Organic Chemistry	
CHM 241 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	
CHM 251 & CHM 254	Organic Chemistry for Chemistry Majors and Organic Chemistry Laboratory for Chemistry Majors	
Select the following:		
CHM 363 & CHM 364	Analytical Chemistry and Analytical Chemistry Laboratory	5
Total Credit Hours		14-17

**Note:** Not open to majors in the Department of Chemistry and Biochemistry.

## CHM 2 Chemistry of Life Processes

Enhances theoretical knowledge toward understanding biochemistry and provides a foundation for learning followed by the systematic investigation of advanced concepts in chemistry. Allows accomplished students to take alternative courses.

**Prerequisite:** CHM 141, CHM 144 (Foundation courses); alternative courses require additional prerequisites.

Code	Title	Credit Hours
Select one of the following:		5
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	
CHM 142M & CHM 145M	College Chemistry for Majors and College Chemistry Laboratory	
Quantitative Analysis		
Select one of the following:		4-5
CHM 231	Fundamentals of Organic Chemistry	
CHM 241 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	
CHM 251 & CHM 254	Organic Chemistry for Chemistry Majors and Organic Chemistry Laboratory for Chemistry Majors	
Select one of the following:		3-4
CHM 332	Outlines of Biochemistry	

CHM 432/ CHM 532	Fundamentals of Biochemistry	
Total Credit Hours		12-14

**Note:** Not open to majors in the Department of Chemistry and Biochemistry.

## CIT 1 Social and Global Computing

Technology has a pervasive effect on society. How we live, work, and interact has been and will continue to be deeply affected by the use of computers and other technologies. Some researchers even believe that the use of technology is actually changing how our brains work. Understanding the effects of technology on society and the implications of using technology in terms of ethics, communication, and personal interaction is critical. Those who have a greater awareness of these issues will be better positioned for success in all aspects of business and personal endeavors.

Code	Title	Credit Hours
CIT 168	Information Technology Tools and Techniques for Organizations	4
CIT/CSE 262	Technology, Ethics, and Global Society	3
CIT 448	Global and Strategic Issues in Information Technology	3
Total Credit Hours		10

## CIT 2 Increasing Productivity Through Agile

Agile culture is being adopted across disciplines and organizations. Agile helps teams to work collaboratively, efficiently, and effectively. Agile teams produce higher quality work, have increased productivity, and adapt better to change. CIT 2 provides students across all disciplines the opportunity to learn and practice the Agile way of thinking and working. Agile rituals and practices are introduced. Students work on an Agile project with a client, gain business value analysis knowledge in an Agile organization, and learn Agile project management skills. Each course offers an opportunity to earn an ICAgile industry certification.

Code	Title	Credit Hours
CIT 205	Agile Launchpad I	3
CIT 306	Agile: Business Value Analysis	3
CIT 307	Agile: ICP-Project Management	3
Total Credit Hours		9

## CIT 3 Data Driven Decision Making

A powerful asset of any organization is the ability to understand, manipulate and interpret its data in a way that drives, informs and improves decision making. CIT 3 is designed to provide hands on, practical skills for analyzing data. These skills will provide students with the tools they need to understand and manage data to support data driven decision making within their organizations.

Code	Title	Credit Hours
STA 261 or STA 301	Statistics Applied Statistics	4
CIT 201	Advanced Spreadsheets and Analytics	3

CIT 338	Business Intelligence Tools	3
Total Credit Hours		10

## CJS 1 Race and Criminal Justice

This thematic sequence, which will be open to all students, introduces students to the role race plays in law and the administration of criminal justice. The sequence will offer a sociohistorical framework of the criminal justice system and the inequalities that are inherently part of its structure with a special emphasis on race in policing, the law of criminal and juvenile adjudications, and corrections.

Code	Title	Credit Hours
Required course		
CRE 151	Introduction to Critical Race and Ethnic Studies	3
Select two of the following:		
CJS 211	Policing in America	3
BWS/CJS 401	Race and Criminal Justice	3
Total Credit Hours		9

**Note:** Not open to Criminal Justice majors.

## CLS 1 Classical Civilization

Combines a general introduction to classical civilization and an in-depth encounter with Greco-Roman civilization, focusing on elements that provide opportunities for observing differences between modern and ancient civilization. Uses literature, monuments, legal documents, art, and sculpture to examine key examples of social organization, including the status of women, legal structures, and urban organization.

Code	Title	Credit Hours
Select one of the following:		
CLS 101	Greek Civilization in its Mediterranean Context	3
CLS 102	Roman Civilization	
CLS 121	Introduction to Classical Mythology	
Select one of the following:		
CLS/BWS 222	Race and Ethnicity in Antiquity	3
CLS 235	Women in Antiquity	
Select one of the following:		
ART 382	Greek and Roman Sculpture	
ART 383	Greek and Roman Painting	
CLS 321	Justice and the Law in Antiquity	
REL 334	Women's Religious Experiences in the Ancient Mediterranean World	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Classics. Majors in the Departments of Art and Comparative Religion must select a minimum of nine hours outside department of major.

## CLS 2 Classical Literature

Provides an overview of Greek or Roman literature, then examines in detail the historical evolution of specific genres, such as tragedy, drama, and epic. Attention to historical forces that brought these

genres into existence and those forces that affected their growth and development.

Code	Title	Credit Hours
Select one of the following:		3
CLS 101	Greek Civilization in its Mediterranean Context	
CLS 102	Roman Civilization	
CLS 121	Introduction to Classical Mythology	
Select one of the following:		3
CLS 210/ RUS 250	Topics in Classics	
CLS 211	Greek and Roman Epic	
CLS 212	Greek and Roman Tragedy	
CLS 213	Greek and Roman Comedy	
CLS 215	Greek and Roman Historians	
Select one of the following:		3
CLS 218	Greek and Roman Erotic Poetry	
CLS 317	Greek and Roman Philosophical Writers	
CLS 331	From Epic to Romance	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Classics.

## CLS 4 The Classical World: Identity and Experience

Specific to Classical antiquity was a set of deeply influential institutions, practices, and ideological elaborations that both drew from and interacted with a wide range of other Mediterranean cultures in shaping the day-to-day identities and life experiences of Greeks and Romans as well as the cultures on which they impacted. In this sequence, students explore some of the most basic issues (e.g. gender, religion, public entertainments, race and ethnicity, imperial conquest and domination) associated with these influences and their more specialized consequences in specific geographical, cultural and institutional areas (e.g. Egypt, Jews in Antiquity, The Construction of Age Identities).

Code	Title	Credit Hours
Select one of the following:		3
CLS 101	Greek Civilization in its Mediterranean Context	
CLS 102	Roman Civilization	
CLS 121	Introduction to Classical Mythology	
Select one of the following:		3
CLS/BWS 222	Race and Ethnicity in Antiquity	
CLS 235	Women in Antiquity	
CLS 336	Ancient Sexualities	
Select one of the following:		3
CLS 332	Classical Mythology and the Arts	
CLS 333	The Greeks in the Near East and Central Asia	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Classics.

## CMR 1 Perspective in Sales and Customer Service

Regardless of one's educational or career aspirations, an understanding of how companies, institutions, and governments attract and satisfy their customers is a valuable skill. Organizations reward those employees, whatever their position, who are able to understand and assist in the ongoing process of adding and keeping customers. Students will be encouraged and challenged to expand their understanding beyond the skills of constructing a marketing plan or ad campaign to explore marketing in ways that will extend their sense of moral commitment, ethical understanding and civic action. This Thematic Sequence lays a strong foundation of broad marketing principles with an in-depth look at both the promotional tools to attract new customers and strategies and tactics to service them.

Code	Title	Credit Hours
CMR 105	Introduction to Marketing	3
CMR 261	Customer Service & Satisfaction	3
CMR 263	Sales and Promotions	3
Total Credit Hours		9

**Note:** Not open to students with majors or minors in business.

## CMR 2 Organizational Leadership

Regardless of one's educational or career aspirations, an understanding of organizational leadership principles and practices can enhance effectiveness "on the job" along with career satisfaction and career advancement. Whether one finds satisfaction in being an individual contributor or seeks a management career track, acquiring fundamental leadership skills can significantly increase one's ability to work through complex assignments, manage projects, coordinate the efforts of teams, and communicate thoughts and results convincingly, regardless of the audience. The student will be encouraged and challenged to explore the personal skills and attitudes that help to build success in a career, to develop a working knowledge of how to analyze data when making important decisions, and to apply all of these skills to real-world leadership challenges through a Service-Learning-oriented leadership course. This thematic sequence is designed to supply theoretical and practical knowledge of organizational leadership principals that students can readily use in pursuing any career.

Code	Title	Credit Hours
CMR 301	Personal Organizational Skills	3
CMR 302	Financial Information for Managers	3
CMR 401	Leadership Decision Skills	4
Total Credit Hours		10

**Note:** Not open to students with majors or minors in business.

## CSE 2 Computer Programming

Because computer information systems usually are not developed by single individuals, it is likely that you will participate on a development team during your professional life. With this sequence, you are in a unique position to understand, assist, and contribute to the

development of information systems that improve your own and your colleagues' way of work.

Code	Title	Credit Hours
CSE 174	Fundamentals of Programming and Problem Solving	3
CSE 271	Object-Oriented Programming	3
Select one of the following:		3
CSE 252	Web Application Programming	
CSE 274	Data Abstraction and Data Structures	
CSE 283	Data Communication and Networks	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Computer Science and Software Engineering.

### CSE 4 Website and Game Technology

Given the prevalence on computing devices, it is important that we understand what they do and how they do it. The web site and computer game technology thematic sequence is designed to provide students with an intuitive understanding of how computer software is created and designed and how it functions to make possible common applications such as computer games and the World Wide Web. After learning the concepts and skills of computer programming, students will apply this knowledge to design and create a variety of computer games and web applications.

Code	Title	Credit Hours
Select any of the following introductory courses:		3
CSE 153	Introduction to C/C++ Programming	
CSE 163	Introduction to Computer Concepts and Programming	
CSE 174	Fundamentals of Programming and Problem Solving	
Select the following:		
CSE 251	Introduction to Game Programming	3
CSE 252	Web Application Programming	3
Total Credit Hours		9

**Note:** Not open to majors in the Department of Computer Science and Software Engineering.

### DST 1 Disability Studies

This interdisciplinary thematic sequence offers a broad liberal arts approach to the study of disability, providing students with knowledge of the historical, social, artistic, literary, legal, educational, philosophical, and political framing of disability. Students develop an interdisciplinary foundation, with emphasis on cultural constructions of disability and the intersections of disability, race, gender, sex, age, class, and other markers of diversity and difference.

Code	Title	Credit Hours
DST 272	Introduction to Disability Studies	3
Select one of the following:		3
DST 278	Women and (Dis)ability: Fictions and Contaminations of Identity	

DST 375	(Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice	
DST 315	Disability History in America	
or EDL 315	Disability History in America	
DST/EDP 378	Media Illusions: Creations of "The Disabled" Identity	
Select the following:		
DST/ENG 494/ EDP 489	Disability in Global and Local Contexts	3
Total Credit Hours		9

### ECO 2 Markets, Institutions, and the Role of Government

In some situations, competitive markets fail to allocate resources efficiently. In some instances, production is concentrated in the hands of a few firms that may restrain output and raise prices. In other cases, market prices fail to fully reflect the costs or benefits associated with the consumption or production of certain goods. This arises in the case of externalities or government in ensuring allocative efficiency.

Code	Title	Credit Hours
ECO 201	Principles of Microeconomics	3
Select two of the following:		6
ECO 321	American Industries and Issues	
ECO 385	Government and Business	
ECO 331	Public Sector Economics	
Total Credit Hours		9

**Note:** Not open to majors in business.

### EDL 2 Critical Youth Studies

Critical Youth Studies is the study of how young people actively create subcultures that affirm diverse identities, resist social exclusion, negotiate their roles within educational institutions, and work for social change. The focus in youth studies is on adolescents and young adults, rather than children, and on the important role of youth subcultures in promoting social change consistent with values of social justice, equity, and inclusion. Youth studies seeks to help students better understand how young people can become more active agents in the development of their own identities and contribute to democratic organizations. This involves an analysis of the everyday, lived experiences of youth—in and out of educational institutions—and the representation of youth in popular culture (including film, art, literature, and music). Finally, critical youth studies is interdisciplinary in nature drawing insights from sociology, history, and philosophy of education as well as race, ethnic and gender studies.

Code	Title	Credit Hours
Select the following:		
EDL 203	Introduction to Critical Youth Studies	3
Select two or more of the following:		6
DST/EDP 272	Introduction to Disability Studies	
EDL 204	Sociocultural Studies in Education	

EDL 333	Youth, Media & Pop Culture	
EDL 334	Transnational Youth Cultures	
EDL/WGS 369	Sexuality, Youth, Education	
EDL 382	Community-Based Research & Learning in Education	
HST 400	Senior Capstone in History	
SJS 323	Social Justice and Change	
LAS 332	Latin American Popular Culture	
SJS 323	Social Justice and Change	
SJS 470	Social/Political Activism	
WGS 432	Feminism and the Diaspora: U.S. Women of Color	
WGS 437/ WGS 537	Black Feminist Theory	
Total Credit Hours		9

**Note:** Open to all majors. Students must select a minimum of nine hours outside their department of major.

## EDP 1 Cultural Patterns in Education and the Law Affecting Persons with Disability

Enhances critical understanding of issues surrounding individuals who fall outside the "norm." Issues include societal values and moral practices related to development, identification, socialization, education, and treatment of these individuals. Explores exceptionality among individuals from the perspectives of psychological "disorder," developmental or educational "difference," and/or "deviance" from socially defined norms. Explores difference as a normally occurring phenomenon of the human condition.

**Prerequisite:** EDP 101 or PSY 111 or EDP 201

Code	Title	Credit Hours
EDP 256	Psychology of the Exceptional Learner	3
Select two of the following:		6
EDP 272	Introduction to Disability Studies	
EDP 478/ EDP 578	Effective Social Skills Development, Collaboration and Transition Planning in Special Education	
EDP 486/ EDP 586	Methods I: Learners with Mild/Moderate Disabilities	
EDP 491/ EDP 591	Methods II: Learners with Mild to Moderate Disabilities	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Educational Psychology.

## EDP 2 Educational Technology and Instructional Design

Designed for students interested in the design, creation, and integration of technology/media for teaching and learning in both K12 and non-K12 environments (e.g. business, higher education, government, military, health care, religious organizations, etc.). Students will learn the processes of designing, developing, and

evaluating the effectiveness of educational/instructional media for classroom and eLearning environments.

Code	Title	Credit Hours
Select the following:		
EDP 279	Technology + Media Literacy and Learning	3
Select two of the following:		6
EDP 332	Instructional Design Theory and Models	
EDP 333	Evaluation and Assessment for Instructional Design	
EDP 336	Diversity, Learning & Technology	
EDP 445	Curriculum & Technology	
EDP 446	Educational Interactive Design	
EDP 483/ EDP 583	Game-based Learning Design	
Total Credit Hours		9

## EDP 3 Technology and Learning

This thematic sequence enhances students' understanding of the relationship among current and emerging technologies and learning.

Students will gain experience and skills in creating and using technology systems in unique learning contexts while developing a critical awareness of the affordances and constraints of various technologies for teaching and learning. Throughout the courses is a common theme of exploring the relationship between Technology and Learning. The courses in the sequence include introductory experiences in crafting media for educational purposes as well as experience in applying principles of technology integration in formal and informal learning environments.

Code	Title	Credit Hours
EDP 279	Technology + Media Literacy and Learning	3
Select two of the following:		6
IMS 225	Games and Learning	
EDP 443/ EDP 543	Audiovisual Instruction: Methods, Media, and Technology	
EDP 446	Educational Interactive Design	
EDP 447/ EDP 547	eLearning in K-12 Education	
Total Credit Hours		9

**Note:** Majors in the Department of Interactive Media Studies must select a minimum of nine hours outside department of major.

## EDP 4 Learning Research and Assessment

The EDP4 thematic sequence "Learning Research and Assessment" is a 9 credit thematic sequence which emphasizes core topics of Educational Psychology. The topics have been selected to enhance the learning of students in and outside the College of Education, Health, and Society. Students complete one learning course, one assessment course, and one research course.

Code	Title	Credit Hours
EDP 101 or EDP 201	Psychology Of The Learner Human Development and Learning in Social and Educational Contexts	3
EDP 301 or EDP 432/ EDP 532 or EDP 494/ EDP 594	Assessment and Evaluation in Educational Settings Assessment and Educational Planning for Children Age 3 to 8 Assessment, Evaluation, and Educational Planning for Learners with Exceptionalities	3
EDP 324	Research and Applied Writing Across the Disciplines	3
Total Credit Hours		9

**NOTE:** Not open to majors in the Department of Educational Psychology.

### EDT 1 Exploring STEM in Society

The courses offered as part of the Exploring STEM in Society thematic sequence take an integrated approach to the teaching and learning of STEM disciplines. Currently, students who want to become a science or mathematics teacher enroll in content and education courses that treat STEM disciplines as disparate subject areas (e.g. Biology, Physics, Earth Science, Mathematics, etc). However, current reform movements in science and mathematics education (NGSS NGSS Lead States, 2103)) point out the inter-connect address of STEM disciplines and emphasize the importance of preparing future science and mathematics teachers who understand and effectively implement an integrated approach to the teaching and learning of STEM disciplines.

Code	Title	Credit Hours
EDT 188	Creativity and Innovation in STEM Education	3
EDT 288	Ways of Thinking in STEM (Science, Technology, Engineering, and Mathematics) Education	3
EDT 488	Grand Challenges in STEM Education	3
Total Credit Hours		9

### EDT 2 Teaching English as a Foreign Language Abroad (TEFLA)

Designed for those interested in teaching English as a Foreign Language (EFL\*) abroad, this thematic sequence is grounded in theory and best practices of second language learning. The sequence examines respect for diversity, multilingualism, multiculturalism, and individuals' language rights, while recognizing the value of learning English in today's globalized world. The courses also prepare students with the ability to design curriculum, write lessons, and assess teaching English as Foreign language. The sequence progresses from introductory level content to theoretical and practical tools that will enable students to become critical and reflective language practitioners.

\* EFL differs from ESL (English as a second language). EFL involves teaching English in countries where English is a foreign language (such as Costa Rica or China). ESL involves teaching English in countries where English is the main language (such as the US or Australia).

Code	Title	Credit Hours
EDT 221	Teaching English Language Learners in PK-12: Culture & Second Language Acquisition	3
EDT 444/EDT 544	Language Teaching and Learning I	3
Select one of the following:		3
EDT 445/ EDT 545	Language Teaching and Learning II	
EDT 446L/ EDT 546L	Reading in the Foreign Language	
Total Credit Hours		9

**Note:** Not open to Foreign Language majors.

### EGS 1 Writing for Diverse Contexts

Introduces students to the ways that writing can function in diverse contexts. Students have the opportunity to develop both theoretical and practical understandings of writing practices in multiple genres and for multiple audiences.

Code	Title	Credit Hours
Select one of the following:		3
EGS 215	Workplace Writing	
EGS 301	Writing and the Professions	
Select one of the following:		3
EGS/BIS 305	Integrative Writing in Global Contexts	
EGS 319	Medical Writing	
EGS 420	Topics in Writing	
Select one of the following:		3
ENG 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds	
ENG 225	Advanced Composition	
ENG 313	Technical Writing	
ENG 413/ ENG 513	Grant and Proposal Writing	
Total Credit Hours		9

**Note:** Not open to English Studies, English: Creative Writing, English: Literature, English: Professional Writing, or Linguistics majors.

### ENG 2 Women and Literature

Assumes the importance of gender as a category for analyzing authors and texts. Attention to how various literatures that constitute "English literature" represent women and gender constructions, how these representations differ, and the various agendas pursued through these representations. Most important, emphasizes women as themselves authors and readers. Builds new knowledge of non-canonical writers and texts; reconsiders canonical writers and texts by focusing on depictions of women or your relation to women's writings.

Code	Title	Credit Hours
Required course:		
ENG/WGS 232	Women Writers	3

Select two of the following: 6

EGS 320	Readings in Literatures and Cultures <sup>1</sup>
ENG/AMS 390	Studies in American Regionalism
ENG/AAA/WGS 351	Cultural Politics of Gender and Sexuality in Asian/America
ENG 360	Interdisciplinary Special Topics <sup>1</sup>
ENG/FST/WGS 356	Women and Gender in Film
EGS 390	Special Topics in English Studies <sup>1</sup>
EGS 410	Readings in Multicultural Perspectives <sup>1</sup>
ENG/BWS/WGS 432	Feminism and the Diaspora: U.S. Women of Color
ENG/BWS/WGS 437	Black Feminist Theory
ENG 470	Studies in Literary Theory <sup>1</sup>
ENG 490	Special Topics in Literary Study <sup>1</sup>
WGS 201	Introduction to Women's Studies

Total Credit Hours 9

<sup>1</sup> Topics may vary from semester to semester. Consult the sequence coordinator to see if the topic can be applied.

**Note:** Open to all majors. Majors in the Departments of English, English Studies, Women's, Gender, and Sexuality Studies, and American Studies must select a minimum of nine hours outside department of major.

## ENG 3 American Life and Culture Since World War II

A cross-disciplinary study of the changing forms of American culture since World War II.

Code	Title	Credit Hours
Select the following:		
ENG 276	American Literature 1900 to the Present	3
Select two of the following: 6		
ART 489/ ART 589	Postwar to Postmodern, 1945-1980	
BWS 348	Race and Ethnic Relations	
ENG 201	Special Topics in Language Awareness <sup>1</sup>	
ENG 246	Native American Literature	
ENG 248	Asian American Literature	
ENG 254	Latino/a Literature and the Americas	
ENG 293	Contemporary American Fiction	
ENG 348	Ethnic American Literatures	
ENG 351	Cultural Politics of Gender and Sexuality in Asian/America	
ENG 355	Contemporary American Literature	
ENG/BWS 338	African American Writing, 1946-Present	
ENG 390	Studies in American Regionalism <sup>1</sup>	
ENG 440	Major English and American Writers <sup>1</sup>	

HST/AMS 367 The United States in the 1960s

HST 369 United States in the Modern Era

Total Credit Hours 9

<sup>1</sup> Topics may vary from semester to semester. Consult the sequence coordinator to see if the topic can be applied.

**Note:** Nine hours minimum must be taken outside department of major.

## ENG 4 Film in Popular Culture

Introduces cultural studies, specifically the analysis of contemporary popular culture. One of the central objectives is to develop analytical tools to examine how film, popular literature, and other mass media (ordinarily "taken for granted" elements of everyday life) have shaped our modern sensibility. In its very nature, the study of popular culture is interdisciplinary, examining both the text and the context of such cultural creations as mass-market literature and film.

Code	Title	Credit Hours
FST 201	Film History and Analysis	3
ENG/FST 220	Literature and Film	3
Select one of the following:		3
ENG/FST 221	Shakespeare and Film	
ENG/FST 235	Classical Hollywood Cinema	
ENG/FST 236	Experimental Film	
ENG/FST/WGS 356	Women and Gender in Film	
FST 206	Diversity and Culture in American Film	
Total Credit Hours		9

## ENG 5 Language and Literacy

Uses formal reasoning skills, research and writing, and ethnographic case studies to develop a sense of the synchronic structure and diachronic background of the English language so that you understand how concepts of literacy have changed through the ages, how literacy functions in contemporary society, and how societies, schools, and communication technologies interact to shape our concepts of literacy, rhetoric, and language standards. Studies grammatical structure of modern English, social and cultural history of the language, and either rhetorical theory (STC 239) or contemporary notions of teaching writing (ENG 304). Although ENG 301 and ENG 302 are recommended to be taken before ENG 304 or STC 239, choose three of the four courses listed.

Code	Title	Credit Hours
Complete three of the following courses: 9		
ENG 301	History of the English Language	
ENG/ATH/GER 219	Introduction to Linguistics	
ENG 302	Structure of Modern English	
ENG 304/ STC 239	Backgrounds to Composition Theory and Research	
Total Credit Hours		9

**Note:** Not open to majors in the Department of English. Majors in the Department of Media, Journalism and Film Studies must select ENG 304.

## ENG 8 African American History and Literature

Provides a sustained encounter with the African American experience from the arrival of African Americans to North America through their contemporary cultural and literary accomplishments.

Code	Title	Credit Hours
CRE 151	Introduction to Critical Race and Ethnic Studies	3
Select two of the following:		6
BWS/ENG 336	African American Writing, 1746-1877	
BWS/ENG 337	African American Writing, 1878-1945	
BWS/ENG 338	African American Writing, 1946-Present	
BWS/HST 221	African-American History	
ENG 355	Contemporary American Literature	
Total Credit Hours		9

**Note:** Not open to majors in Critical Race and Ethnic Studies. Majors in the Departments of English and History must complete a minimum of nine hours outside department of major.

## ESP 1 Entrepreneurship in Different Contexts

Emphasizes the application of entrepreneurial attitudes and behaviors in organizations of all sizes and types. Students explore the underlying nature of entrepreneurship and the entrepreneurial process and develop an appreciation for the unique aspects of entrepreneurship depending upon the context within which one is operating. The first course examines the role of creative thinking in coming up with new, entrepreneurial ideas and solving business problems; the second explores the interface between entrepreneurship and a particular functional area; the third is concerned with entrepreneurship in a larger, established organizational context.

Code	Title	Credit Hours
ESP 251	Entrepreneurial Value Creation and Capture	3
ESP 341	Corporate Entrepreneurship	3
ESP 351	Creativity in Entrepreneurship	3
Total Credit Hours		9

**Note:** Not open to majors in business.

## FRE 3 European Cinema

Explores, questions, and seeks to provide a cross-cultural understanding of the historical, ideological, artistic, and social issues that inform European culture through a critical analysis of the major films of countries that have played an important role both in the birth and development of cinematic art and in shaping the modern world: France, Germany, Italy, and the Soviet Union.

Code	Title	Credit Hours
FST 201	Film History and Analysis	3
or ITS 201	Introduction to International Studies	
Select two of the following:		6
FRE/FST 366	French Cinema in Translation	
FRE/FST 460	Topics in French Cinema	
FST/ITL 262	Italian Cinema	
GER/FST 261	German Film in Global Context	
RUS/FST 263	Soviet & Post-Soviet Russian Cinema	
Total Credit Hours		9

**Note:** Nine hours minimum must be taken outside department of major.

## FSW 3 Families and Sexuality Across the Life Course

The objectives for this thematic sequence are to establish basic concepts and theoretical understandings of individuals in families across the life course, to provide a sound background in human sexuality that may be used as a base to think about underlying issues related to human sexuality, and to explore issues related to familial/relationship contexts involving sexuality and sexual behaviors.

Code	Title	Credit Hours
Select one of the following:		3-4
FSW 245	Children and Families: Ages Conception - 12	
FSW 466/ FSW 566	Interpersonal Perspectives on Adulthood and Aging	
FSW 481/ FSW 581	Adolescent Development in Diverse Families: Ages 13-25	
Select the following:		
FSW 365	Family Life Sexuality Education Across Cultures	3
FSW/WGS 361	Couple Relationships: Diversity and Change	3
Total Credit Hours		9-10

**Note:** Not open to majors in the Department of Family Studies and Social Work. Majors in the Departments of Gerontology and Women, Gender, and Sexuality Studies majors must take a minimum of nine hours outside department of major.

## FSW 4 Children in Families

Students develop an in-depth understanding of child and adolescent development that affects contemporary families. Examines issues in contemporary society that affect families with children (e.g., child and adolescent development and family differences, as well as change over the life course).

Code	Title	Credit Hours
FSW 245	Children and Families: Ages Conception - 12	3
FSW 481/FSW 581	Adolescent Development in Diverse Families: Ages 13-25	3

FSW 261	Diverse Family Systems Across the Life Cycle	3
Total Credit Hours		9

**Note:** Not open to majors in the Department of Family Studies and Social Work.

## FSW 6 Social Inequality and Social Welfare for Diverse Families and Groups

In this thematic sequence the courses will reflect on social inequality and social welfare for diverse groups and families. This thematic sequence aims to deepen the student's knowledge about social inequality in the use, the history, and development of the US welfare system, and to develop a better understanding of how social policies directly and indirectly influence the well-being of families.

Code	Title	Credit Hours
FSW 206	Social Welfare: Impact on Diverse Groups	4
Select one of the following:		3
FSW 201	Introduction to Social Work	
FSW 261	Diverse Family Systems Across the Life Cycle	
Select the following:		
FSW 362	Family Poverty	3
Total Credit Hours		10

**Note:** Not open to majors in the Department of Family Studies and Social Work.

## GEO 1 Urban Geography

Applies geographic concepts to develop an understanding of the patterns, processes, and meanings of change within and among U.S. urban areas. The sequence first examines the changing distribution of economic activities and social groups. Second, the sequence is concerned with underlying processes resulting in distinctive distributions of people and activities observed in U.S. urban areas. The sequence also evaluates the problems and consequences for U.S. cities resulting from changing economic and social geography and examines practices and policies for the planning of U.S. urban areas.

Code	Title	Credit Hours
GEO 201	Geography of Urban Diversity	3
GEO 451/GEO 551	Urban and Regional Planning	3
Select one of the following:		3
GEO 454/ GEO 554	Urban Geography	
GEO 455	Race, Urban Change, and Conflict in America	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Geography. Majors in Critical Race and Ethnic Studies must take a minimum of nine hours outside department of major.

## GEO 2 Earth's Physical Environment: Patterns and Processes

Provides an understanding of the geographical patterns that characterize the Earth's physical environment and the processes responsible for these geographical patterns. The objectives are to study Earth's physical environment and their geographical distribution at global, regional, and local scales; to develop an understanding of the processes that connect Earth's physical subsystems, including the lithosphere, hydrosphere, biosphere, and atmosphere; and to apply concepts (e.g., systems and budgets) and geographic tools (e.g., field research, geographic information systems, and remote sensing) to the geographic analysis of a particular environment or set of environments.

Code	Title	Credit Hours
GEO 121 or GEO 122	Earth's Physical Environment Geographic Perspectives on the Environment	3-4
GEO 221	Regional Physical Environments	3
Select one of the following:		3-4
BIO/GEO 431	Global Plant Diversity	
BIO/GEO 432	Ecoregions of North America	
GEO 333	Global Perspectives on Natural Disasters	
GEO 425/ GEO 525	Hydrogeography	
GEO 426/ GEO 526	Watershed Management	
GEO 428/ GEO 528	Soil Geography	
Total Credit Hours		9-11

**Note:** Not open to majors in the Department of Geography. Majors in the Department of Biology must take a minimum of nine hours outside department of major.

## GEO 3 Geographic Change

Applies geographic concepts to understand patterns, processes, and meaning of change in the human landscape at the global scale.

Code	Title	Credit Hours
GEO 101	Global Forces, Local Diversity	3
GEO 211 or GEO 276	Global Change Geography of the Global Economy	3
Select one of the following:		3
GEO/WGS 436	Women, Gender, and the Environment	
GEO 475/ GEO 575	Global Periphery's Urbanization	
GEO 476/ GEO 576	Global Poverty	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Geography. Majors in Women's, Gender and Sexuality Studies must take a minimum of nine hours outside department of major.

## GEO 4 Global Forces in Regional Contexts

Applies geographic concepts to understanding patterns, processes, and underlying meaning of changes in a region's landscape.

Code	Title	Credit Hours
Select one of the following:		3
GEO 101	Global Forces, Local Diversity	
GEO 111	World Regional Geography: Patterns and Issues	
Select one of the following:		3
GEO 205	Population and Migration	
GEO 208	The Rise of Industrialism in East Asia	
GEO 211	Global Change	
Select one of the following:		3-4
GEO/BWS 301	Geography of Sub-Saharan Africa	
GEO 308	Geography of East Asia	
GEO 406/ GEO 506	Indigenous Peoples and Their Sacred Lands	
GEO 408/ GEO 508	Geography of the Silk Road (The Heart of Asia)	
Total Credit Hours		9-10

**Note:** Not open to majors in the Department of Geography. Majors in Critical Race and Ethnic Studies must take a minimum of nine hours outside department of major.

## GEO 5 Geospatial Techniques

Provides an introduction to geospatial techniques (including GIS, Remote Sensing, and Map Interpretation). Objectives are to build the skills necessary to read and interpret both traditional and digital maps, to gain an understanding of GIS concepts and applications, and to apply this new knowledge by focusing on more advanced GIS tools and applications.

Code	Title	Credit Hours
GEO 242	Mapping a Changing World	3
GEO 441/GEO 541	Geographic Information Systems	3
Select one of the following:		3
GEO 442/ GEO 542	Advanced Geographic Information Systems	
GEO 443/ GEO 543	Python Programming for ArcGIS	
GEO 444/ GEO 544	GIScience Techniques in Landscape Ecology	
GEO 448/ GEO 548	Techniques and Applications of Remote Sensing	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Geography. Majors in Critical Race and Ethnic Studies must take a minimum of nine hours outside department of major.

## GER 3 Developing Language Skills in German

For students who have completed the first two semesters of college-level German language or the equivalent. This sequence develops speaking, listening, reading, and writing ability using a variety of materials drawn from fiction, television, film, the Internet, journalism, and memoirs. The courses draw on computer-assisted materials developed by the Miami faculty for Miami students and are characterized by small sections and substantial in-class and out-of-class interaction. Courses may not be taken credit/no-credit and must be taken in order.

Code	Title	Credit Hours
GER 201	Second Year German	3
GER 202	Second Year German	3
GER 301	German Language Through the Media	3
Total Credit Hours		9

**Note:** Not open to German majors.

## GLG 1 Oceanography

Provides an appreciation of the critical importance of the oceans to the functioning of our planet. Oceans dominate the surface area of the Earth, and they are critical to the maintenance of a habitable planet. Examines what we know about the oceans and how the oceans are an integral part of the Earth's ecology. Explores, first hand, the ways that we study the oceans.

Code	Title	Credit Hours
Select one of the following:		3
GLG 111	The Dynamic Earth	
GLG 121	Environmental Geology	
GLG 141	Geology of U.S. National Parks	
Select the following:		
GLG 244	Oceanography	3
GLG 413/GLG 513	Tropical Marine Ecology	5
GLG 437/GLG 537	Paleontology in Conservation	3
Total Credit Hours		14

**Note:** Not open to majors in the Department of Geology & Environmental Earth Science.

## GLG 2 The Water Planet

Provides an introduction to the essential role water plays in supporting life on Earth, including the origin of water, its physical/chemical characteristics, how these characteristics combine to make life possible on the continents and in the oceans, and details concerning the hydrologic cycle. Introduces the economic, legal, and political ramifications of water use in the U.S.

Code	Title	Credit Hours
Select one of the following:		3
GLG 111	The Dynamic Earth	
GLG 121	Environmental Geology	
GLG 141	Geology of U.S. National Parks	

Select the following:

GLG 244	Oceanography	3
Select one of the following:		3-4
GEO 425/ GEO 525	Hydrogeography	
GLG 307	Water and Society	
GLG 335	Ice Age Earth	
GLG 408/ GLG 508	Introduction to Hydrogeology	
BIO 463/ BIO 563	Limnology	
Total Credit Hours		9-10

**Note:** Not open to majors in the Department of Geology & Environmental Earth Science. Majors in the Departments of Geography and Biology must take a minimum of nine hours outside department of major.

### GLG 3 Geohazards and Plate Tectonics

This thematic sequence provides an overview of the causes and impacts of geohazards and how they are influenced by plate tectonic processes. Tier 1 introduces basic conceptual knowledge and Tier 2 focuses on the underlying physical principles. Tier 3 provides opportunities for application to real-world environments, including strategies for scientific investigation and management. These courses illustrate how focused case studies can provide insight into global systems.

Code	Title	Credit Hours
Select one of the following:		3
GLG 111	The Dynamic Earth	
GLG 121	Environmental Geology	
GLG 141	Geology of U.S. National Parks	
Select the one following:		3
GLG 261	Geohazards and the Solid Earth	
GLG 301	Sedimentology and Stratigraphy	
Select one of the following:		3-4
GLG 322	Structural Geology	
GLG 447/ GLG 547	Volcanology	
GLG 450/ GLG 550	Sedimentary Basin Analysis	
GLG 461/ GLG 561	Geophysics	
GLG 467/ GLG 567	Seismology	
GLG 492/ GLG 592	Global Tectonics	
Total Credit Hours		9-10

Note: Not open to majors in the Department of Geology & Environmental Earth Science.

### GTU 2 Aging in Diverse Contexts

A significant paradigm shift has occurred within gerontology. The accumulation of research findings suggests that age alone predicts

very little about the human experience. Instead, the impact of age and aging is mediated by a range of social and cultural factors. Social characteristics such as gender, race, and ethnicity, and societal factors such as economic development and cultural traditions combine to produce a diverse range of experience and patterns of aging. This thematic sequence begins with an overview of the social, cultural, and personal experiences of aging. The second course provides students with grounding in sociocultural analyses of the contexts of aging, and the third, an in-depth exploration of the sources of variation in the aging experience. Students completing this sequence will understand the ways in which meanings and experiences of aging are shaped by social and physical location, and the ways in which diversity among the older population is produced.

Code	Title	Credit Hours
GTU 154	Big Ideas in Aging <sup>1</sup>	3
Select one of the following:		3
GTU 260	Global Aging <sup>1</sup>	
SOC/GTY 318	Social Forces and Aging	
Select one of the following:		3
GTU 479/ GTU 579	Research on Inequality in Aging & Health	
GTU 354 or FSW 466/ FSW 566	Issues & Controversies in Aging Interpersonal Perspectives on Adulthood and Aging	
Total Credit Hours		9

<sup>1</sup> Only one Foundation (MPF) course can count toward both a Foundation requirement and a Thematic Sequence.

**Note:** Not open to majors in Sociology or Gerontology. Majors in the Department of Family Studies and Social Work must take a minimum of nine hours outside department of major.

### GTU 3 Aging and Health

This thematic sequence explores health and aging. The tier 1 course provides students with an overview of the process of aging, especially in the United States. In tier 2, students select one of two courses, each examining health and aging from a different position along a continuum that ranges from micro- to macro/meso-level contexts. The tier 3 courses offer students the opportunity to integrate academic and applied aspects of health and aging, either through exploration of moral issues in health care, secondary data analysis, or a field experience in a health care setting.

Code	Title	Credit Hours
GTU 154	Big Ideas in Aging	3
Select one of the following:		3
GTU 260	Global Aging	
GTU/SOC 318	Social Forces and Aging	
Select one of the following:		3-4
GTU 362	Applied Research in Gerontology	
GTU 479/ GTU 579	Research on Inequality in Aging & Health	

or GTY 456/ Aging & Health  
GTY 556

Total Credit Hours	9-10
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**Note:** Not open to majors in the Department of Sociology and Gerontology. Philosophy majors may not take PHL 375.

## GTY 4 Aging and Policy

This thematic sequence focuses on age-related policies. It is designed to introduce students to the broad topic of aging in American society, policies and programs, and fill a gap in the current curriculum by analyzing and debating current aging policy topics.

Code	Title	Credit Hours
GTY 154	Big Ideas in Aging	3
GTY 365	Social Policy and Programs in Gerontology	3
GTY 465	Policies & Programs in an Aging Society	3
Total Credit Hours		9

**NOTE:** Not open to majors in Sociology or Gerontology. Majors in the Department of Family Studies and Social Work must take a minimum of nine hours outside department of major.

## ISA 2 Applied Business Statistics

Enhances analytical capabilities and teaches fundamental concepts of statistical thinking. Provides breadth and depth of course work in business statistics methodology. While the academic area of business forms its contextual orientation, the techniques and processes discussed and ways of thinking developed are applicable to every field. The underlying aim is improved decision making and action through thought that is informed by statistical analysis.

Code	Title	Credit Hours
ISA 205	Business Statistics	4
ISA 291	Applied Regression Analysis in Business	3
Select one of the following:		3
ISA/STA 365	Statistical Monitoring and Design of Experiments	
ISA 432	Survey Sampling in Business	
ISA 444	Business Forecasting	
ISA 491/ISA 591	Introduction to Data Mining in Business	
Total Credit Hours		10

**Note:** Not open to Information Systems and Analytics Majors with the Business Analytics Track.

## ITL 1 Italy in the Renaissance

Analyzes the vital role Italy has played in the birth and evolution of modern Western culture in the humanities, arts, sciences, and political thought. Develops analytical skills by viewing Italian culture from a variety of disciplinary angles and over a broad span of time. Promotes a critical understanding of the rich artistic, literary, and intellectual

heritage of the culture that laid the foundation for the European Renaissance and the modern period.

Code	Title	Credit Hours
Select three of the following:		
ART 314	The Renaissance in Italy	9
ENG/ITL 364	From Marco Polo to Machiavelli	
ENG/ITL 401	Dante's Divine Comedy	
HST 315	The Renaissance	
HST 452/ HST 552	Florence in the Time of the Republic, 1250-1550	
Total Credit Hours		9

**Note:** Nine hours minimum must be taken outside department of major.

## JPN 1 Developing Language Skills in Japanese

For students who have completed the first two semesters of college-level Japanese language or the equivalent. This sequence develops speaking, listening, reading, and writing ability using a variety of materials drawn from fiction, television, film, the Internet, journalism, and memoirs. The courses draw on computer-assisted materials developed by Miami faculty for Miami students and are characterized by small sections and substantial in-class and out-of-class interaction. Courses may not be taken credit/no-credit and must be taken in order.

Code	Title	Credit Hours
JPN 201	Second Year Japanese	3
JPN 202	Second Year Japanese	3
JPN 301	Third Year Japanese	3
Total Credit Hours		9

## JRN 1 Journalism and American Life

Students enrolled in JRN 1 will learn about the role of journalism in American life. They will gain an understanding of the functions of journalism in American democracy, how journalists gather the information needed to write news stories, and then either explore the way law and ethics influence the work journalists do, or research the way news media cover particular topics.

Code	Title	Credit Hours
JRN 101	Introduction to Journalism	3
JRN 201	Reporting and News Writing I	3
JRN 301	Journalism Law and Ethics	3
Total Credit Hours		9

**Note:** Not open to majors in the Department Media, Journalism and Film.

## JRN 2 Reporting Your World

Students who pursue the JRN 2 Thematic Sequence will learn about American journalism by actually producing news reporting. They will learn the basics of fact-checking, interviewing, and news writing, produce audio and video packages in the style expected by broadcast

news outlets, experiment with multimedia news production, or learn about the intricacies of covering a specific journalistic beat.

Code	Title	Credit Hours
JRN 201	Reporting and News Writing I	3
JRN 202	Reporting and News Writing II	3
Select one of the following:		3
JRN 303	Multimedia Journalism	
JRN 350	Specialized Journalism	
Total Credit Hours		9

**Note:** Not open to majors in the Department Media, Journalism and Film.

### LAS 3 Latino Studies: Cultures and Histories of Latinos in the United States

This sequence gives students a broad understanding of the diverse histories and cultures of Latina/o populations living in the United States and emphasizes how Latina/o cultural politics in the United States are shaped in relation to both cultural formations within Latin American and racial/ethnic dynamics within the United States.

Code	Title	Credit Hours
LAS 208	Introduction to Latin America <sup>1</sup>	3
Select one of the following:		3
LAS/ENG 254	Latino/a Literature and the Americas <sup>1</sup>	
LAS/HST 260	Latin America in the United States <sup>1</sup>	
Select one of the following:		3
LAS 315	Latin American Diaspora: Communities, Conditions and Issues	
LAS/SPN 332	Latin American Popular Culture	
Total Credit Hours		9

<sup>1</sup> Only one Foundation (MPF) course can count toward both a Foundation requirement and a Thematic Sequence.

### LED 1 Urban Culture and Service-Learning

Courses selected for the Xavier University/Miami University collaboration are determined each time it is offered. Courses will emphasize urban study, drawing from political science, sociology, economics, geography, architecture, history, education, and programs in Critical Race and Ethnic Studies, Urban Studies, American Studies, and Women's Studies. The sequence will have courses grouped in three interrelated tiers:

1. Practical experience based in Service-Learning; and
2. Theoretical investigation of urban issues and policy; and
3. Special topics that allow for deeper investigations of issues pertaining to Cincinnati and Over-The-Rhine. Contact: Tom Dutton in the Department of Architecture

### MBI 1 Biomedical Science

Examines principles and examples of diseases caused by microbial infections so that the role of microorganisms in the development of disease in a human host can be understood. Studies the host at genetic or cell and tissue level to gain an overview of infectious and noninfectious diseases in populations. Fosters understanding

of the effects of diseases on human communities and provides a perspective to help evaluate health dilemmas and develop strategies to solve them.

Code	Title	Credit Hours
MBI 161	Elementary Medical Microbiology	4
BIO 232	Human Heredity	3,4
or BIO 325	Pathophysiology	
MBI 361	Epidemiology	3
Total Credit Hours		10-11

**Note:** Offered only on the Hamilton and Middletown campuses. Not open to majors in the Departments of Biology or Microbiology.

### MGT 1 Dynamics of Human Behavior in Organizations

Regardless of major, most students apply the knowledge and skills they acquire at Miami University within an organizational setting. Organizations form to benefit from collective efforts of individuals who are striving to accomplish a set of common goals. This sequence examines ideas, models, and theories that explain human behavior in organizations. Builds competence in critically analyzing factors that influence both human behavior and the capacity for the organization to achieve its objectives; then you are able to influence work behavior and effectively exercise a leadership role in the organizations you join.

Code	Title	Credit Hours
MGT 211	Introduction to Management for Non-business Majors	3
or MGT 291	Introduction to Management & Leadership	
MGT 414	Employee Engagement and Motivation <sup>1</sup>	3
MGT 415	Leadership and Learning <sup>1</sup>	3
Total Credit Hours		9

<sup>1</sup> May be taken in any order.

**Note:** Not open to majors in business.

### MTH 1 Axioms, Theorems, and Proof in Geometry and Algebra

Considers algebras and geometries defined by axiomatic systems, two very active fields in modern mathematics. Surprises are here: geometries without parallel lines, geometries with parallel lines and no rectangles, and new algebraic operations that can describe the structure of Rubik's cube and molecules. Develops the roles of definition, proof, and abstraction gradually until, at the 400 level, a full scale axiomatic treatment is given. At this level students provide many of the proofs. You rediscover results from the masters: Gauss, Hilbert, Galois, Abel, and others. Not an easy sequence, but you learn about how to read mathematics and solve problems on your own.

**Prerequisite:** MTH 251 or MTH 249/ MTH 249H

Code	Title	Credit Hours
MTH 222	Introduction to Linear Algebra	3
MTH 331	Proof: Introduction to Higher Mathematics	3
MTH 411/ MTH 511	Foundations of Geometry	3
or MTH 421/ MTH 521	Introduction to Abstract Algebra	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Mathematics.

## MTH 2 Basic Mathematical Tools for Science

Scientists today use a variety of mathematical tools, including calculus, discrete mathematics, and statistics to describe physical, biological, and social systems. This sequence helps students analyze problems from several perspectives with these tools. The courses can be taken in any order, keeping in mind that MTH231 and STA301 have a Calculus I as prerequisite, while MTH222, 245, and 252 have a Calculus II prerequisite.

Code	Title	Credit Hours
Select one of the following:		3
MTH 222	Introduction to Linear Algebra	
or MTH 222T	Introduction to Linear Algebra (Honors)	
MTH 231	Elements of Discrete Mathematics	
Select one of the following:		3
MTH 245	Differential Equations for Engineers	
MTH 252	Calculus III	
Select one of the following:		3
ECE 345	Applied Probability and Statistics for Engineers	
ISA 225	Principles of Business Analytics	
STA 261	Statistics	
STA 301	Applied Statistics	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Mathematics.

## MTH 3 Almost Linear Structures-Models for Physical Science

The goal is to extend the derivative and anti-derivative ideas from Calculus I and II by building on the linear function concept from MTH 222. Scientists use linear functions to model the economy, atomic structure, chemical reactions, and other phenomena. MTH 252 develops the derivative of a multivariable function as an approximating linear function, just as the graph of a function of one variable looks like a line segment near a point where the derivative exists. This allows the extension of important optimization techniques to multivariable functions. MTH 347 uses all available tools to generalize and solve antiderivative problems crucial to science. This sequence combines theory and practice and is the traditional path to upper division mathematics. MTH 222 and MTH 252 may be taken in either order or concurrently.

**Prerequisite:** Calculus I and Calculus II.

Code	Title	Credit Hours
MTH 222	Introduction to Linear Algebra	3
or MTH 222T/331T	Introduction to Linear Algebra (Honors)	
MTH 252	Calculus III	4
MTH 347	Differential Equations	3
Total Credit Hours		10

**Note:** Not open to majors in the Department of Mathematics.

## NSC 1 Naval Science: History of Warfare

Examines the evolution of strategic principles and the influence of economic, psychological, moral, political, and technological factors on strategic thought. Covers the evolution of warfare from 500 B.C. into future, naval warfare from 1500 into the future, and amphibious warfare from 1800 to present. Through literature, you are exposed to differing perspectives, including official records of the event, personal experiences of participants, and post-event analysis by researchers. Engage in a critical analysis of great leaders, military organizations, and military theorists of history.

Code	Title	Credit Hours
NSC 311	Evolution of Warfare <sup>1</sup>	3
NSC 202	Sea Power and Maritime Affairs Seminar	3
NSC 411	Fundamentals of Maneuver Warfare <sup>1</sup>	3
Total Credit Hours		9

<sup>1</sup> Taught in alternating fall semesters.

**Note:** Open to all majors. This thematic sequence requires two full academic years to complete.

## NSC 2 War: An Extension of Politics

Examines world politics, historical role played by the military in the outcome of those politics, and possible political methods to avoid future military action. Explores the complexity of world politics driven by differences in economics, population, culture, and philosophy, and studies the historical outcome of incidents where military action occurred as well as those incidents resolved without military involvement.

Code	Title	Credit Hours
Select one of the following:		3
HST 222	U.S. Foreign Relations Since 1898	
POL 271	World Politics	
POL 387	International Security Issues	
Select one of the following:		3
NSC 202	Sea Power and Maritime Affairs Seminar	
NSC 311	Evolution of Warfare	
NSC 411	Fundamentals of Maneuver Warfare	
Select one of the following:		3-4
HST 275	20th Century European Diplomacy	
POL 373	American Foreign Policy	

POL 374	Foreign Policy Analysis	
POL 381	Global Governance	
POL 382	International Law	
Total Credit Hours		9-10

**Note:** Students must select a minimum of nine hours outside department of major.

## PHL 1 Ethics

Develops insight and expertise in dealing with ethical matters that you are likely to confront in your personal and professional life beyond the university.

Code	Title	Credit Hours
Select one of the following:		3
PHL 103	Society and the Individual	
PHL 105	Theories of Human Nature	
PHL 131	Introduction to Ethics	
Select two of the following:		6-8
PHL 265	Confronting Death	
PHL 311	Ethical Theory	
PHL 312	Contemporary Moral Problems	
PHL 331	Political Philosophy	
PHL/WGS 355	Feminist Theory	
PHL 375	Medical Ethics	
PHL 376	Environmental Philosophy	
PHL 394	Existentialism	
Total Credit Hours		9-11

**Note:** Not open to majors in the Department of Philosophy. Students must take nine hours outside department of major.

## PHL 4 Metaphysics and Epistemology

Presents a range of philosophical outlooks and methods regarding the fundamental questions: what is real and how do we know it? Explores these questions as they are manifested in the history of philosophy.

Code	Title	Credit Hours
PHL 104	Purpose or Chance in the Universe	3
or PHL 105	Theories of Human Nature	
PHL 301	Ancient Philosophy	4
or PHL 302	Modern Philosophy	
PHL 321	Problems of Metaphysics and Knowledge	3
Total Credit Hours		10

**Note:** Not open to majors in the Department of Philosophy.

## PHY 1 The Physical World: Contemporary Physics

- Option One - experimental emphasis, stresses experimental, hands-on experience in the laboratory.

- Option Two - theoretical emphasis, stresses modeling and simulation approaches to problem solving.

Extends the basic foundation in the broad area of physics developed in "The Physical World." Provides in-depth developments of topics in modern and contemporary physical science. The goal is to provide a level of understanding and skills in contemporary scientific methodology to enable further study in the sciences or to provide a substantial technical background for a future career.

Code	Title	Credit Hours
PHY 192	General Physics with Laboratory II	5
PHY 281 & PHY 293	Contemporary Physics I: Foundations and Contemporary Physics Laboratory	5
Select one of the following options:		3-5
Experimental Option:		
PHY 292 & PHY 294	Electronic Instrumentation and Laboratory in Electronic Instrumentation	
Theoretical Option:		
PHY 286	Introduction to Computational Physics	
Total Credit Hours		13-15

**Note:** Not open to majors in the Department of Physics. Although laboratory sections are listed as separate courses in this Bulletin, they are integral co-requisites to the companion courses.

## PHY 2 Your Place In the Universe

For untold generations, humans have gazed at the stars, planets, and cosmos, and asked what is it all, and how do I fit in? This sequence attempts to address this timeless, universal, and totally human question from the viewpoint of modern science. The Foundation course provides an overview of our present understanding of the universe and some insight as to how we came to such an understanding. The second course addresses the crucial question, how do we know what we claim to know? Here, the observational foundation of our theories is examined in detail. The final course addresses several topics from astronomy that currently are without explanation.

Code	Title	Credit Hours
PHY 111	Astronomy and Space Physics	3
PHY 211	Observational Foundations of Astronomy	3
PHY 311	Contemporary Astronomy	3
Total Credit Hours		9

**Note:** Not open to majors in the Department of Physics.

## POL 3 National Political Institutions

Enables you to understand the political system in which you live, how it operates or fails to do so, where and how citizen influence is applied, and how to assess proposals for reform. Take POL 241 first, then select three additional courses from the options listed. Sequence of four courses.

Code	Title	Credit Hours
POL 241	American Political System	3
Select three of the following:		9
POL 343	American Presidency	
POL 344	U.S. Congress	
POL 352	Constitutional Law and Politics	
POL 353	Constitutional Rights and Liberties	
POL 356	Mass Media and Politics	
Total Credit Hours		12

**Note:** Not open to majors in the Department of Political Science.

## POL 6 Public Management and Leadership

Students will gain an understanding of the importance and workings of governmental agencies, their influence on society and daily life, and their prospects for promoting the general welfare. Furthermore, students will be confronted with both theoretical issues and practical problems in the courses, encouraging them to be real-world problem solvers through an understanding of the "fourth branch" of government, the bureaucracy.

Code	Title	Credit Hours
POL 261	Public Administration	3
Select two of the following:		6
POL 362	Public Management, Leadership, and Administrative Politics	
POL 364	Federalism and Intergovernmental Relations	
POL 467/ POL 567	Public Budgeting	
POL 468/ POL 568	Public Personnel Administration	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Political Science.

## PSY 1 Perspectives on Psychopathology

Uses a psychological perspective to consider the personal and interpersonal experience of psychopathology and to analyze the impact of psychopathology on society as a whole. Begins with a general examination of individual and social psychopathology and builds toward in-depth exploration of selected specific individual or social issues related to psychopathology.

**Prerequisite:** PSY 111.

Code	Title	Credit Hours
PSY 242	Abnormal Psychology	3
PSY 343	Psychopathology	3
PSY 345	Childhood Psychopathology and Developmental Disabilities	3
Total Credit Hours		9

**Note:** Not open to majors in the Department of Psychology.

## PSY 2 Patterns in Human Development

Throughout life, our thoughts, feelings, and behaviors change. How does our biological makeup interact with our physical and social surroundings to contribute to our actions and abilities? A scientific approach to developmental psychology requires us to think critically in examining theories and research and to understand the contexts in which we develop and the contexts in which theories and research are conducted. In this thematic sequence, you will engage with other learners as you reflect on ideas about why we develop the way we do. Such reflection provides an informed basis for acting on issues affecting infants, children, adolescents, and their families in diverse contexts.

**Prerequisite:** PSY 111 or EDP 101

Code	Title	Credit Hours
PSY 231	Developmental Psychology	3
PSY 332	Child Development	3
Select one of the following:		3
PSY 331	Infant Development	
PSY 333	Adolescent Development	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Psychology. Majors in the Departments of Educational Psychology and Family Studies and Social Work must take a minimum of nine hours outside department of major.

## PSY 5 Cognition: Understanding and Improving Thought

Offers opportunity to reflect upon reasoning, those processes used to create, maintain, modify, and evaluate beliefs about the world. Begins by introducing the study of cognition within the discipline of psychology; the second course emphasizes specific cognitive processes (e.g., language) and methods and theories associated with their study; the third course offers an in-depth analysis of current theories and methods of studying cognition within a circumscribed topic area.

Code	Title	Credit Hours
PSY 271	Survey of Perception, Action, and Cognition	3
PSY 374 or PSY 376	Psychology of Language and Thought Psychology of Judgment, Decision Making, and Reasoning	3
PSY 470	Seminar in Cognition	3
Total Credit Hours		9

**Note:** Not open to majors in the Department of Psychology.

## PSY 6 Applied Leadership and Pedagogy

The redesigned introductory psychology (PSY 111) course focuses on developing skills used by psychologists in using evidence to support their beliefs. Students will be invited to participate in leadership training (PSY 211) that will train them to lead small discussion groups of introductory psychology students (PSY 212) in which the leaders guide students in practicing their use of these critical thinking skills.

The final course (PSY 313) promotes reflection on their experience as a discussion leader and provides an opportunity to engage in a facet of their experience in more depth. These goals are achieved by pursuing a project designed as part of their practicum experience in PSY 212, engaging in an additional pedagogical experience, mentoring new discussion leaders or taking another course approved by the faculty member teaching PSY 313.

With respect to the subject-matter of how psychologists/scientists use evidence: Participants in this thematic sequence begin as students "learning" principles of scientific thinking (PSY 111). The second course (PSY 211) affords the students more advanced training in the skills of how scientists use evidence. The third course (PSY 212) affords students the opportunity to serve as guides for students in PSY 111 learning the same principles for the first time. Finally, PSY 313 affords students the opportunity to use their prior experiences as the basis to guided inquiry into the nature of learning and pedagogy.

Code	Title	Credit Hours
PSY 111	Introduction to Psychology	3
PSY 211 & PSY 212	Psychological Perspectives on Leadership and Pedagogy in the College Classroom and Practicum in Leadership and Pedagogy	5
PSY 313	Advancing in Leadership and Pedagogy	1-3
Total Credit Hours		9-11

## REL 1 Religion and American Life

Acquaints you with fundamental themes in the relationship between religion and society, as exemplified in the development of American religious pluralism in theory and practice, as well as in the impact of religious themes in the development of an American cultural identity.

Code	Title	Credit Hours
REL 101	Introduction to the Study of Religion	3
Select one of the following:		3
AMS/REL 241	Religions of the American Peoples	
AMS/REL 342	Religious Pluralism in Modern America	
AMS/REL/WGS 345	Women, Religion and Social Change in America	
REL 341	Protestantism and the Development of American Culture	
Select one of the following:		3-4
REL/BWS 343	African-American Religions	
REL/AMS 346	Issues in the Study of Native American Religions	
Total Credit Hours		9-10

**Note:** Not open to majors in the Department of Comparative Religion.

## REL 2 The Historical and Comparative Study of Religion

Uses the approach of the history of religions to provide perspective continuity and depends heavily on the study and interpretation of classical foreign-language texts in English translation, while using

case studies, surveys, and field reports. Unlike some sequences in the humanities that concentrate on religious ideas and doctrines, this sequence utilizes categories developed from the field of comparative religion to acquaint students with the diversity of religious phenomena. Emphasizes the importance of studying religion in a comparative and global context; allows a choice of emphasis of either major Eastern or Western religious traditions, at the second level.

Code	Title	Credit Hours
REL 101	Introduction to the Study of Religion	3
REL 201	Methods for the Study of Religion	3
Select one of the following:		3
REL 223	Introduction to Buddhism	
REL 286	Global Jewish Civilization	
REL 343	African-American Religions	
REL 355	Religion and Law	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Comparative Religion.

## SDT 1 Self-Designed Thematic Sequence

The purpose of the self-designed thematic sequence is to provide students with the opportunity to design a specialized thematic sequence beyond those that are currently offered. This sequence should be based on the student's interests, career, goals, and intellectual interests. A proposal must be submitted to the Office of Liberal Education for approval (313 Laws Hall or visit [www.MiamiOH.edu/liberal-ed](http://www.MiamiOH.edu/liberal-ed)) before the last 6 hours have been completed. This is a preapproval process.

## SJS 1 Social Justice and Inequalities

The goal of this sequence is to introduce students to social justice studies from a sociological perspective, with particular focus on social inequalities. The objectives of the sequence are:

- to explain how various sociological and philosophical theories of justice contribute differentially to human rights and social justice-based policies, programs, and declarations/covenants at both national and global levels;
- to evaluate consistencies and disparities between micro- and macro-level efforts to achieve social justice;
- to develop core sociological concepts and theories across the three levels of courses;
- to facilitate and guide personal insight and reflection for acting in a morally just way.

Code	Title	Credit Hours
SOC/SJS 165	Introduction to Social Justice Studies	3
Select one of the following:		3
AAA 207	Asia and Globalization	
SOC 305	Introduction to the Sociology of Globalization	
SOC 225	Work and Occupational Justice	
Select one of the following:		3
SOC/BWS 348	Race and Ethnic Relations	

SOC 372	Social Stratification
SJS/SOC 323	Social Justice and Change
SJS/SOC 487	Globalization, Social Justice and Human Rights

Total Credit Hours 9

## SJS 2 Social Justice, Law, and Crime

The goal of this sequence is to introduce students to social justice studies from a sociological perspective, with particular focus on law and crime. The objectives of the sequence are:

- to explain how various sociological and philosophical theories of justice contribute differentially to justice-based policies, programs and declarations/covenants at both national and global levels;
- to evaluate consistencies and disparities between micro- and macro-level efforts to achieve social justice;
- to link core sociological concepts and theories across the three levels of courses;
- to facilitate personal insights for reflecting and acting in a morally just way.

Code	Title	Credit Hours
SJS/SOC 165	Introduction to Social Justice Studies	3
SOC 201	Social Problems	4
or SOC 202	Social Deviance	
Select one of the following:		3
SOC 352	Criminology	
SOC 409	Systems of Justice	
SOC 412	Sociology of Law	
SOC 413	Juvenile Delinquency	
Total Credit Hours		10

## SOC 3 Sociological Perspectives on Inequality

Uses a sociological perspective to approach the issues of social, political, and economic inequality in contemporary society, paying particular attention to inequality as it is determined by class, race, and gender. Begins with an examination of theories of social stratification; then follows a sequence of courses that allows you to develop an in-depth understanding of the major dimensions of social inequality.

**Prerequisite:** SOC 151 or SOC 153 or CRE 151

Code	Title	Credit Hours
SOC/WGS 203	Sociology of Gender	3
BWS/SOC 348	Race and Ethnic Relations	3
or BWS 248	African-American Experience	
SOC 372	Social Stratification	3
or SOC 417	Economy and Society	
Total Credit Hours		9

**Note:** Not open to majors in the Departments of Sociology and Gerontology. Majors in the Departments of Critical Race and Ethnic Studies and Women's, Gender and Sexuality Studies must take a minimum of nine hours outside department of major.

## SOC 4 Sociological Perspectives on Criminology and Deviance

Students will use the social dynamics of history and a sociological perspective to understand and critique conformity, crime, deviance, and the justice system in contemporary society, paying particular attention to the social construction of legality, normality, and crime as influenced by various cultural contexts. The sequence begins with an examination of the basic theories and components of deviance/conformity, then follows a sequence of courses that allows them to examine and develop an understanding of the criminology field and concludes with an advanced course. Students must apply for this Thematic Sequence; enrollment is limited.

Code	Title	Credit Hours
SOC 201	Social Problems	4
or SOC 202	Social Deviance	
SOC 352	Criminology	3
Select one of the following:		3
SOC 409	Systems of Justice	
SOC 410/ SOC 510	Topics in Criminology	
SOC 413	Juvenile Delinquency	
Total Credit Hours		10

**Note:** Not open to majors in the Department of Sociology and Gerontology.

## SOC 5 Gender and Family Studies

Sequence exposes students to the major sociological contributions to gender and family issues and gives them experience in connecting the substantive content in the courses. Objectives include:

- demonstrating how various sociological theories differentially contribute to our understanding of gender, sexuality, and families;
- linking the core concepts sociologists employ across three levels of courses;
- highlighting how definitional issues and current research in gender, sexuality, and family intersect, and
- deriving personal insights for reflecting and acting regarding one's position in the social structure as to gender, sexuality, and family.

Code	Title	Credit Hours
SOC/WGS 203	Sociology of Gender	3
SOC/WGS/FSW 221	Sexualities	3
FSW 363	Sociology of Families	3
or FSW 466/ FSW 566	Interpersonal Perspectives on Adulthood and Aging	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Sociology and Gerontology. Majors in the Departments of Women's, Gender and Sexuality Studies and Family Studies and Social Work must take a minimum of nine hours outside department of major.

## SOC 6 Medical Sociology

This thematic sequence focuses on social factors in health and illness and the structure and function of health care systems globally. Students completing the sequence will be able to articulate differences between the sociological model and medical model of health and illness; explain how health is stratified by social factors such as gender, age, race-ethnicity, and social class; describe the U.S. health care system and contrast it with that of other nations; identify key ethical issues in health care; critically evaluate the stratification and socialization of health care professionals; and analyze the function and structure of various health care settings.

Code	Title	Credit Hours
SOC 151 or SOC 153	Social Relations Sociology in a Global Context	3-4
Select one of the following:		3
SOC 257	Population	
SOC 358	The Sociology of Mental Disorders	
SOC 440	Internship in Sociology or Social Justice Studies	
Select the following:		
SOC 357	Medical Sociology	3
Total Credit Hours		9-10

**Note:** Not open to majors in the Department of Sociology and Gerontology.

## SPA 2 Exploring Social Emotional and Communication Consequences in Special Populations

Offers students the opportunity to develop insight into:

1. the problems facing physically, mentally, communicatively, culturally, or socially challenged individuals in our society;
2. the development of structures and environments needed for such individuals to communicate effectively, and
3. how these environmental modifications can be implemented.  
Provides specific information on recognizing and treating physical and communicative disorders, with emphasis placed on those problems that impact the normal development of speech, hearing, and language.

Code	Title	Credit Hours
SPA 127	Introduction to Communication Disorders	3
EDP 256 or SPA 223	Psychology of the Exceptional Learner Theories of Language Development	3
Select one of the following:		3
EDP 491/ EDP 591	Methods II: Learners with Mild to Moderate Disabilities	
SPA 426/ SPA 526	Language Disorders	
SPA 427/ SPA 527	Alternative Communication Systems for the Severely Handicapped	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Speech Pathology and Audiology. Special Education majors must take a minimum of nine hours outside department of major.

## SPN 1 Literature and Culture in Spain

Focuses on the literature of Spain, exploring the relationships between texts, history, and culture. SPN 315, a Foundation course, emphasizes skills in the analysis and interpretation of Spanish texts; SPN 351 explores social and historical circumstances from the Arab occupation of Al Andalus through the period of the Catholic empire, colonial expansion and early modernity; SPN 352 focuses on the cultural history of Spain from the 18th-century to the present, with an emphasis on 20th century Spain. All courses taught in Spanish, and all work is completed in Spanish.

**Prerequisite:** SPN 311. Courses must be taken in order.

Code	Title	Credit Hours
SPN 315	Intro to Hispanic Literatures	3
SPN 351	Cultural History of Spain I	3
SPN 352	Cultural History of Spain II	3
Total Credit Hours		9

**Note:** Not open to majors in the Department of Spanish and Portuguese.

## SPN 2 Literature and Culture in Spanish America

Focuses on the literature of Spanish America, exploring the interrelationships among texts, history, and culture. SPN 315, a Foundation course, emphasizes skills in the analysis and interpretation of Spanish American texts; SPN 361 explores social and historical circumstances (colonialism through national independence, issues of national development) as represented in Spanish American literature; SPN 362 continues to focus on cultural and historical circumstances in Spanish American literature from the nineteenth to the twenty-first century. All courses taught in Spanish, and all work is completed in Spanish.

**Prerequisite:** SPN 311. Courses must be taken in order.

Code	Title	Credit Hours
SPN 315	Intro to Hispanic Literatures	3
SPN 361	Spanish American Cultural History I	3
SPN 362	Spanish American Cultural History II	3
Total Credit Hours		9

**Note:** Not open to majors in the Department of Spanish and Portuguese.

## STA 1 Quality Issues in Contemporary Business and Industry

Provides sufficient understanding of the factors influencing quality and organizational productivity. Upon completion, you should be able to critically examine work systems and play a leading role in the improvement of any work process in which you are involved. Key themes include: data based decision-making, use of statistical tools for process analysis and quality improvement, measurement

of quality, Total Quality Management, quality leadership, employee involvement, and the relationship between work processes and quality improvement systems.

Code	Title	Credit Hours
ISA 205 or STA 301	Business Statistics Applied Statistics	4
MGT 302	Introduction to Operations and Supply Chain Management	3
ISA/STA 365 or MME 334	Statistical Monitoring and Design of Experiments Quality Planning and Control	3
MGT 453/ MGT 553	Quality Management Systems	3
Total Credit Hours		13

**Note:** Not open to majors in the Department of Management. Majors in the Departments of Information Systems and Analytics, Manufacturing and Mechanical Engineering, Mathematics and Statistics must take a minimum of nine hours from outside department of major.

## STA 2 Applied Statistics

Provides a basic understanding of the statistical data analysis procedures of estimation and hypothesis testing and their use in data-based decision making. Based primarily on the “classical” assumptions of random sampling and normal distributions, data analysis applications range from one and two population problems to more complex problems of regression and design of experiments. The first course, chosen from three options, introduces additional statistical procedures that go beyond the “classical” assumptions. Considers examples from a variety of disciplines and life experiences and employs statistical software extensively.

Code	Title	Credit Hours
STA 261 or STA 301	Statistics Applied Statistics	3-4
STA 363	Introduction to Statistical Modeling	3
Select one of the following:		3
STA/ISA 333	Nonparametric Statistics	
STA/ISA 365	Statistical Monitoring and Design of Experiments	
STA/ISA 432	Survey Sampling in Business	
Total Credit Hours		9-10

**Note:** Not open to majors in the Departments of Mathematics and Statistics.

## THE 1 Modern Theatre and Drama

Study of the influences, backgrounds, playwrights, and theatre artists that have brought about contemporary theatre production practice, style, and dramaturgy. The eclecticism of 20th century theatre reflects the shifting realities of science, culture, politics, and aesthetics in a way that mirrors our attempts to understand ourselves and our world. The objective is to reach an integrative knowledge of the connectedness of art and society to understand how in creating an image of our lives, in forging new realities, in exploring new forms and

styles, theatre artists have helped define our response to the world and our experience.

Code	Title	Credit Hours
Select one of the following:		3
THE 101	Introduction to Theatre: Drama and Analysis	
THE 191	Experiencing Theatre	
Select two of the following:		6
THE 393	Topics in Intercultural Perspectives and Global Theatre and Performance	
THE 394	Topics in Dramatic Literature and Cultural Performance	
THE 395	The Musical in American Culture	
Total Credit Hours		9

**Note:** Not open to majors in the Department of Theatre.

## THE 3 Theatre Design and Technology

Explores and develops skills, processes, and critical aesthetic thinking as applied to the design, creation, and implementation of the technical elements of theatrical production, including scenery, costumes, and lighting. Analysis of dramatic texts, collaboration, creativity, and problem solving skills are developed as students learn to design and create visual worlds that help tell stories. The concepts may be applied to the larger field of entertainment design including film, television, gaming, merchandising, or any field in which a story can be enhanced through visual means.

Code	Title	Credit Hours
Select the following:		
THE 257 or CCA 111	Stagecraft and Theatre Technologies Innovation, Creativity and Design Thinking	3
Select one of the following:		3
THE 253	Costume Fundamentals	
THE 257	Stagecraft and Theatre Technologies	
THE 258	Scene Painting Fundamentals	
THE 342	Stage Management	
THE 450/ THE 550	Special Topics in Theatre Design and Technology	
Select one of the following:		3
THE 352	Scenic Design	
THE 353	Costume Design	
THE 354	Lighting Design	
Total Credit Hours		9

## WGS 1 Gender in Global Context

This sequence focuses on the analysis of the historical, cultural, socioeconomic, and political contexts of gender relations in various parts of the world. Such a global perspective will be predicated on an understanding of the different debates around gender, race, and class that the variety of transnational feminisms has created. Students will demonstrate the ability to apply the fundamental contexts comparing the ways in which gender is constructed and functions in different countries and regions of the world. Students will develop

skills of increasing complexity ranging from gender analysis to cross-disciplinary research in international contexts.

Code	Title	Credit Hours
WGS 201	Introduction to Women's Studies	3
Select two of the following:		6
WGS 301	Women and Difference: Intersections of Race, Class, and Sexuality	
WGS 309 or GEO 309	Native American Women	
WGS/POL 346	Global Gender Politics	
WGS/HST 450	Topics in Women's History	
WGS 333	Religion, Dress, and Status	
WGS/GEO 436	Women, Gender and the Environment	
WGS 313	Marriage Across Cultures	
WGS/GEO 406	Indigenous Peoples and Their Sacred Lands	
WGS/ENG/BWS 437	Black Feminist Theory	
WGS/ENG/AAA 351	Cultural Politics of Gender and Sexuality in Asian/America	
WGS/POR/ FST/383/ENG/ BWS 383	Brazilian Women through Literature and Film	
WGS 410B or WGS 410E		
Total Credit Hours		9

**Note:** Not open to majors in the Department of Women's, Gender, and Sexuality Studies.

## WGS 2 Scholarly Studies of Gender and Sexuality

The thematic sequence in Scholarly Studies of Gender and Sexuality provides an opportunity for investigating and analyzing the historical, social, legal, and cultural forces that shape experiences, expressions, and representations of non-normative genders and sexualities including, but not necessarily limited to Gay, Lesbian, Bisexual, Transgendered, Intersex and Queer individuals and communities. Students will receive a broad, interdisciplinary introduction to scholarship in GLBTIQ studies in the foundation course, then focus more specifically on a disciplinary or topical perspective in tier two, ultimately engaging with the philosophical and theoretical aspects of investigating sexuality and gender as meaning-making cultural and social systems.

Code	Title	Credit Hours
WGS 202	Introduction to GLBT Studies <sup>1</sup>	3
Select one of the following:		3
ENG 237	GLBTQ Literature	
FST 282	Sexualities and Film	
SOC/WGS 203	Sociology of Gender	
SOC/FSW/WGS 221	Sexualities	
Select the following:		

WGS/ENG 435	Queer Theory	3
Total Credit Hours		9

<sup>1</sup> Only one Foundation (MPF) course can count toward both a Foundation requirement and a Thematic Sequence.

**Note:** Not open to majors in the Department of Women's, Gender, and Sexuality Studies.

## Thematic Sequences Available at Dolibois European Center in Luxembourg

For information, contact the Oxford Luxembourg Office, 218 MacMillan Hall, 513-529-5050.

### LUX 3 European Culture and Society. (Offered during the semester programs and summer workshop)

This sequence permits students to draw on the variety of European-focused courses available at the Dolibois European Center to develop an in-depth understanding of the complexities of contemporary Europe. Emphasis is on an interdisciplinary perspective which links cultural phenomena and socio-political dynamics. Students must take at least one course from each of the three groupings for a total of at least nine credit hours. Students may include only one course from the department of their major in the sequence.

## Advanced Writing

(3 hours minimum)

Advanced writing courses (200 or 300 level) are offered by instructors in disciplines, departments, and programs across the university. These courses focus on writing instruction. Advanced writing courses feature:

- Student writing as the central focus (with the majority of class time dedicated to instruction on and activities about writing)
- Frequent opportunities to write with ongoing instructor feedback on multiple drafts of major projects
- Multiple, substantial writing projects (at least 7,500 words over the course of the term).

The Advanced Writing requirement is new to the entering class of 2015 and courses are being continually added to the list of approved courses. For a comprehensive and current list of approved courses see the liberal education web site: <http://miamioh.edu/hcwe/hwac/advanced-writing/approved-courses/index.html>.

## Advanced Writing Courses

Code	Title	Credit Hours
AAA/AMS/BWS/ LAS/WGS 211	Writing with Purpose: Interdisciplinary Inquiry and Communication	3
AMS 206	Approaches to American Culture	3
ART 285	Writing and the Visual Arts	3
ATH 231	Foundations of Cultural Anthropology	4
BIS 305	Integrative Writing in Global Contexts	3
BUS/ENG 284	Professional Communication for Business	3
CHM 375	Analytical Chemistry for Majors	3

CJS 282	Writing in Criminal Justice	3
EDP 324	Research and Applied Writing Across the Disciplines	3
EDT 284	Writing for Educators	3
EGS 215	Workplace Writing	3
EGS 301	Writing and the Professions	3
EGS 319	Medical Writing	3
ENG 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds	3
ENG 225	Advanced Composition	3
ENG 226	Introduction to Creative Writing: Short Fiction and Poetry	3
ENG 298	Introduction to Literary and Cultural Studies	3
ENG 313	Technical Writing	3
ENG 315	Business Writing	3
ENG 413/ENG 513	Grant and Proposal Writing	3
FRE 301	Culture & Interpretation	3
FRE 303	Modern and Contemporary Literature and Life	3
FRE 310	Texts in Context	3
GEO 201 & GEO 451/ GEO 551	Geography of Urban Diversity and Urban and Regional Planning	6
GEO 211	Global Change	3
GLG 211	Chemistry of Earth Systems	3
GLG 301	Sedimentology and Stratigraphy	4
HST 206	Introduction to Historical Inquiry	3
IMS/ENG 317	Writing for Games	3
ITS 202	Writing Policy Analysis	3
MTH 331	Proof: Introduction to Higher Mathematics	3
MTH 331T	Proof: Introduction to Higher Mathematics (H)	3
NSG 301	Theory-Based Nursing Practice	3
PHL 245	Writing Philosophy	3
PSY 294	Writing and Research Methods in Psychology	4
SPN 316	Intermediate Spanish Composition	3
THE 418/THE 518	Playwriting	3

## Intercultural Perspectives

(3 hours minimum)

Intercultural Perspectives courses prepare students for effective citizenship in diverse multicultural societies in the US and beyond. In these courses, students will recognize new perspectives about their own cultural rules and biases by:

- Demonstrating an understanding of the ways marginalized and dominant groups define and express themselves, and the contexts in which these definitions are constructed; and/or
- Demonstrating an understanding of how such global forces as imperialism, colonialism, religion, globalization, capitalism, and

socialism have shaped ideas, groups, institutions, and/or the natural environment; and/or

- Demonstrating an understanding of theories addressing notions of race, gender, sexuality, class, disability, ethnicity, nationalism, intersectionality and other socially constructed categories.

The Intercultural Perspectives Requirement is new to the entering class of 2015 and courses are being continually added to the list of approved offerings. For a comprehensive and current list of approved courses see the liberal education web site: <http://www.MiamiOH.edu/liberal-ed/>.

Courses currently approved for the Intercultural Perspectives requirement include courses designated as meeting the diversity requirement of the Farmer School of Business and are listed below. A student cannot apply a single course to both the Foundation and the Intercultural Perspectives requirement.

## Intercultural Perspective Courses

Code	Title	Credit Hours
AAA 201	Introduction to Asian/ Asian American Studies	3
AMS 205	Introduction to American Cultures	3
AMS 207	America: Global and Intercultural Perspectives	3
AMS/FST/ITL 222	Italian American Culture	3
AMS/REL 241	Religions of the American Peoples	3
AMS 301	American Identities	3
AMS 302	Immigrant America	3
AMS 305	American Icons	3
AMS/REL 342	Religious Pluralism in Modern America	4
AMS/HST/WGS 382	Women in American History	3
AMS/HST/WGS 392	Sex and Gender in American Culture	3
ARC 427/ARC 527	The American City Since 1940	3
ART/AMS 183	Images of America	3
ASO 201	Introduction to Applied Social Research	3
ATH 185	Cultural Diversity in the U.S.	3
ATH 304	Native North America: Anthropological Perspectives	3
ATH 313	Latin American Archaeology	3
ATH 426	Field Research	4-6
ATH/CLS 431	Archaeology of Power	3
BIS/EGS 305	Integrative Writing in Global Contexts	3
BWS/HST 221	African-American History	3
BWS 248	African-American Experience	3
BWS/SOC 348	Race and Ethnic Relations	3
BWS/FSW/SOC 362	Family Poverty	3
BWS/HST 386	Race in U.S. Society	3
BWS/ENG/WGS 432	Feminism and the Diaspora: U.S. Women of Color	3
CEC 266	Metal on Metal: Engineering and Globalization in Heavy Metal Music	3

CIT 448	Global and Strategic Issues in Information Technology	3	GTY 310	Opening Minds through Art (OMA) Leadership Experience	2
CMR 244	Introduction to Global Business	3	GTY/SOC 318	Social Forces and Aging	3
CMR 402	Cross Cultural Leadership Skills	3	HST 213	Appalachia: Cultures and Music	3
CRE 151	Introduction to Critical Race and Ethnic Studies	3	HST/LAS 260	Latin America in the United States	3
DST/EDP/SOC 272	Introduction to Disability Studies	3	HST 372	Native American History since 1840	3
DST/EDP/SOC/ WGS 375	(Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice	3	IDS 159	Strength Through Cultural Diversity	3
ECO 131	Economic Perspectives on Inequality in America	3	IDS 259	Introduction to the Miami Tribe of Oklahoma	3
ECO 356	Poverty and Income Distribution	3	or HST 259	Introduction to the Miami Tribe of Oklahoma	
EDL 203	Introduction to Critical Youth Studies	3	IMS 384	Rhetoric of Games	3
EDL 204	Sociocultural Studies in Education	3	ITS 201	Introduction to International Studies	3
EDL/AAA 334	Transnational Youth Cultures	3	KNH 453/KNH 553	Seminar in Kinesiology and Health	1-4
EDP 209	Development, Learning & Diversity	3	KNH/WGS 475	Women, Gender Relations, and Sport	3
EDT 205	Race, Cultural Diversity, and Equity in Education	3	LAS 208/ATH 206	Introduction to Latin America	3
EGS 305	Integrative Writing in Global Contexts	3	LAS/AMS 315	Latin American Diaspora: Communities, Conditions and Issues	3
ENG 163	Literature and Travel	3	LAS/BWS/WGS/ ATH 325	Identity, Race, Gender, Class	3
ENG 202	Varieties of English: Dialect Diversity and Language Change	3	MGT 304	Cross Cultural Management	3
ENG 237	GLBTQ Literature	3	MGT 402/ MGT 502	Employment Law	3
ENG/AAA/AMS 248	Asian American Literature	3	MUS/AMS 285	Introduction to African American Music	3
ENG/LAS 254	Latino/a Literature and the Americas	3	MUS/WGS 287	Enter the Diva: Women in Music	3
ENG 332	Early British Women Writers	3	MUS 385	The Roots of Black Music: Blues, Gospel and Soul	3
ENG/FST/WGS 356	Women and Gender in Film	3	MUS/AMS 386	The History and Development of Hip Hop Culture in America	3
ENG/WGS 435	Queer Theory	3	NCS 401	Capstone in Nonprofit and Community Studies	3
ENG/BWS/WGS 437	Black Feminist Theory	3	NSG 430	Community Health Nursing	4
ENG/DST 494/ EDP 489	Disability in Global and Local Contexts	3	POL 142	American Politics and Diversity	3
FST/IDS 206	Diversity and Culture in American Film	3	PSY/AAA 210	Psychology Across Cultures	3
FST 282	Sexualities and Film	3	PSY 325	Psychology of Prejudice and Minority Experience	3
FSW 206	Social Welfare: Impact on Diverse Groups	4	REL/WGS 313	Marriage Across Cultures	3
FSW/WGS 361	Couple Relationships: Diversity and Change	3	SJS/SOC 165	Introduction to Social Justice Studies	3
FSW/BWS/SOC 362	Family Poverty	3	SJS 215	EMPOWER I: Educational and Economic Justice and Service-Learning	3
GEO 201	Geography of Urban Diversity	3	SJS/SOC 487	Globalization, Social Justice and Human Rights	3
GEO/WGS 302	Geography and Gender	3	SOC/WGS 203	Sociology of Gender	3
GEO/WGS 309	Native American Women	3	SOC 362	Family Poverty	3
GEO 455	Race, Urban Change, and Conflict in America	3	SOC/GIC 421	Critical Race and Post-Colonial Studies	3
GER 151	The German-American Experience	3	SOC/SJS/GIC 487	Globalization, Social Justice and Human Rights	3
GER/FST 261	German Film in Global Context	3	SPA/DST 312	Deaf Culture: Global, National and Local Issues	3
GIC 228	Cuba In Transition	6	STC 436	Intercultural Communication	3
GIC 301	Approaches to Global and Intercultural Studies: Globalization and Belonging	3	WGS 201	Introduction to Women's Studies	3
GTY 110	Opening Minds through Art (OMA) Volunteer Experience	1	WGS 202	Introduction to GLBT Studies	3
GTY 260	Global Aging	3	WGS 301	Women and Difference: Intersections of Race, Class, and Sexuality	3

## Experiential Learning

(0 hours minimum)

Experiential learning is the process of making meaning through direct and substantive experience in a “real world” or an “out of the traditional classroom” context. It offers students the opportunity to initiate lifelong learning through the development and application of academic knowledge and skills in new or different settings. In experiential learning, educators purposefully engage with learners in direct experience and reflection in order to increase knowledge, develop skills, and clarify perspectives or values.

- Designated Service-Learning courses
- Credit-bearing or non-credit-bearing internships (numbered 340)
- Credit-bearing or non-credit-bearing independent studies (numbered 177, 277, 377 or 477) that involve significant independent work focusing on research and including a presentation, lab, or archive component (carrying the “R” modifier)
- Undergraduate Summer Scholars Program courses
- Student teaching
- Clinical courses

Courses that currently count for the Experiential Learning requirement are detailed in the liberal education web site: <http://www.MiamiOH.edu/liberal-ed/>. **In some cases and with LEC permission beforehand, students may fulfill the Experiential Learning requirement as part of their Capstone.**

## Experiential Learning

Code	Title	Credit Hours
ACC 370	Applied Accounting Research	1-3
AES 310	Leadership Laboratory	1
AES 311	Leadership Laboratory	1
AES 410	Leadership Laboratory	1
AES 411	Leadership Laboratory	1
ARC 101	Beginning Design Studio	5
ARC 102	Beginning Design Studio	5
ARC 105	Introduction to Architecture	3
ARC 113	Methods of Presentation, Representation and Re-Presentation	2
ARC 114	Methods of Presentation, Representation and Re-Presentation	2
ARC 201	Architecture Studio	5
ARC 202	Architecture Studio	5
ARC 404/ARC 504	Seminars	1-3
ART 271	Sculpture I	3
ART 391	Field Study in Art and Architecture History	3
ART 419	Supervised Student Teaching in Art	15
ART 432/ART 532	Painting V	3
ART 442	Printmaking V	3
ART 451	The Professional Portfolio	3
ART 453	Highwire Brand Studio	4
ART 457	Photography IV	3
ART 462/ART 562	Ceramics V	3

ART 464/ART 564	Jewelry Design and Metals IV	3
ART 472/ART 572	Sculpture V	3
ART 492	Professional Artist's Portfolio and Exhibition Experience	3
ART 498	History and Methods in Art and Architectural History	3
ATH 415	Field Methods in Archaeology	1-6
ATH 416	Applying Archaeology	3
ATH 425/ATH 525	Ethnographic Field Methods	3
ATH 426	Field Research	4-6
ATH 465/ATH 565	Ethnography of Communication	3
ATH 496	Observing Primate Behavior	4
ATH/BIO 498	Evolution of Human Behavior	3
BWS 402	Engaged Learning Practicum	1-6
CEC 205	Agile Launchpad I	3
CHM 480	Departmental Honors	1-6
CIT 457	IT Project Lifecycle I: Requirements and Design	3
CIT 458	IT Project Lifecycle II: Implementation and Deployment	4
CJS 220	Criminal Justice Field Experience	3
CMR 220	Professional Practice	0-2
CPB 471	Engineering Design I	2
CPB 472	Engineering Design II	2
CSE 448	Senior Design Project	2
CSE 449	Senior Design Project	1-2
ECE 448	Senior Design Project	2
ECE 449	Senior Design Project	2
EDL 301	Student Development in Residence Halls	1
EDL 464	Community-Based Leadership and Change	3
EDP 419F	Supervised Teaching in Programs for Mild/Moderate Intervention Specialist Licensure	15
EDP 459/EDP 559	Practicum in Special Education	3
EDP 471/EDP 571	Literacy Seminar: Clinical	3
EDT 190	Introduction to Education	3
EDT 252M	Early Field Experience: Middle Childhood	3
EDT 310	Applications of Peer Education	1
EDT 419A/ EDT 519A	Teaching Internship- Adolescent	1-16
EDT 419E	Teaching Internship- Early Childhood	15
EDT 419M	Teaching Internship-Middle Childhood	15
ENG 163	Literature and Travel	3
ENG 321	The Literary Marketplace	3
ENG 413/ENG 513	Grant and Proposal Writing	3
ENG 414/ENG 514	Usability and User Experience	3
ENG 415	Capstone in Professional Writing	3
ENG 460	Issues in Creative Writing	3
ENG 480	English Honors	1-6
ENT 497	Senior Design Project	2
ENT 498	Senior Design Project	2

ESP 321	Startup Entrepreneurship	3	MBI 488	Medical Laboratory Science Practicum	12
ESP 461	Entrepreneurial Consulting	3	MBI 489	Medical Laboratory Science Practicum	12
FSW 412	Senior Seminar in Social Work I	2	MGT 432	Global Strategic Sourcing	3
FSW 413	Senior Seminar in Social Work II	2	MGT 474	Human Capital Consulting	3
FSW 490/FSW 590	Professional Issues in Family Science	3	MKT 292	Careers In Marketing	1
FSW 494/FSW 594	Internship with Families and Children	3-6	MKT 442	Highwire Brand Studio	4-8
GEO/GLG/IES/LAS 412	Tropical Ecosystems of Costa Rica	5	MKT 495	Strategy Works	4
GEO/GLG/LAS/413/IES 423/IES 523	Tropical Marine Ecology	5	MME 448	Senior Design Project	2
GEO 442/GEO 542	Advanced Geographic Information Systems	3	MME 449	Senior Design Project	2
GEO 459/GEO 559	Advanced Urban and Regional Planning	3	MUS 139	Chamber Music Experience	0
GEO 491	Senior Seminar	4	MUS 142	Applied Music	2
GEO 493	Urban Field Experience	3	MUS 144	Applied Music	3-4
GHS 401	Global Health Experience	2	MUS 242	Applied Music	2
GLG 311	Geoenvironmental Field Methods	3	MUS 244	Applied Music	3-4
GLG 411A/GLG 511A	Field Geology	6	MUS 344	Applied Music	3-4
GTY 110	Opening Minds through Art (OMA) Volunteer Experience	1	MUS 359	Instrumental Methods- Elementary and Secondary	4
GTY 310	Opening Minds through Art (OMA) Leadership Experience	2	MUS 419/MUS 519	Supervised Teaching in Music	12
GTY 440P	Gerontology Practice Capstone Internship	1-16	MUS 442	Applied Music	1-2
HON 181	Foundations of Engaged Learning I	1-2	MUS 444	Applied Music	3-4
HST 400	Senior Capstone in History	3	MUS 481	Advanced Studies in Special Subjects	1-4
HST 435/HST 535	Public History Practicum	3	MUS 482	Advanced Studies in Special Subjects	1-4
HST 480	Departmental Honors	1-6	MUS 494	Senior Recital	0
IMS 440/IMS 540	Interactive Media Studies Practicum	4	NCS 301	Community-Based Practicum I	3
ISA 406	IT Project Management	3	NCS 302	Community-Based Practicum II	3
ISA 496	Business Analytics Practicum	3	NSC 410	Naval Science Laboratory	1
JRN 421	Capstone in Journalism	3	NSG 302	Intermediate Clinical Nursing Practicum	3
KNH 286A	Practicum in Athletic Training I	1	NSG 343	Health Care Informatics	3
KNH 286B	Practicum in Athletic Training II	1	NSG 349	Introduction to Principles of Pharmacology in Nursing Practice	3
KNH 286C	Practicum in Athletic Training III	1	NSG 352	Childbearing Family Clinical	2
KNH 286D	Practicum in Athletic Training IV	1	NSG 354	Nursing Care of Adult Clients with Health Alterations I-Clinical	3
KNH 286E	Practicum in Athletic Training V	1	NSG 362	Nursing Care of Adult Clients with Health Alterations II-Clinical	3
KNH 286F	Practicum in Athletic Training VI	1	NSG 420	Focused Practicum in Baccalaureate and Expanded Nursing Roles	2
KNH 402	Critical Reflection on Practices in Health and Physical Culture	3	NSG 430	Community Health Nursing	4
KNH 403	Professional Practices in Dietetics	3	NSG 452	Nursing Care of Clients Experiencing Mental Health Disorders and Their Families-Clinical	3
KNH 420	Field Experience	1-4	NSG 464	Nursing Care of Clients Experiencing Multi-System Health Alterations-Clinical	5
KNH 495	Practicum in Sport Leadership and Management	3	PSY 112	Foundational Experiences in Psychology	1
MAC 425	Inside Hollywood	3	SJS 215	EMPOWER I: Educational and Economic Justice and Service-Learning	3
MAC 426	Inside Washington	8	SJS 216	EMPOWER II: The Intersections of Race, Class, and Education	3
MAC 427	Inside Washington Semester Experience	4	SOC 260A	Internship: An Introduction to Applied Sociology and Human Services	1-4
MAC 454	The Washington Community	3-4			
MBI 440	Research Problems	1-4			
MBI 487	Medical Laboratory Science Practicum	8			

SOC 440A	Internship - Applied Sociology	1-16
SOC 440C	Internship in Criminology	1-16
SOC 462	Applied Sociological Research	3
STA 475	Data Analysis Practicum	3
THE 200	Production and Performance Practicum	1
THE 400	Advanced Production and Performance Practicum	2
WGS 402/ WGS 502	Engaged Learning Practicum	1-6

## Capstone Experience

(3 hours minimum)

The Capstone Experience, completed near the end of baccalaureate studies, integrates liberal learning with specialized knowledge. Each Capstone emphasizes sharing of ideas, synthesis, and critical, informed reflection as significant precursors to action, and each includes student initiative in defining and investigating problems or projects.

Capstones may be completed in or outside students' majors; in some departments, the Capstone Experience may be a requirement of the major. All Capstones presume a significant scholarly background of specialized study in a major as well as in liberal education course work. In other words, a Capstone does more than culminate years of baccalaureate study: it culminates a student's liberal education.

Ordinarily, a Capstone Experience is taken at Miami and completed in the senior year (minimum of 96 hours registered or earned). Students who plan to transfer any course to meet the Capstone requirement must obtain permission from the Office of Liberal Education **before** they take the course.

The Office of Liberal Education website ([www.MiamiOH.edu/liberal-ed](http://www.MiamiOH.edu/liberal-ed)) provides a complete listing of Capstone Experiences. **Please refer to the Courses of Instruction chapter for course descriptions of the Capstones.**

Students may propose their own Senior Capstone Experience. See the Office of Liberal Education website ([www.MiamiOH.edu/liberal-ed](http://www.MiamiOH.edu/liberal-ed)) for details.

## Capstone Experience Courses

Code	Title	Credit Hours
ACC 495/ACC 595	Accounting Analysis	3
ACC 695	Integrative Accounting Capstone	3
AES 432	National Security/Leadership Responsibilities/Commissioning Preparation	3
AMS 401	Senior Capstone in American Studies	4
APC 401	Applied Communication Capstone	3
ARC 402C	Senior Studio Capstone Experience	6
ARC 408	Interior Design Studio	6
ARC 426/ARC 526	Architecture and Society	3
ART 419	Supervised Student Teaching in Art	15
ART 452	Communication Design Studio 3: Degree Project	3

ART 453	Highwire Brand Studio <sup>1</sup>	4
ART 492	Professional Artist's Portfolio and Exhibition Experience	3
ART 493	Professional Dispositions in Art Education	3
ART 498	History and Methods in Art and Architectural History	3
ASO 401	Applied Social Research Capstone	3
ATH 421/ATH 521	Senior Seminar in Anthropology	3
ATH 426	Field Research	4-6
ATH 448	Developing Solutions in Global Health	3
BIS 401	Senior Integrative Seminar	3
BLS 465	Ethics, Law, & Business	3
BIO 422/BIO 522	Evolutionary and Population Genetics	4
BIO 400	Capstone Seminar: Contemporary Issues in Biology	3
BIO 419R	Independent Research Capstone	3
BIO 435/BIO 535	Winter Biology	3
BIO 444/BIO 544	Molecular Biology	3
BIO 467/BIO 567	Conservation Biology	3
BIO 451/BIO 551	Conservation Education and Community Engagement	3
BIO 452/BIO 552	Nerve and Muscle Physiology	4
BIO 453/BIO 553	Animal Physiological Ecology	4
BIO 454/BIO 554	Endocrinology	3
BIO 465/BIO 565	Animal Behavior	4
BIO 469/BIO 569	Neurophysiology	3
BIO 490	Botany Capstone Seminar	1
BIO 477	Independent Studies <sup>2</sup>	2
BIO 496	Biodiversity of Kenya	6
BIO 498/BIO 598	Evolution of Human Behavior	3
BSC 415	Approaches to Problem Solving and Research in Applied Biology Capstone	3
BSC 416	Applications of Biotechnology to Human Health: Concepts and Issues	3
BSC 475	Capstone in Environmental Biology	3
BWS/WGS 432	Feminism and the Diaspora: U.S. Women of Color	3
BWS/DST/SJS/SOC 470	Social/Political Activism	3
CEC 488	Senior Design-Special Projects	4
CHM 491	Chemistry in Societal Issues	3
CHM 492	Independent Research Capstone in Chemistry	3
CIT 457	IT Project Lifecycle I: Requirements and Design	3
CIT 458	IT Project Lifecycle II: Implementation and Deployment	4
CJS 485	Capstone: Seminar in Criminal Justice	3
CLS 401	The Age of Pericles	3
CLS 402	The Age of Augustus	3
CMA 401	Capstone in Community Arts	3
CMR 495	Strategic Management for Commerce	3

CPB 471 & CPB 472	Engineering Design I and Engineering Design II	4	IMS 489	Game Production	6
CSE 448 & CSE 449	Senior Design Project and Senior Design Project	3-4	ISA 495	Managing the Intelligent Enterprise	3
DST/ENG 494/ EDP 489	Disability in Global and Local Contexts	3	ITS 402	Senior Capstone in International Studies	3
ECE 448 & ECE 449	Senior Design Project and Senior Design Project	4	JRN 421	Capstone in Journalism	3
ECO 405	Economics of Strategy	3	JRN 415	Capstone in Television Journalism	4
ECO 427	The Great Depression Revisited	3	KNH 402	Critical Reflection on Practices in Health and Physical Culture	3
EDP 460	Action Research/Problem-Based Seminar in Exceptional Education/ Developmental Differences	3	KNH 495	Practicum in Sport Leadership and Management	3
EDP 456/EDP 556	Advanced Seminar in Evaluation with Evidence-Based Interventions	3	LAS 410	Current Latin American Issues	3
EDP 471/EDP 571	Literacy Seminar: Clinical	3	LST 402	Capstone in Liberal Studies	3
EDT 422	Studies in Educational Issues	3	MAC 414	Capstone Pictures: Project in Digital Narrative Film Production	4
EDT 495	Writing Information Books for Children	3	MAC 445/ MAC 545	Electronic Media Policy and Regulation	3
EDT 455	Capstone Seminar: Comparative Education in Europe or China	4	MAC 447	Mass Media Criticism	3
ENG 405	Advanced Linguistics: The Research Program of Noam Chomsky	3	MBI 410 & MBI 490	Senior Internship and Undergraduate Seminar	3
ENG 406	Discourse Analysis: Speech Acts in Context	3	MBI 440 & MBI 490	Research Problems and Undergraduate Seminar	1-4
ENG 415	Capstone in Professional Writing	3	MBI 477 & MBI 490	Independent Studies and Undergraduate Seminar	0-5
ENG 460	Issues in Creative Writing	3	MBI 480 & MBI 490	Departmental Honors and Undergraduate Seminar	1-6
ENG 495	Capstone in Literature	3	MBI 487	Medical Laboratory Science Practicum	8
ENT 497 & ENT 498	Senior Design Project and Senior Design Project	4	MBI 490	Undergraduate Seminar	1
ESP 401/ESP 501	Entrepreneurship: New Ventures	3	MBI 488	Medical Laboratory Science Practicum	12
ESP 461	Entrepreneurial Consulting	3	MBI 489	Medical Laboratory Science Practicum	12
FIN 485	Integrative Concepts in Finance	3	MGT 495	Executive Decision Making and Strategy	3
FRE 410	Senior Seminar	3	MKT 442	Highwire Brand Studio	4-8
FST 401	Seminar in Film Study	3	MKT 495	Strategy Works	4
FSW 418/FSW 518	The Family Life Education Process	3	MME 448 & MME 449	Senior Design Project and Senior Design Project	4
FSW/SOC/WGS 451	Family Violence	3	MTH 407/ MTH 507	Mathematical Structures Through Inquiry	3
FSW 462/FSW 562	Family Policy and Law	3	MTH 425/ MTH 525	Number Theory	3
FSW 498	Critical Thinking About Family Relationships	4	MTH 435/ MTH 535	Mathematical Modeling Seminar	3
GEO 491	Senior Seminar	4	MTH 482	Great Theorems of Mathematics	3
GEO 493	Urban Field Experience	3	MUS 460/ MUS 560	Methodologies in Ethnomusicology	3
GER 471	Linguistic Perspectives on Contemporary German	3	MUS 475	Senior Practicum in Music Education	3
GLG 411A/511A	Field Geology	6	MUS 493	Capstone/Senior Recital: Preparation and Performance	3
GLG 497	Trends and Topics in the Geosciences	3	NCS 401	Capstone in Nonprofit and Community Studies	3
GTY 440P	Gerontology Practice Capstone Internship	1-16	NSC 402	Leadership and Ethics	3
GTY 440R	Gerontology Research Capstone Internship	4-6	NSG 435	Challenges in Health Care Delivery	3
HST 400	Senior Capstone in History	3	PHL 404	What is Philosophy?	3
IMS 440/IMS 540	Interactive Media Studies Practicum	4	PHY 488A & PHY 488B	Research Capstone in Physics and Research Capstone in Physics	6
IMS 452	Senior Degree Project	3	POL 411/POL 511	American Political Thought	3
IMS 488	Game Preproduction	3			

POL 419/POL 519	Civil Society and Modern Politics	3
POL 423/POL 523	European Union: Politics and Policies	3
POL 459/POL 559	Capstone Seminar on the American Political System	3
POL 466/POL 566	Public Policy Analysis	3
POL 471	The International System	3
POL 487	Individual Lives and International Politics	3
POL 489/POL 589	Conflict Management in a Divided World	3
PSS 401	Capstone in Psychological Science	3
PSY 410	Capstone Seminar in Psychology: The Multiple Determinants of Behavior	3
PSY 490	Capstone Experience in Psychology: Research Apprenticeship in Psychology	3
REL 402/REL 502	Basic Structures in the History of Religions	3
REL 430/REL 530	Early Christian Literature and Religion	4
SOC 459	Sociology Capstone	3
SOC 462	Applied Sociological Research	3
SPA 413	Senior Seminar in Communication Disorders	3
SPN 490	Issues in Hispanic Literature, Linguistics, or Culture	3
STA 475	Data Analysis Practicum	3
STC 437	Advocacy in Contemporary America	3
STC 439	Advanced Organizational Communication	3
STC 459	Advanced Public Relations	3
THE 481/THE 581	Integrating Performance, Theory and Practice	3
WGS 401	The Role of Women in a Transforming Society	3
WGS 432	Feminism and the Diaspora: U.S. Women of Color	3
WST 444	Senior Workshop and Project	3
WGS 451/ WGS 551	Family Violence	3

<sup>1</sup> Maximum 8 credit hours

<sup>2</sup> 2 credit hours for research option; or concurrent enrollment in BIO 340 for internship option.

Beyond their liberal education courses, students must complete work for their major and divisional requirements, and complete additional hours for minors or electives.

## Frequency of Course Offerings

Scheduling information is provided for some courses in the Courses of Instruction chapter in this Bulletin. Scheduling patterns are subject to change without notice based, usually, on student demand, faculty availability, and programmatic priorities.

## Changes of Course Offerings

Students enrolled under the Miami Plan previous to the fall 2015 semester may opt to fulfill their liberal education requirements with

the revised Global Miami Plan. Contact the divisional advising offices for details.

# Other Requirements

## Divisions, Majors, and Minors

### Academic Divisions and Departments

Miami University has seven academic divisions: College of Arts and Science, Farmer School of Business, College of Creative Arts, College of Education, Health, and Society, College of Engineering and Computing, College of Liberal Arts and Applied Science, and Graduate School.

Within the undergraduate divisions are the academic departments, offering major and minor programs. So, for example, if your major is software engineering, you are in the College of Engineering and Computing. All majors, minors, degrees, and certificate programs are listed in the General Information chapter.

For a degree, you must fulfill three sets of requirements: the Global Miami Plan for Liberal Education or the Honors Plan for Liberal Education, the requirements of your academic division, and the requirements of your major. If you have admission prerequisites to be met, those also must be completed. Often these requirements overlap; that is, one course may fulfill several requirements.

### Majors

Your major is your primary field of study, such as architecture, geography, etc. Your major program requirements are described in your academic division chapter of this Bulletin. For example, requirements for a major in geography are listed in the College of Arts and Science section. All majors are listed in the General Information chapter.

Although you do not need to choose a major when you enroll, you are required to choose a division. In most cases, if you use your first year to take courses that fulfill a part of the Miami Plan and divisional requirements, you can still complete a major with no delay. To declare your major, after taking classes for a semester or more, contact the divisional or department office of the major you wish to declare and the office will assist you.

### Co-Majors

A co-major is designed to provide a complementary perspective to a student's primary major and carries at least 30 credits. There is no specific degree designation for the co-major; students receive the degree designation of their primary major with the co-major listed on the transcript. Some co-majors may have areas of concentration. Completion of the co-major may satisfy the Global Miami Plan thematic sequence requirement.

### Minors

A minor is a second field of study taken along with a major. Taking a minor is optional. This is a specific program that may widen your primary area of interest or increase your career opportunities. Most minors require fewer hours than majors—all require at least 18 semester hours in a specified program. Minors may be offered within one department or across several departments.

Minors are offered in many fields of study. A list of minors is in the General Information chapter; requirements for each minor are included in each division's chapter.

To earn a minor, these are the minimum requirements (some minors require more):

- Contact the department that you want to enroll in the minor.
- You must have a 2.00 grade point average (GPA) for all courses in a minor. Some minor programs may require a higher GPA.
- All courses taken for the minor must be for a grade, not for credit/no-credit, unless exceptions are stated.
- A minor can only be awarded with a bachelor's degree.

You may have more than one minor. All minors you complete are noted on your academic record. Courses used to satisfy the requirements for one minor may also be used to satisfy the requirements for another minor or major. Not all major programs allow students to record certain minors, and some minors are open only to certain majors. Check with your advisor for more information.

Students may use a minor to meet the Global Miami Plan Thematic Sequence requirement if the minor has 9 hours outside the department of major and 6 of those 9 hours are at the 200 level or above. See the Global Miami Plan section for more information.

### Changing a Major or Minor

To change your major or minor, go to the divisional or department office or regional advising office (regional campus students only) offering that program. Your program information is transferred to your academic record. Most majors in the College of Creative Arts require successful completion of an audition or portfolio review to complete the change of major.

### Additional Major, Minor, or Degree

With careful planning, you can complete requirements for more than one major, minor, and/or more than one degree. Early in your program, notify your divisional office(s), and departments involved. Follow change of major process noted in Changing a Major or Minor above to have your program of study noted on your academic records and you will have advisors for your programs.

You must pay a graduation fee for each degree you earn.

If you have already received a bachelor's degree from another accredited college or university, you can qualify for a degree from Miami by earning an additional 32 semester hours and meeting all requirements for the additional degree.

### Miami Plan Thematic Sequence

To enroll in a Thematic Sequence, contact the department in which the sequence is housed or go to the Office of Liberal Education Web site ([www.MiamiOH.edu/liberal-ed](http://www.MiamiOH.edu/liberal-ed)). See the Liberal Education at Miami section in this Bulletin. Regional students should see their regional advisor.

### Basic Personal Computer Proficiency

Incoming students are expected to demonstrate a minimum proficiency with the use of a personal computer and basic software programs. These minimum proficiencies include:

1. The ability to use the Internet to find and retrieve information including: locating an Internet site given a URL; navigating between information sources; doing basic searches using a major

Internet search service; and submitting information via on-line forms;

2. The ability to use electronic mail as a form of communication including: sending an e-mail when given an e-mail address; responding to an e-mail; sending e-mail to a group of individuals; and sending and receiving attachments as part of an e-mail.
3. The ability to use a word processing program to create and edit documents including: creating a new document; editing an existing document; changing the format of text; and changing margins, page orientation, and other elements of page layout.
4. The ability to use an operating system including copying or moving a file to or from removable media; finding files or folders on a local hard drive; and creating a sub-directory (folder).

Students who have not acquired these skills prior to entering the university will be provided with training opportunities during their first semester.

## Physical Education

Physical education is optional. No more than 10 semester hours of physical education (kinesiology and health) courses numbered KNH 110-170 can count toward a bachelor's degree; no more than five semester hours can count toward an associate's degree.

## Credit More Than 10 Years Old

If your course of study is prolonged beyond 10 years, curricula changes adopted after your entrance date as a degree candidate may be required by the university, division, or department. Degree programs that have been eliminated for 10 or more years may not be pursued, and degrees in the programs eliminated for 10 or more years may not be conferred.

Students who have earned credits more than 10 years before their planned graduation date must petition to their divisional committee of advisors to validate these credits. Students are responsible for supplying course descriptions or a college catalog from those colleges previously attended.

## Requirements for Graduation

All majors, minors, and degrees are listed in the General Information chapter.

### Associate's Degree

An associate's degree, generally offered only on the regional campuses, requires:

- At least 62 semester hours, including 15 hours from Hamilton or Middletown campuses (An exception to this is the Associate in Arts; see below.)
- Fulfillment of the Miami Plan for Liberal Education appropriate to your associate's degree
- Nine of your last 20 hours must be taken at Miami University
- At least a 2.00 cumulative GPA
- Fulfillment of your program requirements
- Applying for graduation whether or not you plan to attend the ceremony

If you continue your education past 62 semester hours and your GPA falls below 2.00, you can still receive an associate's degree if your GPA was 2.00 at the time you finished 62 semester hours and your degree requirements. Your academic record will show when you have completed the requirements, and your associate's degree will be awarded at the next commencement.

### Associate in Arts

The Associate in Arts in general studies is available to any Miami University student. For this degree, 31 of the required 62 semester hours must be from any Miami campus. See the program requirements in the Miami University Hamilton and Middletown section.

### Bachelor's Degree

For a bachelor's degree, basic requirements for graduation include:

- Fulfillment of the Global Miami Plan:

Code	Title	Credit Hours
	Foundation courses	27
	Thematic Sequence	9
	Advanced Writing	3
		(minimum)
	Experiential Learning	0
		(minimum)
	Intercultural Perspectives	3
	Capstone experience	3
	Field (major/ courses, divisional requirements, electives)	79-82
	<b>Total Credit Hours</b>	<b>124</b>

- Of the total 124 semester hours, at least 30 must be from Miami University (any campus), including 12 of the final 30 hours required for the bachelor's degree.
- At least a 2.00 cumulative GPA.
- Applying for graduation whether or not you plan to attend the ceremony.

Note: Some degree programs, due to professional accreditation requirements, may require additional credit hours.

### Application for Graduation

To graduate, whether or not you plan to attend the ceremony, you must submit an application and pay a fee. If you earn more than one degree, you must submit an application and pay a graduation fee for each. Applications for graduation are available on BannerWeb. After your application is processed, your account will be assessed the appropriate fee, and you will be billed.

You are encouraged to apply for graduation at least a semester in advance. This way, routine checks can be made in time to inform you of any problems in meeting your degree requirements.

Applications should be received no later than 30 working days before commencement.

If you apply for graduation and then do not qualify for the degree, you must notify the University Registrar's Office of the date you intend

to finish your requirements. All deadlines applicable to first-time applications apply to re-applications.

## **Conferral of Degree**

The conferral of the degree will be granted following the semester or term when all degree requirements have been met and after the student has applied for graduation. Backdating of degrees is not allowed unless in circumstances of administrative error.

## **Degree Audit**

A degree audit shows your completed course work and current registration matched with degree requirements of your declared major; it identifies deficiencies and lists courses to satisfy specific requirements. The report assists you, your advisor, and the university in determining your progress toward completion of your program requirements and serves as a graduation check.

Students are able to run an exploratory "What-If?" degree audit.

Your degree audit is available online (<http://bannerweb.MiamiOH.edu/>).

# Academic Planning

## Educational Decisions

### Choosing a Major and Making Career Choices

This is never a simple decision. Many students change majors at least once.

Although you do not need to choose a specific major, you will need to choose an academic division when you register. If you are undecided, you are assigned to the College of Arts and Science for advising purposes. In most cases, if you use your first year to take courses that fulfill the Global Miami Plan and divisional requirements, you can still complete a major program with no delay. However, **to complete some majors in a four-year time period, you must begin them as a first year student.**

To make academic and career choices, you need to consider your interests and abilities. Although you may have a strong sense of your academic strengths and weaknesses, it is important to remember that your interests are still developing and, like more specific skills, depend on exposure to various activities and ideas.

The Center for Career Exploration and Success, located in 45 Armstrong Center, can also help you understand how majors connect to various careers. The Center's website <http://miamioh.edu/emss/offices/career-services/index.html> provides useful career information and links to dozens of other career-related sites where you can explore different jobs by major. Career Services also offers one-on-one mentoring, workshops to help you explore careers, and standardized career assessments. Each of these opportunities can help you learn about your interests, abilities, and values and to relate them to your academic and career choices.

The Career Development and the College Student Course (EDL 100), provides opportunities to learn more about selecting a career. It is offered to first- and second-year students.

When you are ready to start your job or internship search, Career Services provides resume help, job or internship search strategies, mock interviewing, and can provide information about specific careers or internships. Over 300 employers visit campus annually for on-campus interviews. To learn more about the employers that visit campus, and to make yourself eligible for the interviews and advising appointments, sign up for a Miami Handshake account using your banner ID: <https://miamioh.joinhandshake.com/login>

Finally, don't forget to talk with your assigned academic advisor in the department or division of your primary major; your advisor can offer you informed advice on curriculum, career opportunities within fields, and opportunities for advanced study.

### Programs with Special Admission Requirements

To be eligible to apply for admission into these programs, students must be admitted to Miami University as a matriculated student with a high school diploma or equivalent. Additionally, these some programs have special requirements that call for careful planning. For example, you must be admitted to most majors in the College of Creative Arts or the Department of Nursing (Hamilton & Middletown

campuses only) before you may declare the major. Also, teacher licensure programs and science and technical major programs require specific courses that are usually taken in a specific order.

It is important to check your major's requirements. Programs are listed in each division's chapter.

At present, majors with limited or restricted entry include nursing, social work, special education, speech pathology and audiology, all licensure programs in the Department of Teacher Education, all programs in the Farmer School of Business, and most majors in the College of Creative Arts.

## Academic Advising

Academic advisors are available to help you understand academic requirements and to address your concerns. They can provide you with information and resources that will help you make decisions about your class schedule, course of study, and future opportunities.

Students will be assigned a faculty or professional academic advisor within the department or division of their major prior to their first semester at Miami. When students change majors, their academic advisor will likely change. Students who have not declared a major will be advised by a specifically trained academic advisor within the University Studies program.

Residence hall staff members are trained professionals who will assist first- and second-year students with addressing transitional issues, understanding university tools and resources, making appropriate referrals, and helping them to integrate their academic, personal, and co-curricular life.

## Mid-Semester Grade Reports

By the end of the eighth week of classes in the fall and spring semesters, instructors are required to submit midterm grades for all undergraduate students who have 45 or fewer earned credits at Miami University. Instructors are encouraged to submit midterm grades for all other students. This requirement applies to all full-term classes and twelve-week "Q" sprint classes during the fall and spring semesters. Midterm grades are not required during other fall and spring semester sprint classes or for any winter and summer terms. Midterm grades are available to students online through **BannerWeb**. Midterm grades provide students the opportunity to assess their academic performance while there is still time to improve before receiving official grades. Midterm grades are not recorded on student's academic records. Academic advisors also have access to students' midterm grades, and they will meet with all students who are struggling to discuss strategies for improving academic performance.

## Academic Support

### Bernard B. Rinella, Jr. Learning Center

306 Shriver Center, 513-529-8741

[www.MiamiOH.edu/learning](http://www.MiamiOH.edu/learning)

Students experiencing academic difficulty can seek assistance at the Rinella Learning Center. One-to-one and small group tutoring is available; tutoring is geared to develop self-confidence and independence. Peer tutors reinforce course material and help students to develop strategies to learn class material, prepare for homework, and take exams. Tutoring is free of charge. Requests for

tutoring can be made on-line at [www.MiamiOH.edu/tutoring](http://www.MiamiOH.edu/tutoring). Learning specialists are also available for individual consultations.

In addition to the Tutorial Assistance Program, the Center is the umbrella for a number of programs and services that includes the Office of Student Disability Services (SDS) which provides support for students with LD and ADHD; the Scholastic Enhancement Program for specially admitted students; as well as Supplemental Instruction and Academic Coaching. The Center also coordinates support for students on academic warning, probation or returning from suspension or dismissal.

### Miller Center for Student Disability Services (SDS)

304 Shriver Center, 513-529-1541 (TTY accessible)  
[www.MiamiOH.edu/SDS](http://www.MiamiOH.edu/SDS)

The Miller Center for Student Disability Services (SDS) provides services and mandated accommodations for students with disabilities to ensure equal access to inclusive education and university life at Miami University. SDS coordinates accommodations through various campus, state, and national partners to provide services including, but not limited to, alternative formats for textbooks, orientation mobility training, campus transportation, sign language interpreters, CART services, modified housing, testing accommodations, advance registration, and advocacy.

### Instructors' Office Hours

Most instructors have regularly scheduled office hours to meet with students. These are usually posted outside their office doors and on the course syllabus. To make an appointment for another time, contact the instructor or department administrative assistant.

## Advanced Placement Program (AP)

The State of Ohio, working with public institutions of higher education, has initiated policies to facilitate the ease of transition from high school to college, as well as between and among Ohio's public colleges and universities.

Beginning in the Fall term 2009:

1. Students obtaining an Advanced Placement (AP) exam score of 3 or above will be awarded the aligned course(s) and credits for the AP exam area(s) successfully completed.
2. General Education courses and credits received will be applied towards graduation and will satisfy a general education requirement if the course(s) to which the AP area is equivalent fulfill a requirement.
3. If an equivalent course is not available for the AP exam area completed, elective or area credit will be awarded in the appropriate academic discipline and will be applied towards graduation where such elective credit options exist within the academic major.
4. Additional courses or credits may be available when a score of 4 or 5 is obtained. Award of credit for higher score values varies depending on the institution and academic discipline.

In academic disciplines containing highly dependent sequences (Sciences, Technology, Engineering and Mathematics -STEM), students are strongly advised to confer with the college/university advising staff to ensure they have the appropriate foundation to be successful in advanced coursework within the sequence.

AP Subject	AP Score	Course Number	Hours Awarded
AP Capstone	Seminar	UNV 171	3
	Research	UNV 172	3
Art History	3	ART 188	3
	4 or 5	ART 187, ART 188	6
Biology	3, 4, or 5	BIO 116/MBI 116	4 (for score of 3: students advised to take course at college level, if biology major)
	3, 4, or 5	MTH 151	5 (for score of 3: students advised to take course at college level if going to Calculus II)
Calculus BC	3, 4, or 5	MTH 151, MTH 251	9
Chemistry	3	CHM 111, CHM 111L	4
	4	CHM 141, CHM 144	5
	5	CHM 141, CHM 142, CHM 144, CHM 145	10
Chinese Language and Culture	3	CHI 101, CHI 102	8
	4	CHI 101, CHI 102, CHI 201	11
	5	CHI 101, CHI 102, CHI 201, CHI 202	14
Computer Science A	3 or 4	CSE 174	3
	5	CSE 174, CSE 271	6
Computer Science Principles	3, 4, or 5	CSE 151	3
Macroeconomics	3, 4, or 5	ECO 202	3

Microeconomics	3, 4, or 5	ECO 201	3
English Language	3, 4, or 5	ENG 111	3
English Literature	3, 4, or 5	ENG 111	3
Student takes both exams:			
English Language and English Literature	Any combination of 3, 4, or 5	ENG 111, ENG 122	6
Environmental Science	3, 4, or 5	BIO 121	3
European History	3, 4, or 5	OTM Arts and Humanities	3
French Language	3	FRE 101, FRE 102	8
	4	FRE 101, FRE 102, FRE 201	11
	5	FRE 101, FRE 102, FRE 201, FRE 202	14
French Literature	3	FRE 101, FRE 102, FRE 201	11
	4 or 5	FRE 101, FRE 102, FRE 201, FRE 202	14
German Language	3	GER 101, GER 102	8
	4	GER 101, GER 102, GER 201	11
	5	GER 101, GER 102, GER 201, GER 202	14
Comp Government & Politics	3, 4, or 5	POL 221	3
U.S. Government & Politics	3, 4, or 5	POL 241	3
Human Geography	3, 4 or 5	GEO 101	3
Italian Language & Culture	3	ITL 101, ITL 102	8
	4	ITL 101, ITL 102, ITL 201	11
	5	ITL 101, ITL 102, ITL 201, ITL 202	14
Japanese Language and Culture	3	JPN 101, JPN 102	8
	4	JPN 101, JPN 102, JPN 201	11
	5	JPN 101, JPN 102, JPN 201, JPN 202	14
Latin	3	LAT 101, LAT 102	8
	4 or 5	LAT 101, LAT 102, LAT 201, LAT 202	14
Music Theory	3	MUS 101	3
	4 or 5	MUS 101, MUS 151	4
Physics 1	3, 4 or 5	PHY 161	4
Physics 2	3, 4 or 5	PHY 162	4
Physics B	3, 4 or 5	PHY 161, PHY 162	8
Physics C: Electricity and Magnetism	3, 4 or 5	PHY 192	5
Physics C: Mechanics	3, 4 or 5	PHY 191	5
Psychology	3, 4 or 5	PSY 111	3
Spanish language	3	SPN 101, SPN 102	8
	4 or 5	SPN 101, SPN 102, SPN 201, SPN 202, SPN 311	17
Spanish Literature	3	SPN 101, SPN 102, SPN 201	11
	4 or 5	SPN 101, SPN 102, SPN 201, SPN 202, SPN 311	17
Statistics	3, 4 or 5	STA 261	4
Studio Art: Drawing	3, 4 or 5	ART elective	3
Studio Art: 2D Design	3, 4 or 5	ART elective	3
Studio Art: 3D Design	3, 4 or 5	ART 171	3
U.S. History	3, 4 or 5	HST 111, HST 112	6
World History	3, 4 or 5	HST 197, HST 198	6

## College Level Examination Program (CLEP)

Contact Miami Hamilton Office of Academic Advising (204 Rentschler Hall, 513-785-3129) for information about CLEP.

The State of Ohio, working with public institutions of higher education and statewide faculty panels, has developed policies to recognize students' prior learning and to facilitate the articulation and guaranteed transfer of such learning between Ohio's public colleges and universities.

College credit is guaranteed for students who achieve an established College-Level Examination Program (CLEP) test score for exams that have been endorsed statewide as college level. Statewide faculty panels aligned CLEP exams to equivalent Ohio Transfer Module (OTM) and Transfer Assurance Guide (TAG) courses, as appropriate. If an equivalent course is not available for the CLEP exam area, by default, endorsed elective or area credit will still be awarded and applied towards graduation.

Specific-endorsed alignments and scores for individual CLEP exams that are outlined in the College-Level Examination Program (CLEP) Endorsed Alignment Policies document are available on the Ohio Department of Higher Education website at: <https://www.ohiohighered.org/transfer/clep>.

Credit is awarded for satisfactory scores on some CLEP Subject Examinations. Tests are scored by the Educational Testing Service, Princeton, New Jersey. Because there is a fee for each test (see the Fees and Expenses section), we encourage you to take them only if you have had the equivalent of a college course in the subject area.

Miami's Hamilton campus operates an **open** CLEP testing center, which means tests are offered to university students as well as to members of the community who are not enrolled at Miami University. Miami's Middletown and Oxford campuses do not currently offer CLEP testing. The CLEP exam can be taken at any testing site and the score reported to Miami University.

Ohio Department of Higher Education, working with public institutions of higher education, has initiated policies and procedures to recognize students' prior learning through College Board College-Level Examination Program (CLEP).

1. General Education courses and credits received will be applied towards graduation and will satisfy a general education requirement if the course(s) to which the CLEP area is equivalent fulfills a requirement.
2. If an equivalent course is not available for the CLEP exam area completed, elective or area credit will be awarded in the appropriate academic discipline and will be applied towards graduation where such elective credit options exist within the academic major.
3. Additional courses or credits may be available when a higher score is obtained. Award of credit for higher score values varies depending on the institution and academic discipline.

In academic disciplines containing highly dependent sequences (Sciences, Technology, Engineering and Mathematics – STEM) students are strongly advised to confer with the college/university advising staff to ensure they have the appropriate foundation to be successful in advanced coursework within the sequence.

**American Government:** credit for OTM Social Sciences (3) for score of 56-62; credit for POL 241 for score of 63.

**American Literature:** credit for OTM Arts and Humanities (3) for score of 53.

**Analyzing and Interpreting Literature:** credit for OTM Arts and Humanities (3) for score of 59.

**Biology:** credit for OTM Natural Sciences (3) for score of 50.

**Calculus:** credit for MTH 151 for score of 64.

**Chemistry:** credit for OTM Natural Sciences (3) for score of 50-65; credit for CHM 141 for score of 66.

**College Algebra:** credit for OTM Mathematics, Statistics, and Logic (3) for score of 63.

**College Mathematics:** credit for OTM Mathematics, Statistics, and Logic (3) for score of 63.

**English Literature:** credit for OTM Arts and Humanities (3) for score of 63.

**French Language:** credit for FRE 101, FRE 102 for score of 55-64; credit for FRE 101, FRE 102, FRE 201, FRE 202 for a score of 65.

**Financial Accounting:** credit for ACC 221 or CMR 101 (depending on student's major requirement) for a score of 65.

**German Language:** credit for GER 101 and GER 102 for score of 59-66; credit for GER 101, GER 102, and GER 111 for score of 67.

**History of the United States I:** credit for HST 111 for score of 61.

**History of the United States II:** credit for HST 112 for score of 57.

**Human Growth and Development:** credit for PSY 231 for a score of 58.

**Humanities:** credit for OTM Arts and Humanities (3) for score of 55.

**Information Systems:** general elective credit for score of 50.

**Introductory to Business Law:** credit for BLS 342 or CMR 108 (depending on student's major requirement) for score of 57.

**Introduction to Educational Psychology:** credit for OTM Social Sciences (3) for score of 62.

**Introductory Psychology:** credit for PSY 111 for score of 59.

**Introductory Sociology:** credit for SOC 153 for score of 56.

**Macroeconomics:** credit for ECO 202 for score of 56 or higher.

**Microeconomics:** credit for ECO 201 for score of 57 or higher.

**Precalculus:** credit for MTH 125 for score of 61.

**Principles of Management:** credit for MGT 111 for score of 50.

**Principles of Marketing:** credit for MKT 291 for score of 65.

**Social Sciences and History:** credit for OTM Social Sciences (3) for score of 62.

**Spanish Language:** credit for SPN 101, SPN 102 for score of 56-62; credit for SPN 101, SPN 102, SPN 201, for score of 63-67; credit for SPN 101, SPN 102, SPN 201, SPN 202 for score of 68.

**Western Civilization I:** credit for OTM Arts and Humanities for score of 55.

**Western Civilization II:** credit for OTM Arts and Humanities for score of 54.

## International Baccalaureate Program (IB)

Miami awards credit to IB diploma graduates for higher level subjects passed at a satisfactory level (minimum scores vary 5 to 7 by subject area). Standard levels are not awarded credit. Departments make the final determinations on credit.

**Anthropology** (acceptable score 5 or better)  
Credit for ATH 175 and ATH 231.

**Biology** (acceptable score 5 or better)  
Credit for BIO 116.

**Business & Management** (acceptable score 5 or better)  
Credit for MGT 111.

**Chemistry** (acceptable score 5 or better)  
Credit for CHM 141, CHM 142 and CHM 144, CHM 145 .

**Chinese** (acceptable score 5 or better)  
Credit for CHI 101 and CHI 102.

**Computer Science** (acceptable score 5 or better)  
Credit for CSE 151 and CSE 163.

**Design Technology** (acceptable score of 5 or better)  
Credit for ENT 137 and ENT 135.

**Economics** (acceptable score 5 or better)  
Credit for ECO 201 and ECO 202.

**English A** (acceptable score 6 or better)  
Credit for ENG 111 and ENG 122.

**English B** (no credit awarded).

**French** (acceptable score 5)  
Credit for FRE 202.

**French** (acceptable score of 6 or 7)  
Credit for FRE 202 and FRE 341.

**Geography** (acceptable score 5 or better)  
Credit for GEO 121 and GEO 201.

**German B** (acceptable score 5 or better)  
Credit for GER 101 and GER 102.

**Global Politics** (acceptable score 5 or better)  
Credit for POL 271.

**History of Africa** (acceptable score 5 or better)  
Credit for HST 224 and HST 225.

**History of the Americas** (acceptable score 5 or better)  
Credit for HST 111 and HST 112.

**History of Asia and Oceania** (acceptable score 5 or better)

Credit for HST 324 and HST 353.

**History of Europe** (acceptable score of 5 or better)  
Credit for HST 197 and HST 198 .

**History of Europe and the Islamic World** (acceptable score of 5 or better)  
Credit for HST 241 and HST 246.

**History of Europe and the Middle East** (acceptable score 5 or better)  
Credit for HST 198 and HST 241.

**Italian** (acceptable score of 5 or better)  
Credit for ITL 202.

**Latin** (acceptable score 6 or 7)  
Credit for LAT 201.

**Mathematics** (acceptable score 6 or better)  
Credit for MTH 151.

**Music** (acceptable score 5 or better)  
Credit for MUS 101 and MUS 151.

**Music Composition** (acceptable score 5 or better)  
Credit for MUS 171.

**Music History** (acceptable score 5 or better)  
Credits to be evaluated by department.

**Philosophy** (acceptable score 6 or better)  
Credit for PHL 105.

**Physics** (acceptable score 6 or better)  
Credit for PHY 191 and PHY 192.

**Psychology** (acceptable score 5 or better)  
Credit for PSY 111.

**Russian B** (acceptable score 5)  
Credit for RUS 101 and RUS 102.

**Spanish A** (acceptable score 5)  
Credit for SPN 101 and SPN 102.

**Spanish A** (acceptable score 6 or better)  
Credit for SPN 101, SPN 102 , and SPN 201.

**Spanish B** (acceptable score 5 or better)  
Credit for SPN 101 and SPN 102.

**Spanish B** (acceptable score 6 or better)  
Credit for SPN 101, SPN 102 and SPN 201.

**Theatre** (acceptable score 5 or better)  
Credit for THE 131, THE 191, and THE 200.

## Department Proficiency Examinations

These exams may be offered each semester. Each department in which tests are offered administers its own test, and credit applies toward graduation. You may take a proficiency examination during any semester or term in which you are enrolled. Fees are charged per credit hour after the first hour if the examination is passed. See the Fees and Expenses chapter for test charges.

To be approved for a proficiency examination, you must satisfy the department that you have a reasonable chance of passing it.

Normally, these examinations are for courses below the 300 level, but they may be given for advanced courses with approvals of the department chair and the dean of the division in which the course is offered.

You may obtain credit or advanced placement, or both, by examinations in areas in which you have had adequate preparation. Credit earned is traditional credit and is not counted in the admissible 32 semester hours of nontraditional credit. No grades are awarded for proficiency examinations.

**Business Technology:** offered for CMR 181, CMR 224, CMR 282.

**Computer Science:** two exams offered in CSE 174 and CSE 271.

**English:** submit a writing portfolio to the Composition Program in the department in the summer before your enrollment. For details about eligibility, requirements and deadlines refer to the Composition Program website at <http://www.units.MiamiOH.edu/portfolio/>.

**Information Technology:** offered for CIT 154, CIT 167, CIT 168, and CIT 214.

**Mathematics:** offered in MTH 151, MTH 222, MTH 251. Contact the MTH department office for details; a group proficiency exam in MTH 151 is usually given during the first week of the fall semester.

**Music:** offered in MUS 101, MUS 102, MUS 119, MUS 151, MUS 152.

## Placement Guides

Designed to help you choose your first course in the fields below, these guides describe the background necessary to enter courses at a certain level.

If you find that you have chosen a course that is too difficult, you can drop it (before the deadline to drop, listed in the Academic Calendar at [MiamiOH.edu/OneStop](http://MiamiOH.edu/OneStop)) and begin with an easier course in a later semester.

### Chemistry

CHM 111 and CHM 111L: for non-science majors; no previous chemistry is necessary; CHM 111 and CHM 111L fulfill the MPF natural science requirement and laboratory requirement. CHM 111L can be taken without the lecture course.

CHM 141, CHM 141R, CHM 142, CHM 144, CHM 145: lectures and laboratories for students preparing for careers in health professions and sciences, engineering, or science teaching. See note below about math placement scores.

CHM 141 or CHM 141H, and CHM 142H or CHM 142M: lectures for students majoring in chemistry or biochemistry. CHM 144M or CHM 144H and CHM 145M or CHM 145H: laboratories students majoring in chemistry or biochemistry majors. See note below about math placement scores.

**Certain ACT/SAT math sub-scores are required for placement into any CHM 14x courses.**

- ACT math score 21 / SAT math score 519- and lower -you must complete a math course before enrolling in the CHM 14x series; see an advisor to choose an appropriate math course.

- ACT math score 22 / SAT math score 520- and higher -and no high school chemistry: enroll in CHM 141R (regional campus students only).
- ACT math score 22 / SAT math score 520- and higher -you can register for CHM 141 / 141H (honors students).

CHM 147: introductory seminar strongly recommended for all chemistry and biochemistry majors; one credit hour with credit/no credit grading.

### Foreign Language

Placement is based on:

1. high school preparation (typically, one year of high school equates to one college semester), and
2. results of placement testing administered by Miami University.

You **cannot take a foreign language course for credit at a lower level than you are prepared for**. After being placed, you cannot skip a course in the sequence leading to 202.

If you intend to continue studying the same foreign language as you did in high school, you must take a placement exam for that language before you are able to enroll in a college level course. Students should take the placement exams online prior to attending an orientation program. Continuing students wishing to enter a language sequence should take the placement exam and then seek advising before enrolling in a course.

Placement exams for French, German, Russian, and Spanish are available online and access to the results is immediate and will be used for placement and advising. An exam for Latin is available online, however, the results are not immediate as it requires to be scored by a faculty member and the results sent to you; please plan accordingly. Guidance for placement into our remaining languages (ancient Greek, Arabic, Chinese (Mandarin), Italian, Japanese, and Korean) is available online via the Interactive Language Resource Center or by consulting with a language advisor. Students interested in continuing their study of American Sign Language should communicate with the department of Speech Pathology & Audiology (513-529-2500) for placement information.

Please take the exam seriously as it may have an impact on your future course selections. Academic credit is **not awarded** as a result of any foreign language placement test.

- 101 level: for those beginning a new language or whose placement exam scores indicate they are not prepared to enter 102.
- 102 level: for those who have successfully completed 101. Also for those whose placement exam scores indicate they are not prepared to enter the second-year level.
- 111 in German: review course for those whose placement exam scores indicate they are not prepared to enter second-year level. After completing 111, students enter 201." **and** "111 in Spanish: intensive first-year course for those whose placement exam scores indicate they are not prepared to enter second-year level. After completing 111, students enter 201." to "111 LEVEL in German, Latin, Spanish: intensive first-year course for those whose placement exam scores indicate they are not prepared to enter second-year level. After completing 111, students enter 201.

- 111 in Spanish: intensive first-year course for those whose placement exam scores indicate they are not prepared to enter second-year level. After completing 111, students enter 201.
- 121 level in Latin: intensive review course for those whose placement exam scores indicate they are not prepared to enter the second-year level. After completing 121, students enter 202.: intensive review course offered in Latin for those whose placement exam scores indicate they are not prepared to enter second-year level. After completing 121, students enter 202.
- 201 level: for those who have successfully completed 102, SPN 111, or equivalent, or achieved an appropriate placement exam score.
- 202 level: for those who have successfully completed 121, 201, or equivalent, or achieved an appropriate placement exam score; this course fulfills the language requirement for the College of Arts and Science (CAS-A).
- 203 level: offered in Spanish, for those who have successfully completed SPN 201 or achieved an appropriate placement exam score; designed as an alternative to SPN 202 for those interested in the health care field. Credit not given for both 202 and 203. This course fulfills the language requirement for the College of Arts and Science (CAS-A).
- 211 level: intensive second-year course for those who have achieved an appropriate placement exam score. This course fulfills the language requirement for the College of Arts and Science (CAS-A).
- 301 level and above: for those who have successfully completed 202 or equivalent, or achieved an appropriate placement exam score. Any foreign language course at 300 level or above fulfills the language requirement for the College of Arts and Science (CAS-A), not including courses in translation.

## Physics

All courses listed here can be used to fulfill the natural science section of the Miami Plan.

PHY 101, PHY 111, PHY 118, PHY 121, PHY 131, PHY 141: general physics course. PHY 103 has a prerequisite; see course descriptions.

PHY 161, PHY 162: Physics sequence for students who have had mathematics courses that include trigonometry. PHY 161 is a

prerequisite to PHY 162. Math prerequisite for 161 is a math sub-score of 26 or greater on the ACT, a 610 and greater on the SAT, an international math placement score of 16, or MTH 125.

PHY 191, PHY 192: physics sequence recommended for science and engineering students who have taken or are concurrently enrolled in a calculus course. PHY 191 is a prerequisite for PHY 192.

Math prerequisite for 191 is credit for, or concurrent enrollment in, MTH 151.

## Algebra and Trigonometry

(See Mathematics and Statistics at the end of this chapter.)

MTH 025 Algebra Concepts for Precalculus (5); one semester. This is a remedial course for students whose ACT math score is a 21 (or lower) or SAT math score is a 539 (or lower). **Credits earned from this course will not count toward graduation.** Next course is MTH 125.

MTH 125 : Precalculus (5); one semester. Review of algebra topics important for calculus. Functions, polynomials, rational functions, logarithmic and exponential functions, trigonometric functions and their inverses, conic sections, nonlinear systems, and applications of functions. Next course is MTH 151.

## Calculus

(See Mathematics and Statistics at the end of this chapter.)

MTH 151: Calculus I (5); covers: limits and continuity, derivatives, integration, calculus of trigonometric and exponential functions. For students who have had little or no high school calculus. This is the first semester in calculus sequence MTH 151, MTH 251, MTH 252.

MTH 249: Calculus II (5); primarily for students who have AP credit for Calculus I (limited to first-years). Reviews concepts of limit, derivative, and integrals from Calculus I, then covers same content as MTH 251. This is the first semester of calculus sequence MTH 249, MTH 252 and covers same topics as MTH 151, MTH 251, MTH 252.

MTH 251: Calculus II (4); continuation of Calculus I with plane analytic geometry, techniques of integration, parametric equations, polar coordinates, infinite series, approximations, applications. Credit not given for both MTH 249 and MTH 251.

## Mathematics and Statistics

Starting in the fall of 2018, the university moved to using math sub-scores of the ACT and SAT exams. The following chart will help you understand what math or statistics course you can start with. If you have additional questions, please consult the department of Mathematics (513-529-5818).

If you plan to	and you have passed these high school classes	and have these scores on the test	then take
Take a calculus course	(a) one year of calculus including log, exponential, and trig functions	3-5 on AP Calculus BC	see math advisor
		4-5 on AP Calculus AB or 1-3* on AP Calculus AB; ACT math score: 26+; SAT math score: 610+	MTH 249 MTH 151
	(b) three and one-half or four years of math with trig, but little or no calculus	ACT math score: 26+; SAT math score: 610+	MTH 151
	(c) three or four years of math including some trig	ACT math score: 22 - 25; SAT math score: 540-609	MTH 125
Take a noncalculus course, e.g. MTH 121 or STA 261	(d) less than three years of math	ACT math score: 21 & lower; SAT math score: 539 & lower	MTH 025
	(a) three years of math, including two years of algebra	ACT math score: 22 & higher; SAT math score: 520 & higher	MTH 119, MTH 121 or STA 261
Seek middle childhood licensure with a math concentration	(b) less than three years of math	ACT math score: 21 & lower; SAT math score: 519 & lower	See a math advisor
	(a) one year of calculus including log, exponential, and trig functions	3-5 on AP Calculus AB	MTH 217 or MTH 218
	(b) three and one-half or four years of math, with trig but little or no calculus	ACT math score: 26+; SAT math score: 610+	MTH 151
	(c) three or four years of math, including some trig	ACT math score: 22 - 25; SAT math score: 540 - 609	MTH 125
Seeking Inclusive Special Education, Early Childhood or Middle Childhood education licensure without a concentration in math	(d) less than three years of math	ACT math score: 21 & lower; SAT math score: 539 & lower	MTH 025
	(a) recommended three years of math, including algebra and geometry		MTH 115 or MTH 116 (for Special Ed and ECE only)

\* A score of 3 on the AP Calculus AB will confer credit for MTH 151. However, if you intend to eventually take Calculus II, the department recommends retaking MTH 151.

The regional campuses follow Oxford placement rules and also offer other standardized placement tests, such as Accuplacer.

# Course Registration and Other Regulations

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## Office of the University Registrar

106 Campus Avenue Building  
Student Services - 513-529-8701

Faculty/Staff Services - 513-529-8703  
[www.MiamiOH.edu/registrar/](http://www.MiamiOH.edu/registrar/)

## Academic Calendar

Important academic dates and deadlines are published in the Academic Calendar online at [MiamiOH.edu/OneStop](http://MiamiOH.edu/OneStop). Dates are subject to change without notice.

## Miami ID Card

University registration includes the issue and validation of your student identification card. ID cards are issued in 34 Campus Avenue Building. Regional students should go to the Office of IT services on their campus for ID cards.

## Course Offerings

Course offerings and other registration information are available online through myMiami ([www.mymiami.MiamiOH.edu](http://www.mymiami.MiamiOH.edu)) (log-in required) and [MiamiOH.edu/courselist](http://MiamiOH.edu/courselist) (log-in not required). Course offerings and availability are subject to change without notice.

## Registering

New undergraduate students are required to meet with an academic advisor to select their required courses and electives. First year students register during Summer Orientation in June. Continuing students are encouraged to contact their advisors for further academic and career counseling before registering.

Register for classes at Miami University online through myMiami/BannerWeb ([www.mymiami.MiamiOH.edu](http://www.mymiami.MiamiOH.edu)) and receive immediate confirmation of your schedule. You can register, confirm and change your schedule through BannerWeb only on the assigned days and at the assigned times.

Before you can register, the system will ask you to supply emergency contact information. The university requires that you provide emergency contact information so that we may readily notify a family member or significant other in case of an emergency or should a critical matter arise.

You are required to provide your **local contact information** and the name of a **family member/guardian/spouse or another significant person and their contact information**. You will be delayed in registering for your next semester courses until you enter the requested information. All students are also required to sign a Financial Responsibility Agreement every fall and spring semester. The system will not allow you to register until you have signed the agreement.

## Registration and Graduate Credit

Before registering for courses, consult your advisor to make sure that you are meeting your degree requirements.

### Minimum and Maximum Registration

The maximum number of graduate credit hours that a graduate student who does not hold an assistantship can register for in a regular semester is 18. Graduate students not holding an assistantship are limited to no more than nine credit hours per single summer term. Students with a need to exceed the maximum graduate credit hour limits must file a petition with the Dean of the Graduate School prior to the first day of the semester.

Students who are employed full time are strongly encouraged to keep their enrollment at six credit hours or less during a semester.

All graduate student recipients of assistantships or tuition waivers must register for at least 9 graduate semester hours and may register for as many as 18 total (undergraduate and graduate) hours per semester.

Grant-in-aid recipients must register for at least 9 graduate hours during each semester and must register for six graduate hours in a single summer term or 12 graduate hours in more than one summer term.

A student holding a dissertation scholarship must register for at least 9 graduate semester hours and may register for as many as 18 hours of graduate credit per semester.

### Change of Status or Program

Any change of graduate standing, such as moving from continuing graduate status (CGS) to degree status, must be approved by your major department or division and the Graduate School. To change from continuing graduate status to regular or conditional standing, you must reapply to the Graduate School.

Students with a grade point average below 3.00 who wish to change majors and/or degree programs must have approval of the Student Petitions Committee of the Graduate Council.

### Transfer Credit

Credit for grades of B or better earned at other accredited graduate schools may be applied toward a graduate degree at Miami University. Transfer credit will not be granted for grades of B- or less. "Credit" or "pass" grades are accepted only if approved by the Student Petitions Committee of Graduate Council.

Extension or correspondence work is not accepted for credit.

Transferred courses may not exceed the age limit of five years for the master's degree and seven years for the doctorate.

To transfer credit, first obtain an official transcript from your other institution (if your advisor does not already have one), and then consult with your advisor. If transfer of credit is recommended, your advisor will send a memorandum of recommendation, with your transcript, to the Graduate School. The dean of the Graduate School will approve your transfer of credit if the above criteria are met, and the Registrar's office will post the transferred credit to your Miami

record. Grades of transferred credit are not posted to a Miami record or counted in a grade point average.

## Changes of Registration

Course registration may only be changed in the prescribed time stated in a student's registration time ticket and the University academic calendar. No change is official until the registration transaction is recorded in the student registration system.

### Adding a Course

Students may add full semester/term courses via Bannerweb through the third day of the semester/term (including weekends/holidays). After Bannerweb closes, students may be added by department/instructor authorization through close of business on the fifth day of the semester/term (including weekends/holidays).

Students may add sprint courses via Bannerweb, or be added by department/instructor authorization, through the second day of the sprint part of term.

Independent work permits must be submitted prior to or during the first week of the semester to be assigned a full semester, summer or winter term course. Those permits submitted after the first week will be assigned the next available sprint part of term in which the work is to be completed.

During the add period, a department/instructor may refuse to accept a student request to add if, in the department/instructor's judgement, too much subject matter has already been covered.

Departments or programs may choose to approve the student request in addition to or in place of the class instructor.

### Dropping a Course

Students may drop via Bannerweb full semester/term courses through the third day of the semester/term or through the first two calendar days of any sprint part of term (including weekends/holidays). After Bannerweb closes, students must contact the course instructor to request to be dropped from the course. Instructors approving drops use the online course drop process and the student and instructor are notified via email when the drop is processed.

Dropping a course is a formal administrative procedure; merely ceasing to attend class is equivalent to formally dropping the course through Bannerweb or with instructor permission.

Before dropping a course, a student is encouraged to contact their lenders and insurance agents to determine continued eligibility for loan deferments and insurance coverage before taking an action that will change their enrollment status to less than full-time or a lesser increment of part-time. Dropping a course is a formal administrative procedure; merely ceasing to attend class is not the same as dropping a course. A student may drop a course after the first week of the class up to during the first 20 percent of the course, in which case no grade or other designation will appear on the student's official record. Students should refer to the Academic Calendar (MiamiOH.edu/OneStop) for specific academic deadline dates.

### Withdrawing from a Course

Withdrawing from a course is a formal administrative procedure; merely ceasing to attend class is not equivalent to formally dropping the course through Bannerweb or with instructor permission. Before

withdrawing from a course, a student should consult with his or her instructor and academic advisor. A student may withdraw from a course after the first 20 percent of the course and, ordinarily, before the end of 60 percent of the course. A grade of W will appear on the student's official record. A grade of W is not calculated in the student's grade point average, and credit hours graded with W do not count in enrollment status. Refunds follow University policy, available via the One Stop website at MiamiOH.edu/OneStop. Students should refer to the Academic Calendar on the One Stop website for specific academic deadline dates. Students are strongly encouraged to contact their lenders and insurance agents to determine continued eligibility for loan deferments and insurance coverage before taking an action that will change their enrollment status to less than full-time.

After the first 20 percent of a course through the end of the first 60 percent, students must contact the course instructor to request to be withdrawn from the course. Instructors approving withdrawal use the online course drop/withdrawal process and the student and instructor are notified via email when the drop/withdrawal is processed.

1. After 60 percent of the course is complete, a student may no longer withdraw from a course, unless a petition is approved by the Interdivisional Committee of Advisors. The petition must include the signatures of the course instructor and the student's academic or divisional advisor. The petition must also describe and document the extenuating circumstances (extraordinary circumstances usually beyond the student's control) that form the grounds of the petition. If the petition for withdrawal is approved, the student will be withdrawn from the course with a grade of W. If the petition is not approved, the student will be expected to remain in the course (see Student Handbook, *Exceptions to the Scholastic Regulations*). The withdrawal deadline is 5:00 p.m. on the last Friday of the term's classes preceding exam week, or if a sprint or accelerated class, 5:00 p.m. on the last meeting date of that class.
2. Only in rare circumstances will a petition to withdraw from a course after 60 percent of the course is complete be approved for reasons of academic performance alone.
3. When possible, a student should continue to attend class until the Interdivisional Committee of Advisors has acted on his or her petition. Non-attendance does not void financial responsibility or a grade of F.

If a student is found guilty of academic dishonesty in a class and withdraws from the class, the student will receive the grade of F for the class, and a notation of academic dishonesty will be posted directly beneath the class on the academic record.

### Course Section Change

To change sections online, you must drop the section in which you are currently enrolled, then add the new section. Because many students may be competing for available space in the same course, there is a significant risk that you will lose your place in the course altogether.

## Credit Hour Loads for Undergraduate Students

A full-time undergraduate student must register for at least 12 hours of academic work in a semester or term and shall be subject to all

the rules, regulations, and fees governing regular Miami University student.

A part-time undergraduate student, i.e., carrying fewer than 12 credit hours in a semester or term, must be a resident of Oxford or must commute from his or her home or attend one of the Regional campuses.

The maximum credit-hour limit for an undergraduate student is based upon courses taken at all locations of Miami University and is limited to 20 credit hours in a fall or spring semester. The limit for all summer terms combined is 16 credit hours or 1.3 credit hours per week for overlapping summer terms. The limit for winter term is 6 credit hours. A student who needs to exceed the maximum credit-hour limits must obtain permission from the dean of his or her division.

Students may register for one to five hours of independent study each semester (no more than 10 per year). Registration for each course is in accordance with the level of instruction. Independent study projects must be approved by the instructor and the department chair.

## Independent Work

Independent work comes in two forms:

1. internship or co-operative education, and
2. independent study.

For more information, see Special Course Numbers in the Courses of Instruction General Information section.

## Repeating a Course

Consult the University Policy Library for full information on the undergraduate Course Repeat Policy.

## Undergraduate Student Classification

Students who have met entrance requirements are admitted to freshman rank. Students with at least 30 but less than 64 earned credit hours are ranked as sophomores. Students with at least 64 but less than 96 earned credit hours are ranked as juniors. Students with 96 or more earned credit hours are ranked as seniors.

## Graduate-Level Courses for Undergraduates

Undergraduate students who have earned 64 or more credit hours and have a GPA of 3.00 or greater may request permission to enroll in 500 or 600 level graduate courses. Students must obtain permission from the instructor, the department chair, and the Dean of the Graduate School. Students may double-count up to 12 hours of graduate course work toward their undergraduate degree. With permission of the appropriate advisor(s) and dean(s) or their designee(s), these students may count the graduate courses toward their major, minor, electives, and university requirements. Graduate courses taken in this manner will be treated as graduate level CGS (non-degree) courses. A maximum of 12 hours of graduate continuing graduate status courses may count toward a graduate

degree program and only 3 hours may be applied to a certificate program at Miami.

## Greater Cincinnati College Connection (GC3)

Full-time Miami students can take courses through the Greater Cincinnati College Connection during the academic year and summer. This association can provide courses that are not generally available at the institution where the student is enrolled.

Members of the Cincinnati Consortium include the Art Academy of Cincinnati, Athenaeum of Ohio, Chatfield College, Cincinnati Christian University, Cincinnati State Technical and Community College, College of Mount St. Joseph, Gateway Community and Technical College, God's Bible School & College, Good Samaritan College of Nursing and Health Science, Hebrew Union College-Jewish Institute of Religion, Miami University, Northern Kentucky University, Thomas More College, Union Institute & University, University of Cincinnati, Wilmington College, and Xavier University.

The One Stop can provide you with additional information.

## Southwestern Ohio Council for Higher Education (SOCHE)

Full-time Miami students can take courses through the Southwestern Ohio Council for Higher Education (SOCHE) during the academic year and summer. SOCHE is the collaborative infrastructure for higher education, helping colleges and universities transform their communities and economies through the education, employment, and engagement of more than 120,000 students in southwest Ohio. This association can provide courses that are not generally available at the institution where the student is enrolled.

Members of the Southwestern Ohio Council for Higher Education include Air Force Institute of Technology, Antioch College, Antioch University Midwest, Cedarville University, Central Michigan University, Central State University, Cincinnati State – Middletown Campus, Clark State Community College, Edison Community College, Kettering College, The Kettering Foundation, Miami University Regionals, Sinclair Community College, Southern State Community College, Union Institute & University, University of Dayton, Urbana University, Wilberforce University, Wilmington College, Wittenberg University, and Wright State University.

The One Stop can provide you with additional information.

## Other Regulations

### Changes in Policy

For complete information on changes in any academic policy on student conduct, grievance procedures or petitions consult the University Policy Library. You are responsible for knowing about any changes in these policies that may affect you.

### Electronic Directory

Miami's electronic directory, like those of other institutions, is accessible worldwide across the Internet. To preserve the privacy of students, faculty, and staff, the following data is **only accessible within the Miami University community**:

- **University-supplied data:**
  - Division (staff, faculty)
  - Office address (staff, faculty)
  - Home address and phone number (students, staff, faculty; if authorized)
  - School address and phone number (students)
- **Optional individual-supplied data:**
  - Pager e-mail address and phone number
  - Mobile phone number
  - Office hours
  - High schools attended
  - Other colleges attended

## FERPA Release and Directory Restriction

Under provisions of the Family Educational Right to Privacy Act (FERPA, Buckley Amendment), all students are able to request exclusion from the university's electronic directory.

All first time Miami students are included in the electronic directory beginning August 1st, but the student can request exclusion from the electronic directory by filling out a form available on the One Stop website (MiamiOH.edu/OneStop).

Freshmen may do so any time prior to July 15; continuing students may do so at any time during his/her enrollment at Miami.

Exclusion requests are reflected in the electronic directory approximately 24 hours after being processed by the University Registrar's Office. Emergency exclusions, requested by Miami University Police or the Office of Student Affairs, are processed as soon as possible by the IT Services.

## Right to Privacy and Access: Student Records

Miami University maintains records on all Miami students that include academic and demographic information. To protect our students' privacy, and to ensure that their records are accessible to them, Miami has designed a policy for maintaining and administering student records.

Miami's policy is in compliance with the Family Education Rights and Privacy Act of 1974 (FERPA). The complete policy is included in the online **University Policy Library**.

## Registration Glossary

**Academic action:** Academic actions are defined as academic warning, removal of academic warning, academic probation, removal of academic probation, academic suspension, and academic dismissal. Academic actions are taken at the end of each fall and spring semester, and at the end of the summer term. Any student with a cumulative GPA of less than 2.00 is subject to academic action, regardless of the number of hours taken in any semester or summer term.

**Academic record:** A record of courses taken, grades received, and degrees earned by each student while attending Miami. It includes transfer credit, advanced placement credit, and other credit awarded or earned.

**Admission prerequisites:** See "High School Preparation" in the Admission chapter. If you did not complete these units in high school, you must complete additional courses at Miami. These courses count

toward graduation and many fulfill other requirements. You must complete these units within your first 64 semester hours (normally, during your first two years). Questions about prerequisites should be directed to the Office of Admission.

**Associate's degree:** Two-year degree, generally offered only on regional campuses. An associate's degree requires completion of 64 semester credit hours and should not exceed 65 semester credit hours unless it can be shown that the additional coursework is required to meet professional accreditation or licensing requirements.

**Audit:** You attend classes, but do not receive credit or a grade. The instructor may require you to take exams and participate in class discussion. Since not all courses can be audited, you must have the instructor's written permission to audit. A course can be changed from credit to audit or audit to credit up to 60 percent of the class meetings. See the Grades chapter for more detail.

**Bachelor's degree:** A four-year degree. Basic requirements include: (1) at least 124 semester hours—at least 32 must be from Miami; (2) at least a 2.00 cumulative GPA; (3) fulfillment of the Global Miami Plan; (4) fulfillment of divisional and major requirements.

**Cancellation:** If you do not pay your fees on time, your schedule will be cancelled. You will need to re-register.

**CAS-A, B, etc.:** Abbreviations for sections of the College of Arts and Science requirement. See the College of Arts and Science chapter.

**Certificate program, graduate:** A specialization program that enhances a graduate degree. Available to students who have been admitted to the Graduate School and have met program prerequisites for a graduate degree.

**Certificate program, undergraduate:** A formal award certifying the satisfactory completion of an organized program of study at the postsecondary level and typically carrying 12-18 credits. Certificates should be designed as: (1) supplementary to other degree programs by providing students with new competencies for professional development or lifelong learning; or (2) building blocks toward future degree completion.

**Change of schedule (or drop/add):** Dates and times when you can make changes in your term courses. Consult the academic calendar for specific dates and times.

**Class standing:** Freshmen have earned 0-29 semester hours; sophomores have earned 30-63 semester hours; juniors have earned 64-95 semester hours; seniors have earned 96 or more semester hours.

**Closed class:** When maximum enrollment in a course has been met, no more students can be accommodated.

**Co-Major:** is designed to provide a complementary perspective to a student's primary major and carries at least 30 credits. Students receive the degree designation of their primary major with the co-major listed on the transcript. Some co-majors may have areas of concentration. Completion of the co-major may satisfy the Global Miami Plan thematic sequence requirement.

**Co-requisite:** A course that indicates the courses required to be taken in the same semester as the course in question. Co-requisites are indicated in General Bulletin course descriptions.

**Course level:** (See Course number below.) 100-level courses are generally introductory; 200-level more advanced; 300 and 400-levels for juniors and seniors; 500 and above for graduate students.

**Course modifier:** A letter or numeric symbol designating a different content within a general course.

**Course number:** Three-digit number that follows a departmental abbreviation used to identify a course, for example ENG 111. The course number is an indication of course level.

**Course reference number (CRN):** A five-digit code used to identify each section of a course for registration. It is in effect only for the current term.

**Credit/no-credit:** No grades are received for these courses. You will get credit for a D- or better; you do not get credit if your grade is lower. Credit/no-credit courses are not figured in your GPA. No more than 10 percent of your course work can be taken on a credit/no-credit basis, and usually you cannot take courses in your major this way. Freshmen may register for courses on a credit/no-credit basis, providing they are concurrently enrolled for 12 semester hours for grades. After 20 percent of the class meetings, you cannot change from credit/no-credit to a letter grade or from a letter grade to credit/no-credit. See the Grades chapter for more detail.

**Degree Audit Report:** A report of your completed course work and current registration matched with degree requirements of your declared major; it identifies deficiencies and lists courses to satisfy specific requirements. Degree audits are available online at <http://bannerweb.MiamiOH.edu/>.

**Division:** An academic part of the university with its own requirements. Miami has seven divisions: College of Arts and Science, College of Creative Arts, College of Education, Health and Society, College of Engineering and Computing, Farmer School of Business, Graduate School, and College of Liberal Studies and Applied Science.

**Doctoral Degree:** The highest award a student can earn for graduate study. Doctoral degrees generally require the successful completion of at least 90 semester credit hours (or 135 quarter credit hours) of work beyond the bachelor's degree or at least 60 semester credit hours (or 90 quarter credit hours) beyond the master's degree. Deviations from these credit hour guidelines require proper justification and state approval. The Doctor of Philosophy (PhD) is a research degree and involves preparation for the conduct of independent research and the discovery of new knowledge. Doctoral degrees may also recognize preparation for professional practice.

**Incomplete grade:** May be assigned when a student and an instructor formally agree to a plan to complete unfinished course work. See Grades section for more detail.

**Independent Work:** see full definition

**Late registration:** Late registration is held just before the term begins for new students who have not registered.

**Lec., Lab.:** Lecture and laboratory abbreviations in course descriptions to indicate credit hours in each (for example, 3 Lec. 1 Lab.).

**Major:** is a curriculum component that enables students to make an in-depth inquiry into a discipline or a professional field of study. It is organized around a specific set of goals, objectives and student

learning outcomes that are accomplished through an ordered series of courses whose connections define an internal structure. A major that focuses on a discipline typically draws its courses predominantly from one department. A major that encompasses a professional field of study or is interdisciplinary usually obtains its courses from more than one department/division.

Departments or divisions have the responsibility for administering majors within their unit and for approving particular programs of study and appropriate course substitutions for students. Those departments involved with interdisciplinary majors perform the same functions as individual departments. Students may not declare a major and a minor in the same discipline.

Per the Ohio Department of Higher Education guidelines, a major must comprise a minimum of 30 semester hours in a particular discipline.

**Master's Degree:** An award that requires the successful completion of at least 30 semester credit hours of work beyond the bachelor's degree. Master's degrees such as the Master of Arts and the Master of Science are typically considered research graduate degrees, and involve preparation to carry out research and to discover new knowledge—whether the field is pure or applied. Master's degrees may also recognize preparation for professional practice.

**Miami Plan (MPF):** Miami's liberal education requirement. See the Miami Plan chapter.

**Minor:** is a designated sequence of courses in a discipline or area of undergraduate study. Like the major, it is expected to have coherence and increasing sophistication. A minor is 18 (minimum) and typically up to 24 credit hours, or approximately half of the major. The minor is independent of the student's major and students may not declare a major and a minor in the same discipline. Completion of the minor typically satisfies the Global Miami Plan thematic sequence requirement, as long as 9 hours of the minor are outside the department of the student's major (or outside of the division for majors in the Farmer School of Business) and 6 of those 9 hours are at the 200 level or higher. Students must formally declare a minor, similar to the process by which they declare the major. Minors are designated on University transcripts.

**MPC:** Miami Plan Capstone Experience abbreviation used in course descriptions. Indicates that the course fulfills that requirement.

**MPF:** Global Miami Plan Foundation course abbreviation used in course descriptions. Indicates that the course fulfills a part of that requirement. Additional abbreviations to MPF (for example, MPF IIA, IIIB) indicate which foundation area(s) that course fulfills.

**MPT:** Miami Plan Thematic Sequence abbreviation used in course descriptions. Indicates that the course fulfills a part of that requirement.

**MUNet password:** By default, your password is the month and day of your birth and the last four digits of your Social Security number in the format mmddnnnn. Please include the leading zero for single digit months and days. For example, a birth date of March 1 with Social Security number 123-45-6789 would have a default password of "03016789". For security reasons, you will be required to change your default password to another value the first time you login to myMiami. In addition, to create a new password, you will have the opportunity to create a Secret Question/Answer that can be used in the event that you forget your password. You will

then be required to change your password every six months. To change your password, go to [www.MiamiOH.edu/password](http://www.MiamiOH.edu/password). For login problems, contact the IT Services Support Desk through myMiami at [www.mymiami.MiamiOH.edu](http://www.mymiami.MiamiOH.edu).

**myMiami:** Miami University's web portal. myMiami contains links to BannerWeb, the online campus directory, Knowledge Base, and other Miami services, as well as information about university offices, activities and news and events. myMiami can be accessed from anywhere in the world at [www.mymiami.MiamiOH.edu](http://www.mymiami.MiamiOH.edu) using your Unique ID, MUNet password, and web browser.

**Nontraditional credit:** College credit given for a nonacademic learning experience, such as knowledge you have acquired from a military service or your own study. For information, contact the One Stop for Student Success Services.

**Placement exams:** Offered in foreign languages, mathematics, chemistry and physics to help you enroll in an appropriate first course for your skill level.

**Prerequisite:** Course(s) that are approximations of the necessary specific or general academic knowledge, background, or semester classification required to succeed academically in a specific course. This is indicated in a course description of the Courses of Instruction section of this General Bulletin.

**Proficiency exams:** Tests used to obtain credit in subjects for which you have adequate preparation. Each department administers its own test, and credit applies toward graduation. You must pass the test with a C or better to earn credit. See the Fees and Expenses chapter.

**Section:** One class of a course. Courses with large enrollments are divided into sections. Sections are identified by letters, for example ART 171A, ART 171B. Each section has a unique CRN.

**Semester credit hour:** Unit used to measure course work. The number of credit hours is usually based on the number of hours per week the class meets; for example, a three-hour course typically meets three times a week for 55 minutes each time. One credit hour is usually assigned for two or three hours in laboratory and studio courses.

**Sprint course standards:** Courses that meet for less than the full 14 week term. The sprint parts of term are Q, T, U, V, W, X, Y, Z. Sprint course meeting dates are listed in the course schedule.

**Terminal degree:** A degree that is either highest on the academic track or highest on the professional track in a given field of study. At Miami, the terminal degrees offered are doctoral degrees or Master of Fine Arts (MFA) which is a terminal degree for creative field in the visual and performing arts as well as creative writing. The MFA degrees carry at least 35 semester hours.

**Time conflicts:** Registration/Change of Schedule checks for time conflicts and will not permit you to add courses that meet at overlapping times.

**Transcript:** An official copy of your academic record.

**Unique ID:** Every student, faculty, and staff member has been issued a Unique ID to identify them in the processing of university information. It consists of the first six letters of the last name, followed by the first and middle initials. Some Unique IDs end in a number rather than a middle initial because common last names and

initials mean that a particular Unique ID is already in use. The Unique ID is not case sensitive. Both your Unique ID and MUNet password are required to login to Miami's web portal, myMiami.

**Variable credit hours:** Range of credit hours for courses (usually independent study, special topics, thesis hours). Indicated with cumulative maximum in course description; for example (2-8; maximum 16).

# Grades

## Office of the University Registrar

106 Campus Avenue Building

Phone: 513-529-8703

www.MiamiOH.edu/registrar

## The Grading System

Grades for all students are reported to the Office of the University Registrar. Grade submission deadlines and dates by which grades are viewable are listed on the academic calendar (MiamiOH.edu/OneStop). Miami uses the following grading structure on a 4.00 scale.

Grade		Points Per Semester Hour
A+		4.00
A	Excellent	4.00
A-		3.70
B+		3.30
B	Good	3.00
B-		2.70
C+		2.30
C	Satisfactory	2.00
C-		1.70
D+		1.30
D	Poor	1.00
D-		0.70
F	Failure	0.00

Other grade symbols include:

ADF	Academic Dishonesty - Failed. Denotes a sanction of failure in a course due to Academic Dishonesty. Calculates as an F in grade point average.
ADY	Academic Dishonesty - No Credit. Denotes a sanction. Failure in a course due to Academic Dishonesty. Does not calculate in the grade point average (no credit).
I	Incomplete; calculates as an F in grade point average (retired).
IG or IGY	Incomplete; work at the graduate level; not included in the calculation of grade point average. The student has one academic semester following the recording to complete the academic work. Check the Academic Calendar for the deadlines per term. After the deadline has passed with no grade change being recorded, the "IG" will convert to a grade of F. The "IGY" will convert to Y (no credit).

IU or IUY

Incomplete work at the undergraduate level; not included in the calculation of grade point average. The student has one academic semester following the recording to complete the academic work. Check the Academic Calendar for the deadlines per term. After the deadline has passed with no grade change being recorded, the "IU" will convert to a grade of F. The "IUY" will convert to Y (no credit).

L	Audit; not included in enrollment status hours; not included in calculation of grade point average.
N	No grade submitted by the instructor; not included in the calculation of grade point average.
P	Passing; carries no credit points (used for student teaching, thesis hours, dissertation hours).
Q	Course grades preceded by Q indicate the Fresh Start policy has been applied.
S	Satisfactory Progress; carries no credit points and not included in the calculation of grade point average; (used for courses in research, independent reading, special topics courses, thesis hours, dissertation hours, and undergraduate honors); changes to a final grade when the project is completed.
U	Unsatisfactory progress; carries no credit points; not included in the calculation of grade point average; (also used for special projects as above); changes to a final grade when the project is completed.
W	Withdrawal; assigned to a student who officially withdraws from the University or from a course; carries no credit points; is not included in the calculation of grade point average.
WP	Withdrawal passing; (retired).
WF	Withdrawal failing; (retired).
X	Credit in a course taken credit.no-credit in which a grade of D- or better is earned in an undergraduate course or in which a grade of B is earned in a graduate course; carries no credit points; not included in the calculation of grade point average.

Y	No credit in a course taken credit/no-credit in which a grade of F is earned in an undergraduate course or in which a grade of B- or less was earned in a graduate course; carries no credit points; not included in the calculation of grade point average.
Z	Course grades preceded by Z indicate the Fresh Start policy has been applied; (retired).

## Calculating Your Grade Point Average

Add the hours you have attempted for a grade in the semester. Then figure the point value of your grades by multiplying the point value of the grade by the number of hours in the course. Divide the number of points by the number of hours; this is your term GPA.

Course	Hours		Grade	=	Points
ENG 111	3	x	C (2.00)	=	6.0
PSY 111	3	x	B (3.00)	=	9.0
SPN 101	4	x	B (3.0)	=	12.0
BIO 115	4	x	B+ (3.30)	=	13.2
EDT 110R	2	x	A (4.00)	=	8.0
<b>TOTAL</b>	<b>16</b>				<b>48.2</b>

48.2 divided by 16 = 3.01 GPA

To figure your cumulative GPA, divide total points for all terms by the total number of credit hours you attempted for a grade. Grade point averages are truncated to the second decimal place.

## Auditing Courses

Courses may be audited without credit with the consent of the instructor and will not be counted under any rules establishing maximum registration or enrollment status. The requirements for auditing a course are established by the instructor and may include active participation by the student. An instructor may drop an auditing student at any time during the semester if the student is not fulfilling the audit requirements. Full fees are assessed for auditing a course. A course can be changed from credit to audit or audit to credit during the first 60 percent of the course (see the academic calendar).

## Credit/No-Credit

**Warning:** Nationwide studies have shown that credit/no-credit grades on your academic record may be a negative factor in evaluation of your application for admission or employment by most professional schools (law, medicine, etc.), by many graduate schools, and by some employers and undergraduate schools. Before enrolling for courses on a credit/no-credit basis consider what effect it may have upon your career goals.

Students should consult with the chief departmental advisor of their department of major with regard to questions pertaining to courses that may be taken on a credit/no-credit basis.

All students not on academic probation may register for courses on a credit/no-credit basis, except as noted below. Eligible students may enroll in any course on a credit/no-credit basis excepting

courses used to meet department field of concentration and major requirements and the core courses at the Dolibois European Center. However, departments may specify field of concentration and major requirements that can be met with "credit" in a specified course. Registration in a course on a credit/no-credit basis requires the permission of the instructor except in Miami Plan courses.

No more than 10 percent of the minimum total credit hours required for graduation (i.e. 13 credit hours for bachelor's degrees; 7 credit hours for associate degrees) at Miami University may be earned in courses that students elect to take on a credit/no-credit basis. Courses with a defined grade mode of Credit/No Credit ONLY are excluded from the 10 percent maximum. Freshmen may register for courses on a credit/no-credit basis providing they are concurrently enrolled for 12 hours for grades. During the summer term, freshmen may register for courses on a credit/no-credit basis providing they are concurrently enrolled for four semester hours for grades. If at any time during the semester, a student drops below 12 hours for grades (four hours for the summer term), the credit/no-credit status will be removed. Courses offered only on a credit/no-credit basis are not factored in. Sophomores, juniors, and seniors may register for one or more courses per semester on a credit/no-credit basis. Students may not enroll on a credit/no-credit basis in any course in which they have previously earned credit. A student may not enroll for grade in any course for which they have received "credit" on a credit/no-credit basis. "Credit" (X) will be granted for passing grades of D- or better; "no-credit" (Y) will be granted for grades of F. The instructor will record the normal letter grade, which the University Registrar's Office will convert to the respective credit/no-credit symbol. Courses taken on a credit/no-credit basis are disregarded in the computation of grade point averages. A course can be changed from credit/no-credit to letter grade or from letter grade to credit/no-credit during the first 20 percent of the course (see the academic calendar).

## Incompletes

If you cannot finish the work for a course by the end of a term, with your instructor's permission you can take an incomplete. This is an agreement between you and your instructor that you will finish your course work.

Grades of incomplete for a graduating student must be removed by the conclusion of end-of-term processing for the student's graduation term, approximately 30 days after the date of graduation. For policies regarding incomplete grades and their removal, see *the University Policy Library*.

## Withdrawal from the University

Withdrawing from the University is a formal administrative procedure; merely ceasing to attend classes will not be considered an official withdrawal from the University. A student withdrawing from the University on any Miami campus must submit the online form located on the One Stop website (miamioh.edu/onestop). The withdrawal deadline is 5:00 p.m. on the last Friday of the term's classes preceding final exam week. Official withdrawals are noted on a student's academic record (transcript). Refunds follow University policy, available via the One Stop website at MiamiOH.edu/OneStop. Students considering withdrawal from the University are strongly encouraged to contact their lenders and insurance agents to determine continued eligibility for loan deferments and insurance coverage.

1. If a student officially withdraws during the first 20 percent of any semester, accelerated course or summer term, no grades will be recorded.
2. If a student officially withdraws from the University at any point after 20 percent and through the last class day of a semester, accelerated course or summer term, the University Registrar's Office shall assign a grade of W in each course for which the student is registered, excluding accelerated courses completed or not yet begun prior to the date of withdrawal from the University. Courses in which a final grade has been assigned remain on the academic record.
3. If a student officially withdraws from the University after 60 percent of a semester, accelerated course or summer term, and if the student wishes to re-enroll, the student must submit a re-enrollment application online at [www.MiamiOH.edu/reenroll](http://www.MiamiOH.edu/reenroll) at least 30 days prior to the beginning of the term in which you wish to enroll.
4. If a student obtains a military withdrawal, the provisions of the Official Withdrawal policy (University Policy Library) apply.

## Unofficial Withdrawal

If a student leaves the University without formally withdrawing and failing and/or non-completion grades are recorded, the student will be considered an Unofficial Withdrawal. For additional information and the full policy see the *University Policy Library*.

## Academic Warning, Probation, Suspension, and Dismissal

Academic actions are defined as academic warning; removal of academic warning; academic probation; removal of academic probation; academic suspension; and academic dismissal. Academic actions occur on the basis of semester or term and/or cumulative grade point averages as computed by the Office of the University Registrar at the end of a semester or term. Academic actions will be taken on any student regardless of the number of hours taken in any semester or term with suspension and dismissal exclusions as noted below. Good academic standing is defined as maintaining a minimum 2.00 cumulative grade point average. Students on academic warning are also considered to be in good academic standing.

### Academic Warning

An undergraduate student who earns a cumulative GPA less than 2.00 during his or her first semester at Miami University will be placed on **academic warning**. Excluding a student's first semester (per above), in all subsequent semesters an undergraduate student with fewer than 16 cumulative GPA hours who earns a cumulative GPA lower than 2.00 is placed or continued on academic warning. If an undergraduate student on academic warning has a cumulative average of 2.00 or better, the student is removed from academic warning.

### Academic Probation

An undergraduate student with 16 or more cumulative Miami grade point average hours is placed on **academic probation** at the end of any semester or summer term in which his or her cumulative average is lower than 2.00. If an undergraduate student's cumulative average is 2.00 or better, the student is removed from academic probation.

## Continued on Academic Probation

An undergraduate student with 16-29 Miami grade point average hours who is on academic probation and who has a cumulative average lower than 2.00 is **continued on academic probation**. An undergraduate student with 30 or more Miami grade point average hours who is on academic probation and who has an average for a semester or summer term of 2.00 or better, but has a cumulative average lower than 2.00, is continued on academic probation.

## Academic Suspension

An undergraduate student with 30 or more Miami grade point average hours who is on academic probation will be **suspended** if his or her average for a semester or summer term is lower than 2.00. The period of suspension is two consecutive terms including summer terms (see *University Policy Library, Re-enrollment after Academic Suspension or Dismissal*).

## Academic Dismissal

A second academic suspension for low scholarship constitutes an **academic dismissal**. The period of academic dismissal is two calendar years and is usually considered a permanent action (see *University Policy Library, Re-enrollment after Academic Suspension or Dismissal*).

A student may petition for an exception to academic suspension or academic dismissal. Freshmen should consult with their major advisor about the petitioning process. Upper-class students can get a petition from their divisional dean. These petitions are considered by the Committee of Advisors in your academic division.

All decisions on petitions are reviewed by the Interdivisional Committee of Advisors, which has the authority to affirm or reverse the decision.

## Scholastic Requirements for Graduate Students

A graduate student with 9 or more cumulative Miami graduate-level grade point average hours is placed on academic probation at the end of any semester or summer term in which his/her cumulative grade point average is less than 3.00. If a graduate student has a cumulative grade point average of 3.00 or better at the end of a semester or summer term, the student shall be removed from academic probation. A graduate student who is on academic probation and who has a semester or summer term grade point average of 3.00 or better, but has a cumulative grade point average of less than 3.00, is continued on academic probation. A graduate student who is on academic probation will be dismissed if his/her semester or summer term grade point average is less than 3.00. Academic dismissal is usually considered a permanent action. A graduate student under academic probation may not hold an assistantship. The student may, with the support of the unit that awarded the assistantship, petition the Graduate Council for an exception to this policy. A new petition is required each semester while on probation.

A student under academic probation is not eligible to take a comprehensive examination, final examination, or to graduate. A student's cumulative Miami graduate-level grade point average must be at least 3.00, and a student may not have grades of incomplete, to

take a comprehensive examination, to take a final examination for any graduate degree, or to graduate.

## Fresh Start Policy

The Fresh Start Policy is designed to help Miami University students return to good academic standing after an absence of at least two calendar years. Students who have been academically suspended or dismissed or who voluntarily left the University with a cumulative GPA below 2.00 are eligible for Fresh Start after a two-year absence.

Fresh Start status must be requested within one semester (fall or spring) of completing at least 12 graded credit hours on which a cumulative grade point average of 2.00 or higher has been earned. The fresh Start option applies only to courses taken before re-enrollment.

After Fresh Start status is approved, a notation will be added to the student's academic record indicating that all Miami University credit hours earned prior to re-enrollment will be subject to the following conditions:

1. Courses taken prior to Fresh Start are excluded from the cumulative grade point average calculation, and the student starts with a new cumulative grade point average.
2. Grades from all coursework taken at Miami University after Fresh Start will be used in calculating eligibility for graduation with honors.

Students choosing to re-enroll under the Fresh Start policy are subject to the academic regulations and degree requirements in effect at the time of their re-entry. Fresh Start students must re-declare their major or majors, or re-apply for admission to the major if admission is required and must complete all current academic requirements. Fresh Start status is applicable only to associate and baccalaureate degrees and may be granted only one time. Following re-enrollment, students opting for Fresh Start must complete at Miami a minimum of 50 percent of the total hours required for their degree program. Fresh Start status will be recorded on the student's academic record as follows: "(Date) Fresh Start Approved. New Grade Point Average Established." Catalog year is changed to reflect the first term of re-enrollment after the term of Fresh Start is established. The Transfer Student Policy (1.1.C) applies for students who completed transfer credits while absent from Miami University.

Additionally, Federal Financial Aid regulations do not permit academic forgiveness. All credit hours considered for Fresh Start will still count as attempted hours for the purposes of Federal Financial Aid and may impact a student's aid eligibility. Students should also check with the One Stop to determine what consequences a Fresh Start approval may have on their Federal Student Aid eligibility.

## Re-Enrollment

Former students who left the university in good standing may apply for re-enrollment through the One Stop. Students who have been suspended, dismissed, or have a financial, medical, or disciplinary hold also apply through the One Stop. Apply for re-enrollment at least 30 days before the beginning of the term that you intend to re-enroll. Information is available at [www.MiamiOH.edu/reenroll](http://www.MiamiOH.edu/reenroll).

Returning students whose degree programs have been discontinued should consult with their academic departments or divisions.

# Fees and Expenses

## One Stop

100 Campus Avenue Building  
www.MiamiOH.edu/OneStop

## Fees and Expenses

**Note:** All fees and charges are subject to change without notice. For current information on tuition and fees, visit the One Stop website at www.MiamiOH.edu/OneStop.

## Estimated Fees and Expenses, 2019-2020

**Note:** 2019-2020 fees will be finalized in July 2019. All fees and charges are subject to change without notice.

For complete information, please visit MiamiOH.edu/OneStop.

**Important:** You must be covered by health and accident insurance. Your Bursar account will automatically be charged on your fall semester invoice for Basic Coverage Student health and accident insurance through the Health Services Center. You may reach the Health Services Center at 513-529-3000. If you do not need the insurance, you can complete a Waiver Form online and your Bursar account will be credited.

## Summer Term

Visit the Miami Summer Term website for more details at MiamiOH.edu/OneStop.

## Freshmen

When you are accepted, you must submit the following fee and deposit with your housing application:

Admission Fee	\$95.00
University Contract eConfirmation Deposit	\$330.00
<b>Total</b>	<b>\$425.00</b>

If you attend Miami and fulfill your housing contract requirements, the University Contract eConfirmation deposit portion is retroactively applied toward your final term fees; you will be refunded any remaining credit.

## Paying Your Fees

Fees are due before the semester begins. You must pay by the deadline; otherwise your schedule may be cancelled and a late payment fee will be assessed.

## Late Payment, Late Registration

Late payment fee	\$150.00
Late registration fee, per calendar week	\$27.00

## Late Fees on Past Due Accounts

The Miami University Board of Trustees authorizes charging late fees equal to the then-current prime rate plus 3 percent on charges that are not paid within 90 days of the due date. Full collection costs may

also be charged if it becomes necessary to send a past-due account to a third-party collection agent.

## Financial Obligations

The Miami University Board of Trustees authorizes the Bursar to restrict any services to current and former students and current and former employees until any past due amount owed to the university is paid in full. These services include, but are not limited to, the release of all academic records (e.g., diploma, and transcripts), the continuation of auxiliary services (e.g., telephone, cellular, high-speed data services), and registration for future semesters. Past due amounts include, but are not limited to, fees, tuition, charges, fines, and loans due to the university. Restoration of auxiliary services may require additional signed securities.

## Other Charges

### Audit Courses

These courses are charged at the same rate as credit courses.

### Automobile Registration/Parking Permits

Parking permit fee information and automobile registration requirements are available online at the Parking and Transportation Services Web site (www.MiamiOH.edu/parking/) or at the Student Handbook Web site (www.MiamiOH.edu/handbook/). A Student Motor Vehicle and Bicycle Regulations pamphlet, which includes a parking map, is available at the Parking Office, Campus Avenue Building, Room 128, 513-529-8535.

### Books and Supplies

Undergraduate and graduate students should estimate **at least** \$1216 (\$608 per semester) for books and supplies. Some programs (e.g., Art, Music, Architecture) may require the purchase of additional supplies.

### Examinations (optional)

CLEP (College Level Examination Program) \$100.00 per test

Miami Administrative fee \$20.00

CLEP voucher purchased on College Board website (take voucher and picture ID to testing center) \$80.00

Proficiency examination \$70.00 per test

Fee includes the first credit hour; add \$35.00 for each additional credit hour if you pass.

### Graduation

Certificate \$10.00

Associate, Bachelor, Specialist in education application \$35.00

Master's degree application \$35.00

Diploma replacement charge \$29.00

Doctoral degree application (includes diploma and hood) \$200.00

## Miscellaneous

Bad check charge	\$30.00
ID card replacement	\$35.00

Special fees may be assessed for courses with unusual instructional expenses.

## Refund of Charges

Questions about refunds should be directed to the One Stop.

The date when you withdraw or drop below full-time hours is the date that you officially withdraw or drop at the University Registrar's Office.

## Workshop Refund Policy

In order to receive a refund of tuition for a workshop that is held during the fall, spring, and summer terms, you must drop the workshop no later than 12:00 p.m. on the last business day before the workshop begins. For the winter term, you must cancel by 12:00 p.m. on the Monday following finals week. You can cancel by contacting Global Initiatives at [global@MiamiOH.edu](mailto:global@MiamiOH.edu) or 513-529-8600.

## Dropped Courses

If a full-time student drops below 12 semester hours within the first five days of a semester, the student will be charged per credit hour for classes (instead of flat tuition and fees) and refunded the difference. A drop in hours after the fifth day of a semester does not create a refund.

**Drop unwanted courses. Do not assume that you will be automatically dropped for nonattendance.**

## Withdrawal from the University

If you withdraw during fall or spring semester, your fees will be refunded according to the following schedule.<sup>1</sup>

Withdrawal	Refund
Before 5 p.m. of the 5th day of the term	100 percent
Before 5 p.m. of the 8th day of the term	90 percent
Before 5 p.m. of the 20th day of the term	50 percent
Before 5 p.m. of the 30th day of the term	35 percent
Before 5 p.m. of the 40th day of the term	25 percent
After the 40th day of the term, you will not receive a refund.	

If you withdraw, the room charge will be refunded according to the guidelines and schedule of refunds listed on the housing contract. There is no room refund after the fortieth (40th) class day of a semester. Meal Plan holders who withdraw from the university on or before the fortieth day of the term will receive a refund of 80% of any remaining Meal Plan declining balance dollars.

If you **withdraw during a summer or winter term**, your fees will be refunded as follows.<sup>1</sup>

Withdrawal	Refund
before 5 p.m. of the 3rd day of the term	100 percent
4th through 8th day of the term	50 percent
9th through 15th day of the term	25 percent

**After the 15th day of the term, you will not receive a refund.**

<sup>1</sup> When a student withdraws completely from the University during a semester, the Office of Student Financial Assistance is required to calculate, using a statutory pro rata schedule, the amount of Federal Title IV financial aid the recipient has earned for the semester. This schedule is provided by the Department of Education. The amount of Title IV financial aid earned is based on the amount of time the student spent in academic attendance. The University Registrar's Office will inform The Office of Student Financial Assistance the date the student notified Miami of the intent to withdraw. This date is used to calculate aid eligibility. If you are thinking about withdrawing, please contact the One Stop for information on how it will affect your financial aid.

## Qualifications for Ohio Residency Determined by The Ohio Department of Higher Education

### Intent

It is the intent of the Ohio Department of Higher Education in promulgating this rule to exclude from treatment as residents, as that term is applied here, those persons who are present in the state of Ohio primarily for the purpose of receiving the benefit of a state-supported education.

A complete description of the qualifications for Ohio residency is available online at [MiamiOH.edu/residency](http://MiamiOH.edu/residency).

# Financial Aid, Awards and Scholarships

## Office of Student Financial Assistance

### One Stop for Student Success Services

100 Campus Avenue Building  
513-529-0001  
MiamiOH.edu/OneStop

## Financial Aid for Undergraduate Students

There are many programs of assistance available from private, state, federal, and university funds. We are committed to helping students, within the limits of available funds, gain a college education even if their resources are limited. To receive consideration for most programs, students and parents must complete the appropriate forms. All information provided remains confidential.

Understanding which programs are available to students is complicated by the many state, federal, and local agencies that set regulations for the use of the funds. Students, as consumers of these funds, have the right under law to receive clear, accurate information concerning aid programs.

For more information, contact the One Stop or check online at [MiamiOH.edu/OneStop](http://MiamiOH.edu/OneStop).

## Need-Based Assistance

The One Stop can assist students in obtaining need-based financial aid including: **grants**, gift aid awarded to the student that does not need to be repaid; **loans**, awards that require repayment; **federal work-study**, part-time employment that helps students meet the cost of college and participate in community service; and **scholarships**, a type of gift aid awarded to students that does not need to be repaid. Any awarded aid is combined to meet a student's financial need. The total amount of aid a student receives is based on a family's financial circumstances. To be considered for all need-based financial aid, new first-year students, returning and new transfer students must complete the Free Application for Federal Student Aid (FAFSA) by **February 1**. The FAFSA must be completed **every year** ([fafsa.gov](http://fafsa.gov)).

A student cannot receive any combination of aid, including loans, grants, federal work-study, and scholarships that exceeds the cost of attendance. If the total amount of financial aid exceeds the cost of attendance, the amount of aid will be reduced.

## Private Loans

Miami will certify a private loan from any lender. Terms, fees, and borrowing limits of private loans differ. The yearly amount cannot exceed the annual cost of attendance minus other financial aid and resources. Private loans are not federally guaranteed and do not require that you file the FAFSA. For more information about obtaining a private loan, visit [MiamiOH.edu/loans](http://MiamiOH.edu/loans).

## Student Loan Code of Conduct

The guiding principles for ensuring the integrity of the student aid process and the ethical conduct of employees in regard to student loan practices are provided in the Miami University Student Loan

Code of Conduct by visiting [MiamiOH.edu/loans](http://MiamiOH.edu/loans) and clicking the "Student Loan Code of Conduct" link.

## Federal Work-Study (FWS) Employment

Federal Work-Study is a federal financial aid program that is awarded based on financial need computed from information provided on the Free Application for Federal Student Aid (FAFSA). If a student indicated an interest in work-study on the FAFSA and is eligible, the student's award package may include FWS. A student benefits from having Federal Work-Study because FWS earnings are not calculated in the Expected Family Contribution (EFC) on the following year's FAFSA. Additionally, employers often prefer hiring FWS students since a portion of the student's wage is paid with federal funds.

## Summer Aid

Starting in April, students will be notified of their eligibility for summer aid upon registering for summer classes if they have a Free Application for Federal Student Aid (FAFSA) on file with Miami University and if they have completed all outstanding financial aid requirements.

Summer financial aid is typically based on any remaining aid eligibility the student has from the current academic year. Generally, students are only eligible for additional federal student loan funds if they have the number of hours required to advance in grade level by the end of the spring semester. Further, students cannot use their Miami scholarships for summer terms unless the scholarship was awarded specifically for summer study. If all federal loan eligibility has been exhausted, the student may want to consider a federal Direct PLUS loan or a private loan. More information regarding financial aid can be found at [MiamiOH.edu/OneStop](http://MiamiOH.edu/OneStop).

## Aid for Another University or Study Abroad Program

If you are a degree-seeking student at Miami University and you wish to obtain aid to attend another university or a study abroad program during Fall Semester, Winter Term, Spring Semester or Summer term, or you are simultaneously enrolled at Miami and another institution, you must complete a Consortium/Contractual Agreement in order to receive financial aid and scholarships. The Consortium/Contractual Agreement is available at [MiamiOH.edu/OneStop/forms](http://MiamiOH.edu/OneStop/forms).

A completed Consortium/Contractual Agreement is required to receive aid if you are studying abroad or at another university or if you have borrowed loans that you want to remain in an in-school deferment status. Completing this agreement can be a very long process, and if at all possible, should be started at least two months prior to studying at another institution. For important study abroad financial aid information, requirements, and deadlines, select "Other Financial Aid Information" from the "Your Money" tab of [MiamiOH.edu/OneStop](http://MiamiOH.edu/OneStop). Then select the Study Abroad link.

## Other Sources of Aid

### State Assistance for Non-Ohio Residents

Most states have student assistance programs. Contact the student assistance agency in your state for information on what aid is available and how to apply.

### Assistance for Veterans

Veterans who intend to enroll at Miami should contact the Veterans Affairs (VA) Administration at 888-442-4551 to determine their GI Bill eligibility, and for general information and application.

To apply for benefits, complete the online application at [www.vabenefits.vba.va.gov/vonapp](http://www.vabenefits.vba.va.gov/vonapp). Veterans also need to submit an enrollment form to the Veterans Certifying Official at [MiamiOH.edu/veterans](http://MiamiOH.edu/veterans).

To be assured of advance payment, initial paperwork should be submitted to the Veterans Affairs Administration 45 days before classes begin. For more information or to contact the Veterans Certifying Official at Miami visit [MiamiOH.edu/veterans](http://MiamiOH.edu/veterans), email [veterans@MiamiOH.edu](mailto:veterans@MiamiOH.edu), or call 513-529-0001.

Additional financial assistance through programs described in this section is available to most veterans.

### Student Employment

The Department of Human Resources coordinates all student employment and student payroll registration. The two types of student employment at Miami are Federal Work-Study (FWS) and regular wage employment. Job classifications and wage rates are the same for each, but they are financed differently. University employers do their own hiring and students are responsible for finding a job. Current job openings may be found at [miamioh.hiretouch.com](http://miamioh.hiretouch.com). Information about job classifications, wage rates, and how to apply for jobs is available online at [MiamiOH.edu/studentemployment](http://MiamiOH.edu/studentemployment).

### Eligibility for Financial Assistance

Programs based on financial need, funded by state and federal aid programs, are administered by Miami. To be eligible for these programs, you must:

- be a U.S. citizen or eligible non-citizen as defined on the Free Application for Federal Student Aid (FAFSA);<sup>1</sup>
- be registered with Selective Service, if you're a male (you must register between the ages of 18 and 25);
- be enrolled as a regular student working in an eligible program;
- be able to demonstrate financial need (for most programs); see Applying for Assistance below.
- maintain Satisfactory Academic Progress (SAP);
- certify on the FAFSA that you are not in default on any federal student loan or owe a refund on a federal grant;
- have a valid Social Security number (unless you are from the Republic of Marshall Islands, Federated States of Micronesia, or the Republic of Palau);
- certify that you have not been convicted of an offense involving either the possession or sale of illegal drugs that occurred while receiving Title IV federal aid;
- certify that you are not subject to an involuntary civil commitment following incarceration for a sexual offense (as determined under the FBI's Crime Reporting Program);
- certify on the FAFSA that you will use federal student financial aid only for educational purposes.

<sup>1</sup> International students who do not meet citizenship requirements for federal aid programs should contact the International Student and Scholar Services for information about financial assistance.

### Applying for Assistance

Students must complete the Free Application for Federal Student Aid (FAFSA) to be considered for all need-based scholarships and financial aid. Complete the FAFSA online at [fafsa.gov](http://fafsa.gov). To be considered a priority applicant for all need-based financial aid, new first-year

students must complete the FAFSA by the **December 1** Priority I deadline or **February 1** Priority II deadline (for returning students and new transfer students, the deadline is **February 1**). The FAFSA must be completed **every year**.

### Determining Your Financial Aid Package

A student's financial aid package is processed in this order:

1. The student's Cost of Attendance (COA) is estimated based on state of residence, the campus that will be attended, and enrollment status. The COA includes instructional and general fees; additional fees for technology, facilities, transit, and Armstrong Student Center; estimates for room and board. The COA also includes estimates for books and supplies, transportation, and miscellaneous living expenses such as hygiene, recreation, and entertainment.
2. After receiving the FAFSA data from the US Department of Education, the reported Expected Family Contribution (EFC) that reflects the family's ability to contribute to educational costs, is used to calculate the student's eligibility for need-based aid. The EFC is then subtracted from the COA to determine the student's financial need.
3. Once financial need is determined, the student is considered initially for grant eligibility, then for loan and federal work-study, depending on the student's indicated preference on the FAFSA. Students who submit the FAFSA to the Federal Processing Center by **December 1** or **February 1** for new first-year students and **February 1** for returning students and new transfer students are the first groups to be awarded aid.

Applicants are ranked in order of greatest need and awards are made on the basis of the amount of financial need.

Students who are awarded scholarships will be sent a separate Scholarship Award Notification.

Students with significant changes in family income (death, loss of job, disability, divorce, or other extenuating circumstances) after filing their FAFSA may request a re-evaluation of their application. To see if circumstances qualify for review, please contact the One Stop to speak with a specialist.

### Standards of Satisfactory Academic Progress (SAP)

#### Basic Requirements

If students receive federal financial aid, they are required to maintain satisfactory progress toward their degree. Satisfactory progress is measured with two standards, qualitative, which is grade-based and quantitative, which is time-related. Read the Standards of Satisfactory Academic Progress (SAP) Policy Standards, which outlines Miami University's policy for monitoring a student's progress at [MiamiOH.edu/OneStop/sap](http://MiamiOH.edu/OneStop/sap).

#### Change in Enrollment

A student's initial award is typically based on full-time, full-year enrollment. Students must inform the One Stop in writing or via myMiami on the "My Bill and Aid" tab if their intended enrollment is less than full time or less than a full year. Changes in enrollment could require adjustments to aid before funds can disburse to a student's Bursar account. Usually, a student must be enrolled for at least six hours to be eligible for any type of aid.

In the case of students who change their enrollment prior to the end of the drop/add period, their grant(s), scholarship(s), and/or loan eligibility will be recalculated. Students will receive a revised award notification listing any changes in their aid package.

At the end of the last day to drop a course without a grade, the student's enrollment will be frozen and the financial aid for the semester will be based on the number of credit hours the student is enrolled at that time. Students should make sure they are enrolled for all the classes (including sprint courses) they intend to take for the semester by the last day to drop a course without a grade for the full-term. Please refer to the University Academic Calendar for specific dates.

### **Withdrawal from the University**

The U.S. Department of Education expects that Federal aid recipients complete all courses attempted and paid for with Federal aid. Therefore, if students received federal assistance from any federal aid program (Federal Direct Loan, Federal Pell Grant, Federal TEACH Grant, Federal SEOG, Federal Direct PLUS Loan for graduate students, or Federal Direct PLUS Loan for parents) and withdrew from the University during a semester that they began attendance, Miami is required to determine the amount of federal aid that they have earned as of their withdrawal date.

The percentage of the semester completed is determined by dividing the number of calendar days that the student completed as of the withdrawal date by the total number of calendar days in the semester. Scheduled breaks of at least five consecutive days are excluded from the total number of calendar days in the semester.

If a student notifies the One Stop in writing that they are withdrawing for any reason, Miami will be required to complete a withdrawal calculation and a student's aid may be adjusted for the semester. The withdrawal date will be the date that official notification was provided to Miami of the student's intent to withdraw. The percentage of federal aid that was earned by the student is equal to the percentage of the semester that was completed, as of the withdrawal date, if this date occurs on or before completion of 60% of the semester. If the withdrawal date is after completion of 60% of the semester, the student will have earned 100% of the federal aid and no adjustments will be made to their federal aid for the semester.

If a student stops attending classes and does not notify the One Stop that they are withdrawing, the student is considered to have unofficially withdrawn. Unofficial withdrawals are recorded when grades have been posted by the University Registrar's Office and the student record shows that the student received all (or a combination of) F, I, N, W and/or Y grades for the semester. A return of Title IV withdrawal calculation is performed based on the last known date of attendance provided by the professor. If a date is not provided by the professor, the withdrawal calculation is based on the midpoint (50%) of the semester. Once the withdrawal calculation is performed, a portion of federal aid may be revoked from the student's account at Miami and returned to the federal government. This process typically results in the student owing money to the University. When a withdrawal calculation has been completed and aid has been adjusted, students are notified in writing by the Office of Student Financial Assistance. Adjustments may also be made to the student's state and university awards if required.

Miami will return all unearned aid to the U.S. Department of Education for the student. The unearned aid will be credited to

the outstanding balances on federal loans made to the student, or on behalf of the student for the semester in which the return was required. The order for the return of aid is as follows: Federal Direct Unsubsidized Loan, Federal Direct Subsidized Loan, Federal Perkins Loan, Federal Direct PLUS Loan for graduate students, Federal Direct PLUS Loan for parents (received on behalf of the student), Federal Pell Grant, Federal SEOG, and Federal TEACH Grant.

Withdrawing will also affect a student's Satisfactory Academic Progress and may jeopardize future federal financial aid eligibility. To make sure a student understands the possible impact on financial aid, a student should consult with the One Stop prior to withdrawing from the university.

### **Academic Suspension or Dismissal**

Students suspended or dismissed for academic reasons may not receive financial aid until they are re-enrolled. When students apply for re-enrollment, they should contact the One Stop for information about applying for aid.

## **Federal and State Grants**

Students with a high level of financial need are typically eligible for grants. Generally, a student receives grant funds in combination with loans and/or federal work-study. Students with a disability may also be eligible for grants from the Bureau of Vocational Rehabilitation.

The following grant programs are awarded on the basis of a family's financial circumstances; no repayment is required.

**Federal Pell Grant** - A grant provided by the federal government to qualified undergraduate students who demonstrate exceptional financial need. Pell Grant amounts can change yearly and students must complete the FAFSA annually for renewal consideration. The maximum Federal Pell Grant award is \$6195 for the 2019-2020 award year. The amount awarded will depend on financial need, enrollment status (full-time or part-time), and attendance for a full academic year or less. Students can receive the Federal Pell Grant for no more than 12 semesters.

**Federal Supplemental Educational Opportunity Grant (SEOG)** - Federal grant administered by Miami University for high financial need students who are also eligible for Pell Grants. A limited number of these grants are given in combination with Pell Grant, loan, and/or federal work-study.

**Federal Teacher Education Assistance for College and Higher Education (TEACH) Grant** - Federal grant program awarding up to \$4,000 per year to a student who agrees to serve as a full-time teacher in a high-need field in a public or private elementary or secondary school that serves students from low-income families. A TEACH Grant recipient must teach for at least four academic years within eight calendar years of completing the program of study for which the TEACH Grant was received. **IMPORTANT: If a student fails to complete this teaching obligation, all amounts of the TEACH Grant that were received will be converted to a Federal Direct Unsubsidized Stafford Loan. This loan and all accrued interest must be repaid to the U.S. Department of Education. Interest will be charged from the date the grant(s) was disbursed.**

To qualify for a TEACH Grant, a student must have placed above the 75th percentile of a standardized college admission test (ACT/SAT/GRE); OR have a high school cumulative 3.25 GPA and must maintain the 3.25 GPA throughout the student's academic program

and indicate a strong interest in teaching; OR be a current teacher returning to pursue an advanced degree. The student may be either an undergraduate or graduate enrolled full or part-time. Award amounts are prorated based on enrollment.

A student must complete a TEACH Grant Agreement to Serve (ATS) each year and complete TEACH Entrance Counseling each year to receive a TEACH Grant. For information about the high-need fields and schools serving low-income students, eligibility requirements, grant conditions, and to obtain the service agreement, see [studentloans.gov](http://studentloans.gov).

You may cancel all or a portion of your TEACH grant after funds have been credited to your student's Bursar account by notifying us in writing within 30 days after the date of your grant disbursement notice. After 30 days, you will work directly with the Department of Education.

**Ohio College Opportunity Grant (OCOG)** - A state grant program which provides need-based tuition assistance to Ohio students with financial. Students apply for the OCOG by completing the FAFSA by October 1 each year. For the 2018-2019 academic year, the maximum award amount for full-time enrollment was \$1500 for students with an EFC of less than 2191. Award amounts are prorated based on enrollment.

**BVR/Bureau of Vocational Rehabilitation-Bureau of Services for the Blind** - Federal and state grant program for undergraduate students with disabilities. Eligibility for funding is determined by the Rehabilitation Service Commission in the student's state of residence. Contact the state office in your state capital in order to begin the agency's application process as early as possible.

## Educational Loans

Miami University realizes that managing the cost of education is a challenge for many families. In addition to grants, scholarships, and federal work-study funds, several loan options are available. Loans may make it possible for you and/or your family to borrow now and defer repayment until after you leave the university. Families should monitor loan debt and find ways to reduce expenses, determine the total amount of education debt they are willing to accrue during a student's entire college enrollment, and borrow only what is needed. Please visit [MiamiOH.edu/loans](http://MiamiOH.edu/loans) for more detailed information on loans.

**Federal Direct Subsidized and Unsubsidized Student Loans** - Most students who file the Free Application for Federal Student Aid (FAFSA) are eligible for a Federal Direct Student Loan. Students may receive a Direct Subsidized Loan, a Direct Unsubsidized Loan, or a combination of both for the same academic year.

The Direct Subsidized Loans are awarded based on a student's financial need. With a Direct Subsidized Loan, the federal government pays any interest that accrues on the loan during authorized periods of deferment (postponement of repayment).

The Direct Unsubsidized Loans are awarded based on the cost of education less any other financial aid received. The federal government charges interest on the loan from the time the loan is disbursed until the loan is paid in full.

The annual borrowing limits (as defined by federal needs analysis formulas) for both the Direct Subsidized and Unsubsidized Loans

are \$5,500 (\$3,500 may be in a subsidized loan) for freshmen, \$6,500 (\$4,500 may be in a subsidized loan) for sophomores, and \$7,500 (\$5,500 may be in a subsidized loan) for the remaining years of undergraduate study. Independent students may also qualify for an additional unsubsidized loan of \$4,000 or \$5,000 depending on their undergraduate status. Aggregate loan limits exist for both undergraduate and graduate study. The interest rate on both loans is fixed at the time the loan disburses. Direct Loan interest rates are determined each July 1. For more information about current interest rates visit [studentloans.gov](http://studentloans.gov).

Students are required to begin making payments on their Direct Loans six (6) months after they graduate, leave school, or drop below half-time (6 credit hours) enrollment.

**Federal Direct PLUS Loans (for parents)** - Federal Direct PLUS loans help parents pay their dependent student's educational expenses. Parents may borrow up to the cost of attendance minus any other financial aid the student receives. The federal government charges interest from the date of the first disbursement until the loan is paid in full. The interest rate on the loan is fixed at the time the loan disburses. New loan interest rates are adjusted once a year on July 1. For more information about current interest rates visit [studentloans.gov](http://studentloans.gov). The parent is responsible for repayment of this loan. Parents have the option of beginning repayment either 60 days after the loan is fully disbursed, or six months after the student ceases to be enrolled on at least a half-time basis (6 credit hours). However, interest begins to accrue 60 days after full disbursement and will also accrue during loan deferment. A FAFSA must be submitted in order to apply for a PLUS loan. For information on applying, please visit [MiamiOH.edu/loans](http://MiamiOH.edu/loans).

## Scholarships

Administered by the Office of Student Financial Assistance, scholarship programs are designed to recognize outstanding undergraduates demonstrating high scholastic aptitude and attainment. While all scholarships are based on academic merit, some scholarships also have financial need as a requirement.

Students cannot receive a combination of aid, including loans, grants, federal work-study, and scholarships, which exceeds their cost of attendance. If the total amount of financial aid exceeds the cost of attendance, the amount of aid will be reduced.

All accepted first-year students are automatically considered for all available university scholarships. No separate scholarship application is required. Students that file the FAFSA by the Priority I deadline of **December 1** or the Priority II deadline of **February 1** will also be considered for need-based scholarships. Scholarship award determinations will be based on official testing and high school transcript information received at the time of application. Regional Campus students who are first-time freshmen may be considered for merit awards if they apply for admission by February 1. A separate application is not required.

Current Miami students attending the Oxford or Regional Campus will be considered for the various donor and departmental scholarships available for the following year. To also be considered for need-based scholarships, returning students must complete the FAFSA by the **February 1** deadline. We will automatically make award determinations by reviewing a student's cumulative grade point average (GPA) and the specific eligibility criteria required for each

scholarship. Scholarships are awarded within the limits of available funds. No separate scholarship application is required. Returning students will receive scholarship award notifications prior to June 1.

Renewable scholarships are available for new domestic transfer students who have demonstrated academic merit and significant need. A student must have submitted a FAFSA and also have the scholarship GPA based on 12 or more credit hours from an accredited school. For Miami transfer scholarship requirements, please see [MiamiOH.edu/scholarships](http://MiamiOH.edu/scholarships), then click the "Transfer Student Scholarships" link. Students enrolled less than full-time, attending the regional campuses, or who have a previous Bachelor's degree are not eligible.

For additional scholarship information, see [MiamiOH.edu/scholarships](http://MiamiOH.edu/scholarships).

## **Awards**

Incoming freshmen are notified of their scholarship awards at or near the end of March; returning students will be notified prior to June 1. Awards are normally made for the academic year, starting with the fall semester.

# Graduate Awards and Other Financial Assistance for Graduate Students

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## Graduate School

102 Roudebush Hall  
phone: 513-529-3734  
[www.MiamiOH.edu/graduate-school](http://www.MiamiOH.edu/graduate-school)

## Office of Student Financial Assistance

### One Stop

100 Campus Avenue Building  
phone: 513-529-0001  
[www.MiamiOH.edu/OneStop](http://www.MiamiOH.edu/OneStop)

## Graduate Awards

### Award Information

You must be admitted to the Graduate School with regular standing to be considered for a graduate award.

If you meet the minimum undergraduate grade point average required for admission with regular standing, you may be appointed to a graduate assistantship for one academic year with reappointment contingent upon achievement of a 3.00 graduate grade point average for that semester and satisfactory performance of your graduate assistant duties.

You may not hold more than one graduate award for any given semester or academic year.

A graduate award holder cannot hold any other employment at Miami University during the term of the graduate award unless recommended by the department chair and approved by the graduate dean via a graduate student petition. International students (those with F-1 and J-1 visas) are allowed to work a maximum of 20 hours per week while classes are in session (this includes assistantship duties). An international student who holds a graduate assistantship with duties of eight hours per week may request permission to hold additional employment as long as that employment does not exceed 12 hours per week.

Award of a graduate appointment for one year involves no commitment for continued support by the university for subsequent years.

### To Apply for a Graduate Award

To receive a graduate award you must be recommended by your department following your application and admission by the Graduate School. Contact the department to which you are applying for specific application requirements and deadlines. For a listing of graduate programs, visit the Graduate School website.

### Academic Responsibilities

You must maintain satisfactory progress toward your degree in order to assure continuance as a grant-in-aid holder or graduate assistant. Satisfactory progress means meeting minimum registration

requirements, maintaining a cumulative grade point average of at least 3.00, and fulfilling academic requirements for your degree as determined by your department or program. Failure to achieve such progress may result in the revocation of the award.

### Award Acceptance

The university adheres to the resolution adopted by the Council of Graduate Schools in the United States. The resolution provides that if an award recipient accepts an award before April 15, the recipient will have complete freedom through April 15 to resign in order to accept another appointment. After April 15, however, the recipient may not accept another award without obtaining a formal release from the first commitment.

### Graduate Students' Achievement Fund

The Graduate School sponsors this program to recognize significant achievements in research or creative activities by graduate students. Achievement is defined as completed research or other creative activity that has been recognized by an external organization or selected by an academic department for regional or national presentation. Contact the Graduate School for more information.

### Other Financial Assistance

In addition to awards administered through the Graduate School, graduate students may be eligible for Federal Direct Unsubsidized Loans, Federal Direct PLUS Loans for graduate students, and private loans. Campus employment is also available. To be considered for all available financial aid, you must file the Free Application for Federal Student Aid (FAFSA). Miami's priority filing deadline for the FAFSA is **February 1**. The FAFSA is available at [fafsa.gov](http://fafsa.gov). Miami University's Federal School Code is **003077**.

International students are not generally eligible for federal student aid.

For additional information contact the One Stop, 100 Campus Avenue Building, 513-529-0001 or visit the website at [MiamiOH.edu/OneStop](http://MiamiOH.edu/OneStop).

### Cost of Attendance and Financial Aid Eligibility

Cost of Attendance (COA) is based on campus, housing arrangements, residency, and enrollment status including tuition and fees, room and board, books and supplies, personal expenses, and transportation. A student may not receive financial aid in excess of the COA. If a student receives a graduate assistantship, that amount is considered an additional resource and is used in the formula to determine financial need. In order to remain compliant with federal regulations, the amount of a graduate assistantship is subtracted from the COA to determine the student's remaining financial aid eligibility. This may result in a decrease in the amount of your loan eligibility. Example: If a student's COA is \$30,000 and they receive a graduate assistantship for \$10,000, the student will have financial aid eligibility of \$20,000 and can only borrow up to that amount (if they receive no other aid resources). For questions regarding student loans, please call the One Stop at 513-529-0001. You may visit the website at [MiamiOH.edu/loans](http://MiamiOH.edu/loans).

### Federal Direct Loan Programs

Eligible students filing the FAFSA will be considered for the Federal Direct Loan Programs. Upon verification of eligibility, completion of

a Master Promissory Note, and Entrance Counseling (if a first time borrower at Miami), the loan funds will be credited to the student's Bursar account in accordance with Miami's disbursement schedule.

Need is not a factor in determining eligibility for a Federal Direct Unsubsidized Loan. With a Federal Direct Unsubsidized Loan, interest begins to accrue on the day the loan is disbursed to a student's account and continues until the loan is paid in full. Repayment of the interest is deferred while a student is in school and attending at least 5 graduate credit hours per semester. Graduate students may borrow up to \$20,500 in unsubsidized loans per academic year.

The maximum total debt aggregate limit for a graduate student is \$138,500 (including undergraduate study and only \$65,500 may be in subsidized loans). Direct Loan interest rates are determined each July 1. For more information about current rates visit [studentloans.gov](http://studentloans.gov).

To be eligible for the Federal Direct PLUS Loan for graduate students, you must be enrolled at least half-time (5 graduate credit hours per semester) in a Master's degree or professional program and meet all general eligibility requirements for Federal Student Aid. In addition, you must not have an adverse credit history (a credit check will be done). Interest begins to accrue on the day the loan is fully disbursed to a student's account and continues until the loan is paid in full. While you are enrolled in school, you will automatically be placed in an in-school deferment status that allows postponement of payment on the PLUS loan until you graduate or drop below 5 graduate credit hours. There are no set annual or aggregate limits on the PLUS loan amount. However, you may only borrow up to your cost of attendance (COA) minus any other financial aid you receive. The interest rate for the PLUS loan and rates are determined each July 1. For more information about current rates visit [studentloans.gov](http://studentloans.gov)

## Private Loans

Miami will certify a private loan from any lender. Terms, fees, and borrowing limits of private loans differ. The yearly amount cannot exceed the annual cost of attendance minus other financial aid and resources. Private loans are not federally guaranteed and do not require filing the FAFSA. For more information on obtaining a private loan, visit [MiamiOH.edu/loans](http://MiamiOH.edu/loans).

## Student Loan Code of Conduct

The guiding principles for ensuring the integrity of the student aid process and the ethical conduct of employees in regard to student loan practices are provided in the Miami University Student Loan Code of Conduct available on the loan pages at [MiamiOH.edu/loans](http://MiamiOH.edu/loans).

## Campus Employment

The Department of Human Resources coordinates all student employment on campus. Graduate student wages may vary according to skills or responsibilities. You can look for a campus job at [MiamiOH.hiretouch.com](http://MiamiOH.hiretouch.com).

If you hold an assistantship and want to work on campus any hours beyond your assistantship duties, you must first obtain permission from your department and the Graduate School.

## Notification of Awards

Students filing their FAFSA by the filing deadline of **February 1** should receive their award notification prior to June 1.

You must notify Miami of any additional awards you are receiving (e.g., graduate assistantship, outside scholarships, dissertation scholarships, fee waiver, tuition assistance, etc.). These additional awards may impact your Federal Direct Loan eligibility.

## Veterans

Veterans who intend to enroll at Miami should contact the Veterans Affairs (VA) Administration at 1-888-442-4551 to determine their GI Bill eligibility. To apply for benefits, complete the online application at [www.vabenefits.vba.va.gov/vonapp](http://www.vabenefits.vba.va.gov/vonapp). Veterans also need to submit an enrollment form to the Veterans Certifying Official at Miami [MiamiOH.edu/veterans](http://MiamiOH.edu/veterans). Then select the appropriate program and entry term under "VA Benefit Request Forms".

To be assured of advance payment, initial paperwork should be submitted to the Veterans Affairs Administration 45 days before classes begin. For more information or to contact the Veterans Certifying Official at Miami visit [MiamiOH.edu/OneStop](http://MiamiOH.edu/OneStop), email [veterans@MiamiOH.edu](mailto:veterans@MiamiOH.edu), or call 1-513-529-0001.

Additional financial assistance is available to most veterans through programs described in this section.

## International Students

International students who do not meet citizenship requirements for federal aid programs should contact the Graduate School or the appropriate academic department for information on the types and amounts of specific aid available for international students at [MiamiOH.edu/graduate-school](http://MiamiOH.edu/graduate-school).

## Types of Awards

Most award recipients work in departments of their field of study. Graduate assistantships and doctoral associateships, however, are also available in other offices, such as the library, the Bernard B. Rinella Jr. Learning Center, university advancement, and intercollegiate athletics. Information is available from Academic Personnel Services, 513-529-6724, and the Graduate School, 513-529-3734.

Graduate assistantships are for holders of a baccalaureate degree seeking an advanced degree. These awards carry a stipend for a maximum of half-time duties for one or two semesters and can vary in the amount of stipend and percent of fee waiver. Details of your award are stated in your letter of offer. A one or two semester assistantship award includes a fee waiver for the summer term immediately preceding or following the year of appointment. Graduate assistants with half-time duties for one or two semesters are granted remission of a percentage of the graduate instructional, basic general, and out-of-state fees for the period of appointment and for the summer term immediately preceding or following the year of appointment. You will also be required to pay the remaining general fee (reduced), which includes the technology fee, facilities fee (including Armstrong Student Center) and transit fee. Fee increases for 2019-2020 will be determined at the June meeting of the Board of Trustees. For additional information regarding fees, charges, and regulations regarding refunds see [MiamiOH.edu/OneStop](http://MiamiOH.edu/OneStop). Graduate assistants have two options for payment of fees: pay in full at the start of each semester, or use the payroll deduction program.

Graduate assistants must carry between 9 to 18 hours of graduate courses each semester; however, Master of Arts in Teaching degree candidates in teacher education may carry nine graduate hours plus

at least one undergraduate course each term. Duties normally occupy 18 to 20 hours per week. Some programs have additional fees.

**Dissertation scholarships**, for doctoral candidates at dissertation stage, are service free and carry a stipend that is determined by the student's department. Dissertation Scholars are granted remission of a percentage of the graduate instructional, basic general, and out-of-state fees for the period of appointment and for the summer term immediately preceding or following the year or appointment. You will also be required to pay the remaining general fee (reduced), which includes the technology fee, facilities fee (including Armstrong Student Center) and transit fee. Fee increases for 2019-2020 will be determined at the June meeting of the Board of Trustees. For additional information regarding fees, charges, and regulations regarding refunds see the following link: [MiamiOH.edu/OneStop](http://MiamiOH.edu/OneStop).

**Graduate summer scholarships** provide a tuition waiver and stipend during the summer term. The stipend is awarded for a maximum of \$1,800 for the summer term, and there are no duties attached to the payment of this scholarship. A student with a one-semester appointment will receive a \$900 stipend for the summer term. The award is given to graduate assistants and dissertation scholars who hold awards for one or two terms and meet the guidelines for these scholarships. Graduate assistants with half-time duties for one or two semesters are granted remission of a percentage of the graduate instructional, basic general, and out-of-state fees. You will also be required to pay the remaining general fee (reduced), which includes the technology fee, facilities fee (including Armstrong Student Center) and transit fee. Fee increases for 2019-2020 will be determined at the June meeting of the Board of Trustees. For additional information regarding fees, charges, and regulations regarding refunds see [MiamiOH.edu/OneStop](http://MiamiOH.edu/OneStop). Individual departments will determine what coursework is needed for their students to qualify for the summer scholarship and tuition/fee waiver.

**Graduate grants-in-aid** are waivers of instructional fee and out-of-state tuition. There is no cash stipend. No duties are required. These grants are available for one or both semesters and/or summer terms to U.S. and international students who are in need of financial assistance, have strong academic records, and show considerable promise of future attainment. These grants are for students in continuous full-time study leading to a degree; they are not available to part-time students, CGS students, and students whose full-time study is limited to summer terms. Continuance or renewal of a grant is dependent upon satisfactory progress toward a degree. To apply for this grant, you must submit an official application form before March 1 for the following summer term or for the following academic year. You must apply for this award annually.

# Special Opportunities and Programs

## International Education

Miami University's policy on international programs and educational exchange:

It is essential in today's interdependent world to provide a clear international perspective in the university's curriculum. Citizens of all nations have a growing need to understand their citizenship in terms of global concerns as well as in terms of issues of local or national significance. People who have this awareness are likely not only to recognize and respect the legitimate rights and needs of other nations but also to realize how their own fate is ultimately bound to the fate of all peoples.

In this context, Miami University meets its responsibility to its students and to the state of Ohio by providing educational opportunities that recognize the plurality of cultures, the existence of common concerns, and the need for more effective methods of international and intercultural cooperation. The university is therefore committed to provide to the student body significant educational opportunities with international perspective. To this end, the university encourages the enrollment of international students who lend diversity to the campus community and serve as educational and cultural resources. It further encourages specialization in subject areas that have an international/intercultural dimension, and informs students and faculty of overseas study and research opportunities that will enhance their international experience.

The university encourages international programs on campus and research and study abroad in a manner consistent with its policies on academic freedom and nondiscrimination. International education should promote the development of a humane and cooperative world order including respect for internationally recognized standards of human rights. The university seeks to ensure that its global programs remain consistent with these goals through regular review of all such programs. Creation of a program by Miami University constitutes no expressed or implied endorsement of the policies of the government of the host country.

### John E. Dolibois European Center at the Château de Differdange, Luxembourg

Miami University's Dolibois European Center (MUDEC), founded in 1968, provides students with an opportunity to live and study in Europe while earning Miami credit. The Center is located at the historic castle of Differdange, in Luxembourg's third largest city. Situated in the heart of Western Europe, the Grand Duchy of Luxembourg retains the charm of its thousand-year heritage while standing in the vanguard of the European Union, as one of its three capitals. Both French and German are spoken.

Students pursue an in-depth study of Europe in 30 or more courses and faculty-led study tours, designed to take advantage of the European location. All courses offer Miami standards and credit; instruction is in English except in language courses. Faculty is comprised of both European professors and Miami professors on assignment from the Oxford and regional campuses. The experience of living in a local homestay arrangement and the opportunity to

explore Europe during vacation periods and weekends are integral parts of the MUDEC program.

If students intend to apply, they should plan their academic program carefully. One of the advantages of studying at the Center is that students may complete an entire Miami Plan Thematic Sequence and/or the Miami Plan Global Perspectives requirements in one semester or during the seven week summer program.

For the year and semester programs, tuition is comparable to the Oxford campus and students may apply their university scholarships and financial aid. In addition, to offset out-of-pocket costs, students may be eligible for a Dolibois European Center scholarship or airfare grant. Costs for summer and winter programs are based on Oxford campus tuition and fee rates. Honors Program students may be able to use their tuition waiver.

For more information, contact the Dolibois European Center Oxford Luxembourg Office, 214 MacMillan Hall, 513-529-8600, or review information on the program's website: [www.MiamiOH.edu/luxembourg](http://www.MiamiOH.edu/luxembourg).

### Faculty-led Study Abroad and Away

Miami is a national leader in the number of students who study abroad, and Miami faculty offer a variety of education abroad experiences.

Faculty-led education abroad and domestic programs are directed by experienced Miami University faculty. Program topics include all levels of foreign language immersed in host countries and/or discipline specific courses focused and engaged in the host location. Programs vary from two weeks during university breaks, up to a full semester or year, and may allow students to fulfill Global Miami Plan or other degree requirements.

Recent programs and locations include international business in South America, Australia, and the East and Southeast Asia; ecology and geology in the Bahamas, Belize and Costa Rica; engineering in Germany, Korea, and India; and arts, culture and heritage, in France, Malta, Oman, and Cuba. Language immersion programs include Italian, German, Chinese, Spanish, Portuguese, and French. Examples of recent Study Away programs include: entrepreneurial consulting in San Francisco, Inside Hollywood, and professional development programs in New York, NY and Washington, DC.

Faculty-led study abroad programs are administered by Global Initiatives at Miami University. More information including program listings is available online at [StudyAbroad.MiamiOH.edu](http://StudyAbroad.MiamiOH.edu).

### Student Exchange Opportunities

Miami has exchange agreements that provide opportunities for students to enroll directly in academic institutions overseas for one semester or for a full academic year. Students must be currently enrolled as a full-time student at Miami University to be eligible for application to a university student exchange program. In all cases, students maintain their enrollment by paying the full cost of tuition and fees to Miami, therefore creating a place for an international student to study in Oxford. This arrangement allows students to maintain financial aid eligibility. Depending on the terms of the agreement, students may also pay room and board charges to Miami and will, in turn, be provided these benefits when studying overseas. Academic credit for successful study at an approved overseas institution is guaranteed upon your return. Advance approval for

the transfer of credit must be obtained in consultation with your academic advisor and with the Study Abroad Office, 214 MacMillan Hall, 513-529-8600.

## Other Overseas Programs: Transfer Credit

Many American universities and organizations sponsor study abroad programs all over the world. Information is available in the Study Abroad Office, 214 MacMillan Hall or online at [MiamiOH.edu/studyabroad](http://MiamiOH.edu/studyabroad). Contact the Study Abroad Office (513-529-8600, [studyabroad@MiamiOH.edu](mailto:studyabroad@MiamiOH.edu)) (studyabroad@MiamiOH.edu) to speak with an advisor. All students should make certain that credits earned will transfer before studying abroad (see **Credit Evaluations**).

If admitted to a study abroad program not sponsored by Miami University, students must register through Miami's online study abroad application process to maintain enrollment at Miami while abroad. The application can be found at [MiamiOH.edu/studyabroad](http://MiamiOH.edu/studyabroad). The Study Abroad office works with the Registrar's Office so that registration can be arranged for the next applicable semester. No readmission procedure is necessary if your online Study Abroad application is completed through the Study Abroad Office.

## Academic Opportunities

### Undergraduate Associates

Sophomores, juniors, or seniors who are interested in college teaching or another professional field can become undergraduate associates. Each associate is sponsored by a faculty member. The student and the sponsoring faculty member decide what the associateship should involve. The Undergraduate Associates Program has special eligibility requirements and an application process.

Students successfully completing the university-wide program will receive a notation on their transcript. Additional information about the program is available online (<http://www.cas.MiamiOH.edu/honors/current/ua.html>).

### Undergraduate Research Programs

These programs are publicized in early fall. For more information, contact the Office of Research for Undergraduates at 513-529-2455. Various program guidelines, application forms, and deadline dates are available at [www.MiamiOH.edu/oru](http://www.MiamiOH.edu/oru).

**First Year Research Experience (FYRE)** program provides students with authentic, hands-on research experiences in small teams led by research-active faculty during a two-semester course sequence. Student researchers review their topic, design a study, and complete necessary training during the fall semester (UNV 171); they implement the study, analyze data, and present the results in the spring (UNV 172). Students participate in additional activities to develop problem-solving, communication, teamwork, and other skills. This experience prepares students early for subsequent research opportunities such as summer research positions across the nation and independent research supervised by Miami faculty.

**Doctoral-Undergraduate Research Opportunities Program (DUOS)** encourages graduate and undergraduate students to collaborate on a research project under the supervision of a faculty member in a Ph.D. granting department. Any Miami undergraduate student and any post-master's doctoral student in good standing who agrees to abide by program requirements are eligible to apply. Either student may initiate the application, but the undergraduate student will be the

primary project author. The Graduate School provides funding for up to 10 grants of \$700-900 per project.

**Undergraduate Research Award Program** provides small grants for students to do independent research or other creative endeavors in any discipline. Applications are made to the Undergraduate Research Committee via ORU. Funding for the grants comes from alumni and friends of Miami. Approximately \$40,000 is available yearly for individual grants distributed twice a year. Typically, 90 to 100 grants are awarded ranging from \$200 to \$800 each.

**Undergraduate Summer Scholars Program (USS)** This nine-week summer program enables Miami undergraduates to do research or other creative activities in the summer with the supervision of an individual faculty mentor. About 100 awards are available each summer, and are distributed across all departments and programs. You can apply for an award along with a faculty member as a student-mentor pair. For the student, each award includes a student fellowship, up to 6 hours of academic credit with waiver of instructional fees and tuition, and an allowance for supplies, services, and travel; the faculty mentor receives a modest allowance.

## Science and Engineering Research Semester

Central States Universities, Inc., in conjunction with Argonne National Laboratory near Chicago, Illinois, sponsors this program. Qualified majors participate in basic research in physical and life sciences, mathematics, computer science, and engineering, as well as in applied research programs relating to coal, conservation, environmental impact and technology, fission, fusion, and solar energy.

Students receive a stipend from Argonne National Laboratory, housing, and reimbursement for travel from Miami University to Argonne.

To apply for this program, you must have completed your sophomore year, be a citizen of the United States or a permanent resident alien, be 18 years of age or older, and have an overall GPA of 3.00 or better.

For more information, contact the Department of Physics, 133 Culler Hall, 513-529-5625, or the Department of Geology & Environmental Earth Science, 114 Shideler Hall, 513-529-3216.

### Scholastic Enhancement Program (SEP)

This program provides support to specially admitted students who show academic promise, but whose academic profiles suggest the need for academic and personal guidance to ensure completion of a degree program. Students admitted through SEP are required to follow an individually developed educational plan provided by program coordinators that includes: additional assessment of academic skills, early advising with supervised course selection, personal counseling, and other scholastic activities to assist in their adjustment to Miami. SEP also provides a program called FYRE/URO (Undergraduate Research Option). This program matches students with a faculty sponsor who engages the student in a research project.

For more information, contact the Bernard B. Rinella Jr. Learning Center, 14 Campus Avenue Building, 513-529-5528, or visit [www.MiamiOH.edu/learning](http://www.MiamiOH.edu/learning).

## The Pathway Program

Students in this program start by taking courses at a regional campus before continuing to the Oxford campus. Students enroll in classes during the fall term at the Hamilton or Middletown campus; then, upon successful completion of the fall semester and having earned at least 16 credit hours with a 2.00 cumulative grade point average, they relocate to the Oxford campus for the spring semester of their first year. Pathway students have their own designated advisor throughout their first year, who will assist them in planning for their college success.

## Community Engagement and Service

The Office of Community Engagement and Service (OCES) serves as a catalyst for mutually beneficial campus and community partnerships. Community engagement is a reciprocal, continuous learning process that builds sustainable partnerships among campuses and communities to facilitate change. OCES is dedicated to helping students make the most of their college experience by coordinating opportunities for students to engage and serve in the communities surrounding Miami University. Community engagement includes Service-Learning, volunteerism, social advocacy and engaged scholarship.

### Service-Learning

Miami University defines Service-Learning as "an experiential pedagogical practice that uses action and reflection to meet needs and enhance learning through mutually beneficial, reciprocal partnerships". This practice infuses course content with community service. As a result, Miami students are able to gain real world skills and enhance their learning while contributing to the community. Courses that have been granted the Service-Learning designation have the attribute "SL" in course listings and on student transcripts.

For more information on all programs and services, contact the office at 513-529-2961 or email [CommunityEngagement@MiamiOH.edu](mailto:CommunityEngagement@MiamiOH.edu).

## Programs and Services

### America Reads and America Counts

The America Reads and America Counts programs are funded through federal work-study. Through extensive training, tutors develop effective and efficient ways of working to help children improve their reading and math skills. America Reads tutors work on basic reading and writing skills with students in grades K-6. America Counts tutors focus on mathematic skills with students in grades K-9. The programs primarily serve children in Butler County.

Students interested in the America Reads or America Counts programs should complete an online application, available at the beginning of each semester, and will be interviewed by a student coordinator. Additionally, students must be eligible for federal work-study. Once hired, tutors are required to attend a mandatory training session prior to tutoring and participate in additional monthly trainings throughout the semester. For more information contact the office at 513-529-2961 or e-mail [CommunityEngagement@MiamiOH.edu](mailto:CommunityEngagement@MiamiOH.edu).

### The President's Volunteer Service Award

Students who register in the HUB under the OCES Community can track and enter service hours and, in doing so, may qualify to receive

the President's Volunteer Service Award. This honor is awarded based on different levels of service hours completed. Awardees receive a letter from the U.S. President and a pin to recognize their achievement. For more information, contact the office at 513-529-2961 or e-mail [CommunityEngagement@MiamiOH.edu](mailto:CommunityEngagement@MiamiOH.edu).

### Community Engagement & Service Weekly E-Newsletter

For students interested in community service or looking for a way to get involved, the Office's weekly e-newsletter provides a weekly update on community engagement opportunities ranging from events, scholarships, and one-time volunteer projects to in-depth and ongoing experiences. Please subscribe at this link.

### Voter Registration

Throughout the year, students, faculty, and staff can register to vote in the office at Hanna House. Incoming students can also register to vote during summer orientation's Information Fair at the OCES table. For questions about voter registration or how to vote on election day, visit [miamioh.edu/vote](http://miamioh.edu/vote) or contact [communityengagement@miamioh.edu](mailto:communityengagement@miamioh.edu).

### Civic Engagement

For students interested in becoming more civically engaged, the Office of Community Engagement and Service offers a variety of workshops, programs and events throughout the year focused on active participation in civic life. Events and programs range from panel discussions and documentary film screenings to informal civics lessons and get-out-the-vote efforts. For more information about how to get involved, contact [communityengagement@miamioh.edu](mailto:communityengagement@miamioh.edu)

## Leadership Development

### Harry T. Wilks Leadership Institute

The Harry T. Wilks Leadership Institute provides curricular and co-curricular opportunities to develop ethical leadership capacity and competencies. Participation in Wilks sponsored programs will enable the development of your leadership style and philosophy and put you on the path to becoming a transformational leader. In addition to our programs, the Wilks Leadership Institute also collaborates closely with other leadership development programs on campus and can, therefore, assist you in the identification of programs and opportunities that best fit your developmental needs and desires. To begin your leadership journey, contact the Wilks Leadership Institute at [wilksleadership@MiamiOH.edu](mailto:wilksleadership@MiamiOH.edu) or 513-529-0830 or visit our website at [www.MiamiOH.edu/wilks](http://www.MiamiOH.edu/wilks).

### Peer Education Opportunities

Through peer education programs, students develop knowledge and skills to educate their peers about important student issues.

The Office of Health Education, 513-529-8544, coordinates the HAWKS Peer Health Educators (Health Advocates for Wellness Knowledge and Skills) and addresses issues around student health such as alcohol and other drug use; sexual health and decision making; nutrition and wellness; body image and eating disorders; and relationships.

Career Services, 513-529-3831, coordinates the Career Assistant Program.

### Scholar Leader Program

The Scholar Leader Program is a living-learning program involving a one-year residence in Elliott or Stoddard Hall, two of the most historic residence halls in the nation. Endowments for each room provide scholarships to those students selected to live in the community. The

Scholar Leader community encourages resident-guided programming, academic involvement, Service-Learning projects, and the opportunity to explore leadership through intensive group engagement. Upper-class students must have a 3.00 cumulative grade point average and be in good standing with the university. For more information, please visit [www.MiamiOH.edu/wilks](http://www.MiamiOH.edu/wilks), or [wilksleadership@MiamiOH.edu](mailto:wilksleadership@MiamiOH.edu), or 513-529-0830.

## Emerging Leader LLC

The Emerging Leader LLC is a living-learning community involving a one-year residence for first-year students who are dedicated to putting their convictions into action and gain a deeper understanding about their personal leadership capabilities. The Emerging Leader LLC is sponsored by the Office of Student Activities and Leadership, the Wilks Leadership Institute, and the Office of Community Engagement and Service, and examines leadership from multiple perspectives. For more information, visit <http://miamioh.edu/student-life/residence-life/living-learning-communities/index.html>.

## Reserve Officers Training Corps (ROTC)

Students can earn commissions as officers in the U.S. Air Force, Navy, or Marine Corps through the Air Force Reserve Officers Training Corps (AFROTC) or the Naval Reserve Officers Training Corps (NROTC).

## Air Force Reserve Officers Training Corps (AFROTC)

For information, contact the Air Force Reserve Officers Training Corps office at 50 Millett Hall, 513-529-2031.

AFROTC was established at Miami in 1949 as the Department of Air Science and Tactics. In 1952, a joint university-Air Force agreement resulted in the unit's designation as a Senior Reserve Officer Training Corps and the Department of Aerospace Studies.

### Membership Eligibility

All AFROTC classes may be taken by Miami students for university credit, however only students meeting AFROTC entry requirements may be considered as cadets working toward an Air Force office commission.

To be eligible you must:

- be at least 14 years of age. You must be 17 years of age for enlistment and 18 years of age for commissioning.
- be under the maximum age for commissioning. To compete for the pilot or navigator categories, a cadet must be able to complete their bachelor's degree and be commissioned through Air Force ROTC before they are 29 years old. Scholarship applicants must be less than 31 years old as of December 31 of the year they will commission. Tech, non-tech, and non-rated must be commissioned by age 30 (waiverable up to age 35 in some cases).
- be a United States citizen
- be of good moral character
- meet Department of Defense and Air Force Dependency Policy requirements
- meet medical entrance requirements

- meet academic requirements and be in good academic standing (GPA of 2.00 or higher) to compete for an enrollment allocation
- pass the Air Force Officer Qualifying Test (AFOQT)
- meet weight and physical fitness standards

Veterans with previous honorable active U.S. military service who wish to enroll in the Professional Officer Course may be qualified for a waiver for the General Military Course (GMC) requirement. Veterans who meet all other requirements may be enrolled at the beginning of their junior year.

### Scholarship Program

This AFROTC scholarship program offers highly qualified high school seniors and college freshmen and sophomores opportunities to compete for scholarships on a national level. Awards range from four-year to two-year scholarships which can cover up to full tuition and provide money for books, fees, and a monthly tax-free stipend.

### Other Scholarships

Several other university (i.e., non-government) scholarships are also available to Miami Air Force ROTC cadets. These privately funded scholarships vary by amount and eligibility criteria and are awarded by the Professor of Aerospace Studies.

### Curriculum

The curriculum in Aerospace Studies is divided into two parts: the General Military Course (GMC), taken during your freshman and sophomore years, and the Professional Officer Course (POC), taken during your junior and senior years.

### General Military Course (GMC)

The GMC includes one class (one credit hour) and two leadership laboratory hours (one credit hour) per week plus physical fitness training. Class and leadership laboratory comprise a total of two credit hours each semester.

### Professional Officer Course (POC)

The POC includes three classroom hours and two leadership laboratory hours per week plus physical fitness training. Class and leadership laboratory comprise a total of four credit hours each semester for a total of sixteen semester hours upon completion of the POC program.

### Leadership Laboratory

The leadership laboratory includes activities designed to apply the leadership knowledge and skills learned in the classroom. Activities include demonstration of command, team projects, problem solving, military customs and courtesies, effective communication, fitness development, and field training preparation among other things. POC cadets have the added responsibility of planning and running leadership laboratory in order to gain practical application of the leadership principles learned in the classroom.

### Field Training

Applicants for the Professional Officer Course must attend a summer field training course between their sophomore and junior years. Field training is an opportunity to further develop leadership and team-building skills. Those who successfully complete field training are eligible to enter the POC. Academic credit may be obtained for completing field training. The Air Force provides uniforms, housing, medical care, meals, travel allowance, and pay while attending field training.

**Uniforms and Textbooks**

AFROTC provides all necessary course materials to students enrolled in AFROTC classes and also provides uniforms for cadets in the program. Uniforms must be returned upon completion of or withdrawal from the program.

**Naval Reserve Officers Training Corps (NROTC)**

For information, contact the Naval Reserve Officer Training Corps office at 67 Millett Hall, 513-529-3700.

Miami University's Naval ROTC program was established in 1946. The mission of NROTC is to educate, train, and screen officer candidates to ensure they possess the moral, intellectual, and physical qualities for commissioning and the leadership potential to serve successfully as officers in the United States Navy and Marine Corps. The NROTC program fills a vital need in preparing mature young men and women for leadership and management positions in an increasingly technical Navy and Marine Corps.

At Miami, NROTC midshipmen lead essentially the same campus life as other students. They make their own arrangements for room and board and participate in campus activities of their choice, including the opportunity for University-sponsored overseas study. There are no prescribed academic majors for NROTC students, though scientific and technical studies are encouraged. Students may enroll in the NROTC program at any time from the beginning of their first year of enrollment until the end of their sophomore year.

Interested students may compete for NROTC nationally awarded scholarships. Visit <http://www.nrotc.navy.mil> for scholarship details and application.

**Scholarship Program (4-Year, 3-Year, and 2-Year)**

The NROTC scholarship pays all tuition (in-state or out-of-state), all registration and general/instructional fees, provides Naval Science textbooks and furnishes all program uniforms. Students awarded national scholarships also receive an allowance for subsistence and textbooks.

Between academic years, scholarship midshipmen participate in summer training periods held throughout the world. During these training periods, midshipmen are furnished all meals, housing, medical care, travel expenses, and military pay.

**Navy scholarship option.** Students awarded Navy NROTC scholarships will be required to complete 31 semester hours of Naval Science, one year of calculus, one year of calculus-based physics, one semester of American military affairs or national security policy, and one semester of world culture.

**Marine Corps scholarship option.** Students awarded Marine Corps NROTC scholarships will be required to complete 24 semester hours of Naval Science and one semester of American military affairs or national security policy. Marine Corps option midshipmen must also complete six weeks of training at the Marine Corps Officer Candidate School in Quantico, Virginia, normally during the summer between junior and senior year.

**College Program**

The college program allows non-scholarship students to participate in the NROTC program during their freshman and sophomore years. The Professor of Naval Science selects students to this program based on evaluation of the applicant's potential to complete the NROTC

program and serve as a commissioned officer in the Navy or Marine Corps. College program participants receive uniforms, textbooks and materials for all Naval Science courses.

College program students typically compete for NROTC scholarships.

Visit <http://miamioh.edu/cas/academics/programs/nrotc/admission/index.html> for college program details and application.

**Advanced Standing**

Advanced standing offers a path to commissioning without a scholarship. Based on competitive status, students may be offered advanced standing if not selected to receive a 2-year scholarship after their sophomore year.

Midshipmen selected for advanced standing will be commissioned as officers upon completion of program and degree requirements. Advanced standing midshipmen receive a monthly subsistence stipend. Similar to scholarship midshipmen, advanced standing midshipmen participate in summer training the summer between junior and senior year.

**Other Information**

Scholarship program midshipmen incur service obligation at the beginning of their sophomore year. College program midshipmen incur service obligation upon receipt/activation of scholarship or upon gaining advanced standing status.

Initial duty assignments depend upon the needs of the service and the individual's preference, qualifications, and performance. Navy option midshipmen typically apply for assignment to aviation, submarines, surface warfare, special warfare (SEALs), or special operations (EOD). Marine Corps option midshipmen typically apply for ground officer or aviation officer assignments.

**University Honors Program Academic Requirements**

The mission of the University Honors Program is to empower each student with the opportunity to work with an honors advisor and engaged faculty members to develop an individualized Honors Program path that is unique to each student and that best supports each student's intellectual, academic, creative, personal, or professional growth and development. This rigorous, academic enrichment program for highly engaged and motivated students complements and enhances the Global Miami Plan for liberal education. University Honors students fulfill Honors Experience requirements by enrolling in honors courses, working with a faculty member on an independent project or a course extension, taking part in experiential learning opportunities, studying abroad, or participating in many other intensive learning or creative or professional development opportunities. University Honors Program requirements align with the liberal education goals and outcomes of the Global Miami Plan, maintain an emphasis on integrative learning and interdisciplinary course work, and seek to enhance the development of the key skills and abilities that students gain through liberal education.

Honors students have access to a wide spectrum of course work and co-curricular experiences. Students can propose the use of study abroad, undergraduate research, teaching, internships, and campus and community engagement activities to count as Honors Experiences. They can also earn Honors Experiences by enrolling

in Honors sections of existing courses; and/or working with the instructor of record in a course to create additional assignments or projects to count as an Honors Course Extension. Students in the entering classes of 2014 and 2015 are required to complete four (4) Honors Experiences. Students in the entering class of 2016 and beyond are required to complete eight (8) Honors Experiences. This four-year program empowers students to work with their Honors advisors to develop their own unique Honors path, encourages student-faculty engagement, and is compatible with all majors in the university.

Honors students also have the option to pursue University Honors with Distinction, which requires the completion of a student-initiated, faculty-mentored, and Honors advisor-approved major project that may include traditional academic theses, creative projects or artistic performances, and significant service, experiential, or professional development projects. This optional experience provides interested students with the opportunity to work with their Honors advisor and faculty mentor to develop a major project that further enriches their University Honors Program experience.

There is no minimum GPA needed to maintain participation in the program. However, all honors students who attain a cumulative grade point average of 3.50 or higher when they graduate will also receive the University Honors transcript notation and recognition in the Commencement bulletin.

## Admission to the Program

A select number of students are invited to join the University Honors Program during the university admission process. Most students are admitted to the program at the same time that they are admitted to Miami University directly from high school. However, current and transfer students may apply to the program.

## UHP on the Regional Campuses

Students who are pursuing an Associate's Degree or Bachelor's Degree on the regional campuses also have the opportunity to participate in the University Honors Program. Interested students on the Hamilton and Middletown campuses should contact the UHP director for the regional campuses for information about the application process.

## Additional Information

For more information about the University Honors Program, please contact the UHP office at 513-529-3399, or visit the program's website at <http://www.MiamiOH.edu/honors>.

## Other Types of Honors

### Departmental Honors

If you are interested in additional study in your major area, you may enroll in a departmental honors program in most departments. Consult your chief departmental advisor about departmental honors; these programs vary from department to department. You graduate with departmental honors when you complete the program.

### President's List, Dean's List

The President's List recognizes the top three percent of undergraduate students within each division<sup>1</sup> registered for a semester of 12 or more credit hours attempted for grades (A+ through F). The Dean's Lists recognize the next 17 percent of undergraduate students within each division registered for a

semester of 12 or more hours attempted for grades (A+ through F). Students within each academic division must achieve the following grade point averages:

	President's List	Dean's List
College of Arts and Science	4.00	3.70
College of Creative Arts	4.00	3.70
College of Education, Health and Society	4.00	3.80
College of Engineering and Computing	4.00	3.60
College of Liberal Arts & Applied Science	4.00	3.60
Farmer School of Business	3.95	3.60

The grade point standards used for the President's List and the Dean's List approximate the average GPA of the highest 3 percent of students in each academic division and the next 17 percent of student in each academic division, respectively, for the past three years. These criteria will remain unchanged.

Miami's News and Public Information Office notifies the hometown newspaper of each student eligible for the President's or Dean's Lists. Note that a confidentiality hold on a student's record will prevent his or her name from being published in the hometown newspaper or on the Miami University website. Deans' and President's lists are considered finalized 30 days after the term.

<sup>1</sup> Undergraduate students in non-degree programs who meet these same criteria will be included in the College of Arts and Science calculations.

## Graduation with Latin Honors

The criteria for graduation with distinction are divisionally based. Graduating students within each academic division must achieve the following cumulative grade point averages:

### Latin Honors

	Summa Cum Laude	Magna Cum Laude	Cum Laude
College of Arts and Science	3.95	3.85	3.65
College of Creative Arts	3.90	3.80	3.70
College of Education, Health and Society	3.95	3.85	3.70
College of Engineering and Computing	3.90	3.80	3.60
College of Liberal Arts and Applied Science	3.90	3.75	3.50
Farmer School of Business	3.90	3.75	3.50

Criteria are based on the average GPA within each division from the calendar years, 2009, 2010 and 2011. These criteria will remain unchanged. The grade point standards used for the distinction of summa cum laude approximates the average GPA of highest 2 percent of students in each academic division for the past three years. The standard used for magna cum laude approximates the average GPA of the next 5 highest percent of students in each academic division for the past three years, and the standard used for the cum laude designation approximates the average GPA of the next highest 10 percent of students within each academic division for the past three years, with typically no more than 17 percent being awarded honors within each division. Once every five years, the University Registrar and Office of Provost will conduct a review of these criteria and propose a change to criteria to University Senate if needed.

**Beginning in December 2021**, the cumulative grade point averages for Latin Honors will adjust to the following:

	<b>Summa Cum Laude</b>	<b>Magna Cum Laude</b>	<b>Cum Laude</b>
College of Arts and Science	3.97	3.88	3.72
College of Creative Arts	3.96	3.90	3.77
College of Education, Health and Society	3.97	3.90	3.76
College of Engineering and Computing	3.95	3.81	3.58
College of Liberal Arts and Applied Science	3.94	3.82	3.64
Farmer School of Business	3.92	3.78	3.61

Students who graduate with distinction may wear cords at commencement. Latin Honors is based on the cumulative grade point average in the term prior to the student's graduation term. The commencement program will reflect that they may be graduating with distinction. Actual degree honors will be recalculated to include grades from the student's final semester and will be posted on the student's academic record.

In addition, for students who graduate with distinction, the diploma for the degree will designate the Latin Honors earned by the student. Students who earn two or more degrees receive a separate diploma for each degree. Each diploma will indicate the appropriate Latin Honors the student earned, using the criteria for Latin Honors of the academic division where each degree resides.

For graduation with distinction, a student pursuing a baccalaureate degree must have earned at least 62 credit hours from Miami University; a student pursuing an associate degree must have earned at least 31 credit hours from Miami University. For students who earn fewer than 62 hours from Miami toward a bachelor's degree or fewer than 31 hours from Miami toward an associate degree, the cumulative grade point average used at graduation to determine eligibility for honors is the lower of the following averages:

1. the average for all courses taken from Miami, or
2. the combined average calculated using the grades from all college-level courses.

Degree honors are considered finalized 30 days after graduation and are not subsequently recalculated.

# The College of Arts and Science

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## Arts and Science and University Studies Advising Office

146 Upham Hall

Phone: 513-529-3031

www.cas.MiamiOH.edu

## General Information

The College of Arts and Science is the centerpiece of liberal arts education at Miami University and the largest academic division on campus. As such, the College encompasses a rich diversity of disciplinary opportunities and experiences across the humanities, natural sciences, social sciences, languages, mathematics, and interdisciplinary programs.

Using this broad foundation, an Arts and Science education is devoted to intellectual analysis, critical thinking, and honing transferable skills that will be used for a student's entire lifetime. Employers demand a smart, globally minded workforce that can creatively solve problems while drawing upon a broad and adaptable skill set, and the College prepares its students for a vast array of career opportunities.

The College offers three degrees: the Bachelor of Arts, the Bachelor of Arts in International Studies, and the Bachelor of Science

## Accreditation

Departments in the College that are accredited by professional associations are:

Department of Chemistry and Biochemistry: American Chemical Society

Department of Chemistry and Biochemistry: Chemistry and Biochemistry by the American Society of Biochemistry & Molecular Biology (ASBMB)

Department of Psychology: American Psychological Association

Department of Speech Pathology and Audiology (graduate program only) by the Council of Academic Accreditation in Audiology and Speech-Language Pathology

## General Requirements

These are the general requirements of the College of Arts and Science for graduation:

- Earn at least 124 semester hours, 56 must be advanced (at 200 level and above).
- Fulfill the Global Miami Plan (MP), the College Requirement (CAS), and the requirements of your major.
- Earn a 2.00 cumulative grade point average, as well as a 2.00 average in all courses taken in your department(s) of major.

If you are a transfer student, you must take a substantial portion of your major requirements at Miami. You will work with an Arts and Science divisional academic advisor at the time of transfer to help facilitate your transition.

## Notes on Credit Restrictions

Before registering for your courses, you should keep in mind these restrictions on credit:

- You may not earn credit for a lower-numbered course in a department if you have already taken a closely related, higher-numbered course for credit. For example, if you have passed FRE 201, FRE 202, you cannot take FRE 101, FRE 102 and receive credit for them.
- When taking a series of courses, you may not jump over a prerequisite course. For example: if you start a foreign language and take the 101 and 102 courses, you cannot jump over the 201 course to take the 202 course; be sure to consult the courses of instruction portion of this bulletin to look at the prerequisites for courses you are thinking of taking.
- Credit is not given for closely related courses in two or more divisions; be sure to consult the courses of instruction portion of this bulletin to see if courses are duplicative credit.
- You cannot register for more than 20 hours in a semester except with the approval of the Dean or his/her designee.

## Bachelor of Arts

- American Studies
- Anthropology
- Biochemistry
- Biology
- Botany
- Chemistry
- Classical Humanities
- Classical Languages
- Critical Race and Ethnic Studies
- Diplomacy and Global Politics
- East Asian Languages & Cultures
- Economics
- English:Creative Writing
- English:Literature
- Environmental Earth Science
- French
- Geography and Sustainable Development
- Geology
- German
- Gerontology
- History
- Individualized Studies
- Italian Studies
- Journalism (requires a second major)
- Latin American, Latino/a and Caribbean Studies
- Linguistics
- Mathematics
- Media and Culture (requires a second major)
- Microbiology
- Philosophy
- Physics
- Political Science

- Professional Writing
- Psychology
- Public Administration
- Public Health
- Religion
- Russian, East European, & Eurasian Studies
- Social Justice Studies
- Sociology
- Spanish
- Strategic Communication (requires a second major)
- Urban and Regional Planning
- Women's, Gender, and Sexuality Studies
- Zoology

## Bachelor of Arts in International Studies

- International Studies

## Bachelor of Science

- Biochemistry
- Biological Physics
- Biology
- Botany
- Chemistry
- Data Science and Statistics
- Engineering Physics
- Geology
- Mathematics
- Mathematics and Statistics
- Medical Laboratory Science
- Microbiology
- Physics
- Quantitative Economics
- Speech Pathology and Audiology
- Zoology

## Co-majors

Co-Majors are designed to provide a complementary perspective to a student's primary major. There is no specific degree designation for the co-major, students receive the degree designation of their primary major.

- Analytics
- Comparative Media Studies
- Critical and Classical Languages and Cultures
- Energy
- Environmental Science
- Film Studies
- Food Systems and Food Studies
- Global and Intercultural Studies
- Neuroscience
- Premedical Studies
- Sustainability

## Minors

In addition to majors, the College of Arts and Science offers minors. A minor is a specific program to be taken along with a major to complement your skills and increase your career opportunities. Taking a minor is optional.

You must have a 2.00 grade point average (GPA) for all courses in a minor. Some minor programs may require a higher GPA. Additional requirements and qualifications are included in the Other Requirements chapter. Students may use a minor to satisfy the Thematic Sequence requirement only if the minor is outside the department of major.

- Actuarial Science
- Aerospace Studies
- American Studies
- Anthropology
- Arabic
- Archaeology
- Bioinformatics
- Chinese
- Classical Humanities
- Creative Writing
- Criminology
- Critical Race and Ethnic Studies
- East Asian Studies
- Economics
- English Literature
- Ethics, Society, and Culture
- European Studies
- Film Studies
- French
- Geography
- Geology
- German
- Gerontology
- Global Health
- Global Perspectives on Sustainability
- History
- Horticulture
- Individualized Studies
- Italian
- Japanese
- Latin American Latino/a Caribbean Studies
- Linguistics
- Lusophone Studies
- Mathematics
- Medical Humanities
- Middle East, Jewish, and Islamic Studies
- Molecular Biology
- Naval Science
- Neuroscience
- Philosophy and Law
- Physics

- Plant Sciences
- Political Science
- Religion
- Rhetoric/Writing
- Russian
- Social Justice and Inequalities
- Sociology
- Spanish
- Statistical Methods
- Statistics
- Urban and Regional Analysis
- Women's, Gender, and Sexuality Studies

## Certificates

A certificate is a formal award certifying the satisfactory completion of an organized program of study at the postsecondary level. The purpose of a certificate program is to serve the needs of both matriculated and non-degree students interested in developing specific skills and knowledge for personal and/or professional development.

- GIS Certificate
- Global Readiness Certificate

## Area of Major

In order for you to understand these areas and how they pertain to the College requirement, we list below all majors in Arts and Science and which area the major is in:

### Humanities

American Studies  
 Classical Humanities  
 Classical Languages  
 Critical Race and Ethnic Studies  
 East Asian Languages and Cultures  
 English (all major programs)  
 French  
 German  
 History  
 International Studies  
 Italian Studies  
 Latin American, Latino/and Caribbean Studies  
 Linguistics  
 Philosophy  
 Religion  
 Russian, East European, and Eurasian Studies  
 Spanish

### Social Science

Anthropology  
 Diplomacy and Global Politics  
 Economics  
 Geography and Sustainable Development  
 Gerontology  
 Journalism  
 Media and Culture  
 Political science  
 Psychology

Public Administration  
 Public Health - Health Administration & Policy  
 Quantitative Economics  
 Social Justice Studies  
 Sociology  
 Speech Pathology and Audiology  
 Strategic Communication  
 Urban and Regional Planning  
 Women's, Gender and Sexuality Studies

## Natural Science & Mathematics

Biochemistry  
 Biology  
 Biological Physics  
 Botany  
 Chemistry  
 Data Science and Statistics  
 Engineering Physics  
 Environmental Earth Science  
 Geology  
 Mathematics  
 Mathematics and Statistics  
 Medical Laboratory Science  
 Microbiology  
 Physics  
 Public Health - Human Diseases & Epidemiology  
 Zoology

## Interdisciplinary Programs

The College of Arts and Science offers a range of interdisciplinary programs including specialized degrees, major, minors, and co-majors. These interdisciplinary programs allow students to consider a topic, subject, or problem from differing perspectives and to explore connections between those academic disciplines. Students pursuing these programs work closely with professors and advisors to select courses from across the curriculum that will provide opportunities to identify the intersections between multiple disciplines.

The College of Arts and Science offers interdisciplinary programs in the following areas:

### Majors

American Studies  
 Critical Race and Ethnic Studies  
 Individualized Studies  
 International Studies  
 Italian Studies  
 Journalism  
 Linguistics  
 Latin American Latino/a and Caribbean Studies  
 Women's, Gender, and Sexuality Studies

### Co-Majors

Analytics  
 Comparative Media Studies  
 Critical and Classical Languages and Cultures  
 Energy  
 Environmental Science  
 Film Studies  
 Food Systems and Food Studies

Global and Intercultural Studies  
Neuroscience  
Premedical Studies  
Sustainability

## Minors

American Studies  
Bioinformatics  
Critical Race and Ethnic Studies  
East Asian Studies  
Ethics, Society and Culture  
European Studies  
Film Studies  
Global Perspectives on Sustainability  
Interdisciplinary Studies  
Latin American Latino/a Caribbean Studies  
Linguistics  
Middle East, Jewish, and Islamic Studies  
Molecular Biology  
Neuroscience  
Women's, Gender, and Sexuality Studies

## Departmental Honors

The College of Arts and Science offers a program in departmental honors for students who qualify for and desire independent work in a major field of study under the guidance of a faculty mentor(s). Students who successfully complete such an effort graduate with a departmental honors notation on their transcripts and under their names in the commencement program.

To qualify for entrance into the departmental honors program, you must be a senior, a major in the College of Arts and Science, and have a grade point average of at least 3.50 in the major in which departmental honors work is desired. You must meet specific requirements of the department or academic program in which honors work is to be done; you must consult with the appropriate department or program director about specific requirements.

Qualifying students register for a 480 course (include department abbreviation; for example, BIO 480): departmental honors (1-6, maximum 6) for a minimum total of 4 semester hours and a maximum total of 6 semester hours. These credits may be taken in one or more semesters of your senior year. The approval of the department chair or program director and the faculty mentor of your honors work is required to register for this course.

Expectations are rigorous and demanding, but the nature of projects varies. Projects might involve independent readings, creative efforts, internships, or research, based in the laboratory, field, or library. The project must result in a tangible product, such as an examination, written report, paper or monograph, oral presentation, work of art, or documentary.

Departmental honors in the College may be coordinated and integrated with work for Honors and Distinction in the University Honors Program. A common project may serve both departmental honors and university honors but separate and distinct presentations must be made to the department or program and to the University Honors Program for evaluation to earn both honors notations.

## Medical Laboratory Science

Medical laboratory scientists apply scientific background and skills to supervision and performance of diagnostic procedures to determine presence or absence of disease and to monitor response to treatment.

Miami offers two baccalaureate degree programs that include a 12-month laboratory "clinical year." In the 3+1 program, you take three years at Miami followed by an internship to receive a B.S. in medical laboratory science. In the 4+1 program, you take four years at Miami to earn an A.B. or B.S. in biology, zoology, chemistry, or microbiology, and then you enter the clinical year.

After completing either program, you are eligible to take national registry examinations. Please understand that Miami cannot guarantee your acceptance into a clinical year site.

### 3+1 Program

This program requires 96 pre-clinical year semester hours at Miami, 32 in advanced courses. You take an interdepartmental sequence of courses in biology, chemistry, and microbiology. Specific requirements include: general microbiology, pathogenic microbiology, and immunology, a year of general chemistry and a year of organic chemistry (or organic chemistry and biochemistry), one year of general biology; a course in mathematics; competency in computer usage; and completion of a foreign language at second-year level.

During your junior year, you must file a petition in the dean's office of the College of Arts and Science to be graduated in this program. When you apply for a clinical year at a hospital, you must have a letter of intent from the Registrar of Miami University.

During your clinical year, you will be registered for MBI 487, MBI 488 and MBI 489 at Miami. These courses fulfill the Global Miami Plan Capstone Experience requirement. Clinical laboratory rotations and lecture series may include hematology, chemistry, bacteriology, immunology, virology, parasitology, and mycology along with electives such as laboratory management and forensics. After you complete your clinical year and certify this to the University Registrar's Office, you will be awarded the B.S. in medical laboratory science.

### 4+1 Program

For this program, you choose a major in biology, chemistry, or microbiology and fulfill all departmental, Arts and Science, and Miami Plan requirements for the baccalaureate degree. Pre-clinical year course requirements are: a year of general chemistry, a year of organic chemistry (or organic chemistry and biochemistry), a year of introductory biology, and one course in mathematics and general microbiology.

During fall semester of your senior year, you apply to enter a clinical year program at any hospital approved by the National Accrediting Agency for Medical Laboratory Sciences in the U.S.

Both 3+1 and 4+1 programs have affiliated training hospitals that include: The Cleveland Clinic; University of Cincinnati Hospital; St. Vincent Medical Center's Mercy Health Integrated Laboratories (Toledo, OH); Children's Hospital Medical Center (Akron, OH); St. Elizabeth Medical Center (Covington, KY); Parkview Memorial Hospital (Fort Wayne, IN); Franciscan St. Francis Health (Indianapolis, IN); Indiana University Health Methodist Hospital (Indianapolis, IN); New York Methodist Hospital (Brooklyn, NY); Vanderbilt University Medical

Center (Nashville, TN); Sentara Rockingham Memorial Hospital (Harrisonburg, VA); and Rhode Island Hospital (Providence, RI).

For more information about either program in medical laboratory science, see the program advisor in the Department of Microbiology.

## Planning for Law School

Law school is a popular option for Arts and Science majors; 96% of Miami's 2014-2016 seniors were accepted into a program, compared to the national average of 86%.

Students interested in law school are encouraged to select a major that interests them. Regardless of the major you select, you should take courses that will enhance those skills that are necessary for success in law school.

According to the Law School Admission Council, "as long as [students] receive an education including critical analysis, logical reasoning, and written and oral expression, the range of acceptable college majors is very broad." To develop these very essential skills, students should consider taking courses in the humanities, such as political science or history (critical analysis), philosophy (logic), communication and English (oral/written communication), and math and science (analytical reasoning).

Most law schools have high standards for grade point average (GPA) and Law School Admission Test (LSAT) scores. In fact, the median GPA for students accepted to the top 25 percent of law schools exceeds 3.50. Similarly, the median LSAT score for these schools is 160 (120-180 scale). In addition to success in the classroom, participation in community service, student activities, leadership training and experience, and study abroad are a plus.

If you are interested in law school, you should contact a pre-law advisor in the Sue J. Henry Center or Pre-Law in 159 Upham Hall (513-529-3737) as early in your college career as possible.

## Planning for Medical, Dental, and Veterinary Schools

Most medical, dental, and veterinary schools limit admission requirements to allow for students from a variety of undergraduate programs. All schools recognize the desirability of a broad education that includes a strong foundation in natural sciences, the basis for study and practice of health professions; communication skills, essential for developing successful relationships with the public and professionals; and social sciences and humanities, in order to better understand yourself and others.

Therefore, you should follow an undergraduate program that is as broad and comprehensive as possible in order to prepare for a career in a people-oriented profession in a changing society. Pursuing a double major in sciences is not advised if it is done at the expense of obtaining a broad education.

Common admission requirements include two years of chemistry, two years of biology, one year of physics, and one year of English. However, requirements of schools may vary. You should therefore consider individual requirements of schools and plan your curriculum accordingly.

Students who plan to go to professional schools should see an academic advisor before taking any course on a credit/no-credit

basis. In addition, using AP credit for classes required by professional schools **is not** recommended.

Many students planning to attend medical, dental, or veterinary school major in biology, zoology, microbiology, chemistry or biochemistry.

A recommended program for your first year is:

Code	Title	Credit Hours
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### Select one of the following:

BIO 115 & BIO 116	Biological Concepts: Ecology, Evolution, Genetics, and Diversity and Biological Concepts: Structure, Function, Cellular, and Molecular Biology	
MTH 151 & MTH 251	Calculus I and Calculus II	

### Select the following:

CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	5
One year of English Composition or Equivalent		
Electives (applying toward the College Requirement and Miami Plan)		

Science courses are demanding and for many freshmen the first semester is a difficult period. Therefore, your electives should not be difficult courses for you.

During your sophomore and/or junior year, take organic chemistry and lab (CHM 241, CHM 242 and CHM 244, CHM 245 or CHM 251, CHM 252 and CHM 254, CHM 255) and physics and lab (PHY 161 and PHY 162 or PHY 191 and PHY 192). A year of biology (BIO/MBI 115, BIO/MBI 116) should be taken sometime during your first two years.

Medical schools require the Medical College Admission Test (MCAT), dental schools require the Dental Admission Test (DAT), and most veterinary schools want the Graduate Record Exam. You are strongly urged to talk with a pre-professional advisor as early as possible in preparing for one of these careers.

For more information go to the Mallory-Wilson Center for Healthcare Education in 106 Pearson Hall (513-529-3737) or talk with one of our pre-medicine advisors in biology or in chemistry and biochemistry, microbiology, physics, or psychology. Pre-dentistry and pre-veterinary advisors are also in biology.

## Planning for Physician Assistant Programs

Physician Assistants (PAs) are healthcare professionals who practice medicine as members of a team with their supervising physicians.

PAs deliver a broad range of medical and surgical services to diverse populations in rural and urban settings. As part of their comprehensive responsibilities, PAs conduct physical exams, diagnose and treat illnesses, order and interpret tests, counsel on preventive health care, assist in surgery, and prescribe medications.

Recommended courses:

Code	Title	Credit Hours
Life Science Courses:		
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO 201 or KNH 244 & 244L	Human Anatomy <sup>1</sup> Functional Anatomy and Functional Anatomy Laboratory	4
BIO 161 or BIO 305	Principles of Human Physiology Human Physiology	4
MBI 201	General Microbiology	4
Inorganic Chemistry - take both:		
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	5
Organic/Biochemistry - choose 1 option		8-10
CHM 241 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	
CHM 242 & CHM 245	Organic Chemistry and Organic Chemistry Laboratory	
or		
CHM 231 & CHM 332 & CHM 332L	Fundamentals of Organic Chemistry and Outlines of Biochemistry and Outlines of Biochemistry Lab	
Mathematics Courses:		
MTH 125	Precalculus	5
STA 261	Statistics	4
Psychology Courses:		
PSY 111 & PSY 112	Introduction to Psychology and Foundational Experiences in Psychology	4
1 upper-level PSY depending on the PA program		3
Total Credit Hours		54-56

<sup>1</sup> KNH courses are not accepted by every PA program. PA Program requirements are not standard, so once you have decided to pursue a career as a PA please contact the PA schools to which you plan on applying to verify their course prerequisites.

For additional information, please visit the Mallory-Wilson Center for Healthcare Education in 106 Pearson Hall (513-529-3737).

## Planning for Optometry School

Typical admission requirements for optometry school include one year of English, one year of biology, two years of chemistry, one year of physics, one semester of mathematics (calculus and statistics), one semester of psychology, one year of social science, one semester of microbiology, and one or two semesters of physiology. Since specific requirements vary, you should contact schools where you may apply, and plan your curriculum accordingly. Most pre-optometry students major in biology, zoology, chemistry, or microbiology.

Optometry schools require the Optometry Admission Test. It is available only online (<http://www.ada.org/en/oat/>).

A recommended program for your first year is:

Code	Title	Credit Hours
One year of English Composition or Equivalent		6
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO 305	Human Physiology	4
MBI 201	General Microbiology	4
Inorganic Chemistry- take both:		10
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	
Organic Chemistry/Biochemistry - choose one option:		8-10
CHM 241 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	
CHM 242 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	
or		
CHM 231 & CHM 332 & CHM 332L	Fundamentals of Organic Chemistry and Outlines of Biochemistry and Outlines of Biochemistry Lab	
Physics- choose one option:		8-10
PHY 161 & PHY 162	Physics for the Life Sciences with Laboratory I and Physics for the Life Sciences with Laboratory II	
PHY 191 & PHY 192	General Physics with Laboratory I and General Physics with Laboratory II	
MTH 151	Calculus I	5
STA 261	Statistics	4
PSY 111 & PSY 112	Introduction to Psychology and Foundational Experiences in Psychology	4
Total Credit Hours		61-65

Some schools do not require all of these courses and some schools may require or recommend other courses such as *Comparative Anatomy* (BIO 201) or *Developmental Psychology* (PSY 231). With respect to advanced chemistry, schools may require as little as 1 semester of Organic Chemistry to as much as 1 year of Organic Chemistry plus 1 semester of Biochemistry. The CHM 231 and CHM 332 combination is the best choice for some, but not all, schools. Contact the schools you are interested in to check admission requirements.

## Planning for Pharmacy School

Because the Doctor of Pharmacy is now the only accredited degree for pharmacy, you should complete a bachelor's degree (usually in zoology, microbiology, or chemistry), or at least two years of prerequisite coursework, and apply to a Doctor of Pharmacy program.

Typical prerequisites for pharmacy school include course work in calculus; inorganic, organic, and analytical chemistry; English, biology or microbiology, physics and statistics. Since specific requirements vary, contact schools of interest, and plan your curriculum accordingly. For more information, consult with the pre-pharmacy advisor in the Department of Biology.

Code	Title	Credit Hours
	One year of English Composition or Equivalent	6
MTH 151	Calculus I <sup>1</sup>	5
STA 261	Statistics	4
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
MBI 201	General Microbiology	4
BIO 305	Human Physiology <sup>2</sup>	4
BIO 201	Human Anatomy	4
	General Chemistry - take both:	10
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	5
	Organic Chemistry - take both:	8-10
CHM 241 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	5
CHM 242 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	5
	Biochemistry - take one:	
CHM 432/ CHM 532	Fundamentals of Biochemistry	3-4
or CHM 332	Outlines of Biochemistry	
	Physics- choose one option:	8-10
PHY 161 & PHY 162	Physics for the Life Sciences with Laboratory I and Physics for the Life Sciences with Laboratory II	
PHY 191 & PHY 192	General Physics with Laboratory I and General Physics with Laboratory II	
PSY 111 & PSY 112	Introduction to Psychology and Foundational Experiences in Psychology	4
	Total Credit Hours	88-93

<sup>1</sup> Some programs may require a second semester of calculus, in which case a student would continue on to MTH 251.

<sup>2</sup> Some programs require a second semester of physiology; please contact the pre-pharmacy advisor for more options, if necessary.

Many schools do not require all of these courses. Others may require or recommend additional courses or training in areas such as:

- quantitative analysis/analytical chemistry
- microeconomics
- interpersonal communication
- technical writing

Because requirements are not standardized, it is very important to contact every school of interest.

## Planning for Physical Therapy School

If you are interested in a career in physical or occupational therapy, you should take courses that meet the prerequisites for graduate degree programs in those areas. The Pre-Physical and Pre-Occupational Therapy Program at Miami is designed to provide students with the basic science and related courses needed for background preparation and admission into an accredited physical or occupational therapy program.

The American Physical Therapy Association (APTA) has announced that all physical therapy programs must offer doctoral degrees by 2020. According to the American Occupational Therapy Association (AOTA), all baccalaureate occupational therapy programs nationwide are expected to transition to master's degree granting programs by 2007. Therefore, students interested in physical or occupational therapy usually complete their bachelor's degree at Miami and then apply to a master's or doctoral degree program in physical or occupational therapy at another school.

Because there is no standard set of prerequisite courses required by physical or occupational therapy programs, you must contact schools for their requirements. Select courses at Miami that will meet requirements for your program.

The following courses are required prior to admission by most programs (**note that this is only a general guideline**):

Code	Title	Credit Hours
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	5
PHY 161 & PHY 162	Physics for the Life Sciences with Laboratory I and Physics for the Life Sciences with Laboratory II	8-10
or PHY 191 & PHY 192	General Physics with Laboratory I and General Physics with Laboratory II	
BIO 201	Human Anatomy <sup>1</sup>	4-8
or BIO 201 & KNH 244 & KNH 244L	Human Anatomy and Functional Anatomy and Functional Anatomy Laboratory	
BIO 305	Human Physiology <sup>2</sup>	4

or BIO 161	Principles of Human Physiology	
STA 261	Statistics	4
KNH 381 & 381L	Biodynamics of Human Performance and Biodynamics of Human Performance Lab	4
KNH 468/KNH 568	Physiology of Exercise and Physical Activity	3
ENG 111	Composition and Rhetoric	3
PSY 111 & PSY 112	Introduction to Psychology and Foundational Experiences in Psychology	4
PSY 231	Developmental Psychology	3
KNH 209	Medical Terminology for Health Professionals	3

**Less Common Prerequisite Courses for PT programs include:p**

CHM 231	Fundamentals of Organic Chemistry	4
CHM 332	Outlines of Biochemistry	3
PHL 131 or PHL 375 or SOC 357	Introduction to Ethics <sup>3</sup> Medical Ethics Medical Sociology	3
STC 135	Principles of Public Speaking	3
SOC 151 or SOC 153	Social Relations Sociology in a Global Context	4

<sup>1</sup> Meets human anatomy prerequisite.

<sup>2</sup> Meets human physiology prerequisite.

<sup>3</sup> SOC 357 is one semester of philosophy/medical ethics.

For more information, contact a physical therapy program advisor in the Department of Biology or the Department of Kinesiology and Health.

## Teacher Licensure

Combining a teacher licensure program with a major in the College of Arts and Science makes a student eligible for two degrees: an A.B. or B.S. degree in the College of Arts and Science and a B.S. in Education degree in the College of Education, Health and Society. Students who wish to combine licensure with an Arts and Science major must observe rules, procedures, and restrictions pertaining to admission to a licensure cohort.

If you choose to earn two degrees, you must meet all requirements for the Miami Plan, the College of Arts and Science, and teacher licensure. Early in your program, you should plan your schedule with academic advisors from the College of Arts and Science and the College of Education, Health and Society.

For information, contact the Department of Teacher Education in the College of Education, Health and Society, 202 McGuffey Hall (513-529-6443).

## The College Requirement (CAS)

The divisional requirement in Arts and Science is called the College Requirement (CAS). The CAS Requirement emphasizes skills and competencies needed for the 21st century, as well as breadth of knowledge in the humanities, social sciences, and natural sciences

(biological and physical). Together with the depth of knowledge acquired within a major, the CAS Requirement prepares students for a variety of educational, professional, and career aspirations

If you are working toward a Bachelor of Arts (A.B.), you must fulfill all sections of the CAS Requirement; if you are working toward a Bachelor of Science (B.S.), you must fulfill only CAS-A (foreign language), but the B.S. requires more hours of within your major and related hours.

The College Requirement includes:

- CAS-A Foreign Language
- CAS-B Humanities
- CAS-C Social Science
- CAS-D Natural Science
- CAS-E Formal Reasoning
- CAS-QL Quantitative Literacy
- CAS-W Writing Competence

When you plan your program, keep these important points in mind:

- Although some CAS and Miami Plan courses overlap, not all courses will count toward both requirements: see the section on CAS courses that fulfill Miami Plan Foundation requirements.
- Some courses you take for the Miami Plan or the College Requirement can also help fulfill your major, minor, or related hour requirement.
- Any course cross-listed in two or more departments can be used to satisfy a requirement appropriate to any of the departments in which it is listed.

## CAS-A Foreign Language

Direct acquisition of a different communication system facilitates access to a foreign culture. It also promotes understanding of how language structures human consciousness, increases the understanding of your own language, and makes possible a more informed awareness of the interaction between language and other social institutions.

All foreign languages taught at Miami are applicable for this requirement; they include: American Sign Language, Arabic, Chinese, French, German, (ancient) Greek, Italian, Japanese, Korean, Latin, Portuguese, Russian, and Spanish.

**Requirement:** The foreign language requirement may be met in any one of the following ways:

- By passing the 202 course (or its equivalent in a program abroad), or a language course at the 300 level or above that has 202 as a prerequisite; courses in English translation **cannot** apply to this requirement.
- By earning credit through a foreign language examination (Advanced Placement or College Level Examination Program) with an appropriate score. Information on acceptable scores is included in the Academic Planning chapter of this Bulletin.
- International students whose native language is not English may use English to satisfy the foreign language requirement. (See the College of Arts & Science Academic Advising Office.)

- Students who are fluent in a language not offered at Miami University should work with a divisional advisor on how to satisfy this requirement.
- In some language departments admission to language skills courses may be denied to native or quasi-native speakers and heritage speakers.

GRK 202 or LAT 202 may fulfill either CAS-A or CAS-B-LIT, but not both.

The foreign language placement guide in the Academic Planning section describes the background necessary to enter a course at a certain level; this will help you choose your first course. Placement tests are a diagnostic tool and **do not** award academic credit.

See CAS - Miami Plan Foundations (MPF) for a list of CAS-A courses that also fulfill Miami Plan Foundation requirements.

## CAS-B Humanities

(9 semester hours)

Liberally educated students become familiar with and understand human values as they are expressed in societies and cultures. They know events and ideas that help form ideals, classical and contemporary literature that expresses beliefs, and religious and philosophical principles that stand behind actions. They are cognizant of processes whereby these values and works came into being, of methods by which they may be examined, and of needs and desires they express and fulfill.

### Requirement:

- Nine semester hours total
- Six hours must be from two different sub-categories: history, literature, philosophy, and religion.
- Humanities courses include all courses from the departments of: History, (including CLS 101 and CLS 102), Philosophy (except PHL 273), Comparative Religion; and literature courses offered by the departments of: Classics; English; French and Italian; German, Russian, and East Asian Languages; Spanish and Portuguese; and Theatre. These courses are designated as CAS-B-LIT in the Courses of Instruction section of this Bulletin.
- The remaining three hours may be taken from the sub-categories, or from a list of courses that do not fall into a specific sub-category.

See CAS - Miami Plan Foundations (MPF) for a list of CAS-B courses that also fulfill Miami Plan Foundation requirements.

## CAS-C Social Science

(9 semester hours)

Through study of social science (the systematic study of human behavior, human institutions, and theoretical models through which human beings attempt to organize their lives), liberally educated students become familiar with regularities and variations in human behavior, with explanations of these regularities and variations, with methods useful in systematically and objectively validating propositions concerning these phenomena, and with potential for analyzing human behavior objectively.

### Requirement:

- Nine semester hours total
- Six hours must be from two different sub-categories: anthropology, economics, geography, political science, psychology, and sociology/gerontology.
- Social Science courses include all courses from the departments of: Anthropology; Economics; Geography (except GEO 121, GEO 431/GEO 531, and GEO 432/GEO 532); Political Science; Psychology; and Sociology and Gerontology.
- The remaining three hours may be taken from the sub-categories, or from a list of courses that do not fall a specific sub-category.

See CAS - Miami Plan Foundations (MPF) for a list of CAS-C courses that also fulfill Miami Plan Foundation requirements.

## CAS-D Natural Science

(10 semester hours)

Liberally educated students learn to understand natural phenomena through observations and experimentation. Physical sciences are involved largely with the behavior of energy, particles, atoms, and molecules. Biological sciences are concerned with nature, variation, richness, and interactions of phenomena of life. The natural science requirement introduces you to various aspects of scientific inquiry as practiced in biology, botany, chemistry, geology, microbiology, physical geography, and physics. Laboratory experience is included to demonstrate the relationship between theories or models used within a given science and experimental results.

### Requirement:

- Ten semester hours from courses within the College of Arts and Science natural science areas
- At least three semester hours in biological science
- At least three semester hours in physical science
- One laboratory course (Consult with an advisor to identify an appropriate laboratory course for you to take)
- Biological science includes all courses offered by the departments of: Biology (except BIO 128), Microbiology, as well as GEO 431/ GEO 531 and GEO 432/GEO 532.
- Physical science includes all courses offered by the departments of: Chemistry and Biochemistry, Geology & Environmental Earth Science, and Physics, as well as GEO 121 and GEO 122.

See CAS - Miami Plan Foundations (MPF) for a list of CAS-D courses that also fulfill Miami Plan Foundation requirements.

## CAS-E Formal Reasoning

(3 semester hours)

Liberally educated students enhance their capacity to reason through the study in inductive and deductive thinking. Disciplines that employ formalized languages as the means to develop such thinking include mathematics, statistics, logic, and linguistics. Unlike the Miami Plan, this requirement does not include topics pertaining to technology.

**Requirement:**

- Three semester hours, designated as CAS-E in the Courses of Instruction section of this Bulletin
- Your math placement is based upon your ACT/SAT math sub-scores; please consult the mathematics and statistics placement guide in the Academic Planning chapter, or an academic advisor, to determine the appropriate course for you to take.
- Many majors either require or strongly suggestion a specific course for this requirement

See CAS - Miami Plan Foundations (MPF) for a list of CAS-E courses that also fulfill Miami Plan Foundation requirements.

**CAS-QL Quantitative Literacy**

(3 semester hours)

Liberal education students learn the "habit of mind" associated with reasoning and solving quantitative problems from a wide array of authentic contexts and everyday life situations.

**Requirement:**

- Three semester hours, designated as CAS-QL in the Courses of Instruction section of this Bulletin
- A student **cannot** take a course for both this requirement and the Global Miami Plan Foundation V or CAS-E requirements; however, the same course can be applied to other areas in the Global Miami Plan Foundation or CAS requirements and the CAS-QL.

Quantitative literacy courses include:

Code	Title	Credit Hours
ATH 496	Observing Primate Behavior	4
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO 161	Principles of Human Physiology	4
CHM 111	Chemistry in Modern Society	3
CHM 375	Analytical Chemistry for Majors	3
ECO 311	Examining Economic Data and Models	3
ENG 222	The Rhetoric of Information and Data Visualization	3
GEO 205	Population and Migration	3
GEO 242	Mapping a Changing World	3
GHS 201	Data and Decisions in Global Health	3
GLG 111	The Dynamic Earth	3
GLG 121	Environmental Geology	3
GLG 141	Geology of U.S. National Parks	3
IMS 404/IMS 504	Advanced Data Visualization	3
JRN 404/JRN 504	Advanced Data Visualization	3
JRN 412	Public Affairs Reporting	3
MTH 435/ MTH 535	Mathematical Modeling Seminar	3
MTH 453/ MTH 553	Numerical Analysis	3

POL 241	American Political System	3
POL 306	Applied Research Methods	3
PSY 293	Introduction to Psychological Statistics	4
PSY 294	Writing and Research Methods in Psychology	4
PSY 324	Advanced Social Psychology <sup>1</sup>	3
SOC 262	Research Methods	3
STA/ISA 333	Nonparametric Statistics	3
STA 363	Introduction to Statistical Modeling	3
STA 404/STA 504	Advanced Data Visualization	3
STA 475	Data Analysis Practicum	3
STC 262	Empirical Research Methods	3
WGS 204	Gender, Science, & Technology	3

<sup>1</sup> Only specific sections of PSY 324 are designated QL; see the departmental advisor for information.

See CAS - Miami Plan Foundations (MPF) for a list of CAS-QL courses that also fulfill Miami Plan Foundation requirements.

**CAS-W Writing Competence**

Liberal education students develop advanced writing abilities in their majors. Students learn the writing practices and conventions of their discipline or interdisciplinary area and communicate the results of research in their area to a general public.

Effective writing is learned gradually and through ongoing attention and sustained feedback. As such, each Bachelor of Arts major has a course or set of courses embedded in the requirements for the major. These courses are identified in the Bachelor of Arts major descriptions.

**CAS Courses That Fulfill Miami Plan Foundation (MPF) Requirements**

A course can be used once in the Global Miami Plan and a second time for the CAS requirements; we call this "double-dipping". This page is meant to help you identify courses that will double-dip and is separated by each CAS requirement:

CAS-A Foreign Language, CAS-B Humanities, CAS-C Social Science, CAS-D Natural Science, CAS-E Formal Reasoning, and CAS-QL Quantitative Literacy

A course can only be used once within the CAS requirements- the only exception to this is with a natural science course that has a built-in laboratory component, which will cover the lab requirement (credit is not awarded twice, the course is just applied in both places).

**CAS-A Foreign Language  
MPF Humanities**

Code	Title	Credit Hours
FRE 202	Critical Analysis of French Culture	3

**MPF Global Perspectives**

Code	Title	Credit Hours
FRE 202	Critical Analysis of French Culture	3

**CAS-B Humanities (9 hrs)**

Nine semester hours, six hours taken from two categories: History, Literature, Philosophy and Religion.

The remaining three hours may be either taken from one of these categories or from the courses found below in the non-specific category that also fulfill a Global Miami Plan requirement.

**History**

Any HST course, or one of the following courses that also fulfill a Global Miami Plan requirement:

**MPF Humanities**

Code	Title	Credit Hours
BWS 224	Africa to 1884	3
BWS 225	The Making of Modern Africa	3
CLS 101	Greek Civilization in its Mediterranean Context	3
CLS 102	Roman Civilization	3
HST 111	Survey of American History	3
HST 112	Survey of American History	3
HST 197	World History to 1500	3
HST 198	World History Since 1500	3
HST 224	Africa to 1884	3
HST 225	The Making of Modern Africa	3
HST 245	Making of Modern Europe, 1450-1750	3
HST 254	Introduction to Russian and Eurasian Studies	3
HST 260	Latin America in the United States	3
HST 296	World History Since 1945	3
LAS 260	Latin America in the United States	3

**MPF Global Perspectives**

Code	Title	Credit Hours
HST 197	World History to 1500	3
HST 198	World History Since 1500	3
HST 245	Making of Modern Europe, 1450-1750	3
HST 260	Latin America in the United States	3
HST 296	World History Since 1945	3
LAS 260	Latin America in the United States	3

**MPF Intercultural Perspectives**

Code	Title	Credit Hours
AMS 382	Women in American History	3
AMS 392	Sex and Gender in American Culture	3
BWS 221	African-American History	3
BWS 386	Race in U.S. Society	3
HST 213	Appalachia: Cultures and Music	3
HST 221	African-American History	3
HST 260	Latin America in the United States	3
HST 382	Women in American History	3
HST 386	Race in U.S. Society	3
HST 392	Sex and Gender in American Culture	3
LAS 260	Latin America in the United States	3

WGS 382	Women in American History	3
WGS 392	Sex and Gender in American Culture	3

**Literature**

Any CAS-B Lit courses in AMS, ENG, CLS, THE, a foreign language literature course, or one of the courses below that also fulfill a Global Miami Plan requirement:

**MPF Creative Arts**

Code	Title	Credit Hours
THE 101	Introduction to Theatre: Drama and Analysis	3
THE 191	Experiencing Theatre	3

**MPF Humanities**

Code	Title	Credit Hours
AAA 248	Asian American Literature	3
AMS 248	Asian American Literature	3
CHI 251	Traditional Chinese Literature in English Translation	3
CHI 252	Modern Chinese Literature in English Translation	3
CHI 255	Drama in China and Japan in Translation	3
CHI 257	Chinese Satire	3
CLS 121	Introduction to Classical Mythology	3
ENG 122	Popular Literature	3
ENG 123	Introduction to Poetry	3
ENG 124	Introduction to Fiction	3
ENG 125	Introduction to Drama	3
ENG 134	Introduction to Shakespeare	3
ENG 163	Literature and Travel	3
ENG 248	Asian American Literature	3
ENG 251	Introduction to European Literature	3
ENG 254	Latino/a Literature and the Americas	3
ENG 255	Russian Literature in English Translation From Pushkin to Dostoevsky	3
ENG 256	Russian Literature in English Translation: From Tolstoy to Nabokov	3
ENG 267	Russian Literature in English Translation: From Pasternak to the Present	3
ENG 272	English Literature to 1660	3
ENG 273	English Literature 1660-1900	3
ENG 274	English Literature 1901 to Present	3
ENG 275	American Literature to 1900	3
ENG 276	American Literature 1900 to the Present	3
FRE 131	Masterpieces of French Culture in Translation	3
GER 231	Folk and Literary Fairy Tales	3
GER 252	The German-Jewish Experience	3
GER 321	Cultural Topics in German-Speaking Europe Since 1870	3

GER 322	Comparative Study of Everyday Culture: German-Speaking Europe and the U.S.A.	3
JPN 231	Japanese Tales of the Supernatural in English Translation	3
JPN 255	Drama in China and Japan in English Translation	3
LAS 254	Latino/a Literature and the Americas	3
RUS 137	Russian Folklore	3
RUS 255	Russian Literature in English Translation From Pushkin to Dostoevsky	3
RUS 256	Russian Literature in English Translation: From Tolstoy to Nabokov	3
RUS 257	Russian Literature in English Translation: From Pasternak to the Present	3
SPN 315	Intro to Hispanic Literatures	3

**MPF Global Perspectives**

Code	Title	Credit Hours
CHI 257	Chinese Satire	3
ENG 254	Latino/a Literature and the Americas	3
ENG 256	Russian Literature in English Translation: From Tolstoy to Nabokov	3
ENG 267	Russian Literature in English Translation: From Pasternak to the Present	3
FRE 131	Masterpieces of French Culture in Translation	3
LAS 254	Latino/a Literature and the Americas	3
RUS 256	Russian Literature in English Translation: From Tolstoy to Nabokov	3
RUS 257	Russian Literature in English Translation: From Pasternak to the Present	3

**MPF Intercultural Perspectives**

Code	Title	Credit Hours
AAA 248	Asian American Literature	3
AMS 248	Asian American Literature	3
ENG 232	Women Writers	3
ENG 248	Asian American Literature	3
ENG 254	Latino/a Literature and the Americas	3
LAS 254	Latino/a Literature and the Americas	3
WGS 232	Women Writers	3

**Philosophy**

Any PHL course **except** PHL 273, PHL 373; one of the courses below would also fulfill a Global Miami Plan requirement:

**MPF Humanities**

Code	Title	Credit Hours
PHL 103	Society and the Individual	3
PHL 104	Purpose or Chance in the Universe	3

PHL 105	Theories of Human Nature	3
PHL 106	Thought and Culture of India	3
PHL 131	Introduction to Ethics	3

**Religion**

Any REL course, or one of the courses below that also fulfills a Global Miami Plan requirement:

**MPF Humanities**

Code	Title	Credit Hours
AAA 203	Global Religions of India	3
BIO 128	Religion, Science, and Origins	3
REL 101	Introduction to the Study of Religion	3
REL 128	Religion, Science, and Origins	3
REL 133	Imagining Russia	3
REL 203	Global Religions of India	3
REL 254	Introduction to Russian and Eurasian Studies	3
REL 275	Introduction to the Critical Study of Biblical Literature	3
REL 286	Global Jewish Civilization	3
REL 314	Social and Religious History of the Jewish People	3
RUS 133	Imagining Russia	3

**MPF Global Perspectives**

Code	Title	Credit Hours
AAA 203	Global Religions of India	3
REL 133	Imagining Russia	3
REL 203	Global Religions of India	3
REL 286	Global Jewish Civilization	3
RUS 133	Imagining Russia	3

**MPF Intercultural Perspectives**

Code	Title	Credit Hours
AMS 241	Religions of the American Peoples	3
AMS 342	Religious Pluralism in Modern America	4
REL 241	Religions of the American Peoples	3
REL 313	Marriage Across Cultures	3
REL 342	Religious Pluralism in Modern America	3

**Non-specific Category Courses****MPF Creative Arts**

Code	Title	Credit Hours
ARC 188	Ideas in Architecture	3
ART 187	History of Western Art: Prehistoric-Gothic	3
ART 188	History of Western Art: Renaissance - Modern	3
ART 276	Introduction to the Art of the Black Diaspora	3
ART 286	History of Asian Art, China, Korea, and Japan	3

BWS 276	Introduction to the Art of the Black Diaspora	3
MUS 185	The Diverse Worlds of Music	3
MUS 186	Global Popular Music	3
MUS 189	Great Ideas in Western Music	3

**MPF Humanities**

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
AAA 201	Introduction to Asian/ Asian American Studies	3
AMS 205	Introduction to American Cultures	3
AMS 207	America: Global and Intercultural Perspectives	3
AMS 222	Italian American Culture	3
ARC 188	Ideas in Architecture	3
ART 187	History of Western Art: Prehistoric-Gothic	3
ART 188	History of Western Art: Renaissance - Modern	3
ART 286	History of Asian Art, China, Korea, and Japan	3
BWS 204	Brazilian Culture Through Popular Music	3
BWS 276	Introduction to the Art of the Black Diaspora	3
BWS 383	Brazilian Women through Literature and Film	3
DST 169	Disability and Literature	3
ENG 169	Disability and Literature	3
ENG 171	Humanities and Technology	3
ENG 202	Varieties of English: Dialect Diversity and Language Change	3
ENG 238	Narrative and Digital Technology	3
ENG 383	Brazilian Women through Literature and Film	3
FST 201	Film History and Analysis	3
FST 204	Brazilian Culture Through Music and Film	3
FST 206	Diversity and Culture in American Film	3
FST 222	Italian American Culture	3
FST 383	Brazilian Women through Literature and Film	3
GER 151	The German-American Experience	3
GER 232	The Holocaust in German Literature, History, and Film	3
GIC 101	Global and Intercultural Studies	3
GIC 301	Approaches to Global and Intercultural Studies: Globalization and Belonging	3
IDS 206	Diversity and Culture in American Film	3
IMS 171	Humanities and Technology	3
IMS 238	Narrative and Digital Technology	3
ITL 221	Italy, Matrix of Civilization	3
ITL 222	Italian American Culture	3
JRN 101	Introduction to Journalism	3

LAS 204	Brazilian Culture Through Popular Music	3
MAC 143	Introduction to Media	3
MUS 185	The Diverse Worlds of Music	3
MUS 186	Global Popular Music	3
MUS 189	Great Ideas in Western Music	3
MUS 204	Brazilian Culture Through Music and Film	3
POR 204	Brazilian Culture Through Music and Film	3
POR 383	Brazilian Women through Literature and Film	3
WGS 202	Introduction to GLBT Studies	3
WGS 383	Brazilian Women through Literature and Film	3
WST 201	Self and Place	3

**MPF Global Perspectives**

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
AAA 201	Introduction to Asian/ Asian American Studies	3
AMS 207	America: Global and Intercultural Perspectives	3
ART 276	Introduction to the Art of the Black Diaspora	3
BWS 204	Brazilian Culture Through Popular Music	3
BWS 276	Introduction to the Art of the Black Diaspora	3
BWS 383	Brazilian Women through Literature and Film	3
ENG 383	Brazilian Women through Literature and Film	3
FST 204	Brazilian Culture Through Music and Film	3
FST 383	Brazilian Women through Literature and Film	3
GER 232	The Holocaust in German Literature, History, and Film	3
GIC 101	Global and Intercultural Studies	3
GIC 301	Approaches to Global and Intercultural Studies: Globalization and Belonging	3
LAS 204	Brazilian Culture Through Popular Music	3
MUS 185	The Diverse Worlds of Music	3
MUS 186	Global Popular Music	3
MUS 204	Brazilian Culture Through Music and Film	3
POR 204	Brazilian Culture Through Music and Film	3
POR 383	Brazilian Women through Literature and Film	3
WGS 383	Brazilian Women through Literature and Film	3

**Intercultural Perspectives**

Code	Title	Credit Hours
AMS 205	Introduction to American Cultures	3
AMS 207	America: Global and Intercultural Perspectives	3
AMS 222	Italian American Culture	3
DST 169	Disability and Literature	3
ENG 169	Disability and Literature	3
ENG 202	Varieties of English: Dialect Diversity and Language Change	3
FST 206	Diversity and Culture in American Film	3
FST 222	Italian American Culture	3
GER 151	The German-American Experience	3
IDS 206	Diversity and Culture in American Film	3
ITL 222	Italian American Culture	3
WGS 202	Introduction to GLBT Studies	3

**CAS-C Social Science (9 hrs)**

Nine semester hours, six hours taken from **two** categories: Anthropology, Economics, Geography, Political Science, Psychology and Sociology & Gerontology

The remaining three hours may be taken from the one of these categories or from the courses found below in the non-specific category that also fulfill a Global Miami Plan requirement.

**Anthropology**

Any ATH course, LAS 208 or one of the following courses that also fulfill a Global Miami Plan requirement:

**MPF Social Science**

Code	Title	Credit Hours
ATH 145	Lost Cities & Ancient Civilizations	3
ATH 155	Introduction to Anthropology	3
ATH 175	Peoples of the World	3
ATH 185	Cultural Diversity in the U.S.	3
ATH 206	Introduction to Latin America	3
ATH 405/ATH 505	Food, Taste, and Desire	3
LAS 208	Introduction to Latin America	3

**MPF Global Perspectives**

Code	Title	Credit Hours
ATH 135	Film as Ethnography	1
ATH 145	Lost Cities & Ancient Civilizations	3
ATH 155	Introduction to Anthropology	3
ATH 175	Peoples of the World	3
ATH 185	Cultural Diversity in the U.S.	3
ATH 206	Introduction to Latin America	3
ATH 358	Travelers, Migrants, and Refugees: Transnational Migration and Diasporic Communities	3
ATH 361	Language and Power	3
ATH 405/ATH 505	Food, Taste, and Desire	3

FST 135	Film as Ethnography	1
LAS 208	Introduction to Latin America	3

**MPF Intercultural Perspectives**

Code	Title	Credit Hours
ATH 185	Cultural Diversity in the U.S.	3

**Economics**

Any ECO course, or one of the following courses that also fulfill a Global Miami Plan requirement:

**MPF Social Science**

Code	Title	Credit Hours
ECO 131	Economic Perspectives on Inequality in America	3
ECO 201	Principles of Microeconomics	3
ECO 202	Principles of Macroeconomics	3

**MPF Intercultural Perspectives**

Code	Title	Credit Hours
ECO 131	Economic Perspectives on Inequality in America	3

**Geography**

Any GEO course (except GEO 121, GEO 122, GEO 431/GEO 531, GEO 432/GEO 532), ITS 208, or one of the following courses that also fulfill a Global Miami Plan requirement:

**MPF Social Science**

Code	Title	Credit Hours
GEO 101	Global Forces, Local Diversity	3
GEO 111	World Regional Geography: Patterns and Issues	3
GEO 159	Creating Global Peace	3
GEO 201	Geography of Urban Diversity	3
GEO 208	The Rise of Industrialism in East Asia	3
ITS 208	The Rise of Industrialism in East Asia	3

**MPF Global Perspectives**

Code	Title	Credit Hours
GEO 101	Global Forces, Local Diversity	3
GEO 159	Creating Global Peace	3

**MPF Intercultural Perspectives**

Code	Title	Credit Hours
GEO 201	Geography of Urban Diversity	3
GEO 302	Geography and Gender	3
GEO 309	Native American Women	3
GEO 436/GEO 536	Women, Gender, and the Environment	3
GEO 455	Race, Urban Change, and Conflict in America	3
WGS 309	Native American Women	3

WGS 436/ WGS 536	Women, Gender and the Environment	3
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### Political Science

Any POL course, or one of the following courses that also fulfill a Global Miami Plan requirement:

#### MPF Social Science

Code	Title	Credit Hours
POL 142	American Politics and Diversity	3
POL 221	Comparative Politics	3
POL 241	American Political System	3
POL 271	World Politics	3

#### MPF Global Perspectives

Code	Title	Credit Hours
POL 221	Comparative Politics	3
POL 271	World Politics	3

#### MPF Intercultural Perspectives

Code	Title	Credit Hours
POL 142	American Politics and Diversity	3

### Psychology

Any PSY course, AAA 210, or one of the following courses that also fulfill a Global Miami Plan requirement:

#### MPF Social Science

Code	Title	Credit Hours
AAA 210	Psychology Across Cultures	3
PSY 111	Introduction to Psychology	3
PSY 210	Psychology Across Cultures	3

#### MPF Global Perspectives

Code	Title	Credit Hours
AAA 210	Psychology Across Cultures	3
PSY 210	Psychology Across Cultures	3

#### MPF Intercultural Perspectives

Code	Title	Credit Hours
AAA 210	Psychology Across Cultures	3
PSY 210	Psychology Across Cultures	3

### Sociology & Gerontology

#### MPF Social Science

Code	Title	Credit Hours
BWS 279	African Americans in Sport	3
DST 272	Introduction to Disability Studies	3
EDP 272	Introduction to Disability Studies	3
GTY 154	Big Ideas in Aging	3
ITS 208	The Rise of Industrialism in East Asia	3
KNH 279	African Americans in Sport	3
SJS 159	Creating Global Peace	3

SJS 165	Introduction to Social Justice Studies	3
SOC 151	Social Relations	4
SOC 153	Sociology in a Global Context	3
SOC 165	Introduction to Social Justice Studies	3
SOC 208	The Rise of Industrialism in East Asia	3
SOC 272	Introduction to Disability Studies	3
SOC 279	African Americans in Sport	3

#### MPF Global Perspectives

Code	Title	Credit Hours
GTY 260	Global Aging	3
SJS 159	Creating Global Peace	3
SJS 487	Globalization, Social Justice and Human Rights	3
SOC 153	Sociology in a Global Context	3
SOC 487	Globalization, Social Justice and Human Rights	3

#### MPF Intercultural Perspectives

Code	Title	Credit Hours
BWS 348	Race and Ethnic Relations	3
BWS 362	Family Poverty	3
DST 272	Introduction to Disability Studies	3
DST 375	(Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice	3
EDP 272	Introduction to Disability Studies	3
EDP 375	(Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice	3
GTY 110	Opening Minds through Art (OMA) Volunteer Experience	1
GTY 260	Global Aging	3
GTY 318	Social Forces and Aging	3
SJS 487	Globalization, Social Justice and Human Rights	3
SOC 165	Introduction to Social Justice Studies	3
SOC 203	Sociology of Gender	3
SOC 272	Introduction to Disability Studies	3
SOC 318	Social Forces and Aging	3
SOC 348	Race and Ethnic Relations	3
SOC 362	Family Poverty	3
SOC 372	Social Stratification	3
SOC 375	(Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice	3
SOC 487	Globalization, Social Justice and Human Rights	3
WGS 203	Sociology of Gender	3
WGS 375	(Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice	3

**Non-specific Category Courses****MPF Social Science**

Code	Title	Credit Hours
AAA 201	Introduction to Asian/ Asian American Studies	3
CRE 151	Introduction to Critical Race and Ethnic Studies	3
EDP 101	Psychology Of The Learner	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
GIC 101	Global and Intercultural Studies	3
GIC 301	Approaches to Global and Intercultural Studies: Globalization and Belonging	3
ITS 201	Introduction to International Studies	3
KNH 276	Current Issues in Leisure and Sport	3
KNH 279	African Americans in Sport	3
LAS 207	Latin America before 1910	3
SPA 127	Introduction to Communication Disorders	3
SPA 223	Theories of Language Development	3
STC 136	Introduction to Interpersonal Communication	3
WGS 201	Introduction to Women's Studies	3

**MPF Global Perspectives**

Code	Title	Credit Hours
AAA 201	Introduction to Asian/ Asian American Studies	3
AAA 207	Asia and Globalization	3
AAA 201	Introduction to Asian/ Asian American Studies	3
BWS 156	Introduction to Africa	4
GIC 101	Global and Intercultural Studies	3
GIC 301	Approaches to Global and Intercultural Studies: Globalization and Belonging	3
ITS 201	Introduction to International Studies	3
WGS 201	Introduction to Women's Studies	3

**MPF Intercultural Perspectives**

Code	Title	Credit Hours
AAA 201	Introduction to Asian/ Asian American Studies	3
CRE 151	Introduction to Critical Race and Ethnic Studies	3
WGS 201	Introduction to Women's Studies	3

**CAS-D Natural Science (10 hrs)**

Ten semester hours, three from each of the following categories: Biological Science and Physical Science

Take additional hours from either category to equal ten total; one course must be, or include, a lab designated CAS-D/LAB in the Courses of Instruction section of this Bulletin.

**Biological Science**

Complete three hours from any course in BIO (except BIO 128), MBI, or GEO 431/GEO 531, GEO 432/GEO 532, or one of the following courses that also fulfill a Global Miami Plan requirement:

**MPF Natural Science**

Code	Title	Credit Hours
BIO 101	Biotechnology: Coming of Age in the 21st Century	3
BIO 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity (Lab)	4
BIO 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology (Lab)	4
BIO 121	Environmental Biology	3
BIO 126	Evolution: Just a theory?	3
BIO 131	Plants, Humanity, and Environment	3
BIO 155	Field Botany (Lab)	3
BIO 161	Principles of Human Physiology (Lab)	4
BIO 171	Human Anatomy and Physiology (Lab)	4
BIO 176	Ecology of North America	3
BIO 181	Medicinal and Therapeutic Plants	3
BIO 191	Plant Biology (Lab)	4
MBI 111	Microorganisms and Human Disease	3
MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity (Lab)	4
MBI 116	Biological Concepts: Structure, Function, Cellular and Molecular Biology (Lab)	4
MBI 121	The Microbial World	3
MBI 123	Experimenting with Microbes (Lab)	1
MBI 131	Community Health Perspectives	3
MBI 143	Parasitology and Mycology Labs (Lab)	1
MBI 161	Elementary Medical Microbiology (Lab)	4

**Physical Science**

Complete three hours including any course in CHM, GLG, PHY, or GEO 121, GEO 122, or one of the following courses that also fulfill a Global Miami Plan requirement:

**MPF Natural Science**

Code	Title	Credit Hours
CHM 111	Chemistry in Modern Society	3
CHM 111L	Chemistry in Modern Society Laboratory (Lab)	1
CHM 131	Chemistry of Life Processes (Lab)	4
CHM 141	College Chemistry	3
CHM 141R	College Chemistry	4
CHM 144	College Chemistry Laboratory (Lab)	2
GEO 121	Earth's Physical Environment (Lab)	4
GEO 122	Geographic Perspectives on the Environment	3
GLG 111	The Dynamic Earth	3
GLG 115L	Understanding the Earth (Lab)	1
GLG 121	Environmental Geology	3

GLG 141	Geology of U.S. National Parks	3
PHY 101	Physics and Society	3
PHY 103	Concepts in Physics Laboratory (Lab)	1
PHY 111	Astronomy and Space Physics	3
PHY 118	Introduction to Atmospheric Science	3
PHY 121	Energy and Environment	3
PHY 131	Physics for Music	3
PHY 141	Physics in Sports	3
PHY 161	Physics for the Life Sciences with Laboratory I (Lab)	4
PHY 162	Physics for the Life Sciences with Laboratory II (Lab)	4
PHY 191	General Physics with Laboratory I (Lab)	5
PHY 192	General Physics with Laboratory II (Lab)	5

### CAS-E Formal Reasoning (3 hrs)

Three semester hours, designated as CAS-E in the Courses of Instruction section of this Bulletin, including MTH 222, 251, PHL 373 or one of the following courses, which also fulfills the Global Miami Plan Foundation V requirement.

### MPF Mathematics, Formal Reasoning, & Technology

Code	Title	Credit Hours
ATH 219	Introduction to Linguistics	3
ENG 219	Introduction to Linguistics	3
GER 219	Introduction to Linguistics	3
MTH 119	Quantitative Reasoning	4
MTH 121	Finite Mathematical Models	3
MTH 151	Calculus I	5
MTH 249	Calculus II	5
PHL 273	Formal Logic	4
STA 261	Statistics	4

### CAS-QL Quantitative Literacy (3 hrs)

Complete three semester hours; for comprehensive list refer to The College Requirement page in this Bulletin. The courses below can be used in other GMP foundations, excluding Miami Plan Foundation V

### MPF Social Science

Code	Title	Credit Hours
POL 241	American Political System	3

### MPF Natural Science

Code	Title	Credit Hours
BIO 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO 161	Principles of Human Physiology	4
CHM 111	Chemistry in Modern Society	3
GLG 111	The Dynamic Earth	3
GLG 121	Environmental Geology	3
GLG 141	Geology of U.S. National Parks	3

MBI 116	Biological Concepts: Structure, Function, Cellular and Molecular Biology	4
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## American Studies- Bachelor of Arts

For more information, contact the Director of American Studies, 120 McMillan Hall, 513-529-5333.

The Program in American Studies offers an interdisciplinary major that explores American culture, in all its complexity, from a variety of perspectives. In learning to make connections between a range of fields and disciplines from history to art, politics to religious studies, mass media to popular culture, among many others, students gain a multifaceted understanding of the United States in global context. The program fosters flexible thinking, creative problem solving skills, synthetic analysis, strong writing and oral presentation, an understanding of and familiarity with multiple kinds of media and texts, a broad understanding of social, cultural, and historical contexts, and intercultural awareness. By working with faculty to define an area of concentration, students come away with the intellectual skills and perspective necessary to understand, contextualize, and critically engage the opportunities and challenges of our complex, changing, interdependent world.

## Program Requirements

(34 semester hours)

Code	Title	Credit Hours
<b>Core course</b>		
AMS 205	Introduction to American Cultures	3
or AMS 207	America: Global and Intercultural Perspectives	
AMS 206	Approaches to American Culture	3
Select three courses from the following:		
AMS 301	American Identities	
AMS 302	Immigrant America	
AMS 303	Consumer Culture	
AMS 305	American Icons	
AMS 310	Special Topics in American Studies	
The third 300-level course can be one of the courses above OR it can be a 300-level course cross-listed with AMS, subject to approval by the CDA.		
Capstone course:		
AMS 401	Senior Capstone in American Studies	4
<b>Area of Concentration</b>		
Select an area of concentration		15
Total Credit Hours		34

## Areas of Concentration (15 hours)

Students must take 15 credit hours with at least 12 hours at the 200 level and above, incorporating at least three different disciplines from one of the areas of concentration shown below. A comprehensive list of courses in each of these areas is posted on the AMS website and is also available in pamphlet form at the Programs Office.

**American Institutions, Ideas, and Experiences:** This area of concentration focuses on the core institutions, ideas, and expressions that define America as a nation.

**Diversity and Difference:** This area of concentration focuses on intercultural awareness and the diversity of cultures that come together in the United States, addressing issues of race, gender, class, religion, ethnicity, sexuality, transnational identity, and other social categories.

**Global Perspectives on American Culture:** (developed in consultation with an advisor) This area focuses on global perceptions and analysis of American culture and values, and on the position of the United States in the global world. AMS 207 is a prerequisite for this concentration and will count toward the 15 hours in concentration requirements. The rest of the credits will be taken from AMS courses at our partner universities.

**Popular Culture, Media, Consumerism:** This area of concentration focuses on consumer culture, popular culture, and mass media, examining the origins, meanings, and practices of the modern market place.

**Public Culture and Civic Engagement:** This area of concentration focuses on the practices and activities of civic engagement, the construction of shared identity and public memory, and the interpretation, presentation, and preservation of cultural resources.

**Student Designed Area of Concentration:** (developed in consultation with an advisor) This area of concentration allows a student to work with a faculty advisor to develop an individualized area of concentration in American culture. The proposed concentration needs to be approved by the director of the American Studies Program before course work is initiated.

**Note:** Students seeking the Bachelor of Arts in American Studies meet the College of Arts and Science writing in the major requirement by completing the following course: AMS 206.

## Analytics Co-Major

For information, contact the Department of Statistics, 311 UPH, 513-529-7828, or the Department of Information Systems and Analytics, 3095 FSB, 513-529-4826.

Analytics describes the extensive use of data to guide evidence-based decision-making. This field has emerged during a time when massively large data sets are being collected throughout society. Analytics lives at the junction between numerous traditional disciplines including information systems and statistics. This program will provide a framework for thinking about the collection and use of so-called "big data" and students will develop skills for handling structured and unstructured data sets and for developing models to predict behavior in data-rich environments.

The term "co-major" is unique and indicates that students must be concurrently enrolled in and must complete another major at Miami University. The co-major complements this primary major, which provides significant depth and breadth in an academic discipline. There is no specific degree designation for the co-major; students receive the degree designation of their primary major. Students may earn either the Business Analytics Minor or the Analytics Co-Major.

## Program requirements

Complete a major in one of the divisions of the university.

Code	Title	Credit Hours
<b>CORE coursework to be satisfied by all co-majors (18-19 hours)</b>		
Data Description and Summarization:		
Select one of the following:		3-4
ISA 205	Business Statistics	
ISA 225	Principles of Business Analytics	
STA 261	Statistics	
STA 301	Applied Statistics	
STA 368	Introduction to Statistics	
Data Management - Structured:		
Select one of the following:		9-12
CSE 148 & ISA 235 & ISA 245	Business Computing and Information Technology and the Intelligent Enterprise and Database Systems and Data Warehousing	
CSE 174 & CSE 271 & CSE 274 & CSE 385	Fundamentals of Programming and Problem Solving and Object-Oriented Programming and Data Abstraction and Data Structures and Database Systems	
Regression Models:		
Select one of the following:		3-4
ECO 311	Examining Economic Data and Models	
ISA 291	Applied Regression Analysis in Business	
STA 363	Introduction to Statistical Modeling	
STA 463	Regression Analysis	
Visualizing Data and Digital Dashboards:		
STA/IMS/JRN 404	Advanced Data Visualization	3
<b>Track</b>		
Select a track of study <sup>1</sup>		15
<b>TRACK 1: BUSINESS ANALYTICS</b>		
Note: For IS majors, 18 hours must not double count in the IS major or ISA major with IS track and Analytics Co-Major or business core.		
Note: For STA majors, at least 18 hours must be courses not double counted toward the STA major.		
Note that ISA 291 must be taken as the core option for this track.		
Required Courses		
ISA 401	Business Intelligence and Data Visualization	
ISA 414	Managing Big Data	
ISA 491	Introduction to Data Mining in Business	
Select two of the following:		
ISA 281	Concepts in Business Programming	

ISA 321	Quantitative Analysis of Business Problems
ISA/STA 333	Nonparametric Statistics
ISA/STA 365	Statistical Monitoring and Design of Experiments
ISA/STA 432	Survey Sampling in Business
ISA 444	Business Forecasting
ISA 480	Topics in Decision Sciences
ISA 496	Business Analytics Practicum
STA 402	Statistical Programming
STA 427	Introduction to Bayesian Statistics

### TRACK 2: PREDICTIVE ANALYTICS

#### Required Courses

STA 402	Statistical Programming
STA 427	Introduction to Bayesian Statistics
STA 467	Statistical Learning
ISA 414	Managing Big Data

#### Select one of the following:

ISA 321	Quantitative Analysis of Business Problems
MTH 432	Optimization
CSE 372	Stochastic Modeling

### TRACK 3: GEOSPATIAL ANALYTICS

Note: Students who wish to also earn the GISci Certificate must take an additional 6 appropriate credit hours beyond the Analytics Co-Major requirements.

#### Required Courses

GEO 441	Geographic Information Systems
GEO 442	Advanced Geographic Information Systems
GEO 460	Advanced Systematic Geography

#### Select six hours of the following:

GEO 443	Python Programming for ArcGIS
GEO 444	GIScience Techniques in Landscape Ecology
GEO 448	Techniques and Applications of Remote Sensing
GEO 460G	Tools
IMS 461	Virtual Reality
ISA 414	Managing Big Data

Total Credit Hours 33-38

<sup>1</sup> In addition to the common core, each co-major is required to complete a particular track of study. These tracks reflect a focus on a particular area of application of analytics or advanced methods.

## Anthropology- Bachelor of Arts

For information, contact the Department of Anthropology, 120 Upham Hall, 513-529-8399.

Anthropology is a holistic, interdisciplinary science of humanity. It is the study of people: their origins, adaptations, and ecology, distribution, forms of communication, beliefs, and values. Integrating the hard sciences, social sciences, and the humanities, anthropology

gives students a solid liberal arts background in conjunction with strong research experience and broad perspectives on the human condition. The major in anthropology exposes students to the field as a whole. At the same time, students have the opportunity to pursue individual interests. Anthropology prepares students for a wide variety of professional, business, medical, and scholarly careers.

## Program Requirements

(36 semester hours distributed as follows, A through D)

Code	Title	Credit Hours
<b>A. Core Requirements</b>		
ATH 212	Introduction to Archaeological Theory and Methods	4
ATH 231	Foundations of Cultural Anthropology	4
ATH 255	Foundations of Biological Anthropology	4
ATH 265	Introduction to Linguistic Anthropology	4
ATH 421	Senior Seminar in Anthropology	3
<b>B. Cluster Requirements</b>		
	Take three courses in a single cluster, plus one course each in two other clusters. Variable content courses (e.g. ATH 377,ATH 390,ATH 477,ATH 480,ATH 491) will be allocated to the appropriate cluster, topic dependent.	17
<b>C. Practicum Course</b>		
	Take at least one Practicum course; these hours are included in the cluster requirement.	
<b>D. Restrictions</b>		
	Students may count up to two introductory courses (e.g. ATH 135, ATH 145, ATH 155, ATH 175, or ATH 185) as electives toward the major. <sup>1</sup>	
	Only four credit hours of ATH 415 or ATH 426 will count toward the major.	
Total Credit Hours		36

<sup>1</sup> Students should consult with the Chief Departmental Advisor on where an introductory course can count.

Students seeking the Bachelor of Arts in Anthropology meet the College of Arts and Science writing in the major requirement by completing the following courses: any 200, 300 level course and ATH 421.

## Cluster Requirements

### Engaging the Other

Code	Title	Credit Hours
ATH 235	Imagining and Encountering the Anthropological Other	3
ATH 254	Introduction to Russian and Eurasian Studies (When taught from an anthropological perspective)	3
ATH 301	Intercultural Relations	3
ATH 302	Africa: Anthropological Perspectives	3
ATH 304	Native North America: Anthropological Perspectives	3

ATH 305	Latin America: Anthropological Perspectives	3
ATH 306	Russia and Eurasia: Anthropological Perspectives	3
ATH 307	The Middle East: Anthropological Perspectives	3
ATH 308	South Asia: Anthropological Perspectives	3
ATH 329	Religions of Africa	3
ATH 335L	Multiculturalism in Europe: Anthropological Perspectives	3
ATH 358	Travelers, Migrants, and Refugees: Transnational Migration and Diasporic Communities	3
ATH 364	Language and Culture in Native North America	3
ATH 366	African Oral Traditions	3
ATH 411	Applied Anthropology	3
ATH 425	Ethnographic Field Methods	3
ATH 426	Field Research	4-6

**Ethnography and Culture**

Code	Title	Credit Hours
ATH 301	Intercultural Relations	3
ATH 325	Identity, Race, Gender, Class	3
ATH 329	Religions of Africa	3
ATH 331	Social Anthropology	3
ATH 345	Global Media, Ethnography, and Film	3
ATH 358	Travelers, Migrants, and Refugees: Transnational Migration and Diasporic Communities	3
ATH 361	Language and Power	3
ATH 368	Key Questions in Psychological Anthropology	3
ATH 384	Anthropology of Capitalism: Russia	3
ATH 403	Anthropology of Religion	3
ATH 405	Food, Taste, and Desire	3
ATH 411	Applied Anthropology	3
ATH 425	Ethnographic Field Methods	3
ATH 426	Field Research	4-6
ATH 428	Anthropology of Women's Health	3
ATH 432	Secrecy and Statecraft: Spies, Censors, and Prisoners in Authoritarian and Democratic Societies	3

**The Encultured Body**

Code	Title	Credit Hours
ATH 325	Identity, Race, Gender, Class	3
ATH 348	Introduction to Medical Anthropology	3
ATH 368	Key Questions in Psychological Anthropology	3
ATH 378	Doctors, Clinics, and Epidemics	3
ATH 428	Anthropology of Women's Health	3
ATH 448	Developing Solutions in Global Health	3

ATH 497	Socio-Ecology of Primates	3
ATH 498	Evolution of Human Behavior	3

**Material Worlds**

Code	Title	Credit Hours
ATH 388	Culture, Art, and Artifacts	3
ATH 405	Food, Taste, and Desire	3
ATH 415	Field Methods in Archaeology	1-6
ATH 416	Applying Archaeology	3
ATH 471	Ecological Anthropology	3

**Pathways to the Past**

Code	Title	Credit Hours
ATH 312	North American Archaeology	3
ATH 313	Latin American Archaeology	3
ATH 314	Old World Archaeology	3
ATH 355	Paleoanthropology	3
ATH 388	Culture, Art, and Artifacts	3
ATH 416	Applying Archaeology	3
ATH 431	Archaeology of Power	3
ATH 496	Observing Primate Behavior	4

**Language, Communication & Culture**

Code	Title	Credit Hours
ATH 219	Introduction to Linguistics	3
ATH 345	Global Media, Ethnography, and Film	3
ATH 361	Language and Power	3
ATH 364	Language and Culture in Native North America	3
ATH 366	African Oral Traditions	3
ATH 378	Doctors, Clinics, and Epidemics	3
ATH 465	Ethnography of Communication	3

**Evolution, Ecology, & Behavior**

Code	Title	Credit Hours
ATH 348	Introduction to Medical Anthropology	3
ATH 355	Paleoanthropology	3
ATH 395	Primate Biology and Behavior	3
ATH 403	Anthropology of Religion	3
ATH 431	Archaeology of Power	3
ATH 471	Ecological Anthropology	3
ATH 496	Observing Primate Behavior	4
ATH 497	Socio-Ecology of Primates	3
ATH 498	Evolution of Human Behavior	3

**Practicum Courses**

Code	Title	Credit Hours
ATH 415	Field Methods in Archaeology	1-6
ATH 416	Applying Archaeology	3
ATH 425	Ethnographic Field Methods	3
ATH 426	Field Research	4-6

ATH 448	Developing Solutions in Global Health	3
ATH 465	Ethnography of Communication	3
ATH 496	Observing Primate Behavior	4

## Biochemistry- Bachelor of Arts

For information, contact the Department of Chemistry and Biochemistry, 160 Hughes Laboratories, 513-529-2813.

This program is for students interested in a career in the life or health sciences or biochemistry. Students who anticipate graduate study in biochemistry should elect the B.S. Biochemistry program. Chemistry and required related courses cannot be taken on a credit/no-credit basis.

### Program Requirements

(38-39 semester hours, plus 22-24 related hours)

Code	Title	Credit Hours
<b>Core Courses</b>		
Select one of the following:		3-4
CHM 141	College Chemistry	
CHM 141H	College Chemistry	
CHM 141R	College Chemistry	
Select one of the following:		3
CHM 142	College Chemistry	
CHM 142M	College Chemistry for Majors	
CHM 142H	College Chemistry	
Select one of the following:		2
CHM 144M	College Chemistry Laboratory for Majors	
CHM 144H	College Chemistry Laboratory	
CHM 144	College Chemistry Laboratory (with approval)	
Select one of the following:		2
CHM 145M	College Chemistry Laboratory	
CHM 145H	College Chemistry Laboratory	
CHM 145	College Chemistry Laboratory (with approval)	
Select the following:		
CHM 251 & CHM 252	Organic Chemistry for Chemistry Majors and Organic Chemistry for Chemistry Majors	6
CHM 254 & CHM 255	Organic Chemistry Laboratory for Chemistry Majors and Organic Chemistry Laboratory for Chemistry Majors	4
CHM 375	Analytical Chemistry for Majors	3
CHM 432	Fundamentals of Biochemistry	4
CHM 438	Biochemistry Laboratory	2
CHM 471 or CHM 451	Biophysical Chemistry I Physical Chemistry for Chemistry Majors	3
CHM 472 or CHM 452	Biophysical Chemistry II Physical Chemistry for Chemistry Majors	3

CHM 491 or CHM 492	Chemistry in Societal Issues Independent Research Capstone in Chemistry	3
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#### Related Hours

MTH 151 & MTH 251 or MTH 249	Calculus I and Calculus II Calculus II	9-10
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5

#### Additional Course

Select one of the following:		3-4
BIO 203	Introduction to Cell Biology	
BIO 305	Human Physiology	
BIO 342	Genetics	
STA 301 or STA 333 or STA 363	Applied Statistics Nonparametric Statistics Introduction to Statistical Modeling	

Three credit hours at a 200 level or above in the following departments: BIO, CHM, CPB, GLG, MBI, PHY and STA.

Choices can also be made from:

MTH 222	Introduction to Linear Algebra
MTH 231	Elements of Discrete Mathematics
MTH 245	Differential Equations for Engineers
MTH 252	Calculus III
MTH 347	Differential Equations

<sup>1</sup> CHM 471 & CHM 472 are preferred

Students seeking the Bachelor of Arts in Biochemistry meet the College of Arts and Science writing in the major requirement by completing the following course: CHM 375.

## Biochemistry- Bachelor of Science

For information, contact the Department of Chemistry and Biochemistry, 160 Hughes Laboratories, 513-529-2813.

This major is usually chosen by students who want to enter the chemical industry or graduate school in chemistry, biochemistry, or related areas. Chemistry and required related courses cannot be taken on a credit/no-credit basis.

### Program Requirements

(44-45 semester hours, plus 28-29 related hours)

Code	Title	Credit Hours
<b>Core Courses</b>		
Select one of the following:		3-4
CHM 141	College Chemistry	
CHM 141H	College Chemistry	
CHM 141R	College Chemistry	
Select one of the following:		3
CHM 142	College Chemistry	
CHM 142M	College Chemistry for Majors	

CHM 142H	College Chemistry	
Select one of the following:		2
CHM 144M	College Chemistry Laboratory for Majors	
CHM 144H	College Chemistry Laboratory	
CHM 144	College Chemistry Laboratory (with approval)	
Select one of the following:		2
CHM 145M	College Chemistry Laboratory	
CHM 145H	College Chemistry Laboratory	
CHM 145	College Chemistry Laboratory (with approval)	
Select the following:		
CHM 251 & CHM 252	Organic Chemistry for Chemistry Majors and Organic Chemistry for Chemistry Majors	6
CHM 254 & CHM 255	Organic Chemistry Laboratory for Chemistry Majors and Organic Chemistry Laboratory for Chemistry Majors	4
CHM 375	Analytical Chemistry for Majors	3
CHM 432	Fundamentals of Biochemistry	4
CHM 438	Biochemistry Laboratory	2
CHM 471	Biophysical Chemistry I <sup>1</sup>	3
or CHM 451	Physical Chemistry for Chemistry Majors	
CHM 472	Biophysical Chemistry II <sup>1</sup>	3
or CHM 452	Physical Chemistry for Chemistry Majors	
CHM 491	Chemistry in Societal Issues	3
or CHM 492	Independent Research Capstone in Chemistry	

**Advanced Chemistry Coursework**

An additional six (6) advanced credit hours in CHM courses are required, of which at least 4 credit hours (2 offerings) should be from CHM 430, Special Topics in Biochemistry

CHM 430	Topics in Biochemistry	
The remaining topics can be chosen from:		
CHM 411	Learning Theories in Chemistry	
CHM 415	Misconceptions in Chemistry	
CHM 417	Advanced Inorganic Chemistry	
CHM 419	Synthesis Lab	
CHM 424	Advanced Experimental Techniques in Structural and Functional Genomics	
CHM 426	Spectroscopic Identification of Structure	
CHM 429	Polymer Chemistry	
CHM 450	Topics in Organic Chemistry	
CHM 454	Instrumental Analysis	
CHM 456	Chemical Measurements II	
CHM 460	Topics in Analytical Chemistry	
CHM 470	Topics in Physical Chemistry	

**Related Hours (28-29 required)**

MTH 151 & MTH 251	Calculus I and Calculus II (or equivalents)	9-10
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or MTH 249	Calculus II	
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5

**Additional Courses**

Select a minimum of three credit hours in mathematics or statistics from the following:

MTH 222	Introduction to Linear Algebra	
MTH 231	Elements of Discrete Mathematics	
MTH 245	Differential Equations for Engineers	
MTH 252	Calculus III	
MTH 347	Differential Equations	
STA 301	Applied Statistics	
or STA 333	Nonparametric Statistics	
or STA 363	Introduction to Statistical Modeling	
BIO 466	Bioinformatics Computing Skills	

Select a minimum of six hours of the following:

BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	6
BIO 203	Introduction to Cell Biology	
BIO 342	Genetics	
BIO/MBI 485	Bioinformatics Principles	
PHY 421	Molecular and Cellular Biophysics	
PHY 422	Physics for Medicine and Biology	

Total Credit Hours 72-74

<sup>1</sup> CHM 471 & CHM 472 are preferred

## Biological Physics- Bachelor of Science

For information, contact the Department of Physics, 217 Kreger Hall, 513-529-5625.

A biological physics major explores the physical behavior of biological and biologically-inspired systems, applying physical techniques to solve problems in physics, biology, and medicine. The program is multi-disciplinary, drawing from coursework in physics, biology, chemistry, and mathematics. It combines a broad science curriculum with physical and mathematical rigor in preparation for careers in biological physics, biophysics, medical physics, medicine and biomedical engineering.

## Program Requirements

(77-85 semester hours)

Code	Title	Credit Hours
<b>Biology</b>		
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO 203	Introduction to Cell Biology	3
<b>Chemistry</b>		
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5

CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	5
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Select one of the following: 4-5

CHM 241 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	
CHM 231	Fundamentals of Organic Chemistry	

### Mathematics

Calculus sequence ending with MTH 252 12-14

STA 301	Applied Statistics	3
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### Physics

PHY 191 & PHY 192	General Physics with Laboratory I and General Physics with Laboratory II	10
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PHY 281	Contemporary Physics I: Foundations	3
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PHY 282	Contemporary Physics II: Frontiers	3
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PHY 293	Contemporary Physics Laboratory	2
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PHY 292 & PHY 294	Electronic Instrumentation and Laboratory in Electronic Instrumentation	4
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PHY 286	Introduction to Computational Physics	3
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PHY 421 or PHY 422	Molecular and Cellular Biophysics Physics for Medicine and Biology	4
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PHY 401	Physics Assessment Examination	0
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### Electives

Select four with at least one from each category of the following: 12-17

Category 1: Physics

PHY 483	Mathematical Methods in Physics	
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Any course numbered 400 and above, excluding seminar, research, and independent study courses (PHY 400, PHY 410, PHY 440, PHY 477, PHY 480, PHY 488)

Category 2: Natural and Applied Science <sup>1</sup>

BIO 305	Human Physiology	
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BIO 425	Environmental Plant Physiology	
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CHM 242 & CHM 245	Organic Chemistry and Organic Chemistry Laboratory	
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CHM 332 or CHM 432	Outlines of Biochemistry Fundamentals of Biochemistry	
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CHM 471	Biophysical Chemistry I	
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CHM 472	Biophysical Chemistry II	
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CPB 418	Biological Transport Phenomena	
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KNH 468 & 468L	Physiology of Exercise and Physical Activity and Physiology of Exercise and Physical Activity Laboratory	
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MBI 201	General Microbiology	
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A course from Physics category

Category 3: Mathematics

MTH 222	Introduction to Linear Algebra	
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MTH 347	Differential Equations	
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PHY 483	Mathematical Methods in Physics	
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Total Credit Hours 77-85

## Biology- Bachelor of Arts

For information, contact the Department of Biology, 212 Pearson Hall, 513-529-3100.

Biology is a natural science concerned with the study of life and living organisms. The biology major can be tailored to meet the needs of students interested in the health sciences, animal or plant physiology, cell and molecular biology, ecology or environmental studies, or evolution and systematics. It is possible to complete a Biology Major while earning either the Bachelor of Arts or Bachelor of Science.

Students may not double major in Biology and Botany, or in Biology and Zoology.

## Program Requirements

(32 semester hours, plus 17 related hours)

Code	Title	Credit Hours
<b>Core Courses</b>		
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
<b>Advanced Course Requirements <sup>1</sup></b>		24
Select three of the following:		
BIO 203	Introduction to Cell Biology	
BIO 206 or BIO 204	Evolutionary Biology Evolution of Plant Biodiversity: Genes to Biosphere	
BIO 209	Fundamentals of Ecology	
BIO 342	Genetics	
Laboratory Course Requirement:		
Select at least one advanced course with a laboratory component <sup>2</sup>		
<b>Related Courses</b>		
One year of chemistry:		10-11
First Term:		
CHM 141 or CHM 141R or CHM 141H	College Chemistry College Chemistry College Chemistry	
and		
CHM 144 or CHM 144H or CHM 144M	College Chemistry Laboratory College Chemistry Laboratory College Chemistry Laboratory for Majors	
Second Term:		
CHM 142 or CHM 142H or CHM 142M	College Chemistry College Chemistry College Chemistry for Majors	
and		
CHM 145 or CHM 145H or CHM 145M	College Chemistry Laboratory College Chemistry Laboratory College Chemistry Laboratory	
One course in Statistics		3-4

<sup>1</sup> Some courses may have pre- or co-requisites

Select related courses chosen from ATH, CHM, CIT, CPB, CSE, ENV, GLG, GEO, IES, MTH, MBI, PHY or STA

- <sup>1</sup> The remaining 24 semester hours must be fulfilled by taking courses at the 200 level or above. Advanced microbiology (MBI) courses and IES 275 can count for up to nine semester hours of this requirement. No more than three semester hours of independent study/research/internship may apply to the major. At least one 400 level course (minimum three semester hours) must be taken.
- <sup>2</sup> Three semester hours of independent research, taken at the 200-level or above, can be used in lieu of a formal course to fulfill this laboratory requirement

Students seeking the Bachelor of Arts in Biology meet the College of Arts and Science writing in the major requirement by completing the following courses: two W Biology courses at the 200- or 300-level and one biology W course at the 400-level. As an alternative to the 400-level course, students may complete an independent study that includes technical science writing. Upon completion of an independent study, the student must submit, with the signed support of a faculty member, a letter of certification indicating that s/he has successfully completed the technical science writing requirement.

## Biology- Bachelor of Science

For information, contact the Department of Biology, 212 Pearson Hall, 513-529-3100.

Biology is a natural science concerned with the study of life and living organisms. The biology major can be tailored to meet the needs of students interested in the health sciences, animal or plant physiology, cell and molecular biology, ecology or environmental studies, or evolution and systematics. It is possible to complete a Biology Major while earning either the Bachelor of Arts or Bachelor of Science.

Students may not double major in Biology and Botany, or in Biology and Zoology.

## Program Requirements

(40 semester hours, plus 33 related hours)

Code	Title	Credit Hours
<b>Core Courses</b>		
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
<b>Advanced Course Requirements</b> <sup>1</sup>		
BIO 203	Introduction to Cell Biology	3
BIO 206 or BIO 204	Evolutionary Biology Evolution of Plant Biodiversity: Genes to Biosphere	3-4
BIO 209	Fundamentals of Ecology	3
BIO 342	Genetics	3

Laboratory Course Requirement:

Select at least two advanced courses with a laboratory component<sup>2</sup>

Plant-focused Courses:

Select at least one of the following:		3-4
BIO 205	Dendrology	
BIO 221	Plant Propagation	
BIO 302	Plant Taxonomy	
BIO 306	Basic Horticulture	
BIO 314	Plant and Fungal Diversity	
BIO 401	Plant Ecology	
BIO 402	Plant Anatomy	
BIO 403	Plant Development	
BIO 425	Environmental Plant Physiology	
BIO/GEO 431	Global Plant Diversity	

Animal Focused Courses:

Select at least one of the following:		3-4
BIO 201	Human Anatomy	
BIO 305	Human Physiology	
BIO 311	Vertebrate Zoology	
BIO 312	Invertebrate Zoology	
BIO 361	Patterns in Development	
BIO 407	Ichthyology	
BIO 408	Ornithology	
BIO 409	Herpetology	
BIO 410	Mammalogy	
BIO 411	General Entomology	
BIO 435	Winter Biology	
BIO 449	Biology of Cancer	
BIO 452	Nerve and Muscle Physiology	
BIO 453	Animal Physiological Ecology	
BIO 454	Endocrinology	
BIO 457	Neuroanatomy	
BIO 465	Animal Behavior	
BIO 469	Neurophysiology	

**Related Courses** 33

Two years of chemistry are required: 10-11

First Term:

CHM 141 College Chemistry  
or CHM 141R College Chemistry  
or CHM 141H College Chemistry

and

CHM 144 College Chemistry Laboratory  
or CHM 144H College Chemistry Laboratory  
or CHM 144N College Chemistry Laboratory for Majors

Second Term:

CHM 142 College Chemistry  
or CHM 142H College Chemistry  
or CHM 142N College Chemistry for Majors

and

CHM 145 College Chemistry Laboratory  
or CHM 145H College Chemistry Laboratory  
or CHM 145N College Chemistry Laboratory

Select one of the following options: 8-10

Option 1:

CHM 241 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	
CHM 242 & CHM 245	Organic Chemistry and Organic Chemistry Laboratory	
Option 2:		
CHM 231 & CHM 332 & CHM 332L	Fundamentals of Organic Chemistry and Outlines of Biochemistry and Outlines of Biochemistry Lab	
One semester of physics:		4-5
PHY 161 or PHY 191	Physics for the Life Sciences with Laboratory I General Physics with Laboratory I	
Select one statistics and one calculus course		7-9
Select one microbiology course (200 level or above)		3-4

<sup>1</sup> The remaining 32 semester hours must be fulfilled by taking biology courses at 200 level or above. Advanced microbiology (MBI) courses and IES 275 can count for up to nine semester hours of this requirement. No more than three semester hours of independent study/research/internship may apply to the major. At least one 400 level course (minimum three semester hours) must be taken.

<sup>2</sup> Three semester hours of independent research can be used in lieu of one of these courses

## Botany- Bachelor of Arts

For information, contact the Department of Biology, 212 Pearson Hall, 513-529-3100.

Students may double major in Botany and Zoology, but in that case only nine credits of the Advanced Hours requirement may be used for both degrees.

The Minor in Horticulture, Minor in Molecular Biology, Minor in Plant Sciences, and/or the Co-major in Environmental Science may be completed along with the A.B. to obtain an emphasis in these areas.

## Program Requirements

(30 semester hours, 22 hours must be advanced)<sup>1</sup>

Code	Title	Credit Hours
Select one of the following options:		7-8
Option A:		
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	
Option B:		
BIO 191	Plant Biology	
Plus any Biological Science Foundation Course from the Global Miami Plan		
Take the following:		
BIO 204	Evolution of Plant Biodiversity: Genes to Biosphere	4
Select one of the following:		

BIO 425 or BIO 490	Environmental Plant Physiology Botany Capstone Seminar	4
Select at least one of the following courses in applied botany:		3-4
BIO 221	Plant Propagation	
BIO 241	Botanical Principles in Landscape Gardening	
BIO 244	Viticulture and Enology	
BIO 255	Introduction to Biotechnology	
BIO 306	Basic Horticulture	
Select at least one of the following courses in plant diversity:		4
BIO 205	Dendrology	
BIO 302	Plant Taxonomy	
BIO 314	Plant and Fungal Diversity	
Select at least one of the following courses in genetics, cell biology, or physiology:		3-4
BIO 203	Introduction to Cell Biology	
BIO 342	Genetics	
BIO 402	Plant Anatomy	
BIO 403	Plant Development	
BIO 425	Environmental Plant Physiology	

### Related Hours

A course in CHM of 3 credit hours or more, plus other courses from the departments of CHM, CSE, IES, GEO, GLG, MTH, MBI, PHY, or STA <sup>2</sup> 12

<sup>1</sup> One course must be at the 300 or 400 level. No more than three hours of research/internship may count toward the major. Research/internship hours must be taken credit/no credit.

<sup>2</sup> Within Mathematics, MTH 151, MTH 251, or MTH 252 is recommended.

The following courses may be applied to the major:

Code	Title	Credit Hours
BIO 209	Fundamentals of Ecology	3
BIO 241	Botanical Principles in Landscape Gardening	3
BIO 333	Field Ecology	3
BIO 340	Internship	3
BIO 351	Environmental Education: Focus on Natural History	4
BIO 364	Molecular Techniques	2
BIO 401	Plant Ecology	3
BIO 424	Advanced Experimental Techniques in Structural and Functional Genomics	4
BIO 431	Global Plant Diversity	3
BIO 432	Ecoregions of North America	3
BIO 466	Bioinformatics Computing Skills	3
BIO 467	Conservation Biology	3
BIO 480	Departmental Honors	1-6
BIO 481	Theory of Electron Microscopy	3
BIO 482	Scanning Electron Microscopy Laboratory	2

BIO 483	Transmission Electron Microscopy Laboratory	3
BIO 485	Bioinformatics Principles	3

**Note:** For graduate study in biological sciences, most programs require organic chemistry, many require calculus and/or statistics, and some require a physics sequence.

Students seeking the Bachelor of Arts in Botany meet the College of Arts and Science writing in the major requirement by completing the following courses: two W Biology courses at the 200- or 300-level and one biology W course at the 400-level. As an alternative to the 400-level course, students may complete an independent study that includes technical science writing. Upon completion of an independent study, the student must submit, with the signed support of a faculty member, a letter of certification indicating that s/he has successfully completed the technical science writing requirement.

## Botany- Bachelor of Science

For information, contact the Department of Biology, 212 Pearson Hall, 513-529-3100.

Students may double major in Botany and Zoology, but in that case only nine credits of the Advanced Hours requirement may be used for both degrees.

The Minor in Horticulture, Minor in Molecular Biology, Minor in Plant Sciences, and/or the Co-major in Environmental Science may be completed along with the B.S. to obtain an emphasis in these areas.

### Program Requirements: Basic Major

(40 BIO semester hours, 28 must be advanced hours; 24-33 related hours)

Code	Title	Credit Hours
<b>Core Courses</b>		
Select one of the following options:		7-8
Option A:		
BIO 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	
BIO 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	
Option B:		
BIO 191	Plant Biology	
Plus any Biological Science Foundation Course from the Global Miami Plan		
Select the following:		
BIO 203	Introduction to Cell Biology	3
BIO 204	Evolution of Plant Biodiversity: Genes to Biosphere	4
BIO 425	Environmental Plant Physiology	4
or BIO 490	Botany Capstone Seminar	
Select at least one course in applied botany:		3-4
BIO 221	Plant Propagation	
BIO 241	Botanical Principles in Landscape Gardening	

BIO 244	Viticulture and Enology	
BIO 255	Introduction to Biotechnology	
BIO 306	Basic Horticulture	
Select at least one course in plant diversity:		4
BIO 205	Dendrology	
BIO 302	Plant Taxonomy	
BIO 314	Plant and Fungal Diversity	
Select at least one course in genetics, cell biology, or physiology:		3-4
BIO 342	Genetics	
BIO 402	Plant Anatomy	
BIO 403	Plant Development	
BIO 425	Environmental Plant Physiology	
Select at least one course in ecology:		3-4
BIO 209	Fundamentals of Ecology	
BIO 351	Environmental Education: Focus on Natural History	
BIO 431	Global Plant Diversity	
BIO 432	Ecoregions of North America	
BIO 467	Conservation Biology	
Select from unused courses above or from the following additional courses to equal 40 BIO hours, 28 of which must be at/above the 200-level:		9-5
BIO 241	Botanical Principles in Landscape Gardening	
BIO 333	Field Ecology	
BIO 340	Internship	
BIO 364	Molecular Techniques	
BIO 400	Capstone Seminar: Contemporary Issues in Biology	
BIO 401	Plant Ecology	
BIO 424	Advanced Experimental Techniques in Structural and Functional Genomics	
BIO 466	Bioinformatics Computing Skills	
BIO 480	Departmental Honors	
BIO 481	Theory of Electron Microscopy	
BIO 482	Scanning Electron Microscopy Laboratory	
BIO 483	Transmission Electron Microscopy Laboratory	
BIO 485	Bioinformatics Principles	
<b>Related Hours</b>		
Any Thematic Sequence in Chemistry		18
Select one of the following:		3-10
PHY 161 & PHY 162	Physics for the Life Sciences with Laboratory I and Physics for the Life Sciences with Laboratory II	
PHY 191 & PHY 192	General Physics with Laboratory I and General Physics with Laboratory II	
GLG 111	The Dynamic Earth	
GLG 121	Environmental Geology	
GLG 141	Geology of U.S. National Parks	
GEO 121	Earth's Physical Environment	

Select one of the following: 3-5

STA 261	Statistics
STA 301	Applied Statistics
STA 368	Introduction to Statistics
STA 462	Inferential Statistics
MTH 151	Calculus I
MTH 251	Calculus II
MTH 252	Calculus III

Total Credit Hours 64-73

Note: No more than three hours of research/internship may count toward the major. Research/internship hours must be taken credit/no credit.

Note: For graduate study in biological sciences, many require calculus and/or statistics, and some require a physics sequence.

## Chemistry- Bachelor of Arts

For information, contact the Department of Chemistry and Biochemistry, 160 Hughes Laboratories, 513-529-2813.

This program is for students interested in a career in the life or health sciences, physical sciences related to chemistry, or in teaching chemistry in secondary school. Students who anticipate graduate study in chemistry should elect the B.S. Chemistry Program. Chemistry and required related courses cannot be taken on a credit/no-credit basis.

### Program Requirements

(32 semester hours, plus 28-29 related hours)

Code	Title	Credit Hours
<b>Core courses</b>		
Select one of the following:		3
CHM 141	College Chemistry	
CHM 141H	College Chemistry	
CHM 141R	College Chemistry	
Select one of the following:		3
CHM 142	College Chemistry	
CHM 142M	College Chemistry for Majors	
CHM 142H	College Chemistry	
Select one of the following:		2
CHM 144M	College Chemistry Laboratory for Majors	
CHM 144H	College Chemistry Laboratory	
CHM 144	College Chemistry Laboratory (with approval)	
Select one of the following:		2
CHM 145M	College Chemistry Laboratory	
CHM 145H	College Chemistry Laboratory	
CHM 145	College Chemistry Laboratory (with approval)	
Select the following:		

CHM 251 & CHM 252	Organic Chemistry for Chemistry Majors and Organic Chemistry for Chemistry Majors	6
CHM 254 & CHM 255	Organic Chemistry Laboratory for Chemistry Majors and Organic Chemistry Laboratory for Chemistry Majors	4
CHM 375	Analytical Chemistry for Majors	3
CHM 451 or CHM 471	Physical Chemistry for Chemistry Majors Biophysical Chemistry I	3
CHM 452 or CHM 472	Physical Chemistry for Chemistry Majors Biophysical Chemistry II	3
CHM 491 or CHM 492	Chemistry in Societal Issues Independent Research Capstone in Chemistry	3

#### Related Hours

MTH 151 & MTH 251 or MTH 249	Calculus I and Calculus II (or equivalents) Calculus II	9-10
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5

#### Additional Science Courses

Select nine credit hours at 200 level or above in any of the following departments: BIO, CHM, CPB, GLG, MBI, PHY and STA. 9

Choices can also be made from the following:

MTH 222	Introduction to Linear Algebra
MTH 231	Elements of Discrete Mathematics
MTH 245	Differential Equations for Engineers
MTH 252	Calculus III
MTH 347	Differential Equations

Total Credit Hours 60-61

<sup>1</sup> CHM 451 and CHM 452 are preferred.

Students seeking the Bachelor of Arts in Chemistry meet the College of Arts and Science writing in the major requirement by completing the following course: CHM 375 .

## Chemistry- Bachelor of Science

For information, contact the Department of Chemistry and Biochemistry, 160 Hughes Laboratories, 513-529-2813.

This program is usually chosen by students who want to enter the chemical industry or graduate school in chemistry, biochemistry, or related areas. Chemistry and required related courses cannot be taken on a credit/no-credit basis.

### Program Requirements

(46 semester hours, plus 22-23 related hours)

Code	Title	Credit Hours
<b>Core courses</b>		
Select one of the following:		3-4

CHM 141	College Chemistry	
CHM 141H	College Chemistry	
CHM 141R	College Chemistry	
Select one of the following:		3
CHM 142	College Chemistry	
CHM 142M	College Chemistry for Majors	
CHM 142H	College Chemistry	
Select one of the following:		2
CHM 144M	College Chemistry Laboratory for Majors	
CHM 144H	College Chemistry Laboratory	
CHM 144	College Chemistry Laboratory (with approval)	
Select one of the following:		2
CHM 145M	College Chemistry Laboratory	
CHM 145H	College Chemistry Laboratory	
CHM 145	College Chemistry Laboratory (with approval)	
Select the following:		
CHM 251 & CHM 252	Organic Chemistry for Chemistry Majors and Organic Chemistry for Chemistry Majors	6
CHM 254 & CHM 255	Organic Chemistry Laboratory for Chemistry Majors and Organic Chemistry Laboratory for Chemistry Majors	4
CHM 375	Analytical Chemistry for Majors	3
CHM 451	Physical Chemistry for Chemistry Majors <sup>1</sup>	3
or CHM 471	Biophysical Chemistry I	
CHM 452	Physical Chemistry for Chemistry Majors <sup>1</sup>	3
or CHM 472	Biophysical Chemistry II	
CHM 491	Chemistry in Societal Issues	3
or CHM 492	Independent Research Capstone in Chemistry	
<b>Advanced Chemistry Coursework</b>		
Select 14 advanced credit hours at 200 level or above, of which at least two are advanced lab courses, from the following:		14
CHM 419	Synthesis Lab	
CHM 456	Chemical Measurements II	
CHM 438	Biochemistry Laboratory	
Select additional hours of the following:		
CHM 417	Advanced Inorganic Chemistry	
CHM 411	Learning Theories in Chemistry	
CHM 415	Misconceptions in Chemistry	
CHM 426	Spectroscopic Identification of Structure	
CHM 429	Polymer Chemistry	
CHM 430	Topics in Biochemistry	
CHM 432	Fundamentals of Biochemistry	
CHM 450	Topics in Organic Chemistry	
CHM 454	Instrumental Analysis	

CHM 460	Topics in Analytical Chemistry	
CHM 470	Topics in Physical Chemistry	
<b>Related Hours (22-23 required)</b>		
MTH 151 & MTH 251	Calculus I and Calculus II (or equivalents)	9-10
or MTH 249	Calculus II	
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5
Additional Courses (minimum of 3 hours in mathematics or statistics):		3-4
MTH 222	Introduction to Linear Algebra	
MTH 231	Elements of Discrete Mathematics	
MTH 245	Differential Equations for Engineers	
MTH 252	Calculus III	
MTH 347	Differential Equations	
STA 301	Applied Statistics	
or STA 333	Nonparametric Statistics	
or STA 363	Introduction to Statistical Modeling	
Total Credit Hours		68-71

<sup>1</sup> CHM 451 and CHM 452 are preferred.

## Classical Humanities- Bachelor of Arts

For information, contact the Department of Classics, 105 Irvin Hall, 513-529-1480.

Classics is the study of literature, art, history, archaeology, philosophy, and cultures of the ancient Greeks and Romans. Achievements of Greco-Roman civilization are important to study for their inherent power and beauty and for the extraordinary influence they have on cultures that followed. Study of the Greco-Roman world deepens your understanding of the origins of Western culture and offers alternatives to social, political, and cultural values of our world. This major gives you a broad spectrum of classical culture and civilization without primary emphasis on study in classical languages.

Graduate work in Classics, Greek, Latin or Classical Archaeology requires not only appropriate experience reading Greek and Latin, but a reading knowledge of French or German as well. Students planning to go to graduate school should consult with the department as early as possible to design an appropriate course of study.

## Program Requirements

(36 semester hours)

Code	Title	Credit Hours
Select two of the following:		6
CLS 101	Greek Civilization in its Mediterranean Context	
CLS 102	Roman Civilization	
CLS 121	Introduction to Classical Mythology	
Select one of the following:		3
ART 382	Greek and Roman Sculpture	
ART 383	Greek and Roman Painting	

Select the following:	
CLS 401            The Age of Pericles	3
or CLS 402      The Age of Augustus	
Select remaining hours of the following:	18
Any course in classical humanities	
Any course in Greek or Latin beyond the first year	
Related Hours:	6
Choose from such areas as anthropology, architecture, art, history, language, literature, philosophy, and religion to make up an integrated plan of study in classical humanities. Four hours of Greek or Latin at the 100 level may be counted toward this requirement. You must obtain the written approval of your advisor for any related hours courses.	
<b>Total Credit Hours</b>	<b>36</b>

Knowledge of at least one other foreign language is recommended.

Students seeking the Bachelor of Arts in Classical Humanities meet the College of Arts and Science writing in the major requirement by completing one of the following courses at the 200 level: CLS 235, CLS 212 or CLS 211; one of the following courses at the 300 level: CLS 331 or CLS 361; and one of the following courses: CLS 401 or CLS 402 (capstone). There is a rotation system for the 200 and 300 level courses. One at each level will count for the requirement each year.

## Classical Languages- Bachelor of Arts

For information, contact the Department of Classics, 105 Irvin Hall, 513-529-1480.

This program is an in-depth study of classical culture possible only through the study of the classical languages. The study of ancient Greek and Latin has provided the basis of classical education for centuries. This major leads to the development of enhanced skills in grammar and textual analysis, and the ability to read the work of ancient authors in their own language. Classical languages provides exposure to word roots in English, as well as familiarity with key terminology in a range of professions, not least medicine and law. It also enhances the study of other European languages as well as studies in early Christianity

Graduate work in Classics, Greek, or Latin requires not only appropriate experience reading Greek and Latin, but a reading knowledge of German and French as well. Students planning to go to graduate school should consult with the department as early as possible to design an appropriate course of study.

## Teacher Licensure

Students who wish to combine teacher licensure with an Arts and Science major must observe the rules, procedures, and restrictions pertaining to admission to a licensure cohort as outlined in the College of Education, Health and Society chapter. For information, contact the Office of Student Services in the College of Education, Health and Society, 202 McGuffey Hall, 513-529-6418.

## Program Requirements

(24 semester hours, plus 16 related hours)

Code	Title	Credit Hours
Select 24 semester hours in Latin and Greek language and literature at 200 level or above <sup>1</sup>		24
Select 16 semester hours of related courses <sup>2</sup>		16
<b>Total Credit Hours</b>		<b>40</b>

- 1 Either GRK 102 or LAT 102 can be counted toward the major provided you have taken advanced coursework in the other language.
- 2 CLS courses can count as related hours. Choose remaining hours from such areas as art, history, language, literature, philosophy and religion with an advisor to make up an integrated plan of study. You must obtain the written approval of your advisor for any related hours courses.

Knowledge of at least one other foreign language is recommended.

Students seeking the Bachelor of Arts in Classical Languages meet the College of Arts and Science writing in the major requirement by completing the following courses: LAT 310 and LAT 410.

## Comparative Media Studies Co-Major

For information, contact the Department of Media, Journalism and Film, 120 Williams Hall, 513-529-3521.

The CMS co-major will help you successfully navigate a life shaped by numerous and continually evolving media technologies like television, film, print, radio, mp3, video games, websites, smart phone apps, geographic mapping, data visualization software, and many more. As a CMS co-major, you will compare such media technologies and examine how different media function in different historical and cultural contexts. In doing so, you will encounter disciplinary methods drawn from communication, media studies, sociology, history, music, art history, anthropology, computer science, philosophy, business and others. CMS is designed to help you control the media in your life rather than be controlled by them.

The CMS curriculum is highly flexible, allowing students to create a self-designed major and is ideal for students interested in gaining experience engaging with a wide range of media technologies. As a co-major, students are required to complete a primary major. There is no specific degree designation for the co-major; students receive the degree designation of their primary major.

## Program Requirements

(31 semester hours)

**Complete a major in one of the divisions of the university.<sup>1</sup>**

Code	Title	Credit Hours
<b>Core <sup>2</sup></b>		
MAC 143	Introduction to Media	3
CMS 101	The Smartphone and Society	3

CMS 301	Comparative Approaches to Media Studies	3
CMS 401	Senior Seminar in Comparative Media Studies	3

**Critical/Analytical<sup>3</sup>**

You will consult with your CMS advisor to identify 3 courses from across the university relevant to your selected track. At least one of these courses must be a CMS-coded course. For non-CMS coded courses, you will be responsible for completing a project connecting that course content to track-specific concepts gained in CMS 201. If deemed appropriate by your advisor, that project can be completed through the course's standard assignments. If the course's standard assignments are not appropriate, you will design an assignment in consultation with your CMS advisor. Below, we provide a list of a few courses CMS students might be interested in taking. NOTE: many more courses could be used to fulfill this requirement even if they are not explicitly about media. For example: a student could make a History course about 19th century Russia a CMS-experience by completing a project that examines the role newspapers played in Russian politics.

Each track must include the following:

CMS 350	Special Topics in Comparative Media Studies
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Comparative Media Technologies:

Relevant courses include, but are not limited to the following:

CMS 350	Special Topics in Comparative Media Studies
ENG/IMS 171	Humanities and Technology
IMS 238	Narrative and Digital Technology
MAC 355	Media Technology & Culture

Comparative Media Cultures:

Relevant courses include, but are not limited to the following:

CMS 350	Special Topics in Comparative Media Studies
POL 356	Mass Media and Politics
RUS 263	Soviet & Post-Soviet Russian Cinema

Comparative Media Histories:

Relevant courses include, but are not limited to the following:

CMS 350	Special Topics in Comparative Media Studies
HST 252	History at the Movies
CLS 210S	Roman Spectacle
MAC 215	Media History

**Production Requirement** 9

In addition to the media production experiences you develop in CMS core courses, you must also develop a minimum competency in a form of media production of your choosing. Pick one of the following ways to satisfy this requirement:

Complete 3 courses (minimum 9 credits) in an individualized production track approved by your CMS advisor.

Complete a minor or certificate in a production-oriented program (e.g. Computer Science, Geographic Information Science Certificate).

Complete a first major with a substantial media production component (e.g. IMS, Computer Science, Art, Graphic Design, English/Creative Writing or Professional Writing, Paper Engineering).

CMS 101	The Smartphone and Society	3
Total Credit Hours		33

- <sup>1</sup> As a Co-Major, students must complete a second major. The second major must be outside the Department of Media, Journalism, and Film.
- <sup>2</sup> CMS 101 is the introductory course to the co-major. CMS 301 is the prerequisite for CMS 401.
- <sup>3</sup> Students will be responsible for completing a project connecting that course content to track-specific concepts/tools. If deemed appropriate by your advisor, that project can be completed through the course's standard workload. Otherwise, additional course work designed in consultation with CMS advisor will be developed.

## Critical and Classical Languages and Cultures Co-Major

For information, contact the Department of German, Russian, Asian, and Middle Eastern Languages and Cultures, 172 Irvin Hall, 513-529-2526.

Students are increasingly electing to study more than one foreign language and, quite frequently, combine a Western language with a non-Western one. Those who decide to branch out into a second language often derive the greatest benefit if they move beyond the beginning level of their second language. This co-major is designed to help students structure language course selections so that they can acquire significant competence in both of the languages, even if it does not delve as deeply into either language as a major otherwise would. This focus on language acquisition can be a powerful prospective professional skill.

Studying abroad is highly recommended, but not required for the co-major, and any university-level study of either targeted language or other required course(s) can count; courses in unrelated disciplines may not be applied toward the co-major requirements.

Students majoring in: German; East Asian Languages and Cultures; Russian, East European, and Eurasian Studies; or Classical Languages, may not select languages being used in their major.

Students minoring in Arabic, Chinese, German, Japanese, Classical Languages, or Russian may not select languages being used in their minor.

## Program Requirements

(33-34 semester hours)

Code	Title	Credit Hours
<b>Language One</b>		15
Choose from:		
ARB 201	Intermediate Modern Arabic	
or CHI 201	Second Year Chinese	
or GER 201	Second Year German	
or JPN 201	Second Year Japanese	
or LAT 201	Intermediate Latin	
or RUS 201	Intermediate Russian	
ARB 202	Intermediate Modern Arabic	
or CHI 202	Second Year Chinese	
or GER 202	Second Year German	
or JPN 202	Second Year Japanese	
or LAT 202	Representative Latin Authors	
or RUS 202	Intermediate Russian	
ARB 301	Advanced Arabic	
or CHI 301	Third Year Chinese	
or GER 301	German Language Through the Media	
or JPN 301	Third Year Japanese	
or RUS 301	Advanced Russian	
300-level course taught in the language		
400-level course taught in the language		
<b>Language Two</b>		12-13
Choose from unused languages listed in language one		
ARB 102	Elementary Arabic II	
or CHI 102	Elementary Chinese	
or GER 102	Beginning German	
or GER 111	Review of Basic German	
or JPN 102	First Year Japanese	
or LAT 102	Beginning Latin	
or LAT 111	Review Latin	
or RUS 102	Beginner's Course	
ARB 201	Intermediate Modern Arabic	
or CHI 201	Second Year Chinese	
or GER 201	Second Year German	
or JPN 201	Second Year Japanese	
or LAT 201	Intermediate Latin	
or RUS 201	Intermediate Russian	
ARB 202	Intermediate Modern Arabic	
or CHI 202	Second Year Chinese	
or GER 202	Second Year German	
or JPN 202	Second Year Japanese	
or LAT 202	Representative Latin Authors	
or RUS 202	Intermediate Russian	
300-level course taught in the language		
<b>Advanced Study</b>		6
300/400-level course in language one or two; taught in the language <sup>1</sup>		
300/400-level course in language one or two; taught in the language <sup>1</sup>		
Total Credit Hours		33-34

<sup>1</sup> Courses taught in English that are relevant to either language one or two (ex. German music, Russian literature, Chinese art, etc.) can be substituted with permission of the department.

## Critical Race and Ethnic Studies - Bachelor of Arts

The **Critical Race and Ethnic Studies** major fosters the critical and interdisciplinary study of race, ethnicity, and/or indigeneity in an increasingly interconnected world. Students develop a deep understanding of the particular historical, social, cultural, and political experiences of individual racialized groups within and beyond the United States, as well as the relations among them. Students choose one of three tracks: they may focus on one social group, or compare two of these groups, or create a self-designed thematic approach.

### Program Requirements

(30 semester hours)

Code	Title	Credit Hours
<b>Core Courses</b>		
CRE 151	Introduction to Critical Race and Ethnic Studies	3
AAA/BWS/LAS/WGS 211	Writing with Purpose: Interdisciplinary Inquiry and Communication	3
GIC 421	Critical Race and Post-Colonial Studies	3
<b>Capstone Requirement</b>		3
Take any capstone in the department of Global and Intercultural Studies		
<b>Tracks</b>		18
Students are required to complete one track; see below for full course lists		
A: Social Group Track		
Take 18 credits from one of the following groups: African and African Diaspora Studies, Latina/o Studies, Asian American/Asian Studies, Native Indigeneity Studies; at least two courses must be 300-level or above		
B: Comparative Race and Ethnicity Track		
Take 9 credits from one social group and 9 credits from a second social group, as listed above in A; at least once course from each group must be 300-level or above		
C: Self-Designed Track		
A proposal for a self-designed track that includes 18 credits of coursework must be submitted to the CDA for approval; at least two courses must be 300-level or above		
Total Credit Hours		30

### African / African Diaspora Studies

Social Group Emphasis: Societies of Africans and peoples of African descent in the diaspora

Code	Title	Credit Hours
BWS 156	Introduction to Africa	4
BWS 181	Introduction to Civil Rights and Social Movements	1
BWS 182	Human Rights & Social Movements	1
BWS/FST/LAS/ MUS/POR 204	Brazilian Culture Through Popular Music	3
BWS/HST 221	African-American History	3
BWS/CLS 222	Race and Ethnicity in Antiquity	3
BWS/HST 224	Africa to 1884	3
BWS/HST 225	The Making of Modern Africa	3
BWS/HST/LAS 243	History of the Atlantic Slave Trade, 1400s to 1800s	3
BWS 248	African-American Experience	3
BWS/SJS/SOC 265	Critical Inquiry: Penny Lecture Series	2
BWS/ART 276	Introduction to the Art of the Black Diaspora	3
BWS/KNH/SOC 279	African Americans in Sport	3
BWS/GEO 301	Geography of Sub-Saharan Africa	4
BWS/ATH 307	The Middle East: Anthropological Perspectives	3
BWS 324/HST 325	Images of Africa	3
BWS/ATH/LAS/ WGS 325	Identity, Race, Gender, Class	3
BWS/ART 335	Arts of West Africa	3
BWS/ENG 336	African American Writing, 1746-1877	3
BWS/ENG 337	African American Writing, 1878-1945	3
BWS/ENG 338	African American Writing, 1946-Present	3
BWS 339/POL 338	Contemporary African Politics	3
BWS/HST 342	Africa Since 1945	3
BWS/REL 343	African-American Religions	3
BWS/SOC 348	Race and Ethnic Relations	3
BWS/SOC/FSW 362	Family Poverty	3
BWS/HST 365	Civil War and Reconstruction Era	3
BWS 370	Selected Topics/Black World Studies	3
BWS/ENG/POR/ FST 381	Afro-Brazilian Diaspora Through Film and Arts	3
BWS/ENG/FST/ POR 383	Brazilian Women through Literature and Film	3
BWS/LAS/HST 385	Race, Science, and Disease in the Americas	3
BWS/HST 386	Race in U.S. Society	3
BWS/CJS 401	Race and Criminal Justice	3
BWS/WGS 402	Engaged Learning Practicum	1-6
BWS/ENG/WGS 432	Feminism and the Diaspora: U.S. Women of Color	3
BWS/ENG/WGS 437	Black Feminist Studies	3
EDL 203	Introduction to Critical Youth Studies	3
GEO 455	Race, Urban Change, and Conflict in America	3

MUS/AMS 285	Introduction to African American Music	3
MUS/AMS 386	The History and Development of Hip Hop Culture in America	3
PSY 210	Psychology Across Cultures	3

## Latina/o Studies

Social Group Emphasis: Latina/o populations in the United States and their diaporas

Code	Title	Credit Hours
AMS 207	America: Global and Intercultural Perspectives	3
ATH 185	Cultural Diversity in the U.S.	3
ENG 348	Ethnic American Literatures	3
HST/BWS 386	Race in U.S. Society	3
LAS/ENG 254	Latino/a Literature and the Americas	3
LAS/HST 260	Latin America in the United States	3
LAS/AMS 315	Latin American Diaspora: Communities, Conditions and Issues	3
LAS/ATH/BWS/ WGS 325	Identity, Race, Gender, Class	3
LAS 332	Latin American Popular Culture	3
SJS 215	EMPOWER I: Educational and Economic Justice and Service-Learning	3

## Asian / Asian American Studies

Social Group Emphasis: Societies of Asians and peoples of Asian descent in the diaspora.

Code	Title	Credit Hours
AAA 201	Introduction to Asian/ Asian American Studies	3
AAA 203	Global Religions of India	3
AAA 207	Asia and Globalization	3
AAA 210	Psychology Across Cultures	3
AAA 248	Asian American Literature	3
AAA 249	Asian & Asian American Cinema	3
AAA 269	Colonial & Postcolonial Literature	3
AAA 351	Cultural Politics of Gender and Sexuality in Asian/America	3
EDL 334	Transnational Youth Cultures	3
EDT 202	Global Childhood Education: Diversity, Education & Society	3
EDT 205	Race, Cultural Diversity, and Equity in Education	3

## Native / Indigeneity Studies

Social Group Emphasis: Native Nations and Indigenous peoples around the world

Code	Title	Credit Hours
AMS 301	American Identities (Native American Communities)	3

ATH 304	Native North America: Anthropological Perspectives	3
ATH 312	North American Archaeology	3
ATH 313	Latin American Archaeology	3
ATH 364	Language and Culture in Native North America	3
ENG/AMS 246	Native American Literature	3
GEO/WGS 309	Native American Women	3
GEO/WGS 406	Indigenous Peoples and Their Sacred Lands	3
GIC 360	Topics in Global and Intercultural Studies ((Global Indigeneity))	3
HST/AMS 371	Native American History to 1840	3
HST 372	Native American History since 1840	3
IDS 259	Introduction to the Miami Tribe of Oklahoma	3
REL/AMS 346	Issues in the Study of Native American Religions	3

Students seeking the BA in Critical Race and Ethnic Studies will meet the CAS Writing in the Major requirement by completing the following course: AAA/BWS/LAS/WGS 211.

## Data Science and Statistics-Bachelor of Science

For information, contact the Department of Statistics (statistics@miamioh.edu), 311 Upham Hall, 513-529-7828.

Data Science and Statistics combines knowledge of concepts from statistics and computer science to extract meaning from data to inform evidence-based decisions. Students select a concentration in statistics or in data science. The two concentrations share a core of coursework in mathematics, statistics and programming. The concentration in statistics develops skills for preparing and analyzing data in a wide variety of observational and experimental contexts. The concentration in data science focuses on methods needed for exploring, managing and analyzing complex or enormous data sets.

All STA courses and related-hours courses must be taken for grades rather than credit/no-credit. A GPA of at least 2.00 is required for the STA courses.

Students majoring in Data Science and Statistics may not minor in Statistics or Statistical Methods, nor major in Mathematics and Statistics. Students majoring in the Data Science concentration may not co-major in Analytics. Students selecting the Statistics concentration may select the Predictive Analytics track in the Analytics co-major **ONLY** if they include at least 9 credit hours from that track beyond what is needed to fulfill the requirements of the Statistics concentration.

### Program Requirements

Prerequisites for this program include Introductory Statistics, Calculus 1, and Calculus 2.

Code	Title	Credit Hours
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#### Core Courses - required for both concentrations

CSE 174	Fundamentals of Programming and Problem Solving	3
MTH 252	Calculus III	4
MTH 222	Introduction to Linear Algebra	2-3
	or MTH 222T Introduction to Linear Algebra (Honors)	
STA 363	Introduction to Statistical Modeling <sup>2</sup>	3
STA 401	Probability	3
STA 402	Statistical Programming	3
STA 462	Inferential Statistics	3
STA 463	Regression Analysis	4

#### Concentration

Select one of the two concentrations shown below	27-31
Total Credit Hours	52-57

#### Concentration in Data Science

Code	Title	Credit Hours
CSE 271	Object-Oriented Programming	3
CSE 274	Data Abstraction and Data Structures	3
CSE 385	Database Systems	3
ISA 414	Managing Big Data	3
STA 404	Advanced Data Visualization	3
STA 467	Statistical Learning	3
<b>Select one of the following:</b>		3

STA 427	Introduction to Bayesian Statistics
STA 483	Analysis of Forecasting Systems

#### Select two of the following: 6

CSE 273	Optimization Modeling	
CSE 372	Stochastic Modeling	
CSE 471	Simulation	
CSE 485	Advanced Database Systems	
MTH 432	Optimization	
MTH 438	Theory and Applications of Graphs	
MTH 439	Combinatorics	

Total Credit Hours	27
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#### Concentration in Statistics (also requires a selection of Related Hours)

Code	Title	Credit Hours
STA 466	Experimental Design Methods	4
STA 475	Data Analysis Practicum	3
<b>Select two of the following:</b>		6
STA 333	Nonparametric Statistics	
STA 365	Statistical Monitoring and Design of Experiments	
STA 404	Advanced Data Visualization	
STA 427	Introduction to Bayesian Statistics	
STA 432	Survey Sampling in Business	
STA 467	Statistical Learning	
STA 483	Analysis of Forecasting Systems	

**Select one of the following, chosen so it is not also used for the related hours requirement:** 3

CSE 372	Stochastic Modeling
CSE 471	Simulation
ISA 414	Managing Big Data
MTH 432	Optimization

#### Related Hours <sup>1</sup>

Select one of the lists of related hours shown below <sup>2</sup> 12-15

Total Credit Hours 28-31

<sup>1</sup> The related hours requirement for the concentration in Statistics is waived for students who complete the requirements for a major, co-major, or minor outside of the Department of Statistics.

<sup>2</sup> **Related Area Hour Reduction:** Some students may want to have the flexibility to include in their program an additional elective course in mathematics or statistics. To that end, the cluster of related courses required for the concentration in statistics can be reduced by up to 3 hours (of the 6 advanced hours) by taking the same number of hours in MTH or STA (numbered 400 or higher and not a service course). This decision is made in consultation with the Chief Departmental Adviser.

## Related Hours Lists for the concentration in Statistics (A Miami Plan Thematic (MPT) Sequence is embedded within some lists.)

**Actuarial Science (See the requirements for the Actuarial Sciences Minor also.)**

Code	Title	Credit Hours
ACC 221	Introduction to Financial Accounting	3
ACC 222	Introduction to Managerial Accounting	3
ECO 201	Principles of Microeconomics	3
ECO 202	Principles of Macroeconomics	3
FIN 301	Introduction to Business Finance	3
See the requirements for the Actuarial Sciences Minor		
Total Credit Hours		15

### Economics (MPT ECO 3)

Code	Title	Credit Hours
ECO 201	Principles of Microeconomics	3
ECO 202	Principles of Macroeconomics	3
ECO 317	Intermediate Macroeconomic Theory	3
ECO 418	Monetary Theory and Policy	3
Total Credit Hours		12

### Computer Science and Software Engineering (MPT CSE 2)

Code	Title	Credit Hours
CSE 271	Object-Oriented Programming	3
CSE 274	Data Abstraction and Data Structures	3
Select one of the following:		3
CSE 252	Web Application Programming	
CSE 283	Data Communication and Networks	

Select three hours above the 174 level 3

Total Credit Hours 12

### Geospatial Systems (MPT GEO 5)

Code	Title	Credit Hours
GEO 241	Map Interpretation	3
GEO 441	Geographic Information Systems	3
<b>Select two of the following:</b>		6
GEO 442	Advanced Geographic Information Systems	
GEO 443	Python Programming for ArcGIS	
GEO 444	GIScience Techniques in Landscape Ecology	
GEO 448	Techniques and Applications of Remote Sensing	

Total Credit Hours 12

### Information Systems and Analytics (MPT ISA 3)

Code	Title	Credit Hours
ISA 235	Information Technology and the Intelligent Enterprise	3
ISA 245	Database Systems and Data Warehousing	3
ISA 401	Business Intelligence and Data Visualization	3
ISA 414	Managing Big Data	3

Total Credit Hours 12

### Operations Research

Code	Title	Credit Hours
CSE 273	Optimization Modeling	3
CSE 372	Stochastic Modeling	3
CSE 471	Simulation	3
<b>Select one of the following:</b>		3
MTH 432	Optimization	
MTH 435	Mathematical Modeling Seminar	
MTH 437	Game Theory and Related Topics	
MTH 438	Theory and Applications of Graphs	
MTH 439	Combinatorics	

Total Credit Hours 12

### Other

Code	Title	Credit Hours
Create a related area <sup>1</sup>		12
Total Credit Hours		12

<sup>1</sup> 12 or more credit hours in any area, with at least 6 of the hours numbered 300 or higher (200 or higher in Chemistry, Physics, Engineering, or Computer Science and Software Engineering). Such program must be approved by the Chief Departmental Adviser *in advance of applying for graduation.*

# Diplomacy and Global Politics- Bachelor of Arts

For information, contact the Department of Political Science, 218 Harrison Hall, 513-529-2000.

This program of concentration is designed primarily for students interested in understanding more about comparative and international politics. It is a major appropriate for those interested in international careers. It is also the kind of broad, liberal arts program that many pre-law students will want to consider. Additionally, it provides a solid background for graduate study in comparative politics and international relations.

This major requires that at least 17 of the 33 major hours and at least 9 of the 22 related hours must be earned at Miami. Required courses and related hours may not be taken on a credit/no-credit basis. A GPA of at least 2.00 is required for required courses as well as related hours.

## Program Requirements

(minimum 33 hours)

Code	Title	Credit Hours
<b>Core courses</b>		
(At least one must be a writing (W) section.)		
POL 221	Comparative Politics	3
POL 241	American Political System	3
POL 271	World Politics	3
<b>Diplomacy and international relations</b>		
Select two of the following:		6
POL 346	Global Gender Politics	
POL 373	American Foreign Policy	
POL 374	Foreign Policy Analysis	
POL 376	U.S. National Security Policy	
POL 381	Global Governance	
POL 382	International Law	
POL 387	International Security Issues	
<b>Politics in global regions</b>		
Select at least two courses from two regional clusters <sup>1</sup>		12
<b>Eurasia and East Asia</b>		
POL 331	Communism and Soviet Politics, 1917-1991	
POL 332	Post-Soviet Russian Politics	
POL 440	Havighurst Colloquium	
<b>Africa, Middle East, and Latin America</b>		
POL 336	Politics of the Middle East	
POL 337	Politics of Latin America	
POL 338	Contemporary African Politics	
POL 339	Nationalism, Islam and Democracy in Arab Politics	
POL 378	Latin America: The Region and the World	
<b>Europe: East and West</b>		
POL 321L	Comparative European Pol:Lux	

POL 333	Politics of Western Europe
POL 334	Politics of Eastern Europe
POL 423	European Union: Politics and Policies

### Required Capstone

Select one of the following: 3

POL 419	Civil Society and Modern Politics
POL 471	The International System
POL 487	Individual Lives and International Politics
POL 489	Conflict Management in a Divided World (An additional 3 hours is required from the core or study abroad.)

An additional 3 hours is required from the core or study abroad. 3

Total Credit Hours 33

<sup>1</sup> With approval of advisor, student may apply relevant coursework taken in an approved study abroad program as substitute for one or two courses on politics in global regions.

### Related Requirements

(minimum 22 hours - maximum 28)

Code	Title	Credit Hours
<b>Cognate courses:</b>		
ECO 201	Principles of Microeconomics	3
ECO 202	Principles of Macroeconomics	3
STA 261	Statistics	4
<b>Advanced foreign language study:</b>		
At least 6 semester hours in a foreign language at the 300 level or higher (not in translation)		6
<b>Study Abroad:</b>		
12 semester hours earned in one or more study-abroad programs approved by the Department of Political Science (not more than 6 semester hours earned in study abroad program can be applied to other major requirements)		6-12
Total Credit Hours		22-28

### CAS Writing Competency Requirement

Students seeking the Bachelor of Arts in Diplomacy and Global Politics meet the College of Arts and Science writing in the major requirement by completing the following courses:

1. Take at least one of the required 200-level courses in a "Writing" or "W" section;
2. Take at least one of the POL 300-level courses in a "W" section;
3. Complete one of the required POL Capstone courses (all of which meet the Writing requirement).

## Note about Double Majoring in the Department

The Department of Political Science does not allow Political Science majors to pursue another major in the Department. A double major

between Public Administration and Diplomacy and Global Politics is allowed, but will not meet the Miami Plan's thematic sequence requirement as a double major that is in the same department. We strongly discourage a Diplomacy and Global Politics - International Studies double major due to all the "double counting" that is involved.

## East Asian Languages and Cultures- Bachelor of Arts

For information, contact the Department of German, Russian, Asian, and Middle Eastern Languages and Cultures, 172 Irvin Hall, 513-529-2526.

This program provides intensive studies in the languages and cultures of East Asia, focusing on Japan and China. Students can choose from either the Japan Concentration or the China Concentration.

Related hours which are requirements for the two cases provide a broadly based background for the two curricula. Study abroad is encouraged. Credits earned abroad may count toward the major.

### Program Requirements: Japan Concentration

(24 semester hours plus 12 related hours)

Code	Title	Credit Hours
<b>Required courses in Japanese</b>		
JPN 201 & JPN 202	Second Year Japanese and Second Year Japanese	6
JPN 301 & JPN 302	Third Year Japanese and Third Year Japanese	6
JPN 401	Fourth Year Japanese	3
<b>Selected courses</b> <sup>1</sup>		
Select 9 semester hours of the following:		9
JPN 231	Japanese Tales of the Supernatural in English Translation	
JPN 255	Drama in China and Japan in English Translation	
JPN 260	Topics in Japanese Literature in English Translation	
JPN 266	Survey of Japanese Cinema	
JPN 381	Introduction to Japanese Linguistics	
JPN 402	Fourth Year Japanese	
<b>Related hours</b> <sup>2</sup>		
Select 12 hours of the following including at least one course from the Japan group:		12
Japan:		
HST 356	Modern Japanese History	
ATH 390Z	Pokemon:Local & Global Cultures	
China:		
ART 311	Chinese Painting History	
CHI 251	Traditional Chinese Literature in English Translation	
CHI 252	Modern Chinese Literature in English Translation	
CHI 253	Three Kingdoms	

CHI 254	Modern Chinese Autobiography
CHI 255	Drama in China and Japan in Translation
CHI 257	Chinese Satire
CHI 264	Chinese Cinema and Culture
CHI 271	Chinese Culture Live
CHI 402	Fourth Year Chinese II
EDP 366	Cross-cultural Examination of the United States and China within an Educational Context
EDP 387	Chinese Education through Culture, Customs, History, and Development
HST 353	History of Chinese Civilization
HST 354	Modern Chinese History
HST 383	Women in Chinese History
HST 434	China along the Silk Road before 1600
East Asia:	
ART 286	History of Asian Art, China, Korea, and Japan
ART 326	Modern & Contemporary East Asian Art
GEO/ITS/SOC 208	The Rise of Industrialism in East Asia
GEO 308	Geography of East Asia
GEO 408	Geography of the Silk Road (The Heart of Asia)
HST 324	Eurasian Nomads and History
REL 223	Introduction to Buddhism
Linguistics:	
ATH/ENG/GER 219	Introduction to Linguistics
Total Credit Hours	36

<sup>1</sup> These Selected courses may be used in Related hours if not used as Selected courses.

<sup>2</sup> The Chinese minor will also satisfy this requirement.

### Program Requirements: China Concentration

(24 semester hours plus 12 related hours)

Code	Title	Credit Hours
<b>Required courses in Chinese (select 12 hours)</b> <sup>1</sup>		
CHI 201 & CHI 202	Second Year Chinese and Second Year Chinese	12
CHI 301 & CHI 302	Third Year Chinese and Third Year Chinese	
CHI 311 & CHI 312	Business Chinese I and Business Chinese II	
CHI 330	Chinese Verbal Theatre Performance	
Select the following:		
CHI 401	Fourth Year Chinese I	3
<b>Selected courses</b> <sup>2</sup>		
Select 9 semester hours of the following:		9

CHI 251	Traditional Chinese Literature in English Translation
CHI 252	Modern Chinese Literature in English Translation
CHI 253	Three Kingdoms
CHI 254	Modern Chinese Autobiography
CHI 255	Drama in China and Japan in Translation
CHI 257	Chinese Satire
CHI 264	Chinese Cinema and Culture
CHI 271	Chinese Culture Live
CHI 402	Fourth Year Chinese II
CHI 480	Independent Reading for Departmental Honors

**Related hours**<sup>3</sup>

Select 12 semester hours of the following including at least one course from the China group: 12

China:	
ART 311	Chinese Painting History
EDP 366	Cross-cultural Examination of the United States and China within an Educational Context
EDP 387	Chinese Education through Culture, Customs, History, and Development
HST 353	History of Chinese Civilization
HST 354	Modern Chinese History
HST 383	Women in Chinese History
HST 434	China along the Silk Road before 1600

Japan:	
HST 356	Modern Japanese History
JPN 231	Japanese Tales of the Supernatural in English Translation
JPN 255	Drama in China and Japan in English Translation
JPN 260	Topics in Japanese Literature in English Translation
JPN 266	Survey of Japanese Cinema
JPN 381	Introduction to Japanese Linguistics
JPN 402	Fourth Year Japanese

East Asia:	
ART 286	History of Asian Art, China, Korea, and Japan
ART 326	Modern & Contemporary East Asian Art
GEO/ITS/SOC 208	The Rise of Industrialism in East Asia
GEO 308	Geography of East Asia
GEO 408	Geography of the Silk Road (The Heart of Asia)
HST 324	Eurasian Nomads and History
REL 223	Introduction to Buddhism

Linguistics:

ATH/ENG/GER Introduction to Linguistics  
219

Total Credit Hours 36

- <sup>1</sup> These Required courses may be used in Selected or Related hours if not used as Required courses.
- <sup>2</sup> These Selected courses may be used in Related hours if not used as Selected courses.
- <sup>3</sup> The Japanese minor will also satisfy this requirement.

Students seeking the Bachelor of Arts in East Asian Languages and Cultures meet the College of Arts and Science writing in the major requirement by completing the following courses: CHI 302 or CHI 312 and CHI 401 or JPN 302 and JPN 401.

## Economics- Bachelor of Arts

For information, contact the Department of Economics, 2054 Farmer School of Business, 513-529-2836.

Miami offers three programs in economics, two in the College of Arts & Science (Economics and Quantitative Economics) and one in the Farmer school of Business (Business-Economics). The same core of economics courses is required for all three programs; the differences are in the divisional requirements. You should choose this program if you are interested in a liberal arts background in addition to your major.

## Honors in Economics

For details on honors in economics please see the departmental website.

## Program Requirements

(30 semester hours, plus 16 related hours)

Code	Title	Credit Hours
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### Core courses

ECO 201	Principles of Microeconomics	3
ECO 202	Principles of Macroeconomics	3
ECO 311	Examining Economic Data and Models <sup>1</sup>	3
ECO 315	Intermediate Microeconomic Theory	3
ECO 317	Intermediate Macroeconomic Theory	3

Select 15 hours in economics that are at the 300-level or above; at least six of these hours must be in courses that require ECO 315 and/or ECO 317 as a prerequisites and are numbered at 410 or above.<sup>2,3</sup>

**Related Hours** 16

Calculus:

Select one of the following:

MTH 151	Calculus I
MTH 249	Calculus II
MTH 251	Calculus II

Statistics:

Select one of the following:

ISA/STA 125	Introduction to Business Statistics
STA 261	Statistics

STA 301	Applied Statistics
STA 368	Introduction to Statistics
Select remaining hours from accountancy, decision sciences, finance, geography, history, management information systems, mathematics, philosophy, political science, psychology, sociology, statistics, or computer science and software engineering	
Total Credit Hours	46

- It is highly recommended that ECO 311 be completed by the end of your junior year.
- ECO 315 and ECO 317 must be taken at Miami. At least three additional hours of economics numbered 300 or higher must be taken at Miami. Up to three hours of Summer Scholar credit can be applied toward the 15 hours of economics. Any exception to this must be approved by the director of undergraduate studies.
- Prerequisites for all 300- and 400-level courses include ECO 201 and ECO 202 unless otherwise noted.

Students seeking the Bachelor of Arts in Economics meet the College of Arts and Science writing in the major requirement by completing the following courses: ECO 311, ECO 315, ECO 317, and two economics courses numbered 410 or above.

Mathematics and statistics beyond the minimum requirement is recommended if you are considering graduate school in economics. See your advisor.

## Energy Co-Major

For more information, contact the Institute for the Environment and Sustainability, 118 Shideler Hall, 513-529-5811.

The Energy Co-major provides students with fundamental principles of energy systems, physical science, and policy to prepare them for advanced study in an energy-related field or for professional careers in industry, consulting, government, or non-profit organizations. The energy co-major is designed to give interdisciplinary breadth to complement disciplinary majors in engineering, natural sciences, architecture, business, and the social sciences. The term "co-major" indicates that students must complete another major at Miami University. The Energy Co-major is open to all majors, but students are recommended to take specific courses to fulfill Miami Plan Foundation requirements in physical science and quantitative reasoning.

## Program requirements

(34-45 Semester Hours)

**Complete a major in one of the divisions of the university.**

Code	Title	Credit Hours
<b>Physical Science</b>		
Select one of the following:		3-10
PHY 121	Energy and Environment	
PHY 161 & PHY 162	Physics for the Life Sciences with Laboratory I and Physics for the Life Sciences with Laboratory II	

PHY 191 & PHY 192	General Physics with Laboratory I and General Physics with Laboratory II	
Select one of the following:		4

GLG 121 & GLG 115L	Environmental Geology and Understanding the Earth	
GEO 121	Earth's Physical Environment	

### Math, Information Technology, Statistics

Select one of the following:		3-5
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MTH 151	Calculus I	
CSE 243	Problem Analysis Using Computer Tools	
ISA 245	Database Systems and Data Warehousing	

Select one of the following:		3-4
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ECE 345	Applied Probability and Statistics for Engineers	
ISA 205	Business Statistics	
STA 261	Statistics	
STA 301	Applied Statistics	
STA 363	Introduction to Statistical Modeling	
STA 368	Introduction to Statistics	

### Political and Social Dimensions of Energy and Resources

IES 211	Energy and Policy	3
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Select two of the following:		6
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POL 241	American Political System	
POL 362	Public Management, Leadership, and Administrative Politics	
HST 397	American Environmental History	
ECO 406	Environmental Economics	
IES 450	Environmental Law	

### Energy and Building Systems

ECE 291	Energy Systems Engineering	3
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Select one of the following:		3-4
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ARC 212	Principles of Environmental Systems	
ARC 413	Environmental Systems I	
CPB 204	Mass and Energy Balances I	
CPB 244	Introduction to Environmental Engineering	
CPB/MME 314	Engineering Thermodynamics	
ECE 205	Electric Circuit Analysis I	
ECE 287	Digital Systems Design	
ECE 491	Power Systems Engineering	
MME 451	Sustainability Considerations in Design and Development	

### Climate and Air Pollution

Select one of the following:		3
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GLG 335	Ice Age Earth	
GLG 436	Paleoclimatology	
CPB 442	Air Pollution Control	

### Practicum and Synthesis

Speakers from the energy industry, building & transportation, and regulatory agencies:

Select one of the following:		1
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CPB 490	Special Topics in Paper and Chemical Engineering	
IES 440	Contemporary Topics in Environmental Sciences	
MME 410	Undergraduate Research Seminar	
<b>Interdisciplinary team projects</b>		
Select one of the following: <sup>1</sup> 2		
CPB 471	Engineering Design I	
CSE/ECE/MME 448	Senior Design Project	
Total Credit Hours		34-45

<sup>1</sup> We also offer 3-credit, project-based alternatives with no or few prerequisites. Please contact IES for more information.

## Engineering Physics- Bachelor of Science

For information, contact the Department of Physics, 217 Kreger Hall, 513-529-5625.

This major prepares students for employment in technical fields or entry into professional engineering programs at the undergraduate or graduate level.

### Program Requirements: Bachelor of Science

(56-73 semester hours)

Code	Title	Credit Hours
Select one of the following: 5-9		
MTH 151 & MTH 251	Calculus I and Calculus II	
MTH 249	Calculus II	
Select the following:		
MTH 222	Introduction to Linear Algebra	3
MTH 252	Calculus III	4
PHY 191 & PHY 192	General Physics with Laboratory I and General Physics with Laboratory II	10
PHY 281	Contemporary Physics I: Foundations	3
PHY 282	Contemporary Physics II: Frontiers	3
PHY 286	Introduction to Computational Physics	3
PHY 292	Electronic Instrumentation	2
PHY 293	Contemporary Physics Laboratory	2
PHY 294	Laboratory in Electronic Instrumentation	2
PHY 401	Physics Assessment Examination	0
PHY 483	Mathematical Methods in Physics	4
Complete Path 1 or Path 2		15-28
Total Credit Hours		56-73

### Path 1

Complete one of the following minors in the College of Engineering and Computing at Miami:

- electrical engineering (22 semester hours)
- manufacturing engineering (25 semester hours)
- mechanical engineering (18 semester hours)
- computer science (18 semester hours)
- computer engineering (15 semester hours)

### Path 2

Complete one of the following applied physics tracks:

#### Electro-Optics Track

(16 semester hours)

Code	Title	Credit Hours
PHY 441	Optics and Laser Physics	4
PHY 442	Spectroscopy of Atoms and Molecules	4
PHY 461	Electromagnetic Theory	4
PHY 491	Introduction to Quantum Mechanics I	4
Total Credit Hours		16

#### Electrical/Instrumentation Track

(18-24 semester hours)

Code	Title	Credit Hours
ECE/MME 303	Computer-Aided Experimentation	3
PHY 461	Electromagnetic Theory	4
PHY 471	Advanced Electronics	3
STA 368	Introduction to Statistics	4
Select one of the following: 4-6		
PHY 451	Classical Mechanics	
CEC 102 & MME 211	Problem Solving and Design and Static Modeling of Mechanical Systems	
Recommended Elective:		
PHY 491	Introduction to Quantum Mechanics I	
Total Credit Hours		18-20

#### Materials Track

(15-19 semester hours)

Code	Title	Credit Hours
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
MME 223	Engineering Materials	3
MME/CPB 313	Fluid Mechanics	3
PHY 437	Intermediate Thermodynamics and Introduction to Statistical Physics	4
Recommended Elective:		
PHY 491	Introduction to Quantum Mechanics I	
Total Credit Hours		15

#### Biomedical Track

(22-32 semester hours)

Code	Title	Credit Hours
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	5
PHY 421 or PHY 422	Molecular and Cellular Biophysics Physics for Medicine and Biology	4
Select one of the following:		4-10
CHM 231	Fundamentals of Organic Chemistry (for non-premeds)	
CHM 241 & CHM 242 & CHM 244 & CHM 245	Organic Chemistry and Organic Chemistry Laboratory and Organic Chemistry Laboratory (for premeds)	
Recommended Elective:		
BIO 305	Human Physiology	
Total Credit Hours		22-28

## English: Creative Writing- Bachelor of Arts

For information, contact the Department of English, 356 Bachelor Hall, 513-529-5221.

The English department offers four majors: creative writing, literature, linguistics, and professional writing. These concentrations lead to an A.B.

### Program Requirements

(39 semester hours)

Code	Title	Credit Hours
<b>Introduction to Creative Writing</b>		
ENG 226	Introduction to Creative Writing: Short Fiction and Poetry	3
<b>Introduction to Literary Studies</b> <sup>1</sup>		
ENG 298	Introduction to Literary and Cultural Studies	3
<b>Creative Writing courses</b>		
Select four of the following: <sup>2</sup>		12
ENG 213	Writing for Media	
ENG 320	Intermediate Creative Writing: Fiction	
ENG 321	The Literary Marketplace	
ENG 323	Intermediate Creative Writing: Creative Nonfiction	
ENG 330	Intermediate Creative Writing: Poetry	
ENG 420	Advanced Creative Writing: Fiction Workshop	
ENG 422	Advanced Creative Writing: Screenwriting Workshop	

ENG 423	Advanced Creative Writing: Nonfiction Workshop	
ENG 430	Advanced Creative Writing: Poetry Workshop	
<b>Senior Capstone</b>		
ENG 460 or ENG 495	Issues in Creative Writing Capstone in Literature	3
<b>Literature of Earlier Periods</b>		
Select two courses <sup>3</sup>		6
<b>Literature of Later Periods</b>		
Select two courses <sup>4</sup>		6
<b>Ethnic, minority, or women's literature</b>		
Select one course <sup>5</sup>		3
<b>Genre</b>		
Select one course		3
Total Credit Hours		39

- Completed fall semester of sophomore year at Miami or fall semester after declaring the literature major, whichever is later.
- ENG 320 is the prerequisite for ENG 420; ENG 323 is the prerequisite for ENG 423; ENG 330 is the prerequisite for ENG 430. Students must take an intermediate and advanced course in poetry, fiction, or creative nonfiction. Repeat credits WILL NOT count toward the major requirement of twelve (12) hours of creative writing courses.
- No more than one 100-level course may be used to fulfill literature requirements. No more than one course can focus on Shakespeare. ENG 440, ENG 450 and ENG 490 may count when the topic/time period is appropriate (contact the Chief Departmental Advisor in English).
- No more than one 100-level course may be used to fulfill literature requirements. ENG 440, ENG 450 and ENG 490 may count when the topic/time period is appropriate (contact the Chief Departmental Advisor in English).
- This requirement may be satisfied by a course taken to fulfill the literature (earlier or later periods) requirements above.

### Literature of Earlier Periods

Code	Title	Credit Hours
ENG 134	Introduction to Shakespeare	3
ENG 221	Shakespeare and Film	3
ENG 272	English Literature to 1660	3
ENG 273	English Literature 1660-1900	3
ENG 275	American Literature to 1900	3
ENG 327	Medieval Literature	3
ENG 328	Sixteenth-Century English Literature	3
ENG 331	Seventeenth-Century English Literature	3
ENG 332	Early British Women Writers	3
ENG 335	English Literature of the 18th Century	3
ENG 336	African American Writing, 1746-1877	3
ENG 339	British Romanticism, 1789-1837	3
ENG 349	Early American Literature	3
ENG 352	Antebellum American Literature	3

ENG 372	Shakespeare's Principal Plays: Early Works	3
ENG 373	Shakespeare's Principal Plays: Late Works	3
ENG 374	English Renaissance Drama	3

## Literature of Later Periods

Code	Title	Credit Hours
ENG 246	Native American Literature	3
ENG 248	Asian American Literature	3
ENG 254	Latino/a Literature and the Americas	3
ENG 269	Colonial & Postcolonial Literature	3
ENG 274	English Literature 1901 to Present	3
ENG 276	American Literature 1900 to the Present	3
ENG 293	Contemporary American Fiction	3
ENG 337	African American Writing, 1878-1945	3
ENG 338	African American Writing, 1946-Present	3
ENG 343	Victorian Literature, 1837-1901	3
ENG 345	British Modernism, 1890-1945	3
ENG 347	Postwar/Postcolonial British Literature, 1945-Present	3
ENG 348	Ethnic American Literatures	3
ENG 353	American Realism and Naturalism	3
ENG 354	American Modernism	3
ENG 355	Contemporary American Literature	3

## Ethnic, minority, or women's literature

Code	Title	Credit Hours
ENG 169	Disability and Literature	3
ENG 232	Women Writers	3
ENG 237	GLBTQ Literature	3
ENG 246	Native American Literature	3
ENG 248	Asian American Literature	3
ENG 254	Latino/a Literature and the Americas	3
ENG 269	Colonial & Postcolonial Literature	3
ENG 332	Early British Women Writers	3
ENG 336	African American Writing, 1746-1877	3
ENG 337	African American Writing, 1878-1945	3
ENG 338	African American Writing, 1946-Present	3
ENG 348	Ethnic American Literatures	3
ENG 351	Cultural Politics of Gender and Sexuality in Asian/America	3
ENG 356	Women and Gender in Film	3

## Genre

Code	Title	Credit Hours
ENG 123	Introduction to Poetry	3
ENG 124	Introduction to Fiction	3

ENG 231	The Short Story	3
ENG 311	Reading for Creative Writing: Contemporary Literature	3
ENG 360	Interdisciplinary Special Topics	1-4
ENG 386	Studies in Drama and Performance	3
ENG 387	Studies in Poetry	3
ENG 388	Studies in Prose	3
ENG 450	Studies in Genre	3

Students seeking the Bachelor of Arts in English Creative Writing meet the College of Arts and Science writing in the major requirement by completing the following course: ENG 226 and writing workshops at the 300- and 400-levels ( ENG 320 and ENG 420 for fiction, ENG 330 and ENG 430 for poetry, or ENG 323 and ENG 423 for creative nonfiction).

## English:Literature- Bachelor of Arts

For information, contact the Department of English, 356 Bachelor Hall, 513-529-5221.

The English department offers four majors: creative writing, literature, linguistics, and professional writing. These concentrations lead to an A.B.

## Program Requirements

(36 semester hours)

Code	Title	Credit Hours
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### Prerequisite introductory course <sup>1</sup>

ENG 298	Introduction to Literary and Cultural Studies	3
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### Literature courses

Select seven courses (no more than two 100-level courses): 21

Select at least two of the following: 6

ENG 432	Feminism and the Diaspora: U.S. Women of Color	
ENG 440	Major English and American Writers	
ENG 450	Studies in Genre	
ENG 480	English Honors	
ENG 490	Special Topics in Literary Study	

### Literary, cultural, or other theory

Select one of the following: 3

ENG 351	Cultural Politics of Gender and Sexuality in Asian/America	
ENG 370	Introduction to Literary and Cultural Theory	
ENG 435	Queer Theory	
ENG 437	Black Feminist Theory	
ENG 470	Studies in Literary Theory	

### Senior Capstone

ENG 460	Issues in Creative Writing	3
or ENG 495	Capstone in Literature	

**Literature Distributional Requirements**

Choose literature courses to also meet the following group requirements.<sup>2</sup>

Literature of Earlier Periods: select six hours<sup>3</sup>

Literature of Later Periods: select six hours

Ethnic, minority, or women's literature: select three hours

**Optional**

An elective course, offered in the English Department, may be taken for credit toward major hours but not toward any core or distribution requirements.<sup>4</sup>

Total Credit Hours 36

<sup>1</sup> Completed fall semester of sophomore year at Miami or fall semester after declaring the literature major, whichever is later.

<sup>2</sup> ENG 440, ENG 450 and ENG 490 may count when the topic/time period is appropriate.

<sup>3</sup> Both courses cannot focus on Shakespeare.

<sup>4</sup> Courses that cannot count toward major hours include ENG 104, ENG 105, ENG 108, ENG 109, ENG 111, ENG 112. The purpose of this elective is to allow students to take a course in another English program (e.g. Creative Writing, Linguistics, or Professional Writing), if desired.

**Literature courses**

Code	Title	Credit Hours
ENG 122	Popular Literature	3
ENG 123	Introduction to Poetry	3
ENG 124	Introduction to Fiction	3
ENG 125	Introduction to Drama	3
ENG 129	Books You Need To Read	3
ENG 134	Introduction to Shakespeare	3
ENG 163	Literature and Travel	3
ENG 169	Disability and Literature	3
ENG 171	Humanities and Technology	3
ENG 220	Literature and Film	3
ENG 221	Shakespeare and Film	3
ENG 231	The Short Story	3
ENG 232	Women Writers	3
ENG 237	GLBTQ Literature	3
ENG 238	Narrative and Digital Technology	3
ENG 246	Native American Literature	3
ENG 248	Asian American Literature	3
ENG 251	Introduction to European Literature	3
ENG 254	Latino/a Literature and the Americas	3
ENG 262	Children's Literature	3
ENG 269	Colonial & Postcolonial Literature	3
ENG 272	English Literature to 1660	3
ENG 273	English Literature 1660-1900	3
ENG 274	English Literature 1901 to Present	3
ENG 275	American Literature to 1900	3
ENG 276	American Literature 1900 to the Present	3

ENG 293	Contemporary American Fiction	3
ENG 327	Medieval Literature	3
ENG 328	Sixteenth-Century English Literature	3
ENG 331	Seventeenth-Century English Literature	3
ENG 332	Early British Women Writers	3
ENG 335	English Literature of the 18th Century	3
ENG 336	African American Writing, 1746-1877	3
ENG 337	African American Writing, 1878-1945	3
ENG 338	African American Writing, 1946-Present	3
ENG 339	British Romanticism, 1789-1837	3
ENG 343	Victorian Literature, 1837-1901	3
ENG 345	British Modernism, 1890-1945	3
ENG 347	Postwar/Postcolonial British Literature, 1945-Present	3
ENG 348	Ethnic American Literatures	3
ENG 349	Early American Literature	3
ENG 350	Topics in Film	3
ENG 352	Antebellum American Literature	3
ENG 353	American Realism and Naturalism	3
ENG 354	American Modernism	3
ENG 355	Contemporary American Literature	3
ENG 356	Women and Gender in Film	3
ENG 360	Interdisciplinary Special Topics	1-4
ENG 372	Shakespeare's Principal Plays: Early Works	3
ENG 373	Shakespeare's Principal Plays: Late Works	3
ENG 374	English Renaissance Drama	3
ENG 386	Studies in Drama and Performance	3
ENG 387	Studies in Poetry	3
ENG 388	Studies in Prose	3
ENG 390	Studies in American Regionalism	3
ENG 440	Major English and American Writers	3
ENG 450	Studies in Genre	3
ENG 490	Special Topics in Literary Study	3

**Literature of Earlier Periods**

Code	Title	Credit Hours
ENG 134	Introduction to Shakespeare	3
ENG 221	Shakespeare and Film	3
ENG 272	English Literature to 1660	3
ENG 273	English Literature 1660-1900	3
ENG 275	American Literature to 1900	3
ENG 327	Medieval Literature	3
ENG 328	Sixteenth-Century English Literature	3
ENG 331	Seventeenth-Century English Literature	3
ENG 332	Early British Women Writers	3
ENG 335	English Literature of the 18th Century	3
ENG 336	African American Writing, 1746-1877	3

ENG 339	British Romanticism, 1789-1837	3
ENG 349	Early American Literature	3
ENG 352	Antebellum American Literature	3
ENG 372	Shakespeare's Principal Plays: Early Works	3
ENG 373	Shakespeare's Principal Plays: Late Works	3
ENG 374	English Renaissance Drama	3

## Literature of Later Periods

Code	Title	Credit Hours
ENG 246	Native American Literature	3
ENG 248	Asian American Literature	3
ENG 254	Latino/a Literature and the Americas	3
ENG 269	Colonial & Postcolonial Literature	3
ENG 274	English Literature 1901 to Present	3
ENG 276	American Literature 1900 to the Present	3
ENG 293	Contemporary American Fiction	3
ENG 337	African American Writing, 1878-1945	3
ENG 338	African American Writing, 1946-Present	3
ENG 343	Victorian Literature, 1837-1901	3
ENG 345	British Modernism, 1890-1945	3
ENG 347	Postwar/Postcolonial British Literature, 1945-Present	3
ENG 348	Ethnic American Literatures	3
ENG 353	American Realism and Naturalism	3
ENG 354	American Modernism	3
ENG 355	Contemporary American Literature	3

## Ethnic, minority, or women's literature

Code	Title	Credit Hours
ENG 169	Disability and Literature	3
ENG 232	Women Writers	3
ENG 237	GLBTQ Literature	3
ENG 246	Native American Literature	3
ENG 248	Asian American Literature	3
ENG 254	Latino/a Literature and the Americas	3
ENG 269	Colonial & Postcolonial Literature	3
ENG 332	Early British Women Writers	3
ENG 336	African American Writing, 1746-1877	3
ENG 337	African American Writing, 1878-1945	3
ENG 338	African American Writing, 1946-Present	3
ENG 348	Ethnic American Literatures	3
ENG 356	Women and Gender in Film	3

Students seeking the Bachelor of Arts in English Literature meet the College of Arts and Science writing in the major requirement by completing the following

course: ENG 298 and ENG 495 or ENG 460 (or another 400-level capstone).

## Professional Writing- Bachelor of Arts

For information, contact the Department of English, 356 Bachelor Hall, 513-529-5221.

The English department offers four majors: creative writing, literature, linguistics, and professional writing. These concentrations lead to an A.B.

## Program Requirements

(36 semester hours)

The Bachelor of Arts with a major in Professional Writing is designed for students who wish to engage with the theory and practice of writing for various purposes and in different print and digital media. Students may choose one of four tracks:

1. Digital and Technical Communication
2. Editing in Professional Contexts
3. Public Writing and Rhetoric
4. Intercultural Rhetoric and Writing

The major requires 36 hours: five core courses (15 hours); five track courses, one of which is required (15 hours); and two elective courses in any 200-level or above course in the English Department (6 hours). (Note: You may not "double-dip" a course as both a track-elective and an open-elective.)

Code	Title	Credit Hours
<b>Core courses</b>		
ENG 171	Humanities and Technology	3
ENG 223	Rhetorical Strategies for Writers	3
ENG/IMS 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds	3
ENG/IMS 411	Visual Rhetoric	3
<b>ENG Capstone:</b>		
ENG 415	Capstone in Professional Writing <sup>1</sup>	3
<b>Track</b>		
Select one of four tracks		15
<b>Open Electives</b>		
Select two courses from any 200-level or above course in the English Department. <sup>2</sup>		6
<b>Total Credit Hours</b>		<b>36</b>

<sup>1</sup> ENG 495R may be substituted for ENG 415.

<sup>2</sup> This may include 200-level and above ENG courses from the tracks.

## Tracks

### Editing in Professional Contexts

Code	Title	Credit Hours
<b>Required course</b>		
ENG 412	Print and Digital Editing	3
<b>Elective courses</b>		
Select four courses from the following, two of which must be at the 300 or 400 level:		12
ENG 202	Varieties of English: Dialect Diversity and Language Change	
ENG 222	The Rhetoric of Information and Data Visualization	
ENG 226	Introduction to Creative Writing: Short Fiction and Poetry	
ENG 302	Structure of Modern English	
ENG 310	Special Topics in Rhetoric and Persuasion	
ENG 315	Business Writing	
ENG 321	The Literary Marketplace	
ENG 323	Intermediate Creative Writing: Creative Nonfiction	
ENG 340	Internship	
ENG/IMS 407	Interactive Business Communication	
ENG 413	Grant and Proposal Writing	
ENG/IMS 416	Writing for Global Audiences	
ENG/IMS/JRN 424	Ethics and Digital Media	
ENG/IMS 426	Developing & Publishing Digital Books	
ENG 481	Writing Center Theory and Practice	
JRN 316	Editing and Design	
Total Credit Hours		15

### Public Writing and Rhetoric

Code	Title	Credit Hours
<b>Required course</b>		
ENG 310	Special Topics in Rhetoric and Persuasion	3
or ENG 413	Grant and Proposal Writing	
<b>Elective courses</b>		
Select four courses from the following, two of which must be at the 300 or 400 level:		12
AAA/AMS/BWS/LAS/WGS 211	Writing with Purpose: Interdisciplinary Inquiry and Communication	
ENG 201	Special Topics in Language Awareness	
ENG/MAC 213	Writing for Media	
ENG 222	The Rhetoric of Information and Data Visualization	
ENG 315	Business Writing	
ENG 316	Legal Writing and Reasoning	
ENG 340	Internship	
ENG/IMS 407	Interactive Business Communication	
ENG 412	Print and Digital Editing	
ENG/IMS 416	Writing for Global Audiences	

ENG/IMS/JRN 424	Ethics and Digital Media	
ENG/IMS 426	Developing & Publishing Digital Books	
ENG/IES/JRN 429	Environmental Communication	
ENG 481	Writing Center Theory and Practice	
JRN 318	Advanced Storytelling in Journalism	
JRN 412	Public Affairs Reporting	
Total Credit Hours		15

### Digital and Technical Communication

Code	Title	Credit Hours
<b>Required course</b>		
ENG 313	Technical Writing	3
<b>Elective courses</b>		
Select four courses from the following, two of which must be at the 300 or 400 level:		12
ENG 222	The Rhetoric of Information and Data Visualization	
ENG/IMS 238	Narrative and Digital Technology	
ENG 310	Special Topics in Rhetoric and Persuasion	
ENG 340	Internship	
ENG/IMS 407	Interactive Business Communication	
ENG 412	Print and Digital Editing	
ENG 413	Grant and Proposal Writing	
ENG 414	Usability and User Experience	
ENG/IMS 416	Writing for Global Audiences	
ENG/JRN/IMS 424	Ethics and Digital Media	
ENG/IMS 426	Developing & Publishing Digital Books	
IMS 222	Introduction to Interaction Design and Development	
IMS 315	User Experience Research	
IMS 418	Social Media Marketing and Online Community Management	
IMS 422	Advanced Interaction Design and Development	
Total Credit Hours		15

### Intercultural Rhetoric and Writing

Code	Title	Credit Hours
<b>Required course</b>		
ENG/IMS 416	Writing for Global Audiences	3
<b>Elective courses</b>		
Choose four, two of which must be at the 300 or 400 level:		12
AAA/AMS/BWS/LAS/WGS 211	Writing with Purpose: Interdisciplinary Inquiry and Communication	
AMS 207	America: Global and Intercultural Perspectives	
ENG/DST 169	Disability and Literature	
ENG/STC 201	Special Topics in Language Awareness	

ENG 202	Varieties of English: Dialect Diversity and Language Change
ENG 237	GLBTQ Literature
ENG/AMS 246	Native American Literature
ENG/AAA/AMS 248	Asian American Literature
ENG/LAS 254	Latino/a Literature and the Americas
ENG/AAA 269	Colonial & Postcolonial Literature
ENG 298	Introduction to Literary and Cultural Studies
ENG 310	Special Topics in Rhetoric and Persuasion
ENG/BWS 336	African American Writing, 1746-1877
ENG/BWS 337	African American Writing, 1878-1945
ENG/BWS 338	African American Writing, 1946-Present
ENG/AMS 348	Ethnic American Literatures
ENG/AAA/WGS 351	Cultural Politics of Gender and Sexuality in Asian/America
ENG/FST 356	Women and Gender in Film
ENG/IMS/JRN 424	Ethics and Digital Media
ENG/BWS/WGS 432	Feminism and the Diaspora: U.S. Women of Color
ENG/WGS 435	Queer Theory
ENG/BWS/WGS 437	Black Feminist Theory
GIC 301	Approaches to Global and Intercultural Studies: Globalization and Belonging
STC 436	Intercultural Communication
WGS 201	Introduction to Women's Studies
WGS 406	Indigenous Peoples and Their Sacred Lands
<b>Total Credit Hours</b>	
15	

In consultation with your advisor and with administrative approval, you may design your own track. Your track (1) must have a coherent and clearly identified identity or theme in professional writing, and (2) must include at least three courses at the 300 level or above from the above list.

Students seeking the Bachelor of Arts in Professional Writing meet the College of Arts and Science writing in the major requirement by completing the following course: ENG 223 and either ENG 415 or ENG 495R.

## Environmental Earth Science-Bachelor of Arts

For information, contact the Department of Geology & Environmental Earth Science, 118 Shideler Hall, 513-529-3216.

The Bachelor of Arts in Environmental Earth Science is designed for those students who are interested in Earth systems and processes, but who are also interested in applying their geoscience pursuits to environmental issues, problems and solutions. This major reflects the

fact that most of our faculty are involved in environmental research and study.

## Program Requirements

(53 semester hours minimum)

Code	Title	Credit Hours
<b>Strongly recommended for first year students</b>		
GLG 147	Introductory Seminar - Geology & Environmental Earth Science	
<b>Core requirements</b>		
Select one of the following:		3
GLG 111	The Dynamic Earth	
GLG 121	Environmental Geology	
GLG 141	Geology of U.S. National Parks	
Select the following:		
GLG 115L	Understanding the Earth	1
Select one of the following:		3
GEO 271	Human Dimensions of Natural Resource Conservation	
IES 274	Introduction to Environment and Sustainability	
IES 275	Principles of Environmental Science	
Select all of the following:		
GLG 204	Survival on an Evolving Planet	4
GLG 301	Sedimentology and Stratigraphy	4
GLG 354	Geomorphology	4
GLG 408	Introduction to Hydrogeology	4
Field experience:		
Minimum of 3 semester hours of a field based course.		3
Courses that can fulfill the Field Experience are listed below. May be fulfilled by other credit workshops if pre-approved by GLG CDA.		
GLG 311	Geoenvironmental Field Methods	
GLG 412	Tropical Ecosystems of Costa Rica	
GLG 413	Tropical Marine Ecology	
GLG Capstone:		
GLG 497	Trends and Topics in the Geosciences	3
<b>Electives</b>		
Select at least 15 semester hours; no more than 1 course at the 200- or 300-level		15
GLG 201	Mineralogy	
GLG 244	Oceanography	
GLG 307	Water and Society	
GLG 335	Ice Age Earth	
GLG 402	Geomicrobiology	
GLG 417	Forensic Isotope Geochemistry	
GLG 428	Hydrogeological Modeling: Groundwater Flow and Contaminant Transport and Fate	
GLG 435	Soils and Paleosols	
GLG 436	Paleoclimatology	
GLG 437	Paleontology in Conservation	

GLG 496	Isotopes in Environmental Processes	
<b>Related Hours (minimum of 9 hours required)</b>		
Select one of the following:		3-6
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	
CHM 141R & CHM 144	College Chemistry and College Chemistry Laboratory	
GLG 211	Chemistry of Earth Systems	
Select one of the following:		3-5
MTH 151	Calculus I	
MTH 251	Calculus II	
STA 261	Statistics	
STA 301	Applied Statistics	
Select one of the following:		3-5
PHY 161	Physics for the Life Sciences with Laboratory I	
PHY 191	General Physics with Laboratory I	
GLG 261	Geohazards and the Solid Earth	
Total Credit Hours		53-60

Students seeking the Bachelor of Arts in Environmental Earth Science meet the College of Arts and Science writing in the major requirement by completing GLG 204, GLG 301, and GLG 497.

## Environmental Science Co-Major

For more information, contact the Institute for the Environment and Sustainability, 118 Shideler Hall, 513-529-5811.

This co-major emphasizes earth science and life science approaches to understanding environmental patterns and processes. Students are prepared to pursue a wide variety of career paths and post-graduate degrees in environmental science, especially those with biological and physical science specializations. The term "co-major" indicates that students must be concurrently enrolled in and must complete another major at Miami University. The co-major complements this primary major, which provides significant depth and breadth in an academic discipline. There is no specific degree designation for the co-major; students receive the degree designation of their primary major.

## Program Requirements

(32-44 semester hours)

**Complete a major in one of the divisions of the university.**

Code	Title	Credit Hours
<b>Biological Science</b>		
Select one of the following:		3-4
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	
BIO 121	Environmental Biology	
BIO 131	Plants, Humanity, and Environment	
BIO 176	Ecology of North America	
BIO 191	Plant Biology	
<b>Physical Science</b>		
Select one course from group A and one from B: <sup>1</sup>		6-9

<b>Group A:</b>		
CHM 111 & 111L	Chemistry in Modern Society and Chemistry in Modern Society Laboratory	
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	
GLG 211	Chemistry of Earth Systems	
CPB 244	Introduction to Environmental Engineering	
<b>Group B:</b>		
GEO 121	Earth's Physical Environment	
GEO 122	Geographic Perspectives on the Environment	
GLG 111 & GLG 115L	The Dynamic Earth and Understanding the Earth	
GLG 121 & GLG 115L	Environmental Geology and Understanding the Earth	
GLG 141 & GLG 115L	Geology of U.S. National Parks and Understanding the Earth	

### Statistics

Select one of the following:		3-4
STA 261	Statistics	
STA 301	Applied Statistics	
STA 368	Introduction to Statistics	

### Social Science

ECO 201	Principles of Microeconomics	3
Select one of the following:		3
ATH 175	Peoples of the World	
GEO 101	Global Forces, Local Diversity	
GEO 436	Women, Gender, and the Environment	
IES 211	Energy and Policy	
IES 494	Sustainability Perspectives in Resources and Business	
POL 241	American Political System	
POL 261	Public Administration	

### Environmental Science

IES 275	Principles of Environmental Science	3
Select two related courses from the list at the bottom of this page (both of which must be outside department of primary major)		5-9

### Synthesis

IES 431	Principles and Applications of Environmental Science	3
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### Practicum/Field Experience <sup>2</sup>

Select one of the following:		3-6
BIO 333	Field Ecology	
BIO 463	Limnology	
BIO 496	Biodiversity of Kenya	
GEO/GLG/IES/LAS 412	Tropical Ecosystems of Costa Rica	
GEO/GLG/LAS 413/IES 423	Tropical Marine Ecology	
GLG 311	Geoenvironmental Field Methods	
GLG 411A	Field Geology	

IES 411	Environmental Protocols	
Honors Thesis		
Independent Studies 377 or Internship 340 <sup>3</sup>		
Or other appropriate field courses with permission of the CDA or IES Director		
Total Credit Hours		32-44

<sup>1</sup> PHY 161 or PHY 191 strongly recommended.

<sup>2</sup> The course used for Practicum/Field Experience may not also be used for Environmental Science: Related Courses

<sup>3</sup> must be approved by IES Director or Co-Major advisor

## Environmental Science: Related courses

Code	Title	Credit Hours
BIO 351	Environmental Education: Focus on Natural History	4
BIO 408	Ornithology	4
BIO 425	Environmental Plant Physiology	4
BIO/GEO 431	Global Plant Diversity	3
BIO/GEO 432	Ecoregions of North America	3
BIO 438	Soil Ecology and Sustainable Use	3
BIO 451	Conservation Education and Community Engagement	3
BIO 453	Animal Physiological Ecology	4
BIO 463	Limnology	4
BIO 467	Conservation Biology	3
CHM 363 & CHM 364	Analytical Chemistry and Analytical Chemistry Laboratory	5
CHM 454	Instrumental Analysis	3
CHM 491	Chemistry in Societal Issues	3
CPB 405	Industrial Environmental Control	3
CPB 441	Pollution Prevention in Environmental Management	3
CPB 442	Air Pollution Control	3
GEO 425	Hydrogeography	3
GEO 426	Watershed Management	3
GEO 428	Soil Geography	4
GEO/BIO 431	Global Plant Diversity	3
GEO/BIO 432	Ecoregions of North America	3
GEO 441	Geographic Information Systems	3
GEO 444	GIScience Techniques in Landscape Ecology	3
GLG 307	Water and Society	3
GLG 335	Ice Age Earth	3
GLG 354	Geomorphology	4
GLG 402	Geomicrobiology	3
GLG 408	Introduction to Hydrogeology	4
GLG 428	Hydrogeological Modeling: Groundwater Flow and Contaminant Transport and Fate	4
GLG 432	X-ray Powder Diffraction and Clay Analysis	3
GLG 435	Soils and Paleosols	3

GLG 496	Isotopes in Environmental Processes	3
IES 411	Environmental Protocols	4
IES 441	Environmental Public Health	3
MBI 475	Microbial Ecology: Exploration of the Diverse Roles of Microorganisms in Earth's Ecology	4
PHY 421	Molecular and Cellular Biophysics	4
PHY 437	Intermediate Thermodynamics and Introduction to Statistical Physics	4
PHY 441	Optics and Laser Physics	4
STA 333	Nonparametric Statistics	3
STA 363	Introduction to Statistical Modeling	3
STA 401	Probability	3
STA 462	Inferential Statistics	3
STA 475	Data Analysis Practicum	3

## Film Studies Co-major

For information, contact the Department of Media, Journalism and Film, **120 Williams** Hall, 513-529-3521.

Film Studies is an interdisciplinary co-major that explores the interaction between film, culture and society. Coursework encompasses film history, theory, criticism and analysis. Students interested in production also have the opportunity to direct, shoot and edit their own short films. Film Studies students learn how to watch, think, write about and create film in new and profound ways. In its combined focus on the arts, technology and the humanities, as well as in its global framework, film studies is an intellectually challenging and enriching co-major that prepares students for a wide variety of careers in the 21st century workplace.

## Program Requirements

(34-38 hours)

Code	Title	Credit Hours
<b>Core Courses (take all five)</b>		
MAC 143	Introduction to Media	3
MAC 146	Media Aesthetics	3
FST 201	Film History and Analysis	3
FST 301	Film Theory	3
FST 401	Seminar in Film Study	3
<b>Electives</b>		19-23
Critical/Analytic - General (at least two electives from here)		
FST 135	Film as Ethnography	
FST 206	Diversity and Culture in American Film	
FST 220	Literature and Film	
FST 221	Shakespeare and Film	
FST 235	Classical Hollywood Cinema	
FST 236	Experimental Film	
FST 252	History at the Movies	
FST 282	Sexualities and Film	
FST 330	Film Auteurs	
FST 345	Global Media, Ethnography, and Film	

FST 350	Topics in Film
FST 356	Women and Gender in Film
FST 360	Film Genres
FST 400	Topics in Film
National Cinemas (at least two electives from here):	
FST 222	Italian American Culture
FST 261	German Film in Global Context
FST 262	Italian Cinema
FST 263	Soviet and Post-Soviet Russian Cinema
FST 264	Chinese Cinema and Culture
FST 266	Survey of Japanese Cinema
FST 366	French Cinema In Translation
FST 383	Brazilian Women through Literature and Film
FST 460	Topics in French Cinema
Production (these courses may be taken as electives):	
MAC 211	Introduction to Video Production
MAC 213	Writing for Media
MAC 311	Digital Film Production
MAC 414	Capstone Pictures: Project in Digital Narrative Film Production
MAC 422	Advanced Creative Writing: Screenwriting Workshop
THE 253	Costume Fundamentals
THE 439A	Acting for the Camera
Total Credit Hours	34-38

## Food Systems and Food Studies Co-Major

For information, contact the Institute for the Environment and Sustainability, 118 Shideler Hall, 513-529-5811.

The Food Systems & Food Studies co-major provides an interdisciplinary examination of food, exploring the complex path food follows from farm to fork and beyond. Combining courses on the fundamentals of agricultural ecology; food, nutrition, and health; and food, society, and culture with real-world experiences, students develop a broad understanding of food from a biological, economic, political, social, cultural, and environmental perspective. Students are prepared to pursue a wide variety career paths and post-graduate degrees in agriculture and food related professions. The Food Systems and Food Studies co-major is designed to complement a primary major, which provides significant depth and breadth in an academic discipline.

### Program Requirements

Code	Title	Credit Hours
<b>I. Foundations of Food Systems &amp; Food Studies</b>		
BIO 131 or BIO 191	Plants, Humanity, and Environment Plant Biology	3-4
BIO 306	Basic Horticulture	3
IES 274	Introduction to Environment and Sustainability	3
IES 278	Introduction to Food Systems	3

IES 278L	Understanding Food Systems Laboratory	1
KNH 102	Fundamentals of Nutrition	3

### II. Experiential Learning

Students must complete 3 hours of internship working with an Institute for Food faculty advisor. Internship hours can be completed at the Miami University Institute for Food Farm or at other farm or food-centered organizations approved in advance by the advisor for the Food Systems & Food Studies Co-Major. Fifty hours of internship work equals 1 credit hour. Prerequisite IES 278L.

IES 340	Internship	3
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### III. Interdisciplinary Electives

15

Student designed, interdisciplinary elective in food systems and food studies integrating courses from the following areas. Courses from at least 2 areas must be included:

AREA ONE: Fundamentals of Sustainable Agriculture (select from the following list of courses)

BIO 209	Fundamentals of Ecology
BIO 244	Viticulture and Enology
BIO 438	Soil Ecology and Sustainable Use
GEO 428	Soil Geography
GLG 307	Water and Society
GLG 435	Soils and Paleosols
IES 474	Sustainability in Practice
MBI 121	The Microbial World

AREA TWO: Food, Nutrition & Health (select from the following list of courses)

KNH 104	Introduction to Food Science and Meal Management
KNH 203	Nutrition in Disease Prevention Management
KNH 213	Global and Community Nutrition
KNH 304	Advanced Nutrition
KNH 404	Advanced Food Science
KNH 432	Nutrition Across the Life Span

AREA THREE: Food, Culture & Society (select from the following list of courses)

ATH 405	Food, Taste, and Desire
ESP 331	Social Entrepreneurship
HST 238	Food in History
IES 429	Environmental Communication
IES 494	Sustainability Perspectives in Resources and Business
MKT 412	Sustainable Marketing Management
SOC 362	Family Poverty
WST 201	Self and Place
WST 341	Interdisciplinary Synthesis and Action

Total Credit Hours	34-35
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## French- Bachelor of Arts

For information, contact the Department of French and Italian, 207 Irvin Hall, 513-529-7508.

Students are encouraged to participate in the Department's summer programs abroad.

### Teacher Licensure

Students who wish to combine teacher licensure with an Arts and Science major must observe the rules, procedures, and restrictions pertaining to admission to a licensure cohort as outlined in the College of Education, Health and Society chapter. For information, contact the Office of Student Services in the College of Education, Health and Society, 202 McGuffey Hall, 513-529-6418.

### Program Requirements

(33 semester hours)

Code	Title	Credit Hours
FRE 131	Masterpieces of French Culture in Translation <sup>1</sup>	3
FRE 301	Culture & Interpretation <sup>1</sup>	3
Select 6 hours of the following in no particular sequence:		6
FRE 302	Pre-Revolutionary Literature and Life	
FRE 303	Modern and Contemporary Literature and Life	
FRE 310	Texts in Context	
Select 18 hours at 400 level, including the following:		18
FRE 410	Senior Seminar	
Select remaining hours from 300/400 level courses to total 33 hours.		3
Total Credit Hours		33

<sup>1</sup> FRE 131 and FRE 301 must be taken first.

No more than six hours in translation count toward this major. FRE 361 does **not** count toward this major.

Students seeking the Bachelor of Arts in French meet the College of Arts and Science writing in the major requirement by completing the following course/s: FRE 301; six hours from FRE 302, FRE 303, or FRE 310, in no particular sequence; and FRE 410.

## Geography and Sustainable Development- Bachelor of Arts

Geography and Sustainable Development majors integrate the social and natural sciences to address 21st century social, economic, and environmental challenges. They synthesize geographic information using qualitative and quantitative techniques, including geospatial mapping technologies and data science. Students apply critical thinking, communication, and technical skills through individualized research and field experiences. They are prepared for purposeful careers in sustainable development and policy; environment and natural resource management; culture, citizenship and social justice; and geospatial techniques and applications.

## Program Requirements

(36 semester hours)

Code	Title	Credit Hours
<b>Geography and Sustainable Development Foundations</b>		9-10
GEO 101 or GEO 111	Global Forces, Local Diversity World Regional Geography: Patterns and Issues	
GEO 121 or GEO 122	Earth's Physical Environment Geographic Perspectives on the Environment	
GEO 211	Global Change	
<b>Geospatial Analysis and Techniques</b>		6-7
GEO 242	Mapping a Changing World	
GEO 221 or GEO 441 or GEO 448 or STA 261	Regional Physical Environments Geographic Information Systems Techniques and Applications of Remote Sensing Statistics	
<b>Sustainable Development Perspectives</b>		3
Choose one from the following.		
GEO 201	Geography of Urban Diversity	
GEO 271	Human Dimensions of Natural Resource Conservation	
GEO 276	Geography of the Global Economy	
GEO 302	Geography and Gender	
GEO 378	Political Geography	
IES 274	Introduction to Environment and Sustainability	
<b>Place and Region</b>		3-6
Choose one from the following.		
GEO 288	Geographic Field Study Abroad	
GEO 412	Tropical Ecosystems of Costa Rica	
GEO 413	Tropical Marine Ecology	
GEO 208	The Rise of Industrialism in East Asia	
GEO 301	Geography of Sub-Saharan Africa	
GEO 309	Native American Women	
GEO 406	Indigenous Peoples and Their Sacred Lands	
<b>Applications and Areas of Focus</b>		12
Select at least 12 hours from any of the following:		
Sustainable Development and Policy		
GEO 408	Geography of the Silk Road (The Heart of Asia)	
GEO 436	Women, Gender, and the Environment	
GEO 451	Urban and Regional Planning	
GEO 454	Urban Geography	
GEO 459	Advanced Urban and Regional Planning	
GEO 467	Land Use, Law and the State: Geographic Perspectives	
GEO 475	Global Periphery's Urbanization	
GEO 476	Global Poverty	
Environment and Natural Resource Management		

GEO 333	Global Perspectives on Natural Disasters
GEO 354	Geomorphology
GEO 425	Hydrogeography
GEO 426	Watershed Management
GEO 428	Soil Geography
GEO 431	Global Plant Diversity
GEO 432	Ecoregions of North America
GEO 436	Women, Gender, and the Environment
Culture, Citizenship, and Social Justice	
GEO 302	Geography and Gender
GEO 309	Native American Women
GEO 378	Political Geography
GEO 406	Indigenous Peoples and Their Sacred Lands
GEO 455	Race, Urban Change, and Conflict in America
GEO 457	Global Cities, World Economy
GEO 462	Citizenship and the City
GEO 475	Global Periphery's Urbanization
GEO 476	Global Poverty
Geospatial Applications	
GEO 441	Geographic Information Systems
GEO 442	Advanced Geographic Information Systems
GEO 443	Python Programming for ArcGIS
GEO 444	GIScience Techniques in Landscape Ecology
GEO 445	Geographic Information Systems for Criminal Justice
GEO 448	Techniques and Applications of Remote Sensing
<b>Capstone Experience</b>	3-4
GEO 491	Senior Seminar
or GEO 493	Urban Field Experience
Total Credit Hours	36-42

<sup>1</sup> Students are encouraged to consult with their advisor (mary.henry@miamioh.edu) and review departmental publications for suggested specialization courses that align with each student's interests and post-graduation plans.

**Note:** Students seeking the Bachelor of Arts in Geography and Sustainable Development meet the College of Arts and Science writing in the major requirement by completing the following courses: GEO 211 and GEO 491.

## Geology- Bachelor of Arts

For information, contact the Department of Geology & Environmental Earth Science, 118D Shideler Hall, 513-529-3216.

Geology is the study of the history of the Earth and processes that continue to shape the planet today. Geoscientists view the Earth as a set of intimately connected atmospheric, hydrologic, and rock systems. Both Geology undergraduate degree options require a core

of geology classes and cognate courses including a capstone field mapping experience.

The Bachelor of Arts in Geology prepares students for further graduate work in the geosciences and related disciplines, as well as careers in the environmental industry, petroleum, mining, government, or education.

The Bachelor of Science in Geology is designed to provide more in-depth study, particularly in preparation for pursuit of a graduate degree in the geological sciences. As part of this preparation, students are required to conduct independent research leading to public presentation of their results.

## Teacher Licensure

Students who wish to combine teacher licensure with an Arts and Science major must observe the rules, procedures, and restrictions pertaining to admission to a licensure cohort as outlined in the College of Education, Health and Society chapter. For information, contact the Office of Student Services in the College of Education, Health and Society, 202 McGuffey Hall, 513-529-6418.

## Program Requirements: Bachelor of Arts

(39 semester hours minimum in GLG; 51 semester hours minimum including related courses)

Code	Title	Credit Hours
<b>Strongly recommended for first year students</b>		
GLG 147	Introductory Seminar - Geology & Environmental Earth Science	
<b>Core courses</b>		
Select one of the following:		3
GLG 111	The Dynamic Earth	
GLG 121	Environmental Geology	
GLG 141	Geology of U.S. National Parks	
Select the following:		
GLG 115L	Understanding the Earth	1
GLG 201	Mineralogy	4
GLG 204	Survival on an Evolving Planet	4
GLG 301	Sedimentology and Stratigraphy	4
GLG 322	Structural Geology	4
GLG 357	Igneous/Metamorphic Petrology	4
GLG 411A	Field Geology	6
<b>Electives</b>		
Select a minimum of 9 hours; at least two courses must be at 400-level		9
<b>Related Hours</b>		
Select 12-16 hours of the following:		12-16
CHM 141	College Chemistry	
or CHM 141R	College Chemistry	
CHM 144	College Chemistry Laboratory	
MTH 151	Calculus I	
or STA 261	Statistics	
or STA 301	Applied Statistics	

PHY 161	Physics for the Life Sciences with Laboratory I	
or PHY 191	General Physics with Laboratory I	
Total Credit Hours		51-55

## Electives

Code	Title	Credit Hours
GLG 335	Ice Age Earth	3
GLG 354	Geomorphology	4
GLG 402	Geomicrobiology	3
GLG 408	Introduction to Hydrogeology	4
GLG 417	Forensic Isotope Geochemistry	3
GLG 427	Isotope Geochemistry	3
GLG 428	Hydrogeological Modeling: Groundwater Flow and Contaminant Transport and Fate	4
GLG 432	X-ray Powder Diffraction and Clay Analysis	3
GLG 435	Soils and Paleosols	3
GLG 436	Paleoclimatology	3
GLG 437	Paleontology in Conservation	3
GLG 447	Volcanology	3
GLG 450	Sedimentary Basin Analysis	3
GLG 461	Geophysics	3
GLG 467	Seismology	3
GLG 492	Global Tectonics	4
GLG 496	Isotopes in Environmental Processes	3

Students seeking the Bachelor of Arts in Geology meet the College of Arts and Science writing in the major requirement by completing GLG 204 and GLG 301 and one of the following (GLG 402) or (GLG 408) or (GLG 417) or (GLG 427).

## Geology- Bachelor of Science

For information, contact the Department of Geology & Environmental Earth Science, 118D Shideler Hall, 513-529-3216.

Geology is the study of the history of the Earth and processes that continue to shape the planet today. Geoscientists view the Earth as a set of intimately connected atmospheric, hydrologic, and rock systems. Both Geology undergraduate degree options require a core of geology classes and cognate courses including a capstone field mapping experience.

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The Bachelor of Science in Geology is designed to provide more in-depth study, particularly in preparation for pursuit of a graduate degree in the geological sciences. As part of this preparation, students are required to conduct independent research leading to public presentation of their results.

## Teacher Licensure

Students who wish to combine teacher licensure with an Arts and Science major must observe the rules, procedures, and restrictions pertaining to admission to a licensure cohort as outlined in the College of Education, Health and Society chapter. For information, contact the Office of Student Services in the College of Education, Health and Society, 202 McGuffey Hall, 513-529-6418.

## Program Requirements: Bachelor of Science

(45 semester hours minimum in GLG; 68 semester hours minimum including related courses)

Code	Title	Credit Hours
<b>Strongly recommended for first year students</b>		
GLG 147	Introductory Seminar - Geology & Environmental Earth Science	
<b>Core Requirements</b>		
Select one of the following:		3
GLG 111	The Dynamic Earth	
GLG 121	Environmental Geology	
GLG 141	Geology of U.S. National Parks	
Select the following:		
GLG 115L	Understanding the Earth	1
GLG 201	Mineralogy	4
GLG 204	Survival on an Evolving Planet	4
GLG 301	Sedimentology and Stratigraphy	4
GLG 322	Structural Geology	4
GLG 357	Igneous/Metamorphic Petrology	4
GLG 411A	Field Geology	6
<b>Electives</b>		
Select at least 12 semester hours (with at least 3 courses at 400 level) of the following:		12
GLG 335	Ice Age Earth	
GLG 354	Geomorphology	
GLG 402	Geomicrobiology	
GLG 408	Introduction to Hydrogeology	
GLG 417	Forensic Isotope Geochemistry	
GLG 427	Isotope Geochemistry	
GLG 428	Hydrogeological Modeling: Groundwater Flow and Contaminant Transport and Fate	
GLG 432	X-ray Powder Diffraction and Clay Analysis	
GLG 435	Soils and Paleosols	
GLG 436	Paleoclimatology	
GLG 437	Paleontology in Conservation	
GLG 447	Volcanology	
GLG 450	Sedimentary Basin Analysis	
GLG 461	Geophysics	
GLG 467	Seismology	
GLG 492	Global Tectonics	
GLG 496	Isotopes in Environmental Processes	

**Research Project**

Select one of the following:	3
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GLG 377	Independent Studies <sup>1</sup>
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GLG 477	Independent Studies <sup>1</sup>
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GLG 498	Senior Thesis In Geology <sup>1</sup>
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**Related Hours (23-30 required)**

CHM 141	College Chemistry	3-4
or CHM 141R	College Chemistry	

CHM 144	College Chemistry Laboratory	2
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Select one of the following:	3-5
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CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory
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GLG 211	Chemistry of Earth Systems
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Take this course:	
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MTH 151	Calculus I	5
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Select one of the following:	3-4
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MTH 251	Calculus II
or MTH 249	Calculus II

STA 261	Statistics
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STA 301	Applied Statistics
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Select one of the following:	4-5
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PHY 161	Physics for the Life Sciences with Laboratory I
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PHY 191	General Physics with Laboratory I
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Select one of the following:	3-5
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PHY 162	Physics for the Life Sciences with Laboratory II
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PHY 192	General Physics with Laboratory II
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GLG 261	Geohazards and the Solid Earth
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Total Credit Hours	68-75
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<sup>1</sup> Public presentation of research project

## German- Bachelor of Arts

For information, contact the Department of German, Russian, Asian, and Middle Eastern Languages and Cultures, 172 Irvin Hall, 513-529-2526.

This program provides students with a solid foundation in language, literature, and culture. The department offers an intensive summer program in Germany for students at intermediate and advanced levels.

Six semester hours of GER courses taught in English can be applied toward the required 27 semester hours. All courses for the German major must be taken for a grade except courses only offered as credit/no-credit.

## Teacher Licensure

Students who wish to combine teacher licensure with an Arts and Science major must observe the rules, procedures, and restrictions pertaining to admission to a licensure cohort as outlined in the College of Education, Health and Society chapter. For information, contact the Office of Student Services in the College of Education, Health and Society, 202 McGuffey Hall, 513-529-6418.

## Program Requirements

(27 semester hours numbered above GER 202 plus 9 hours of related courses)

Code	Title	Credit Hours
<b>Language skills</b>		
GER 301	German Language Through the Media	3
<b>Literature</b>		
GER 311	Passionate Friendships in German Literature from the Middle Ages to the Present	3
GER 312	Coming of Age in German Life and Thought	3
<b>Culture</b>		
GER 321	Cultural Topics in German-Speaking Europe Since 1870	3
or GER 322	Comparative Study of Everyday Culture: German-Speaking Europe and the U.S.A.	
<b>Advanced study (Global Miami Plan Capstone)</b>		
GER 471	Linguistic Perspectives on Contemporary German	3
Select a 400-level GER course		3
Two three-hour German courses at any level taught in English <sup>1</sup>		
Remaining course hours from those taught in German at 300 or 400 level		9
<b>Related Hours</b>		
Select nine semester hours <sup>2</sup>		9
Total Credit Hours		36

<sup>1</sup> Except FRE 212/GER 212; ATH 219/ENG 219/GER 219 may be used toward the major.

<sup>2</sup> These may include study of other national literatures, literary theory, comparative literature, linguistics, or another language. Depending on the subject, another major or minor may satisfy this requirement. Courses in music, art, history, political science, and other disciplines qualify on the basis of their content. Related hours must be approved by your advisor.

Students seeking the Bachelor of Arts in German meet the College of Arts and Science writing in the major requirement by completing the following courses: GER 301 and GER 471.

## Gerontology- Bachelor of Arts

Students with a bachelor's degree in gerontology from Miami University apply interdisciplinary knowledge about aging and the life course in a variety of settings and across cultures. Seeking to improve the lives of aging and older people, their families, and communities, Miami's gerontology program graduates are skilled in effective teamwork, communication, and creative problem-solving. They possess core skills in research, breadth of knowledge about the individual and societal issues of aging, and cumulative supervised experiences working in organizations that address the challenges and opportunities of aging.

## Program Requirements

(33-34 semester hours)

Code	Title	Credit Hours
<b>Multidisciplinary Core</b>		21
GTY 154	Big Ideas in Aging	
GTY 244	Pre-Internship in Gerontology	
GTY/SOC 318	Social Forces and Aging	
GTY 354	Issues & Controversies in Aging	
GTY 365	Social Policy and Programs in Gerontology	
SOC 262	Research Methods	
STA 261	Statistics	
<b>Students select one of the following track areas:</b>		12-13
<b>Applied Research Track</b>		
Select all:		
GTY 362	Applied Research in Gerontology	
GTY 479	Research on Inequality in Aging & Health	
GTY 440R	Gerontology Research Capstone Internship	
or		
<b>Aspiring Health Professions</b>		
Select both of the following:		
GTY 456	Aging & Health	
GTY 479	Research on Inequality in Aging & Health	
Select one:		
GTY 440P	Gerontology Practice Capstone Internship	
or GTY 440R Gerontology Research Capstone Internship		
or		
<b>Policies and Programs</b>		
Select all of the following:		
GTY 465	Policies & Programs in an Aging Society	
GTY 456	Aging & Health	
GTY 440P	Gerontology Practice Capstone Internship	
Total Credit Hours		33-34

**Note:** Gerontology majors are required to take at least one 400 level gerontology course in addition to GTY 440R OR GTY 440P.

Students seeking the Bachelor of Arts in Gerontology meet the College of Arts and Science writing in the major requirement by completing GTY 318 and the GTY Capstone (GTY 440R OR GTY 440P).

## Global and Intercultural Studies Co-Major

For information, contact Dr. Ann Fuehrer, fuehrea@miamioh.edu, 513-529-6827, 126 MacMillan Hall

The GIC Co-Major enhances a primary degree by exploring questions related to global systems of power in our interconnected world. The Co-Major examines questions related to belonging, identity and culture, as well as economic and political trends. Students learn to address contemporary issues, such as immigration, poverty, inequality, and sustainable development, using interdisciplinary perspectives and diverse frames of reference. Students will, with an advisor, design a concentration in an area of interest to them, such as Global Economies; Critical Race and Ethnicities; Human Rights and Social Movements; Migrations: Transnationalism and Diaspora; Critical Gender and Sexualities; Visual and Popular Culture; and Environment, Science and Health. GIC Co-Majors may have a primary major in any department and division. A minimum of 18 credit hours must be unique to the Co-Major, thus, outside of students' primary major coursework.

## Program Requirements

Code	Title	Credit Hours
<b>Core Courses</b>		
Select the following:		
GIC 101	Global and Intercultural Studies	3
GIC 301	Approaches to Global and Intercultural Studies: Globalization and Belonging	3
Select two of the following:		6-7
AAA 201	Introduction to Asian/ Asian American Studies	
or AAA 207	Asia and Globalization	
AMS 205	Introduction to American Cultures	
or AMS 207	America: Global and Intercultural Perspectives	
CRE 151	Introduction to Critical Race and Ethnic Studies	
or BWS 156	Introduction to Africa	
ITS 201	Introduction to International Studies	
LAS 208	Introduction to Latin America	
or LAS 260	Latin America in the United States	
WGS 201	Introduction to Women's Studies	
or WGS 202	Introduction to GLBT Studies	
<b>Experiential Component</b>		3
Approved by advisor from the following, or see advisor for alternatives:		
AMS 277	Independent Studies	
AMS 301	American Identities	
ITS 340	Internship	
or JRN 340	Internship	
SPN 331	Spanish for Community Work	
WGS/BWS 402	Engaged Learning Practicum	
<b>Capstone</b>		3-4
Select one:		
AMS 401	Senior Capstone in American Studies	
BWS/WGS 432	Feminism and the Diaspora: U.S. Women of Color	
BWS 470	Social/Political Activism	
FSW/SOC/WGS 451	Family Violence	

ITS 402	Senior Capstone in International Studies
LAS 410	Current Latin American Issues
WGS 401	The Role of Women in a Transforming Society

**Concentration Hours**<sup>1</sup> 15

Approved by advisor, in one area of concentration, from existing courses.

Concentration hours may be approved from Programs in the GIC Department or from relevant departments.

Total Credit Hours 33-35

<sup>1</sup> Minimum of 15 at the 300-level or above, at least 9 of which must be from Programs in the GIC Department.

## History- Bachelor of Arts

For information, contact the Department of History, 254 Upham Hall, 513-529-5121.

The history major provides a specialized undergraduate program that strengthens a student's ability to read critically; analyze physical and written evidence; and develop clear, coherent arguments. These skills allow the student to engage the past with careful and imaginative questions. As students engage in the discipline of historical inquiry, they will become adept at developing written conclusions and oral presentations based on the systematic evaluation of historical evidence. Students will grow used to considering an array of cultures, familiar and unfamiliar, in diverse historical contexts.

## Teacher Licensure

Students who wish to combine teacher licensure with an Arts and Science major must observe the rules, procedures, and restrictions pertaining to admission to a licensure cohort as outlined in the College of Education, Health and Society chapter. For information, contact the Office of Student Services in the College of Education, Health and Society, 202 McGuffey Hall, 513-529-6317.

## Program Requirements

(36 semester hours)

Code	Title	Credit Hours
HST 206	Introduction to Historical Inquiry <sup>1</sup>	3
At least one History course at the 100 level		3
At least three History courses at 200 level (excludes HST 206)		9
At least six History courses at 300 level or above <sup>2</sup>		18
HST 400	Senior Capstone in History	3
Total Credit Hours		36

<sup>1</sup> You must take HST 206 within one semester of becoming a History major. You must earn a C or better in HST 206 in order to graduate as a History major.

<sup>2</sup> At least one of these (3) must be at the 400 level (excluding HST 400 and independent study work under-taken at the 400 level).

If you scored 3 or above on an Advanced Placement examination, you may apply 3 credit hours to the major (100-level course). University credit will be awarded as described below.

Code	Title	Credit Hours
<b>U.S. History</b>		
HST 111	Survey of American History	3
HST 112	Survey of American History	3
<b>European History</b>		
OTM Arts and Humanities		3
<b>World History</b>		
HST 197	World History to 1500	3
HST 198	World History Since 1500	3

A single course may fulfill both of the following categories (Geographical Diversity and Pre-modern Period).

## Geographical Diversity Requirement (12 hours)

Two courses (6 hours) at the 200-level or above must be on the history of Africa, the Middle East, Asia, Latin America, or some combination of those regions. One course at the 200-level or above must be in American history (3). One course at the 200-level or above must be in European history, including Russia (3).

## Pre-modern Period Requirement (6 hours)

Two courses (6) at the 200-level or above must be on the pre-modern period (defined as pre-1800), and at least one of those courses (3) must be a pre-1500 course.

Students seeking the Bachelor of Arts in History meet the College of Arts and Science writing in the major requirement by completing the following courses: HST 206 and HST 400.

## Department Honors Option

History majors with a record of high achievement have the opportunity to participate in the Honors Program in History. Eligible students will receive invitations to the program no later than the first semester of their junior year. Participation in the program is by invitation only and is based in part on the number of history courses taken to that point and the grade point average in those courses.

Students accepted into the Honors Program in History must complete the following, unless alternative arrangements are made in advance with the department honors director.

Code	Title	Credit Hours
HST 359	Junior Honors Colloquium <sup>1</sup>	3
HST 400	Senior Capstone in History <sup>2</sup>	3
HST 480	Departmental Honors <sup>3</sup>	1-3

<sup>1</sup> Ordinarily taken in the spring semester of the junior year. Counts toward upper-level courses for the History major.

<sup>2</sup> Ordinarily taken in the fall semester of the senior year. Fulfills the departmental and Miami Plan capstone requirement.

<sup>3</sup> An independent study course ordinarily taken in the spring semester of the senior year with the senior thesis advisor. Counts toward upper-level courses for the History major, but not for the required 400-level course.

## Individualized Studies- Bachelor of Arts

The AB in Individualized Studies offers an academic home for students with multiple interests to develop their own plan of study by integrating a set of core classes with courses chosen by the student from almost any area of study. Western courses explore diverse subjects but share a strong interdisciplinary theme. By emphasizing the importance of studying complex issues from multiple perspectives, these courses equip students with skills in critical thinking, problem solving, and objective analysis. The individualized portion of the major is designed by students in close consultation with faculty and staff advisors, and draws from courses across the university, including study abroad, independent studies, and/or credit-bearing internships. The degree culminates in a student-designed project that positions students for entry into graduate school or the workplace.

For information, contact the Western Program, 111 Peabody Hall, 513-529-2233 or Western@MiamiOH.edu (western@miamioh.edu).

### Program Requirements

Code	Title	Credit Hours
<b>Introductory courses</b>		
WST 231	Interdisciplinary Inquiry	3
WST 251	Individualized Studies Seminar	1
<b>Core courses in interdisciplinary and integrative studies</b>		
WST 301	Interdisciplinary Problems and Questions	3
WST 321	Developing Interdisciplinary Projects: Exploring Ways of Knowing	3
or WST 322	Developing Interdisciplinary Projects: Art and Politics of Representation	
WST 341	Interdisciplinary Synthesis and Action	3
<b>Individualized coursework component</b>		
Select a minimum of 24 hours <sup>1</sup>		24
<b>Senior Project</b>		
WST 421	Senior Project Proposal Workshop	3
WST 444	Senior Workshop and Project	3
Total Credit Hours		43

<sup>1</sup> Building upon the individualized plan of study completed in WST 251, students select and complete coursework at the 200-level or above from around the university to build content knowledge in specific area(s) of focus. Students might choose to pattern their individualized plan on an existing multidisciplinary Thematic Sequence or an interdisciplinary minor within the university, but will be expected to go well beyond what is already in place at Miami to flesh out their unique areas of study. Plans of study, subject to approval by a faculty advisor, may include study abroad, independent study, and/or credit-bearing internships as appropriate. The individualized component forms an important knowledge base for constructing the senior project.

Students seeking the Bachelor of Arts in Individualized Studies meet the College of Arts and Science writing in the major requirement by completing the following courses: WST 231.

## International Studies- Bachelor of Arts in International Studies

For information, contact the director of the International Studies Program, 120 MacMillan Hall, 513-529-5333.

This multidisciplinary program is for students desiring a broad foundation for understanding and analyzing important issues within an international and multicultural context. Its flexible curriculum provides a basis for graduate work or careers in government service, international business, academia, tourism, public service, cultural relations, and law. **Overseas study is required** as a part of this major.

### Program Requirements

(24 hours of core courses, plus 15-21 additional hours)

Code	Title	Credit Hours
<b>Interdisciplinary Core Courses</b>		
ITS 201	Introduction to International Studies	3
ITS 202	Writing Policy Analysis	3
Select three of the following:		9
GEO 378	Political Geography	
HST 296	World History Since 1945	
ITS/ATH 301	Intercultural Relations	
or GIC 301	Approaches to Global and Intercultural Studies: Globalization and Belonging	
POL 271	World Politics	
Select the following:		
ITS 302	Problems of Non-Western Societies	3
or ITS 365	Applied Topics in International Studies	
ECO 344	International Economic Relations <sup>1</sup>	3
or ITS 333	Global Development and Inequality	
ITS 402	Senior Capstone in International Studies <sup>2</sup>	3
<b>Language Requirement</b>		6-12
Spanish, French, German, Chinese, Japanese and Russian require 12 hours at the 300 level or above. All other languages require 6 hours at the 300 level or above. <sup>3</sup>		
<b>Approved Study Abroad Experience</b>		

At least one semester must be spent abroad	
<b>Concentration Requirement</b>	9
Select 9 semester hours from at least 2 disciplines from the functional concentration or regional concentration <sup>4</sup>	
Functional Concentrations:	
Conflict, Peace and Diplomacy	
International Development	
Global Cultural Relations	
The Global Environment	
Global Human Rights and Justice	
Women in the World	
Regional Concentrations:	
Africa	
South and East Asia	
Latin America	
Middle East	
Western Europe	
Russia Eastern Europe and Central Asia	
<b>Total Credit Hours</b>	39-45

<sup>1</sup> ECO 201 and ECO 202 are prerequisites

<sup>2</sup> Senior year only

<sup>3</sup> All language courses must be taken in the target language. Courses in translation or taught in English, or the student's native language, will not count toward the ITS language requirement. Alternative courses in relevant culture, history, or fine arts may be allowed only with ITS advisor approval and only if required language-based courses become unavailable. Students are also encouraged to complete language coursework during the required study abroad experience.

<sup>4</sup> Take 9 hours from at least **two** different disciplines.

Students seeking the Bachelor of Arts in International Studies meet the College of Arts and Science writing in the major requirement by completing the following courses: ITS 202 and ITS 402.

## Italian Studies- Bachelor of Arts

For more information, contact the Department of French and Italian, 207 Irvin, 513-529-7508.

### Prerequisite Preparatory Course

(8 semester hours)

Code	Title	Credit Hours
Select one of the following:		8
ITL 101 & ITL 102	Beginner's Course and Beginner's Course <sup>1</sup>	
ITL 105W	Intensive Elementary Italian (or equivalent) <sup>2</sup>	
<b>Total Credit Hours</b>		8

<sup>1</sup> Taken at Miami University

<sup>2</sup> Offered at the Miami University Summer Language Institute in Italy

Generally, two years of language study in high school are the equivalent of one year in college. It is not necessary to complete the first-year courses before embarking on the major. They may be taken concurrently with major courses, but ideally should be completed during the student's first two years.

## Program Requirements

(30 credit hours)

Code	Title	Credit Hours
<b>Required Courses</b>		
ITL 221	Italy, Matrix of Civilization	3
ITL 420	Italian Contributions to the World	3
<b>Core Courses</b>		
Select at least six courses of the following: <sup>1</sup>		18-24
ART 314	The Renaissance in Italy	
CLS 102	Roman Civilization	
CLS 402	The Age of Augustus	
HST 315	The Renaissance	
HST 328	Italy: Machiavelli to Mussolini	
HST 452	Florence in the Time of the Republic, 1250-1550	
ITL 201 & ITL 202	Second Year Italian and Second Year Italian <sup>2</sup>	
ITL 205W	Intensive Intermediate Italian <sup>2,3</sup>	
ITL/AMS/FST 222	Italian American Culture	
ITL/FST 262	Italian Cinema	
ITL 301	Culture, Society and Politics in Perspective	
ITL 302	Introduction to Italian Literature	
ITL 305W	Intensive Advanced Italian (offered at the Miami University Summer Language Institute in Italy)	
ITL/ENG 364	From Marco Polo to Machiavelli	
ITL/ENG 401	Dante's Divine Comedy	
ITL 410	Topics in Italian	
<b>Supplementary Courses</b>		
Select up to six semester hours of the following: <sup>4</sup>		6
ART 316	Baroque Art in Europe	
ART 382	Greek and Roman Sculpture	
ART 383	Greek and Roman Painting	
CLS 215	Greek and Roman Historians	
CLS 332	Classical Mythology and the Arts	
<b>Total Credit Hours</b>		30-36

<sup>1</sup> Select fewer if choosing ITL 205W or ITL 305W, which are 8 hours each, for a minimum of 18 hours, up to as many as eight three credit courses, for a maximum of 24 semester hours.

<sup>2</sup> Select either ITL 201 & ITL 202 or ITL 205W.

<sup>3</sup> Offered at the Miami University Summer Language Institute in Italy.

<sup>4</sup> ITL 350 - Special Topics courses can be used, with approval of the department.

## Concentration in Italian Language and Literature

A notation will be added to the transcripts of students completing at least 18 credits in courses with an ITL designation, indicating that they have fulfilled the requirements for the Italian Studies Major with a Concentration in Italian Language and Literature. This concentration requires at least two years of Italian at the university level. ITL 301 and ITL 302 are strongly recommended, as is participation in the Miami University Summer Language Institute in Reggio Emilia, Italy.

Code	Title	Credit Hours
<b>Required Courses</b>		
Select one of the following: <sup>1</sup>		6-8
ITL 201 & ITL 202	Second Year Italian and Second Year Italian	
ITL 205W	Intensive Intermediate Italian (or the equivalent.) <sup>2</sup>	
<b>Strongly Recommended</b>		
It is strongly recommended students select 3-14 hours of the following:		3-14
ITL 301	Culture, Society and Politics in Perspective	
ITL 302	Introduction to Italian Literature	
ITL 305W	Intensive Advanced Italian <sup>2</sup>	
ITL 410	Topics in Italian	
Select remaining hours, if any, of the following:		
ITL/AMS/FST 222	Italian American Culture	
ITL/FST 262	Italian Cinema	
ITL/ENG 364	From Marco Polo to Machiavelli	
ITL/ENG 401	Dante's Divine Comedy (in English)	
Total Credit Hours		9-22

<sup>1</sup> Eight semester hours if ITL 205W is chosen.

<sup>2</sup> Offered at the Miami University Summer Language Institute in Italy

Students seeking the Bachelor of Arts in Italian Studies meet the College of Arts and Science writing in the major requirement by completing the following course/s: ITL 221 and ITL 420.

## Journalism- Bachelor of Arts

For information, contact the area director of the journalism program, 206 Williams Hall, 513-529-5893.

This program provides students with a liberal arts approach to integrated journalism (print, broadcast, and web) focusing on proficiency in critical thinking, writing, reporting, and editing. These skills prepare students for careers in print and broadcast journalism, new media, related professions, and graduate studies. The program further emphasizes the importance of acting as ethical and productive members of the media and the community at large. In addition, all journalism students must choose and complete a **second major** outside the Department of Media, Journalism and Film.

## Program Requirements

(40 semester hours)

Code	Title	Credit Hours
<b>Core requirements</b>		
JRN 101	Introduction to Journalism	3
JRN 201	Reporting and News Writing I <sup>1</sup>	3
JRN 202	Reporting and News Writing II	3
JRN 303	Multimedia Journalism	3
JRN 412	Public Affairs Reporting	3
MAC 143	Introduction to Media	3
MAC 211	Introduction to Video Production	4
IMS 201	Information Studies and Digital Citizenship	3
<b>Analytical Courses</b>		
Select two of the following (see JRN area director to sub other media related courses):		6-8
JRN 301 or MAC 445	Journalism Law and Ethics or Electronic Media Policy and Regulation	
JRN 333	International Journalism	
JRN 427	Inside Washington Semester Experience	
MAC 212	Media, Representation, and Society	
MAC 215	Media History	
MAC 355	Media Technology & Culture	
MAC 446	Media Globalization	
POL 356	Mass Media and Politics	
<b>Creative Courses</b>		
Select two of the following:		6
JRN 313	Digital Audio Reporting	
JRN 318	Advanced Storytelling in Journalism	
JRN 314	Digital Video Reporting	
JRN 316	Editing and Design	
JRN 350	Specialized Journalism <sup>2,3</sup>	
<b>Capstone</b>		
Select one of the following:		3-8
JRN 415	Capstone in Television Journalism	
JRN/MAC/POL 426	Inside Washington	
JRN 421	Capstone in Journalism	
<b>Internship<sup>2</sup></b>		
JRN 340	Internship <sup>3</sup>	
Total Credit Hours		40-47

<sup>1</sup> Prerequisite for JRN 202 and all 300- and 400-level JRN writing/editing courses

<sup>2</sup> An internship is not required but **strongly** encouraged for all majors.

<sup>3</sup> This course can be repeated.

Students seeking the Bachelor of Arts in Journalism meet the College of Arts and Science writing in the major requirement by completing the following course: JRN 201.

# Latin American, Latino/a & Caribbean Studies- Bachelor of Arts

For information, contact the LAS Program, 120 MacMillan Hall, 513-529-5333.

Latin American Latino/a & Caribbean Studies (LAS) offer an interdisciplinary major and minor based in mutually enriching perspectives in the humanities, fine arts, social and physical sciences. Courses examine and analyze Latin American and Caribbean cultures, economies, social and political systems, literature, art, music, history, and geography across the hemisphere. Opportunities to study abroad and to engage with Latin American communities in Ohio promote the active application of international knowledge to issues vital to today's changing world.

## Program Requirements

(30 semester hours)

Code	Title	Credit Hours
<b>Introduction to Latin America</b>		
Select three semester hours of the following: <sup>1</sup>		3
LAS 208/ ATH 206	Introduction to Latin America	
LAS/HST 217	Modern Latin American History	
LAS 260	Latin America in the United States	
<b>Interdisciplinary Writing</b>		
LAS 211	Writing with Purpose: Interdisciplinary Inquiry and Communication <sup>1</sup>	3
<b>Culmination of Latin American Studies</b>		
Select three semester hours of the following: <sup>1</sup>		3
LAS 410	Current Latin American Issues	
LAS 477	Independent Studies <sup>2</sup>	
<b>Language Requirement</b>		
Select one of the following options:		3-7
Option 1: select one course		
FRE 301	Culture & Interpretation	
SPN 311	Grammar Review and Introductory Composition	
Option 2: select two courses		
SPN 202	Second Year Spanish (or the equivalent)	
POR 211	Intermediate Portuguese (or the equivalent)	
FRE 202	Critical Analysis of French Culture (or the equivalent)	
One course from a second language selected from SPN, POR or FRE		
<b>Core Courses</b>		
Select at least 15 hours, with at least 6 credits of the Core Course hours coming from LAS courses or their cross-listed equivalents. At least 3 of the LAS course credits must be from the 300-level.		15
AMS 302	Immigrant America	

ART 317	The Arts of Colonial Latin America
ATH 305	Latin America: Anthropological Perspectives
ATH 313	Latin American Archaeology
ATH 415	Field Methods in Archaeology
FST/MUS/POR 204	Brazilian Culture Through Music and Film
BWS/LAS 243/ HST 342	History of the Atlantic Slave Trade, 1400s to 1800s
BWS/ENG/FST/ POR/WGS 383	Brazilian Women through Literature and Film
ENG/LAS 254	Latino/a Literature and the Americas
HST/LAS 243	History of the Atlantic Slave Trade, 1400s to 1800s
LAS 207	Latin America before 1910
LAS 277	Independent Studies <sup>1</sup>
or LAS 377	Independent Studies
or LAS 477	Independent Studies
LAS 277X	Service-Learning (taken with any MPF course) <sup>2</sup>
LAS 300	Special Topics
LAS 315	Latin American Diaspora: Communities, Conditions and Issues
LAS/HST 319	Revolution in Latin America
LAS 325	Identity, Race, Gender, Class
LAS/SPN 332	Latin American Popular Culture
LAS/HST/BWS 385	Race, Science, and Disease in the Americas
LAS 390	Special Topics
LAS 412	Tropical Ecosystems of Costa Rica
LAS 413	Tropical Marine Ecology
LAS 424	Seminar on Modern Architecture in Latin America
POL 337	Politics of Latin America
POL 378	Latin America: The Region and the World
SPN 315	Intro to Hispanic Literatures
SPN 361 & SPN 362	Spanish American Cultural History I and Spanish American Cultural History II
SPN 430	Selected Topics in Literature and Culture: Spanish America
SPN 450	Topics in Hispanic Culture and Language
SPN 461	Spanish American Film, Visual, and Digital Studies
SPN 463	Spanish American Interdisciplinary Studies
<b>Related Courses</b>	
Select up to three semester hours	
AMS 207	America: Global and Intercultural Perspectives
ATH 175	Peoples of the World
ATH 185	Cultural Diversity in the U.S.
ATH 312	North American Archaeology

EDL 204	Sociocultural Studies in Education
FSW 206	Social Welfare: Impact on Diverse Groups
GEO 111	World Regional Geography: Patterns and Issues
HST 371	Native American History to 1840
HST 386	Race in U.S. Society
IDS 159	Strength Through Cultural Diversity
ITS 201	Introduction to International Studies
LAS 413/ IES 423	Tropical Marine Ecology
MUS 186	Global Popular Music
SJS 215	EMPOWER I: Educational and Economic Justice and Service-Learning
SOC 153	Sociology in a Global Context
SOC 348	Race and Ethnic Relations
Total Credit Hours	30-34

<sup>1</sup> Additional credits here are counted toward the core courses requirement.

<sup>2</sup> **Independent Study:** Students who have completed at least three credits of LAS program requirements or core courses may design an Independent Study in LAS, working with a member of the LAS Faculty Advisory Committee.

## Study Abroad

The LAS Program highly values study abroad in all Latin American contexts and will extend credit by petition to international study experiences that fulfill program criteria

## New courses

New courses, one-time only courses, sections of variable content courses, and other that relate to Latin America may be recognized by petition for credit toward appropriate categories.

Students seeking the Bachelor of Arts in Latin American, Latino/a and Caribbean Studies meet the College of Arts and Science writing requirement by completing LAS 211 and an LAS culmination course: LAS 410 or LAS 477.

## Linguistics- Bachelor of Arts

For information, contact the Department of English, 356 Bachelor Hall, 513-529-5221.

The English department offers four majors: creative writing, literature, linguistics, and professional writing. These concentrations lead to a Bachelor of Arts degree.

Linguistics is the study of language. Linguists look at how people use language and try to find the rules that govern that use.

## Program Requirements

(36 semester hours)

Code	Title	Credit Hours
<b>Core Courses</b>		
ENG/GER/ATH 219	Introduction to Linguistics	3

ENG 201	Special Topics in Language Awareness (May be repeated twice for credit when the topic changes.)	3
ENG 202	Varieties of English: Dialect Diversity and Language Change	3
ENG 301 or ENG 302	History of the English Language Structure of Modern English	3
<b>Capstone course:</b>		
ENG 405 or ENG 406	Advanced Linguistics: The Research Program of Noam Chomsky Discourse Analysis: Speech Acts in Context	3
<b>Tracks</b>		12

Select one of the following three tracks:

### Applied Linguistics

EDT 311	Educational Strategies for Non-Majors
EDT 444	Language Teaching and Learning I
EDT 445	Language Teaching and Learning II
ENG 302	Structure of Modern English (if not used in the core)
ENG 408	Second Language Acquisition
ENG 410	Selected Topics in Linguistics (variable topics as applicable)
SPA 223	Theories of Language Development
SPA 334	Clinical Phonetics and Articulation Disorders
SPA 413	Senior Seminar in Communication Disorders (Variable topics as applicable; permission of instructor required)
SPN 484	Second Language Acquisition: Spanish

### Foreign Languages and Linguistics

At least two of the courses must be in the same foreign language. Foreign language literature or culture courses taught in English translation do not count toward this track.

Courses taken at the 200 level or above in the following languages may count toward this track: Arabic, American Sign Language, Chinese, Greek, Hebrew, Japanese, Korean, Latin, and Russian.

Courses taken at the 300 level or above in the following languages may count toward this track: French, German, Italian, Portuguese, and Spanish.

### Sociocultural Linguistics

ATH 265	Introduction to Linguistic Anthropology
ATH 361	Language and Power
ATH 364	Language and Culture in Native North America
ATH 425	Ethnographic Field Methods
ATH 465	Ethnography of Communication
ENG 201	Special Topics in Language Awareness (variable topics as applicable)
ENG 298	Introduction to Literary and Cultural Studies
ENG 301	History of the English Language

ENG 410	Selected Topics in Linguistics (variable topics as applicable)
FRE 341	Conversation and Current Events in France
GER 471	Linguistic Perspectives on Contemporary German
IDS 259	Introduction to the Miami Tribe of Oklahoma
PSY 374	Psychology of Language and Thought
SPN 381	Spanish Language and Hispanic Culture I
SPN 382	Spanish Language and Hispanic Culture II
SPN 483	History of the Spanish Language
STC 436	Intercultural Communication
<b>Electives</b>	9
Choose from among the unused courses in the pre-approved tracks, and/or from the list of electives below.	
ATH 265	Introduction to Linguistic Anthropology
ATH 304	Native North America: Anthropological Perspectives
ATH 345	Global Media, Ethnography, and Film
ATH 358	Travelers, Migrants, and Refugees: Transnational Migration and Diasporic Communities
ATH 361	Language and Power
ATH 364	Language and Culture in Native North America
ATH 366	African Oral Traditions
ATH 378	Doctors, Clinics, and Epidemics
ATH 425	Ethnographic Field Methods
ATH 465	Ethnography of Communication
CIT 154	Personal Computer Concepts and Applications
CSE 151	Computers, Computer Science, and Society
CSE 174	Fundamentals of Programming and Problem Solving
CSE 274	Data Abstraction and Data Structures
CSE 283	Data Communication and Networks
CSE 473	Automata, Formal Languages, and Computability
CSE 474	Compiler Design
CSE 486	Introduction to Artificial Intelligence
ENG 201	Special Topics in Language Awareness
ENG/IMS 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds
ENG 226	Introduction to Creative Writing: Short Fiction and Poetry
ENG 298	Introduction to Literary and Cultural Studies
ENG 301	History of the English Language
ENG 302	Structure of Modern English

ENG 313	Technical Writing
ENG 327	Medieval Literature
AAA 410	Asian/Asian American Studies
ENG 410	Selected Topics in Linguistics (variable topics as applicable)
ENG/IMS 411	Visual Rhetoric
ENG/IMS 416	Writing for Global Audiences
FRE 341	Conversation and Current Events in France
FRE 361	French Pronunciation
GER 471	Linguistic Perspectives on Contemporary German
IDS 259	Introduction to the Miami Tribe of Oklahoma
MTH 483	Introduction to Mathematical Logic
PHL 273	Formal Logic
PHL 373	Symbolic Logic
PSY 271	Survey of Perception, Action, and Cognition
PSY 374	Psychology of Language and Thought
PSY 470	Seminar in Cognition
SPA 223	Theories of Language Development
SPA 334	Clinical Phonetics and Articulation Disorders
SPN 311	Grammar Review and Introductory Composition
SPN 312	Introduction to Spanish Language/Linguistics
SPN 381	Spanish Language and Hispanic Culture I
SPN 382	Spanish Language and Hispanic Culture II
SPN 440	Selected Topics in Spanish Language and Hispanic Culture
SPN 481	Spanish Phonology and Syntax
SPN 482	Language Variation in Spanish
SPN 483	History of the Spanish Language
SPN 484	Second Language Acquisition: Spanish
SOC 262	Research Methods
SOC 462	Applied Sociological Research
STC 262	Empirical Research Methods
STC 436	Intercultural Communication

Total Credit Hours 36

Students seeking the Bachelor of Arts in Linguistics meet the College of Arts and Science writing in the major requirement by completing the following course/s: ENG 201 and ENG 405 or ENG 406.

## Mathematics- Bachelor of Arts

For information, contact the Department of Mathematics, 123 Bachelor Hall, 513-529-5818.

Two degrees are offered: Bachelor of Arts and Bachelor of Science. For the Bachelor of Science, choose one of two majors: mathematics or mathematics and statistics. The A.B. in Mathematics requires all

sections of the College of Arts and Science Requirement (CAS), while the B.S. has only the language requirement. Each program has the related hours requirement. All MTH and STA courses applied to your program, and all courses in the 12-hour section of the related hours, must be taken for grades, not credit/no-credit. In the MTH and STA courses, your GPA must be at least 2.00. Service courses do not figure into your GPA unless explicitly approved by the department.

Each degree requires the following introductory courses:

Code	Title	Credit Hours
MTH 252	Calculus III <sup>1</sup>	4
MTH 222 or MTH 222T	Introduction to Linear Algebra Introduction to Linear Algebra (Honors)	2-3
Total Credit Hours		6-7

<sup>1</sup> The Honors version of this course will also apply.

## Program Requirements

Select courses from the lists below to meet the following hours requirements:

- The selected courses must include at least 19 semester hours at the 300 level or above.
- The selected courses must include at least 16 hours at the 400 level.
- The selected courses must include at least 9 semester hours at the 400 level earned at Miami.

Code	Title	Credit Hours
<b>Transition Course</b>		
MTH 331 or MTH 331T	Proof: Introduction to Higher Mathematics Proof: Introduction to Higher Mathematics (H)	3
<b>Theoretical Courses:</b>		
Take one of the following:		3-4
MTH 421	Introduction to Abstract Algebra	
MTH 441	Real Analysis	
Take an unused theoretical course above or one of the following:		3
MTH 411	Foundations of Geometry	
MTH 438	Theory and Applications of Graphs	
MTH 483	Introduction to Mathematical Logic	
MTH 486	Introduction to Set Theory	
MTH 491	Introduction to Topology	
<b>Applied Courses:</b>		
Take two of the following:		6-7
MTH 347	Differential Equations	
MTH 432	Optimization	
MTH 439	Combinatorics	
MTH 447	Topics in Mathematical Finance	
MTH 451	Introduction to Complex Variables	
MTH 453	Numerical Analysis	
MTH 455	Introduction to Partial Differential Equations	

MTH/MME 495	Introduction to Applied Nonlinear Dynamics	
STA 401	Probability	
<b>Elective Courses:</b>		
Select enough additional courses from the following list, or unused courses from the lists above, to meet the hours requirements stated above.		2-4
MTH 410	Topics In Geometry	
MTH 420	Topics in Algebra	
MTH 425	Number Theory	
MTH 435	Mathematical Modeling Seminar	
MTH 437	Game Theory and Related Topics	
MTH 440	Topics in Analysis	
MTH 482	Great Theorems of Mathematics	
Total Credit Hours		19

Students seeking the Bachelor of Arts in Mathematics meet the College of Arts and Science writing in the major requirement by completing at least one course from each of the following tiers:

Code	Title	Credit Hours
<b>Tier 1 (Introductory Course)</b>		
MTH 331	Proof: Introduction to Higher Mathematics	3
MTH 347	Differential Equations	3
<b>Tier 2 (Theory Course)</b>		
MTH 421	Introduction to Abstract Algebra	4
MTH 438	Theory and Applications of Graphs	3
MTH 441	Real Analysis	3
MTH 451	Introduction to Complex Variables	4
MTH 491	Introduction to Topology	3
<b>Tier 3 (Capstone Course)</b>		
MTH 425	Number Theory	3
MTH 435	Mathematical Modeling Seminar	3
MTH 482	Great Theorems of Mathematics	3

There is one exception that is possible. Students with transfer credit for MTH 331 and MTH 347, or students who are so well prepared as to skip these courses, may take a second course from Tier 2 in place of a Tier 1 course.

## Related Hours

A program of related courses is intended to provide the student with opportunities to see and do mathematics or statistics in the context of other disciplines and, perhaps, enhance the student's employment prospects. The departmental requirement is for a program of at least 15 hours. Please note that all related area courses must be taken for a grade, not as credit/no credit. Each program includes two parts, as follows:

**Part I: Computer Programming Requirement:** Every major is required to demonstrate computer programming proficiency by passing one approved programming course. Approved courses include:

Code	Title	Credit Hours
CSE 153	Introduction to C/C++ Programming <sup>1</sup>	3
CSE 163	Introduction to Computer Concepts and Programming <sup>1</sup>	3
CSE 174	Fundamentals of Programming and Problem Solving <sup>1</sup>	3
STA 402	Statistical Programming <sup>2</sup>	3
MTH 408	Mathematical Problem Solving with Technology <sup>3</sup>	3
PHY 286	Introduction to Computational Physics <sup>4</sup>	3

<sup>1</sup> Any CSE course with one of CSE 153, 163, 174 as a prerequisite can be used to satisfy the programming requirement.

<sup>2</sup> STA 402 cannot be used to satisfy any other Mathematics or Mathematics and Statistics degree requirement if it is used toward the programming requirement.

<sup>3</sup> MTH 408 can only be used toward the programming requirement by students who have been admitted to an AYA teacher licensure cohort.

<sup>4</sup> PHY 286 can only be used toward the programming requirement by students who are also majoring in Physics.

**Part II: Related Area Requirement:** Every major must include in their program a cluster of courses in one area of study which mathematics or statistics is used. Minimally (but see **Related Area Reduction** below), the area is to consist of at least 12 credit hours, with at least 6 advanced hours. Advanced hours include all courses numbered 200 level or above in CHM, CSE, PHY, and all courses numbered 300 level or above in ACC, ECO, ECE, ISA, STA. Pre-approved related areas are listed below. If your interests are not accommodated by the pre-approved areas listed below, you may elect to design your own program of related courses. Such programs must be approved by the Chief Departmental Adviser **in advance of applying for graduation**. Pre-approved related areas include:

- Actuarial Science: ECO 201, ECO 202, ACC 221, ACC 222, FIN 301 (Students interested in an actuarial career are urged to complete the Minor in Actuarial Science, which will also satisfy this Related Area Requirement.)
- Teacher Education: The secondary licensure program in The College of Education, Health, and Society (This option is available only for Integrated Mathematics Education Majors).
- Accounting (ACC)
- Chemistry (CHM)
- Computer Science and Software Engineering (CSE)
- Economics (ECO)
- Electrical and Computer Engineering (ECE)
- Information Systems & Analytics (ISA)
- Physics (PHY)
- Statistics (STA)

Unless using the Actuarial Science or Teacher Education option, all related area hours must come from the same department. Students majoring in Mathematics (Bachelor of Arts or Bachelor of Science) may use statistics as their related area. There is no restriction on the statistics courses that can count (service courses are OK), but courses applied to the related area cannot also be counted towards the requirements of the major. On the other hand, students majoring in Mathematics and Statistics (Bachelor of Science) cannot use statistics as their related area. Students may simultaneously use any related area courses towards the university Thematic Sequence requirement, or toward a minor or second major. But, related area courses cannot be used towards the requirements of a Mathematics or Mathematics and Statistics major.

**Related Area Reduction:** Some students may want to have the flexibility to include in their program an additional course in mathematics or statistics. To that end, the cluster of related courses required can be reduced by up to 3 hours (of the 6 advanced hours) by taking the same number of hours in a MTH or STA course, numbered 400 or higher and listed among the possible courses to fulfill requirements of your chosen degree. This decision must be made in consultation with your adviser or one of the CDAs.

## Teacher Licensure

Students who wish to combine teacher licensure with a major in the Department of Mathematics should apply for admission to a licensure cohort as outlined in the College of Education, Health and Society chapter. For information, contact the Office of Student Services in the College of Education, Health and Society, 202 McGuffey Hall, 513-529-6418.

To earn an A.B. degree in addition to teacher licensure, you must complete the requirements for the Bachelor of Arts degree, while also satisfying your professional education course requirements. As a consequence, the following courses (not all of which apply toward the A.B.) are automatically required to be in your academic program:

**These courses must include:**

Code	Title	Credit Hours
MTH 331	Proof: Introduction to Higher Mathematics	3
MTH 408/ MTH 508	Mathematical Problem Solving with Technology	3
MTH 409/ MTH 509	Secondary Mathematics from an Advanced Perspective	3
MTH 411/ MTH 511	Foundations of Geometry	3
MTH 421/ MTH 521	Introduction to Abstract Algebra	4
MTH 482	Great Theorems of Mathematics	3
STA 301	Applied Statistics	3
STA 401/STA 501	Probability	3

One additional course is required for completion of the A.B. degree. See the A.B. requirements for details about the selection of this course.

To earn a B.S. degree in addition to teacher licensure, you must complete the requirements for the B.S. in Mathematics or the B.S. in

Mathematics and Statistics. Each of these programs requires four or five additional courses. See the B.S. requirements for details about the selection of these courses.

## Mathematics- Bachelor of Science

For information, contact the Department of Mathematics, 123 Bachelor Hall, 513-529-5818.

Two degrees are offered: Bachelor of Arts and Bachelor of Science. For the Bachelor of Science, choose one of two majors: mathematics or mathematics and statistics. The A.B. requires all sections of the College of Arts and Science Requirement (CAS), while the B.S. has only the language requirement. Each program has the related hours requirement. All MTH and STA courses applied to your program, and all courses in the 12-hour section of the related hours, must be taken for grades, not credit/no-credit. In the MTH and STA courses, your GPA must be at least 2.00. Service courses do not figure into your GPA unless explicitly approved by the department.

### Program Requirements

Each degree requires the following introductory courses:

Code	Title	Credit Hours
MTH 252	Calculus III <sup>1</sup>	4
MTH 222 or MTH 222T	Introduction to Linear Algebra Introduction to Linear Algebra (Honors)	2-3
Total Credit Hours		6-7

<sup>1</sup> The Honors version of this course will also apply.

Select courses from the lists below to meet the following hours requirements:

- The selected courses must include at least 28 semester hours at the 300 level or above.
- The selected courses must include at least 22 semester hours at the 400 level.
- The selected courses must include at least 12 semester hours at the 400 level earned at Miami.

Code	Title	Credit Hours
<b>All of the following courses are required.</b>		
MTH 331 or MTH 331T	Proof: Introduction to Higher Mathematics Proof: Introduction to Higher Mathematics (H)	3
MTH 421	Introduction to Abstract Algebra	4
MTH 441	Real Analysis	3
Select at least two of the following theoretical courses.		6-7
MTH 411	Foundations of Geometry	
MTH 425	Number Theory	
MTH 438	Theory and Applications of Graphs	
MTH 483	Introduction to Mathematical Logic	
MTH 486	Introduction to Set Theory	
MTH 491	Introduction to Topology	

Select at least two of the following applied courses.		6-7
MTH 347	Differential Equations	
MTH 432	Optimization	
MTH 435	Mathematical Modeling Seminar	
MTH 439	Combinatorics	
MTH 447	Topics in Mathematical Finance	
MTH 451	Introduction to Complex Variables	
MTH 453	Numerical Analysis	
MTH 455	Introduction to Partial Differential Equations	
MTH/MME 495	Introduction to Applied Nonlinear Dynamics	
STA 401	Probability	
Select enough additional courses from the following list, or from the lists above, to meet the hours requirement stated above. <sup>2</sup>		4-6
MTH 410	Topics In Geometry	
MTH 420	Topics in Algebra	
MTH 437	Game Theory and Related Topics	
MTH 440	Topics in Analysis	
MTH 482	Great Theorems of Mathematics (MPC)	

Total Credit Hours 28

<sup>2</sup> Up to two semester hours from MTH 430 or MTH 477 may also be counted towards the hours requirements.

### Related Hours

A program of related courses is intended to provide the student with opportunities to see and do mathematics or statistics in the context of other disciplines and, perhaps, enhance the student's employment prospects. The departmental requirement is for a program of at least 15 hours. Please note that all related area courses must be taken for a grade, not as credit/no credit. Each program includes two parts, as follows:

**Part I: Computer Programming Requirement:** Every major is required to demonstrate computer programming proficiency by passing one approved programming course. Approved courses include:

Code	Title	Credit Hours
CSE 153	Introduction to C/C++ Programming <sup>1</sup>	3
CSE 163	Introduction to Computer Concepts and Programming <sup>1</sup>	3
CSE 174	Fundamentals of Programming and Problem Solving <sup>1</sup>	3
STA 402	Statistical Programming <sup>2</sup>	3
MTH 408	Mathematical Problem Solving with Technology <sup>3</sup>	3
PHY 286	Introduction to Computational Physics <sup>4</sup>	3

<sup>1</sup> Any CSE course with one of CSE 153, 163, 174 as a prerequisite can be used to satisfy the programming requirement.

- <sup>2</sup> STA 402 cannot be used to satisfy any other Mathematics or Mathematics and Statistics degree requirement if it is used toward the programming requirement.
- <sup>3</sup> MTH 408 can only be used toward the programming requirement by students who have been admitted to an AYA teacher licensure cohort.
- <sup>4</sup> PHY 286 can only be used toward the programming requirement by students who are also majoring in Physics.

**Part II: Related Area Requirement:** Every major must include in their program a cluster of courses in one area of study which mathematics or statistics is used. Minimally (but see **Related Area Reduction** below), the area is to consist of at least 12 credit hours, with at least 6 advanced hours. Advanced hours include all courses numbered 200 level or above in CHM, CSE, PHY, and all courses numbered 300 level or above in ACC, ECO, ECE, ISA, STA. Pre-approved related areas are listed below. If your interests are not accommodated by the pre-approved areas listed below, you may elect to design your own program of related courses. Such programs must be approved by the Chief Departmental Adviser **in advance of applying for graduation**. Pre-approved related areas include:

- Actuarial Science: ECO 201, ECO 202, ACC 221, ACC 222, FIN 301 (Students interested in an actuarial career are urged to complete the Minor in Actuarial Science, which will also satisfy this Related Area Requirement.)
- Teacher Education: The secondary licensure program in The College of Education, Health, and Society (This option is available only for Integrated Mathematics Education Majors).
- Accounting (ACC)
- Chemistry (CHM)
- Computer Science and Software Engineering (CSE)
- Economics (ECO)
- Electrical and Computer Engineering (ECE)
- Information Systems & Analytics (ISA)
- Physics (PHY)
- Statistics (STA)

Unless using the Actuarial Science or Teacher Education option, all related area hours must come from the same department. Students majoring in Mathematics (Bachelor of Arts or Bachelor of Science) may use statistics as their related area. There is no restriction on the statistics courses that can count (service courses are OK), but courses applied to the related area cannot also be counted towards the requirements of the major. On the other hand, students majoring in Mathematics and Statistics (Bachelor of Science) cannot use statistics as their related area. Students may simultaneously use any related area courses towards the university Thematic Sequence requirement, or toward a minor or second major. But, related area courses cannot be used towards the requirements of a Mathematics or Mathematics and Statistics major.

**Related Area Reduction:** Some students may want to have the flexibility to include in their program an additional course

in mathematics or statistics. To that end, the cluster of related courses required can be reduced by up to 3 hours (of the 6 advanced hours) by taking the same number of hours in a MTH or STA course, numbered 400 or higher and listed among the possible courses to fulfill requirements of your chosen degree. This decision must be made in consultation with your adviser or one of the CDAs.

## Teacher Licensure

Students who wish to combine teacher licensure with a major in the Department of Mathematics should apply for admission to a licensure cohort as outlined in the College of Education, Health and Society chapter. For information, contact the Office of Student Services in the College of Education, Health and Society, 202 McGuffey Hall, 513-529-6418.

To earn an A.B. degree in addition to teacher licensure, you must complete the requirements for the Bachelor of Arts degree, while also satisfying your professional education course requirements. As a consequence, the following courses (not all of which apply toward the A.B.) are automatically required to be in your academic program:

**These courses must include:**

Code	Title	Credit Hours
MTH 331	Proof: Introduction to Higher Mathematics	3
MTH 408/ MTH 508	Mathematical Problem Solving with Technology	3
MTH 409/ MTH 509	Secondary Mathematics from an Advanced Perspective	3
MTH 411/ MTH 511	Foundations of Geometry	3
MTH 421/ MTH 521	Introduction to Abstract Algebra	4
MTH 482	Great Theorems of Mathematics	3
STA 301	Applied Statistics	3
STA 401/STA 501	Probability	3

One additional course is required for completion of the A.B. degree. See the A.B. requirements for details about the selection of this course.

To earn a B.S. degree in addition to teacher licensure, you must complete the requirements for the B.S. in Mathematics or the B.S. in Mathematics and Statistics. Each of these programs requires four or five additional courses. See the B.S. requirements for details about the selection of these courses.

## Mathematics and Statistics- Bachelor of Science

For information, contact the Department of Mathematics, 123 Bachelor Hall, 513-529-5818, or the Department of Statistics, 311 Upham Hall, 513-529-7828.

Two degrees are offered: Bachelor of Arts and Bachelor of Science. For the Bachelor of Science, choose one of two majors: mathematics or mathematics and statistics. The A.B. requires all sections of the College of Arts and Science Requirement (CAS), while the B.S. has only the language requirement. Each program has the related hours

requirement. All MTH and STA courses applied to your program, and all courses in the 12-hour section of the related hours, must be taken for grades, not credit/no-credit. In the MTH and STA courses, your GPA must be at least 2.00. Service courses do not figure into your GPA unless explicitly approved by the department.

Each degree requires the following introductory courses:

Code	Title	Credit Hours
MTH 252	Calculus III <sup>1</sup>	4
MTH 222 or MTH 222T	Introduction to Linear Algebra Introduction to Linear Algebra (Honors)	2-3
Total Credit Hours		6-7

<sup>1</sup> The Honors version of this course will also apply.

## Program Requirements

Select courses from the lists below to meet the following hours requirements:

- The selected courses must include at least 31 semester hours at the 300 level or above.
- The selected courses must include at least 22 semester hours at the 400 level.
- The selected courses must include at least 12 semester hours at the 400 level earned at Miami.

Code	Title	Credit Hours
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All of the following mathematics courses are required.

MTH 331 or MTH 331T	Proof: Introduction to Higher Mathematics Proof: Introduction to Higher Mathematics (H)	3
MTH 347	Differential Equations <sup>1</sup>	3
MTH 421	Introduction to Abstract Algebra	4
MTH 441	Real Analysis	3
Select at least one of the following mathematics courses.		3-4

MTH 432	Optimization	
MTH 435	Mathematical Modeling Seminar (MPC)	
MTH 439	Combinatorics	
MTH 447	Topics in Mathematical Finance	
MTH 451	Introduction to Complex Variables	
MTH 453	Numerical Analysis	
MTH 455	Introduction to Partial Differential Equations	
MTH/MME 495	Introduction to Applied Nonlinear Dynamics	

All of the following statistics courses are required.

STA 363	Introduction to Statistical Modeling	3
STA 401	Probability	3
STA 462 or STA 466	Inferential Statistics Experimental Design Methods	3
STA 463	Regression Analysis	4

Select enough additional hours from the following list, or from the lists above, to meet the hours requirements stated above. <sup>2</sup> 1-2

MTH 410	Topics In Geometry	
MTH 411	Foundations of Geometry	
MTH 420	Topics in Algebra	
MTH 425	Number Theory (MPC)	
MTH 437	Game Theory and Related Topics	
MTH 438	Theory and Applications of Graphs	
MTH 440	Topics in Analysis	
MTH 482	Great Theorems of Mathematics (MPC)	
MTH 483	Introduction to Mathematical Logic	
MTH 486	Introduction to Set Theory	
MTH 491	Introduction to Topology	
STA 402	Statistical Programming	
STA 427	Introduction to Bayesian Statistics	
STA 467	Statistical Learning	
STA 475	Data Analysis Practicum (MPC)	
STA 483	Analysis of Forecasting Systems	
Total Credit Hours		31

<sup>1</sup> Students who have taken MTH 245 or MTH 246 as a requirement for another major may substitute it for MTH 347. (However, as it is a 200-level course, it will not count toward the required hours at the 300 level or above.)

<sup>2</sup> Up to two semester hours from MTH 430, MTH 477, or STA 477 may also be counted toward the hours requirements.

## Related Hours

A program of related courses is intended to provide the student with opportunities to see and do mathematics or statistics in the context of other disciplines and, perhaps, enhance the student's employment prospects. The departmental requirement is for a program of at least 15 hours. Please note that all related area courses must be taken for a grade, not as credit/no credit. Each program includes two parts, as follows:

**Part I: Computer Programming Requirement:** Every major is required to demonstrate computer programming proficiency by passing one approved programming course. Approved courses include:

Code	Title	Credit Hours
CSE 153	Introduction to C/C++ Programming <sup>1</sup>	3
CSE 163	Introduction to Computer Concepts and Programming <sup>1</sup>	3
CSE 174	Fundamentals of Programming and Problem Solving <sup>1</sup>	3
STA 402	Statistical Programming <sup>2</sup>	3
MTH 408	Mathematical Problem Solving with Technology <sup>3</sup>	3
PHY 286	Introduction to Computational Physics <sup>4</sup>	3

<sup>1</sup> Any CSE course with one of CSE 153, 163, 174 as a prerequisite can be used to satisfy the programming requirement.

- <sup>2</sup> STA 402 cannot be used to satisfy any other Mathematics or Mathematics and Statistics degree requirement if it is used toward the programming requirement.
- <sup>3</sup> MTH 408 can only be used toward the programming requirement by students who have been admitted to an AYA teacher licensure cohort.
- <sup>4</sup> PHY 286 can only be used toward the programming requirement by students who are also majoring in Physics.

**Part II: Related Area Requirement:** Every major must include in their program a cluster of courses in one area of study which mathematics or statistics is used. Minimally (but see **Related Area Reduction** below), the area is to consist of at least 12 credit hours, with at least 6 advanced hours. Advanced hours include all courses numbered 200 level or above in CHM, CSE, PHY, and all courses numbered 300 level or above in ACC, ECO, ECE, ISA, STA. Pre-approved related areas are listed below. If your interests are not accommodated by the pre-approved areas listed below, you may elect to design your own program of related courses. Such programs must be approved by the Chief Departmental Adviser **in advance of applying for graduation**. Pre-approved related areas include:

- Actuarial Science: ECO 201, ECO 202, ACC 221, ACC 222, FIN 301 (Students interested in an actuarial career are urged to complete the Minor in Actuarial Science, which will also satisfy this Related Area Requirement.)
- Teacher Education: The secondary licensure program in The College of Education, Health, and Society (This option is available only for Integrated Mathematics Education Majors).
- Accounting (ACC)
- Chemistry (CHM)
- Computer Science and Software Engineering (CSE)
- Economics (ECO)
- Electrical and Computer Engineering (ECE)
- Information Systems & Analytics (ISA)
- Physics (PHY)
- Statistics (STA)

Unless using the Actuarial Science or Teacher Education option, all related area hours must come from the same department. Students majoring in Mathematics (Bachelor of Arts or Bachelor of Science) may use statistics as their related area. There is no restriction on the statistics courses that can count (service courses are OK), but courses applied to the related area cannot also be counted towards the requirements of the major. On the other hand, students majoring in Mathematics and Statistics (Bachelor of Science) cannot use statistics as their related area. Students may simultaneously use any related area courses towards the university Thematic Sequence requirement, or toward a minor or second major. But, related area courses cannot be used towards the requirements of a Mathematics or Mathematics and Statistics major.

**Related Area Reduction:** Some students may want to have the flexibility to include in their program an additional course in mathematics or statistics. To that end, the cluster of related

courses required can be reduced by up to 3 hours (of the 6 advanced hours) by taking the same number of hours in a MTH or STA course, numbered 400 or higher and listed among the possible courses to fulfill requirements of your chosen degree. This decision must be made in consultation with your adviser or one of the CDAs.

## Teacher Licensure

Students who wish to combine teacher licensure with a major in the Department of Mathematics should apply for admission to a licensure cohort as outlined in the College of Education, Health and Society chapter. For information, contact the Office of Student Services in the College of Education, Health and Society, 202 McGuffey Hall, 513-529-6418.

To earn an A.B. degree in addition to teacher licensure, you must complete the requirements for the Bachelor of Arts degree, while also satisfying your professional education course requirements. As a consequence, the following courses (not all of which apply toward the A.B.) are automatically required to be in your academic program:

**These courses must include:**

Code	Title	Credit Hours
MTH 331	Proof: Introduction to Higher Mathematics	3
MTH 408/ MTH 508	Mathematical Problem Solving with Technology	3
MTH 409/ MTH 509	Secondary Mathematics from an Advanced Perspective	3
MTH 411/ MTH 511	Foundations of Geometry	3
MTH 421/ MTH 521	Introduction to Abstract Algebra	4
MTH 482	Great Theorems of Mathematics	3
STA 301	Applied Statistics	3
STA 401/STA 501	Probability	3

One additional course is required for completion of the A.B. degree. See the A.B. requirements for details about the selection of this course.

To earn a B.S. degree in addition to teacher licensure, you must complete the requirements for the B.S. in Mathematics or the B.S. in Mathematics and Statistics. Each of these programs requires four or five additional courses. See the B.S. requirements for details about the selection of these courses.

## Media and Culture- Bachelor of Arts

For more information, please contact the Media and Culture area of the Department of Media, Journalism and Film, 120 Williams Hall, 513-529-3521.

Media and Culture is a field of inquiry that examines the processes, institutions, and effects of the media as they function in national and international contexts. The general goals of this curriculum are threefold:

1. to develop students' competence in the critique of communication practices,
2. to increase students' appreciation of the history of media communication, and
3. to understand its impact on policies, institutions, and culture. Students study a broad range of media issues, including critical and cultural studies, communication technology and policy analysis, international communication, gender and sexuality issues, ethnic and minority studies, and more. In addition, students experience how to put this knowledge into practice in various forms of media production.

## Program Requirements

(37 semester hours)

Code	Title	Credit Hours
<b>Foundation courses</b>		
MAC 143	Introduction to Media	3
MAC 146	Media Aesthetics	3
<b>Core courses</b>		
MAC 211	Introduction to Video Production	4
MAC 212	Media, Representation, and Society	3
MAC 213	Writing for Media	3
MAC 215	Media History	3
<b>Major electives</b>		15
<b>Signature Experience courses</b>		3
Select at least one of the following: <sup>1</sup>		
MAC 414	Capstone Pictures: Project in Digital Narrative Film Production	
MAC 425	Inside Hollywood	
MAC 426	Inside Washington	
MAC 427	Inside Washington Semester Experience	
MAC 445	Electronic Media Policy and Regulation	
MAC 447	Mass Media Criticism	
MAC 454	The Washington Community	
<b>Related courses</b>		
None are required, but up to two of the five major elective courses can come from this category		
Total Credit Hours		37

<sup>1</sup> Additional hours earned from the Signature Experience courses will count in the major electives area.

## Major Electives

Code	Title	Credit Hours
MAC 209	Advertising in Consumer Culture	3
MAC 258	Copywriting for Electronic Media	3
MAC 267	Practicum in Electronic Media Production II	1-3
MAC 311	Digital Film Production	3
MAC 312	TV Studio Production	3
MAC 324	Ethics and Digital Media	3
MAC 325	Social Media Cultures	3

MAC 343	Advanced Audio Production	3
MAC 353	Audience Studies	3
MAC 355	Media Technology & Culture	3
MAC 443	Media Economics	3
MAC 446	Media Globalization	3
MAC 450	Topics in Communication	3
MAC/WGS 461	Gender, Sexuality and Media	3

## Related Courses

Code	Title	Credit Hours
None required, but up to two of the five major elective courses can come from the following:		
CMS 301	Comparative Approaches to Media Studies	3
CMS 350	Special Topics in Comparative Media Studies	3
CMS 350	Special Topics in Comparative Media Studies	3
ENG 422	Advanced Creative Writing: Screenwriting Workshop	3
FST (any course)		
IMS 211	Introduction to Game Studies	3
JRN 202	Reporting and News Writing II	3
JRN 314	Digital Video Reporting	3
STC 259	Introduction to Strategic Communication and Public Relations	3

## Notes on Curriculum

**Students must complete a second major outside the Department of Media, Journalism and Film.** Courses from the second major can NOT be used to satisfy any requirements in the major.

All MAC majors must complete two 400-level MAC courses. Independent studies will not count towards this requirement.

MAC Independent Studies (MAC 177, MAC 277, MAC 377, and MAC 477) and MAC 340 do not fulfill any specific Media and Culture curriculum requirement.

Students seeking the Bachelor of Arts in Media and Culture meet the CAS writing requirement by taking the following courses: MAC 213 and any Media and Culture course at the 400 or higher level.

## Medical Laboratory Science-Bachelor of Science

For information, contact the Department of Microbiology, 212 Pearson Hall, 513-529-5422.

This program is for students who are preparing for the national examination, including sections on key lab specialties such as molecular biology, biochemistry, toxicology, microbiology, parasitology, immunology, immunohematology (blood bank) and hematology, for certification as Medical Laboratory Scientists (MLS) by the American Society for Clinical Pathology (ASCP).

## Special Curriculum Requirements

This program requires 124 semester hours. Required courses include a twelve month, 32 credit medical laboratory internship. See program description in the Combined Programs section earlier in this chapter. No pre-internship science or related course may be taken on a credit/no-credit basis.

## Program Requirements

(75-86 semester hours)

Code	Title	Credit Hours
<b>Core Biology Courses</b>		
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
MBI 201	General Microbiology	4
MBI 365	Molecular and Cell Biology	3
or BIO 444	Molecular Biology	
<b>Core Chemistry Courses</b>		
CHM 141 & CHM 142	College Chemistry and College Chemistry	6-7
or CHM 141R & CHM 142	College Chemistry and College Chemistry	
CHM 144 & CHM 145	College Chemistry Laboratory and College Chemistry Laboratory	4
Organic chemistry - select one of the following options:		4-10
Option 1:		
CHM 231	Fundamentals of Organic Chemistry	
Option 2:		
CHM 241 & CHM 242	Organic Chemistry and Organic Chemistry	
CHM 244 & CHM 245	Organic Chemistry Laboratory and Organic Chemistry Laboratory	
CHM 332	Outlines of Biochemistry	3-4
or CHM 432	Fundamentals of Biochemistry	
<b>Core Math Courses</b>		
MTH 151	Calculus I	4-5
or STA 261	Statistics	
<b>Practicum/Internship Courses</b>		
MBI 487	Medical Laboratory Science Practicum	8
MBI 488	Medical Laboratory Science Practicum	12
MBI 489	Medical Laboratory Science Practicum	12
<b>Elective Courses</b>		
Select one of the following:		3-5
BIO 203	Introduction to Cell Biology	
CHM 363	Analytical Chemistry	
MBI 435	Medical Mycology	
MBI 464	Human Viruses	
PHY 161	Physics for the Life Sciences with Laboratory I	
PHY 191	General Physics with Laboratory I	
Select one of the following:		4

BIO 161	Principles of Human Physiology	
BIO 305	Human Physiology	
MBI 405	Medical Bacteriology	
MBI 415	Immunology Principles and Practice	
Total Credit Hours		75-86

## Microbiology- Bachelor of Arts

For information, contact the Department of Microbiology, 212 Pearson Hall, 513-529-5422.

The Bachelor of Arts degree is designed for students interested in a career in microbiology, the life or health sciences, or environmental sciences. Students who anticipate graduate study in microbiology should elect the B.S. in Microbiology program.

No course required for the major in microbiology may be taken on a credit/no-credit basis. Of the 100-level courses, only those that satisfy departmental degree requirements can be counted toward the GPA or the 32 hours required for the Bachelor of Arts major in microbiology.

## Program Requirements

(32 MBI semester hours plus 19-25 related hours)

Code	Title	Credit Hours
<b>Core courses</b>		
Select one of the following:		4
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	
MBI 121 & MBI 123	The Microbial World and Experimenting with Microbes	
MBI 161	Elementary Medical Microbiology	
Select the following:		
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
MBI 201	General Microbiology	4
MBI 365	Molecular and Cell Biology	3
MBI 490	Undergraduate Seminar	1
<b>Focus Courses</b>		14
Breadth Requirement- select at least 1 course from each Focus Group		
• Biomedical Focus Group - select at least one of the following:		
MBI 361	Epidemiology	
MBI 405	Medical Bacteriology <sup>2</sup>	
MBI 415	Immunology Principles and Practice <sup>1</sup>	
or MBI 414	Immunology Principles	
MBI 435	Medical Mycology	
MBI 464	Human Viruses	
• Integrative Focus Group - select at least one of the following:		
MBI 424	Advanced Experimental Techniques in Structural and Functional Genomics <sup>2</sup>	
MBI 465	Microbial and Molecular Genetics Laboratory	

MBI 475	Microbial Ecology: Exploration of the Diverse Roles of Microorganisms in Earth's Ecology <sup>2</sup>
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MBI 485	Bioinformatics Principles
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MBI 495	Bacterial Cellular and Developmental Biology
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• Advanced Core Focus Group - select at least one of the following:

MBI 425	Microbial Physiology <sup>2</sup>
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MBI 445	Microbial Genetics
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Depth Requirement- select at least 2 four-credit hour lab courses

Hours Requirement- select sufficient Focus Courses to total at least 14 credit hours

### Elective Courses 2

Select from additional Focus Courses, from the Elective Courses (below) or from Biology or Chemistry (at 300 - level or higher) to complete the 32 required hours.

#### Related Hours (19-25)

Select one of the following Chemistry options: 7-10

Chemistry option one:

CHM 231 & CHM 332	Fundamentals of Organic Chemistry and Outlines of Biochemistry
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Chemistry option two:

CHM 241 & CHM 242	Organic Chemistry and Organic Chemistry
CHM 244 & CHM 245	Organic Chemistry Laboratory and Organic Chemistry Laboratory

Select one of the following Mathematics/Statistics courses: 4-5

MTH 151	Calculus I
or STA 261	Statistics

Select one of the following Physics options: 8-10

Physics option one:

PHY 161 & PHY 162	Physics for the Life Sciences with Laboratory I and Physics for the Life Sciences with Laboratory II
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Physics option two (calculus-based):

PHY 191 & PHY 192	General Physics with Laboratory I and General Physics with Laboratory II
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Total Credit Hours 51-57

<sup>1</sup> Credit not given for both MBI 414 and MBI 415.

<sup>2</sup> Counts as a 4-credit hour lab course

## Elective Courses

Select from additional Focus Courses, from the following Elective Courses (Microbiology at 200 - level or higher) or from Biology or Chemistry (at 300 - level or higher) to complete the 32 required hours.

Code	Title	Credit Hours
MBI 223	Bacteriophage Biology	1
MBI 224	Bacteriophage Genomics	1
MBI 250	Topics in Microbiology	1-6

or MBI 350	Topics in Microbiology
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or MBI 450	Topics in Microbiology
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MBI 256	Introduction to Programming for the Life Sciences	3
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MBI 333	Field Ecology	3
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MBI 410	Senior Internship	2
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MBI 440	Research Problems <sup>1</sup>	1-4
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MBI 466	Bioinformatics Computing Skills	3
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MBI 477	Independent Studies <sup>1</sup>	0-5
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MBI 480	Departmental Honors <sup>1</sup>	1-6
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GLG 402	Geomicrobiology	3
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<sup>1</sup> MBI 440, MBI 477, and MBI 480 have a maximum of four credit hours that can receive a standard grade.

Students seeking the Bachelor of Arts in Microbiology meet the College of Arts and Science writing in the major requirement by completing the following courses: MBI 201, MBI 365, and MBI 490.

## Microbiology- Bachelor of Science

For information, contact the Department of Microbiology, 212 Pearson Hall, 513-529-5422.

The Bachelor of Science in Microbiology is designed to provide more in-depth study than the Bachelor of Arts, particularly in preparation for pursuit of a graduate degree in microbiology and related fields. As part of this preparation, students are required to conduct independent research leading to public presentation of their results.

No course required for the major in microbiology may be taken on a credit/no-credit basis. Of the 100-level courses, only those that satisfy departmental degree requirements can be counted toward the GPA or the 40 hours required for the Bachelor of Science major in microbiology.

## Program Requirements

(40 semester hours plus 24-29 related hours)

Code	Title	Credit Hours
<b>Core Courses</b>		
Select one of the following:		4
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	
MBI 121 & MBI 123	The Microbial World and Experimenting with Microbes	
MBI 161	Elementary Medical Microbiology	
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
MBI 201	General Microbiology	4
MBI 365	Molecular and Cell Biology	3
MBI 425	Microbial Physiology	4
MBI 445	Microbial Genetics	3
MBI 490	Undergraduate Seminar	1
<b>Focus Courses</b>		14

Lab Requirement - select at least two of the following:

MBI 405	Medical Bacteriology
MBI 415	Immunology Principles and Practice <sup>1</sup>
MBI 435	Medical Mycology
MBI 475	Microbial Ecology: Exploration of the Diverse Roles of Microorganisms in Earth's Ecology
MBI 485	Bioinformatics Principles

Research Requirement - select at least one of the following:

MBI 424	Advanced Experimental Techniques in Structural and Functional Genomics
MBI 465	Microbial and Molecular Genetics Laboratory
MBI 477	Independent Studies (MBI 477R - research)

Hours Requirement - select additional Focus Courses, including from the following, to total at least 14 credit hours

MBI 361	Epidemiology
MBI 414	Immunology Principles <sup>1</sup>
MBI 464	Human Viruses
MBI 495	Bacterial Cellular and Developmental Biology

### Elective Courses 3

Select from additional Focus Courses or from the Elective Courses (below) to complete the 40 required hours

#### Related Hours

Select one of the following Chemistry options: 7-10

Chemistry option one:	
CHM 231 & CHM 332	Fundamentals of Organic Chemistry and Outlines of Biochemistry
Chemistry option two:	
CHM 241 & CHM 242	Organic Chemistry and Organic Chemistry
CHM 244 & CHM 245	Organic Chemistry Laboratory and Organic Chemistry Laboratory

Select both of the following Mathematics/Statistics courses: 9

MTH 151	Calculus I
STA 261	Statistics

Select one of the following Physics options: 8-10

Physics option one:	
PHY 161 & PHY 162	Physics for the Life Sciences with Laboratory I and Physics for the Life Sciences with Laboratory II
Physics option two (calculus-based):	
PHY 191 & PHY 192	General Physics with Laboratory I and General Physics with Laboratory II

Total Credit Hours 64-69

<sup>1</sup> Credit not given for both MBI 414 and MBI 415.

## Elective Courses

Select from additional Focus Courses or from the following Elective Courses (Microbiology at the 200-level or higher) to complete the 40 required hours:

Code	Title	Credit Hours
MBI 223	Bacteriophage Biology	1
MBI 224	Bacteriophage Genomics	1
MBI 250	Topics in Microbiology	1-6
or MBI 350	Topics in Microbiology	
or MBI 450	Topics in Microbiology	
MBI 333	Field Ecology	3
MBI 410	Senior Internship	2
MBI 440	Research Problems <sup>1</sup>	1-4
MBI 466	Bioinformatics Computing Skills	3
MBI 477	Independent Studies <sup>1</sup>	0-5
MBI 480	Departmental Honors <sup>1</sup>	1-6
GLG 402	Geomicrobiology	3

<sup>1</sup> MBI 440, MBI 477, and MBI 480 have a maximum of four credit hours that can receive a standard grade.

## Neuroscience Co-Major

For information, contact the Department of Biology, 212 Pearson Hall, 513-529-3100 or the Department of Psychology, 100 Psychology building, 513-529-2400; this co-major is offered cooperatively.

The inter-departmental Neuroscience Co-major offers students the opportunity to pursue an in-depth exploration of the biology of individual nerve cells; the organization of nerve cells into a functional nervous system; and the role of the nervous system in behavior and cognition. The co-major is multidisciplinary, including coursework in biology, psychology, chemistry and statistics. It provides a basic framework for students planning advanced work at the graduate level. Students in the co-major must also be enrolled in, and complete, a primary major; the co-major cannot be taken as a stand-alone major. Upon graduation, students are awarded the degree of their primary major; there is no specific degree designation for the co-major.

## Program Requirements

(40-43 semester hours)

Code	Title	Credit Hours
<b>Biological Science and Psychology</b>		
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO/PSY 159	Seminar in Neuroscience	1
BIO 203	Introduction to Cell Biology	3
or MBI 365	Molecular and Cell Biology	
BIO 305	Human Physiology	4
PSY 251	Introduction to Biopsychology	3

### Chemistry

CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	5

**Statistics**

Select one course:		3-4
STA 363	Introduction to Statistical Modeling	
PSY 294	Writing and Research Methods in Psychology	

**Neuroscience Hours** 12-14

Select at least two courses from each area:

**Advanced Biology**

BIO 454	Endocrinology	
BIO 457	Neuroanatomy	
BIO 465	Animal Behavior	
BIO 469	Neurophysiology	
BIO 471	Molecular Physiology	

**Advanced Psychology**

PSY 351	Advanced Biopsychology	
PSY 352	Structured Research Experience in Behavioral Neuroscience	
PSY 356	Psychopharmacology	
PSY 451	Cognitive Neuroscience	
PSY 456	Advanced Biological Bases of Behavior	
PSY 458	Capstone in Neuroscience	

Total Credit Hours 40-43

Strongly recommended but not required courses

Code	Title	Credit Hours
CHM 241 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	5
CHM 242 & CHM 245	Organic Chemistry and Organic Chemistry Laboratory	5
PHY 161	Physics for the Life Sciences with Laboratory I	4
PHY 162	Physics for the Life Sciences with Laboratory II	4
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5

An independent research project with BIO 320 or PSY 477

## Philosophy- Bachelor of Arts

For information, contact the Department of Philosophy, 212 Hall Auditorium, 513-529-2440.

Philosophy is the search for knowledge regarding fundamental questions. The philosophy major provides students with the opportunity to examine the nature of reality and to understand the origin and development of ideas that structure and underlie the world and our lives. Philosophy majors will learn how to read complex texts critically, to write meaningfully and with clarity, and to understand and develop arguments.

## Program Requirements

(34 semester hours)

Code	Title	Credit Hours
PHL 245	Writing Philosophy	3
PHL 301	Ancient Philosophy	4
PHL 302	Modern Philosophy	4
PHL 404	What is Philosophy?	3
Select any two 400/500 level seminars (4 credits each)		8
Select 12 credit hours in philosophy <sup>1</sup>		12
Total Credit Hours		34

<sup>1</sup> No more than one course may be at the 100 level, not more than two of the additional courses may be at the 200 level and not more than 3 credits can be from independent study.

A minimum 2.00 GPA is required for all courses in the major, and courses must be taken for a grade, not credit/no credit.

Students seeking the Bachelor of Arts in Philosophy should meet the College of Arts and Science writing in the major requirement by completing PHL 245 and PHL 404.

## Physics- Bachelor of Arts

For information, contact the Department of Physics, 217 Kreger Hall, 513-529-5625.

Miami offers both a Bachelor of Arts (A.B.) and a Bachelor of Science (B.S.) in physics. The A.B. degree is for those students wishing to acquire a good background in physical science to complement work in other areas. The A.B. degree is especially well suited for persons desiring teacher licensure in physics and those preparing for careers in medicine, law, or business. The B.S. degree prepares students for graduate study or employment in physics or physics-related fields. Engineering physics and biological physics are described earlier in this chapter.

## Teacher Licensure

Students who wish to combine teacher licensure with an Arts and Science major must observe the rules, procedures, and restrictions pertaining to admission to a licensure cohort as outlined in the College of Education, Health and Society chapter. For information, contact the Office of Student Services in the College of Education, Health and Society, 202 McGuffey Hall, 513-529-6418.

## Program Requirements: Bachelor of Arts

(47-51 semester hours)

Code	Title	Credit Hours
Select one of the following:		5-9
MTH 151 & MTH 251	Calculus I and Calculus II	
MTH 249	Calculus II	
Select the following:		
MTH 252	Calculus III	4

PHY 191 & PHY 192	General Physics with Laboratory I and General Physics with Laboratory II	10
PHY 286	Introduction to Computational Physics	3
PHY 281	Contemporary Physics I: Foundations	3
PHY 282	Contemporary Physics II: Frontiers	3
PHY 292	Electronic Instrumentation	2
PHY 293	Contemporary Physics Laboratory	2
PHY 294	Laboratory in Electronic Instrumentation	2
PHY 401	Physics Assessment Examination	0
Select three hours of physics courses numbered 300-399 or above 410 with written approval of your physics advisor <sup>1</sup>		3
Select ten hours of related courses with written approval from your physics advisor <sup>2</sup>		10
<b>Total Credit Hours</b>		<b>47-51</b>

<sup>1</sup> Excluding PHY 311

<sup>2</sup> Can be selected from upper level PHY courses or advanced courses in other areas.

Students seeking the Bachelor of Arts in Physics meet the College of Arts and Science writing in the major requirement by completing PHY 293, PHY 294, and either PHY 488 or an independent study PHY course by petition.

## Physics- Bachelor of Science

For information, contact the Department of Physics, 217 Kreger Hall, 513-529-5625.

Miami offers both a Bachelor of Arts (A.B.) and a Bachelor of Science (B.S.) in physics. The A.B. degree is for those students wishing to acquire a good background in physical science to complement work in other areas. The A.B. degree is especially well suited for persons desiring teacher licensure in physics and those preparing for careers in medicine, law, or business. The B.S. degree prepares students for graduate study or employment in physics or physics-related fields. Engineering physics and biological physics are described earlier in this chapter.

## Teacher Licensure

Students who wish to combine teacher licensure with an Arts and Science major must observe the rules, procedures, and restrictions pertaining to admission to a licensure cohort as outlined in the College of Education, Health and Society chapter. For information, contact the Office of Student Services in the College of Education, Health and Society, 202 McGuffey Hall, 513-529-6418.

## Program Requirements: Bachelor of Science

(63-73 semester hours)

Code	Title	Credit Hours
Select one of the following:		5-9
MTH 151 & MTH 251	Calculus I and Calculus II	
MTH 249	Calculus II	

MTH 222	Introduction to Linear Algebra	3
Select the following		
MTH 252	Calculus III	4
PHY 191 & PHY 192	General Physics with Laboratory I and General Physics with Laboratory II	10
PHY 281	Contemporary Physics I: Foundations	3
PHY 282	Contemporary Physics II: Frontiers	3
PHY 286	Introduction to Computational Physics	3
PHY 292	Electronic Instrumentation	2
PHY 293	Contemporary Physics Laboratory	2
PHY 401	Physics Assessment Examination	0
PHY 294	Laboratory in Electronic Instrumentation	2
PHY 437	Intermediate Thermodynamics and Introduction to Statistical Physics	4
PHY 451	Classical Mechanics	4
PHY 461	Electromagnetic Theory	4
PHY 483	Mathematical Methods in Physics	4
PHY 491	Introduction to Quantum Mechanics I	4
Select one advanced laboratory course from the following:		3-4
PHY 427	Nano-scale Science and Technology	
PHY 441	Optics and Laser Physics	
PHY 442	Spectroscopy of Atoms and Molecules	
PHY 471	Advanced Electronics	
Select two of the following:		6-8
PHY 421	Molecular and Cellular Biophysics	
PHY 422	Physics for Medicine and Biology	
PHY 431	Elementary Particle Physics	
PHY 467	Seismology	
PHY 481	Gravitation and Spacetime	
PHY 486	Advanced Computational Physics	
PHY 488A	Research Capstone in Physics	
or PHY 488B	Research Capstone in Physics	
Advanced laboratory courses not used to fulfill the advanced laboratory requirement		
<b>Total Credit Hours</b>		<b>66-73</b>

## Advising tracks (recommended, not required)

### Materials

Code	Title	Credit Hours
PHY 437	Intermediate Thermodynamics and Introduction to Statistical Physics	4
MME 223	Engineering Materials	3
CHM 141	College Chemistry	3
CHM 142	College Chemistry	3
CHM 144	College Chemistry Laboratory	2
CHM 145	College Chemistry Laboratory	2

**Mathematical Physics**

Code	Title	Credit Hours
MTH 347	Differential Equations	3
Two other advanced MTH courses		

**Optics**

Code	Title	Credit Hours
PHY 441	Optics and Laser Physics	4
PHY 442	Spectroscopy of Atoms and Molecules	4

## Political Science- Bachelor of Arts

For information, contact the Department of Political Science, 218 Harrison Hall, 513-529-2000.

This major is for liberal arts students interested in the study of politics, government, and public affairs. For this major, at least 15 of the required 33 major hours and at least nine of the required 18 related hours must be from Miami. Required political science and related hours may not be taken on a credit/no-credit basis. A GPA of at least 2.00 is required for political science courses as well as related hours.

### Program Requirements

(33 semester hours minimum)

Choose political science hours from the following major fields: political theory, comparative politics, American government, public administration, and international politics, with the following requirements:

Code	Title	Credit Hours
<b>Required course</b>		
POL 241	American Political System	3
Select at least two of the following:		6
POL 201	Political Thinking <sup>1</sup>	
POL 221	Comparative Politics <sup>1</sup>	
POL 261	Public Administration <sup>1</sup>	
POL 271	World Politics <sup>1</sup>	

**Advanced Courses**

In consultation with your faculty advisor, select at least 18 additional hours from other POL courses at the 300 level and above, with at least one course from two of the five major fields.

Political Science MP Capstone course:

Select one of the following:

POL 411	American Political Thought	
POL 419	Civil Society and Modern Politics	
POL 459	Capstone Seminar on the American Political System	
POL 466	Public Policy Analysis	
POL 471	The International System	
POL 487	Individual Lives and International Politics	

POL 489	Conflict Management in a Divided World	
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**Additional Courses**

Select additional hours from POL courses at 200-level and above to complete the 33 hour requirement<sup>2</sup> 6

Total Credit Hours 33

<sup>1</sup> Prerequisites for 300 and 400-level courses in those subfields.

<sup>2</sup> 100-level POL courses do NOT apply to the major

Code	Title	Credit Hours
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**Related hours**

Select 18 hours

(At least 12 hours must be at the 200 level or higher.)

Take a total of 18 hours from cognate disciplines including: AMS, ATH, BLS, BWS, BUS, ECO, ESP, GEO, GIC, GTY, HST, ISA, ITS, JRN, LAS, MAC, MGT, PHL, PSY, REL, SOC, STC, WGS or AES 221, AES 222, AES 431, AES 432; ENG 432; NSC 202, NSC 311 or NSC 402; and other courses as approved by the Chief Departmental Advisor or Chair.

**CAS Writing Competency Requirement**

Students seeking the Bachelor of Arts in Political Science meet the College of Arts and Science writing in the major requirement by completing the following courses:

1. Take at least one of the required 200-level courses in a "Writing" or "W" section;
2. Take at least one of the POL 300-level courses in a "W" section;
3. Complete one of the required POL Capstone courses (all of which meet the Writing requirement).

### Note about Double Majoring in the Department

The Department of Political Science does not allow Political Science majors to pursue another major in the Department. A double major between Public Administration and Diplomacy and Global Politics is allowed, but will not meet the Miami Plan's thematic sequence requirement as a double major that is in the same department. We strongly discourage a Diplomacy and Global Politics - International Studies double major due to all the "double counting" that is involved.

### Premedical Studies Co-Major

For information, contact the Mallory-Wilson Center for Healthcare Education, 106 Pearson Hall, (513) 529-3737.

Provides a broad-based premedical background and prepares students to pursue advanced degrees in medicine as well as other healthcare related fields. Integrates comprehensive, regularly scheduled premedical advising with courses that cover fundamental concepts in the biological, physical, and social sciences required for admission to medical school or other health professional schools, and/or in preparation for the Medical College Admission Test (MCAT). A co-major must be taken in conjunction with a primary major, which provides the significant depth and breadth of an academic discipline; it cannot be taken independently. There is no specific

degree designation for the co-major; students receive the degree designation of their primary major.

**Note:** Students are not required to complete the co-major for successful application and admittance to medical school or other health professional schools. Premedical Studies courses as well as access to services provided by the Mallory-Wilson Center for Healthcare Education and the Prehealth Advisory Committee are available to all students.

## Program Requirements

Required courses (60-67 hrs)

**Complete a major in one of the divisions of the university.**

Code	Title	Credit Hours
<b>Biology</b>		
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
Select one of the following:		4
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	
BIO 305	Human Physiology	
MBI 201	General Microbiology	
Select three to four hours in BIO/MBI at the 200-level or above (not independent study)		3-4
<b>Chemistry</b>		
General Chemistry:		10
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	
Organic Chemistry:		10
Select one of the following sequences:		
CHM 241 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	
CHM 242 & CHM 245	Organic Chemistry and Organic Chemistry Laboratory	
<b>OR</b>		
CHM 251 & CHM 254	Organic Chemistry for Chemistry Majors and Organic Chemistry Laboratory for Chemistry Majors	
CHM 252 & CHM 255	Organic Chemistry for Chemistry Majors and Organic Chemistry Laboratory for Chemistry Majors	
Biochemistry:		3-4
CHM 432 or CHM 332	Fundamentals of Biochemistry <sup>1</sup> or Outlines of Biochemistry	
<b>English Composition</b>		
Select one year of English Composition or equivalent		6
<b>Statistics</b>		
Select one of the following:		3-6
STA 261	Statistics	

STA 301	Applied Statistics	
STA 125 & ISA 225	Introduction to Business Statistics and Principles of Business Analytics	
<b>Physics</b>		
Select one of the following sequences:		8-10
PHY 161 & PHY 162	Physics for the Life Sciences with Laboratory I and Physics for the Life Sciences with Laboratory II	
<b>OR</b>		
PHY 191 & PHY 192	General Physics with Laboratory I and General Physics with Laboratory II	
<b>Professional Development</b>		
PMD 101	Explorations in Medicine	1
PMD 301	Preparing for a Career in Medicine	1
<b>Social Science</b>		
PSY 111 & PSY 112	Introduction to Psychology and Foundational Experiences in Psychology	4
SOC 153	Sociology in a Global Context	3
<b>Recommended Electives</b>		
Select one additional BIO/MBI course at the 200-level or above		
MTH 151	Calculus I	5
Total Credit Hours		65-72

<sup>1</sup> CHM 432 is the preferred course for Biochemistry.

## Psychology- Bachelor of Arts

For information, contact the Department of Psychology, 100 Psychology Building, 513-529-2400, psychology@MiamiOH.edu (psychology@miamioh.edu).

You must have at least a 2.00 cumulative GPA for all psychology courses attempted and for which a letter grade has been earned. All courses used to satisfy basic departmental requirements must be taken for a letter grade. If you wish to transfer courses from another institution to meet requirements for the major, we strongly recommend you have those approved IN ADVANCE by the Chief Departmental Advisor.

## Departmental Honors

Students with both a cumulative and major GPA of 3.25 are eligible to apply to complete an honors thesis, which requires the support of a faculty advisor for the project. Departmental honors candidates complete PSY 480 (minimum 4; maximum 6), in which they write and present a thesis. PSY 400 is strongly recommended.

## Recommended Courses of Study

This department offers a single major; all majors are encouraged to take a variety of courses in psychology. For flexible career planning, the department suggests courses of study consistent with your career goals. Choose those courses with your academic advisor.

## Program Requirements

(minimum of 36 semester hours in PSY)

Code	Title	Credit Hours
PSY 111	Introduction to Psychology (pre- or co-requisite PSY 112, or PSY 112M) <sup>1</sup>	3
Take one of the following:		1
PSY 112	Foundational Experiences in Psychology	
PSY 112M	Foundational Experiences for Majors	
Take the following three courses in this order. PSY294 is a prerequisite for most 300 level and above courses:		
STA 261	Statistics <sup>2</sup>	4
PSY 293	Introduction to Psychological Statistics	4
PSY 294	Writing and Research Methods in Psychology (pre or co-requisite PSY 112 or PSY 112M)	4
Select at least one course from each Biopsychology, Cognitive, Developmental, Individual and Social group <sup>3</sup>		15
Additional requirements:		
Select one of the following two courses:		3
PSY 410	Capstone Seminar in Psychology: The Multiple Determinants of Behavior	
PSY 458	Capstone in Neuroscience	
Approved area of focus <sup>4</sup>		6-9
Select three 300-level or higher courses, at least one of which must be at the 400-level (this does not include PSY 410 or PSY 458). <sup>5</sup>		
Additional courses to make up minimum of 36 semester hours in psychology		
Total Credit Hours		40-43

<sup>1</sup> If you have taken EDP 101, you cannot receive credit for it and PSY 111, so the department will count it as meeting the requirement for PSY 111.

<sup>2</sup> If you have another statistics course such as ISA205, or STA301 please contact the chief departmental advisor.

<sup>3</sup> Please see below for a list of courses that will count for each of these areas.

<sup>4</sup> Must take 3 courses within a single area of focus; a list of the areas is available through the department or students can consult their degree audit.

<sup>5</sup> PSY 294 is a prerequisite for nearly all courses at or above the 300-level.

## Biopsychology

Code	Title	Credit Hours
PSY 251	Introduction to Biopsychology	3
PSY 351	Advanced Biopsychology	4
PSY 352	Structured Research Experience in Behavioral Neuroscience	3
PSY 356	Psychopharmacology	3
PSY 451	Cognitive Neuroscience	3
PSY 456	Advanced Biological Bases of Behavior	3

## Cognitive

Code	Title	Credit Hours
PSY 271	Survey of Perception, Action, and Cognition	3
PSY 374	Psychology of Language and Thought	3
PSY 375	Laboratory in Perception, Action, and Cognition	4
PSY 376	Psychology of Judgment, Decision Making, and Reasoning	3
PSY 451	Cognitive Neuroscience	3
PSY 470	Seminar in Cognition	3
PSY 473	Human Factors/Ergonomics	4
PSY 474	Advanced Cognitive Processes	3

## Developmental

Code	Title	Credit Hours
PSY 231	Developmental Psychology	3
PSY 331	Infant Development	3
PSY 332	Child Development	3
PSY 333	Adolescent Development	3
PSY 334	Adulthood and Aging	3
PSY 430	Seminar in Developmental Psychology	3

## Individual

Code	Title	Credit Hours
PSY 241	Personality	3
PSY 242	Abnormal Psychology	3
PSY 343	Psychopathology	3
PSY 345	Childhood Psychopathology and Developmental Disabilities	3
PSY 350	Advanced Topics in Personality Theory and Research	3

## Social

Code	Title	Credit Hours
PSY 221	Social Psychology	3
PSY 324	Advanced Social Psychology	3
PSY 325	Psychology of Prejudice and Minority Experience	3
PSY 326	Psychology of Gender	3
PSY 327	Intro to Social Cognition	3
PSY 420	Seminar in Social Psychology	3

Students seeking the Bachelor of Arts in Psychology meet the College of Arts and Science writing in the major requirement by completing the following course: PSY 294.

## Public Administration- Bachelor of Arts

For information, contact the Department of Political Science, 218 Harrison Hall, 513-529-2000.

The Public Administration major is designed for undergraduates interested in studying and understanding the issues of governance and management in government and not-for-profit organizations, and more specifically about the link between politics and public policy implementation. It is appropriate for those interested in public service careers in the federal government, state government, and/or local government including: city and county management, public finance administration, public personnel administration, public policy analysis and program evaluation. This major also prepares students for continued education in professional and graduate schools of public administration, public policy analysis, and related fields. It also serves as a pre-law course of study.

At least half of the required semester hours in the Public Administration Core and half of the required semester hours in the Related Hours must be from Miami. Required hours in the Core and Related Hours may not be taken credit/no-credit. A GPA of at least 2.00 is required in the Core as well as in the Related Hours courses.

### Program Requirements

(At least 38 semester hours)

Code	Title	Credit Hours
<b>Public Administration Core</b>		
POL 241	American Political System	3
POL 261	Public Administration <sup>1</sup>	3
POL 306	Applied Research Methods	3
ECO 201	Principles of Microeconomics	3
ECO 202	Principles of Macroeconomics	3
<b>Core electives <sup>2</sup></b>		
Select at least 12 hours of the following:		12
POL 268	State and Local Government and Politics	
POL 307	Public Opinion Laboratory	
POL 351	Criminal Justice	
POL 362	Public Management, Leadership, and Administrative Politics	
POL 363	Administrative Law	
POL 364	Federalism and Intergovernmental Relations	
POL 460	Seminar on Public Administration and Policy Analysis	
POL 467	Public Budgeting	
POL 468	Public Personnel Administration	
Select no more than six hours of the following professional related courses:		6
ACC 468	Accounting for Governmental and Not-for-Profit Organizations	
AMS 302	Immigrant America	
ECO 331	Public Sector Economics	

ECO 406	Environmental Economics
ENG 313	Technical Writing
GEO 441	Geographic Information Systems
GEO 442	Advanced Geographic Information Systems
GEO 451	Urban and Regional Planning
GTU 365	Social Policy and Programs in Gerontology
HST 379	U.S. Consumerism, 1890-Present
IES 431	Principles and Applications of Environmental Science
IES 450	Environmental Law
JRN 412	Public Affairs Reporting
SOC 454	Formal Organization
STC 339	Introduction to Organizational Communication

### Senior Capstone Seminars

Seniors must take the two capstone courses concurrently:

POL 406	Public Policy Analysis Laboratory <sup>3</sup>	2
POL 466	Public Policy Analysis <sup>3</sup>	3
Total Credit Hours		38

<sup>1</sup> POL 261 is a prerequisite for 300/400-level courses in Public Administration.

<sup>2</sup> Courses appropriate to the major, but not listed as core electives, may in some cases be counted toward the major with the written approval of the student's public administration advisor.

<sup>3</sup> Requires Senior standing, completion of the core requirements and 15 hours from above.

### Internships

Public administration internships (POL 340) for majors are coordinated through the Center for Public Management and Regional Affairs, 2 Harrison Hall. Internships provide an added dimension to your educational experience. Internship credits do not fulfill any requirements for the Public Administration major. For information, consult the Political Science Internship Coordinator.

### CAS Writing Competency Requirement

Students seeking the Bachelor of Arts in Public Administration meet the College of Arts and Science writing in the major requirement by completing the following courses:

1. Take either POL 241 or POL 261 in a "Writing" or "W" section;
2. Take at least one of the required POL 300-level courses in a "W" section;
3. Complete the required Capstone course (which meets the Writing requirement).

### Note about Double Majoring in the Department

The Department of Political Science does not allow Political Science majors to pursue another major in the Department. A double major between Public Administration and Diplomacy and Global Politics

is allowed, but will not meet the Miami Plan's thematic sequence requirement as a double major that is in the same department. We strongly discourage a Diplomacy and Global Politics - International Studies double major due to all the "double counting" that is involved.

## Public Health- Bachelor of Arts

For more information about the Human Disease and Epidemiology concentration, contact the Department of Microbiology, 212 Pearson Hall, 513-529-5422, Email: microbiology@MiamiOH.edu

For more information about the Health Policy and Administration concentration, contact the Department of Political Science, 218 Harrison Hall, 513-529-2000, Email: political@MiamiOH.edu

Public Health is a field of study focused on preventing illness and promoting health in individuals, communities, and society as a whole. The Public Health degree at Miami builds on the University's strengths in four areas: Human Disease & Epidemiology; Health Policy & Administration; Public Health Promotion; and Behavioral Public Health. Students will choose a concentration in one of these specialty areas, as well as complete a core curriculum covering the critical elements of public health. These curricula will prepare students for either graduate school or employment in the field. Students choosing a concentration in either Health Promotion or Behavioral Health will complete all of the requirements of the College of Education, Health and Society. Students choosing a concentration in Human Disease and Epidemiology or Health Policy and Administration will complete all of the requirements of the College of Arts and Science.

## Program Requirements

Code	Title	Credit Hours
<b>Core Courses</b>		
Take the following:		
GTY 365	Social Policy and Programs in Gerontology	3
or KNH 321	National and Global Health Policy	
IES 441	Environmental Public Health	3
KNH 218	Applied Health Behavior Change	3
KNH 221	Social Marketing in Public Health	3
MBI 131	Community Health Perspectives	3
or KNH 125	Introduction to Public Health	
MBI 361	Epidemiology (Note: enroll in a W section to meet the CAS writing in the major requirement)	3
STA 261	Statistics	3-4
or STA 301	Applied Statistics	
<b>Concentrations (one required):</b>		18-20
<b>HUMAN DISEASE &amp; EPIDEMIOLOGY</b>		
Take the following:		
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	
BIO 203	Introduction to Cell Biology	
BIO 305	Human Physiology	
MBI 111	Microorganisms and Human Disease	
MBI 461	Human Disease and Epidemiology	

Select one of the following:

ATH 348	Introduction to Medical Anthropology
ATH 378	Doctors, Clinics, and Epidemics
BIO 342	Genetics
MBI 414	Immunology Principles
STA 363	Introduction to Statistical Modeling

### HEALTH POLICY & ADMINISTRATION

Take the following:

GTY 465	Policies & Programs in an Aging Society
POL 261	Public Administration
POL 340	Internship <sup>1</sup>
or GTY 440R	Gerontology Research Capstone Internship
or GTY 440P	Gerontology Practice Capstone Internship

Select one of the following administration courses:

POL 362	Public Management, Leadership, and Administrative Politics
POL 467	Public Budgeting
POL 468	Public Personnel Administration
SOC 454	Formal Organization

Select one of the following policy courses:

ATH 448	Developing Solutions in Global Health
ECO 332	Health Economics
GTY 362	Applied Research in Gerontology
POL 466	Public Policy Analysis

Total Credit Hours 39-42

<sup>1</sup> In the Health Policy & Administration concentration, a minimum of 6 hours of internship are required; however, a student may apply up to 8 hours toward the major, depending on the course.

Students seeking the Bachelor of Arts in Public Health meet the College of Arts and Science writing in the major requirement by completing MBI 361W, the writing-intensive section of the epidemiology course required in the core.

## Quantitative Economics- Bachelor of Science

For information, contact the Department of Economics, 2054 Farmer School of Business, 513-529-2836.

This program enables students to undertake a more rigorous and quantitative course of study, while still completing their degree work in four years. Additional required courses (including more quantitative courses), combined with more advanced mathematics and statistics requirements are an ideal preparation for graduate training in economics, as well as jobs in business, industry and government that require the more technical tools of economic theory and econometrics.

## Honors in Economics

For details on honors in economics please see the departmental website.

## Program Requirements

(36 semester hours, plus 20-21 related hours)

Code	Title	Credit Hours
<b>Core Courses</b>		
ECO 201	Principles of Microeconomics	3
ECO 202	Principles of Macroeconomics	3
ECO 311	Examining Economic Data and Models <sup>1</sup>	3
ECO 315	Intermediate Microeconomic Theory	3
ECO 317	Intermediate Macroeconomic Theory	3
Select one of the following:		3
ECO 414	Mathematical Economics	
ECO 465	Game Theory with Economic Applications	
An acceptable alternative economics, mathematics, or statistics course <sup>2</sup>		
Select 18 hours in economics that are at the 300-level or above; at least six of these hours must be in courses that require ECO 315 and/or ECO 317 as a prerequisite and are numbered at 410 or above. <sup>3,4</sup>		18
<b>Related Hours (20 required)</b>		
Mathematics:		
MTH 222	Introduction to Linear Algebra	3
MTH 249	Calculus II	4-5
or MTH 251	Calculus II	
MTH 252	Calculus III	4
Select one of the following:		3
ISA 444	Business Forecasting	
MTH 347	Differential Equations	
MTH 422	Linear Algebra and Fields	
MTH 432	Optimization	
MTH 441	Real Analysis	
STA 463	Regression Analysis	
STA 467	Statistical Learning	
STA 483	Analysis of Forecasting Systems	
Statistics: take both		
STA 301	Applied Statistics	3
STA 401	Probability	3
Total Credit Hours		56-57

<sup>1</sup> It is highly recommended that ECO 311 be completed by the end of your junior year.

<sup>2</sup> Alternatives must be approved by the departmental chief advisor, ideally before the student enrolls in the course.

<sup>3</sup> and must be taken at Miami. At least three additional hours of economics numbered 300 must be taken at Miami. Up to three hours of Summer Scholar credit can be applied toward the 15 hours of advanced economics. Exceptions must be approved by the director of undergraduate studies.

<sup>4</sup> Prerequisites for all 300- and 400-level course include ECO 201 and ECO 202 unless otherwise stated.

## Religion- Bachelor of Arts

For information, contact the Department of Comparative Religion, 200 Upham Hall, 513-529-4300.

In virtually all cultures, religion has developed as a powerful dimension of social, political, and economic life. Religion has also had enormous impact on literature, the arts, and human thought. A brief glance at today's headlines will show how religion permeates every corner of human affairs. In this major, you will study world religions, along with their history, their relationships, and their impact on individuals and societies.

## Program Requirements

(42 semester hours)

Code	Title	Credit Hours
<b>Required course:</b>		3
REL 201	Methods for the Study of Religion	
<b>Select one of the following:</b>		3
REL 233	History of Christian Thought	
REL 241	Religions of the American Peoples	
REL 275	Introduction to the Critical Study of Biblical Literature	
REL 286	Global Jewish Civilization	
<b>Select one of the following:</b>		3
REL 203	Global Religions of India	
REL 223	Introduction to Buddhism	
REL 226	Introduction to Islam	
<b>Select one of the following not yet taken:</b>		3
REL 101	Introduction to the Study of Religion	
REL 203	Global Religions of India	
REL 223	Introduction to Buddhism	
REL 226	Introduction to Islam	
REL 233	History of Christian Thought	
REL 241	Religions of the American Peoples	
REL 275	Introduction to the Critical Study of Biblical Literature	
REL 286	Global Jewish Civilization	
<b>Select at least four of the following:</b>		12
CLS 210L	Ancient Religions	
REL 312	Religions of the Old Testament/ Hebrew Bible	
REL 313	Marriage Across Cultures	
REL 314	Social and Religious History of the Jewish People	
REL 316	The Age of the Reformation	
REL 331	Paul and the Beginnings of Christianity	
REL 332	The Development of Christianity: 100 to 451	
REL 333	Religion, Dress, and Status	
REL 334	Women's Religious Experiences in the Ancient Mediterranean World	
REL 336	Jesus and the Gospels	
REL 337	Religions of Russia and Eurasia	

REL 338	Eastern Christianity	
REL 341	Protestantism and the Development of American Culture	
REL 342	Religious Pluralism in Modern America	
REL 343	African-American Religions	
REL 345	Women, Religion and Social Change in America	
REL 346	Issues in the Study of Native American Religions	
REL 355	Religion and Law	
REL 360	Interdisciplinary Special Topics	
REL 376	Global Militant Islamisms	
<b>Select one of the following or an approved 400-level CAS writing course in another department:</b>		3-4
REL 402/502	Basic Structures in the History of Religions	
REL 430/530	Early Christian Literature and Religion	
REL 470A	Havighurst Colloquium	
REL 480	Independent Reading for Departmental Honors	
<b>Related hours:</b>		15
Select 15 hours outside of REL, nine of which must be at the 300 level or above, selected with the departmental advisor		
<b>Total Credit Hours</b>		42-43

**Note:** Students seeking the Bachelor of Arts in Comparative Religion will meet the College of Arts and Science "writing in the major" requirement by completing the following course: REL 201.

## Russian, East European, and Eurasian Studies- Bachelor of Arts

For information, contact the Department of German, Russian, Asian, and Middle Eastern Languages and Cultures, 172 Irvin Hall, 513-529-2526.

This interdisciplinary major allows students to study the history, politics, language, literature, and culture of Russia, Eastern Europe, and Eurasia, broadly defined as the territory of the former Soviet republics and their sphere of influence, from medieval times to today. Drawing from a range of disciplines and approaches, students have the opportunity to explore issues of political, social, and regional identity and cultural diversity, as well as official and popular culture. Majors may choose to participate in the Dawisha Fellows program sponsored by the Havighurst Center for Russian and Post-Soviet Studies

Proficiency at the level of RUS 302 or above is required. Students are encouraged to attend a Miami summer Russian language workshop in Russia, Eastern Europe, and Eurasia or an approved academic study program in Russia, Central Asia, the Caucasus, or Eastern Europe. Special financial support may be available through the Havighurst Center and ROTC programs.

## Program Requirements

(36 semester hours)

Code	Title	Credit Hours
<b>Core Requirements</b>		
RUS/CLS/HST/ POL/REL 254	Introduction to Russian and Eurasian Studies	3
RUS 201 & RUS 202	Intermediate Russian and Intermediate Russian	6
RUS 301 & RUS 302	Advanced Russian and Advanced Russian	6
RUS 311	Reading in Russian	3
RUS 436	Havighurst Colloquium	3
<b>Electives</b>		15
Select from the following:		
ATH 306	Russia and Eurasia: Anthropological Perspectives	
ATH 384	Anthropology of Capitalism: Russia	
ATH 482	Russian, Eastern European and Eurasian Summer Workshop	
HST 324	Eurasian Nomads and History	
HST 374	History of the Russian Empire	
HST 375	The Soviet Union and Beyond	
HST 428	History Through Literature	
POL 331	Communism and Soviet Politics, 1917-1991	
POL 332	Post-Soviet Russian Politics	
POL 334	Politics of Eastern Europe	
REL 337	Religions of Russia and Eurasia	
REL 338	Eastern Christianity	
RUS 137	Russian Folklore	
RUS 255	Russian Literature in English Translation From Pushkin to Dostoevsky	
RUS 256	Russian Literature in English Translation: From Tolstoy to Nabokov	
RUS 257	Russian Literature in English Translation: From Pasternak to the Present	
RUS 263	Soviet & Post-Soviet Russian Cinema	
RUS/GER 272	Cinemas and Cultures of Central and Eastern Europe	
RUS 325	Russian Reception of Classical Culture	
RUS 411	Advanced Conversation, Composition and Reading	
RUS 480	Departmental Honors	
<b>Total Credit Hours</b>		36

Students seeking the Bachelor of Arts in Russian, East European, and Eurasian Studies meet the College of Arts and Science writing in the major requirement by completing the following courses: CLS 254/HST 254/POL 254/REL 254/RUS 254 and HST 436/RUS 436/RUS 536/POL 440/POL 540.

## Social Justice Studies- Bachelor of Arts

For information, contact the Department of Sociology and Gerontology, 375 Upham Hall, 513-529-2628.

The Bachelor of Arts in Social Justice Studies (SJS) offers a sociologically-based foundation of knowledge and skills to examine ideals of justice, realities of injustice, and change strategies to bridge the gap between the two. It prepares students for graduate work, law school, and a broad range of careers in areas including public policy, business, social activism, human services, public health, foreign affairs, and humanitarian relief.

Students seeking the Bachelor of Arts in Social Justice Studies meet the College of Arts and Science writing in the major requirement by completing the following courses: SJS 165, SJS 323, and SJS 470.

### Program Requirements

(40 Semester hours)

Code	Title	Credit Hours
<b>Core Courses</b>		
Select all of the following:		
SJS 165	Introduction to Social Justice Studies	3
SJS 323	Social Justice and Change	3
SJS 470	Social/Political Activism	3
<b>Logic, Reasoning, Research Methods</b>		3-4
Select one of the following: <sup>1</sup>		
SOC 262	Research Methods	
PHL 273	Formal Logic	
STA 261	Statistics	
<b>Professional Development</b>		2-3
Select one of the following:		
EDL 100	Career Development for College Students	
SJS 303	Life After Graduation: Careers in Sociology/Social Justice	
<b>Electives</b>		16
Select courses from the following to total at least 30 hours:		
SJS 204	Introduction to Service-Learning	
SJS 215	EMPOWER I: Educational and Economic Justice and Service-Learning	
SJS 216	EMPOWER II: The Intersections of Race, Class, and Education	
SOC 203	Sociology of Gender	
SOC 221	Sexualities	
SOC 225	Work and Occupational Justice	
SOC 348	Race and Ethnic Relations	
SOC 372	Social Stratification	
SOC 305	Introduction to the Sociology of Globalization	
SJS 419	Environment, Society & Justice	

SJS 487 Globalization, Social Justice and Human Rights

<b>Related hours</b>	10
Pre-approved related areas include:	
Black World Studies (BWS)	
Community-Based Leadership (CBL)	
Comparative Media Studies (CMS)	
Disability Studies (DST)	
Entrepreneurship (ESP)	
Geography (GEO)	
International Studies (ITS)	
OTR Residency	
Sustainability (IES)	
Women's, Gender, and Sexuality Studies (WGS)	
<b>Total Credit Hours</b>	40-42

<sup>1</sup> Other courses may apply with approval from the Chief Departmental Advisor

### Sociology- Bachelor of Arts

For information, contact the Department of Sociology and Gerontology, 375 Upham Hall, 513-529-2628.

This major is for students interested in the study of society, social institutions, and human interaction. These range from two-person interactions to relations between large social institutions to relations between nations. Students select a general sociology concentration or a criminology concentration. The general sociology concentration offers coursework focusing on a variety of social processes and institutions, and the criminology concentration focuses on the social-scientific study of crime, and systems of legal and criminal justice.

Required sociology courses and related hours (excluding fieldwork) may not be taken credit/no-credit; however, hours in excess of the required minimum may be taken credit/no-credit. A GPA of at least 2.00 is required for this major, and only three hours of independent study may be included. Not all courses are offered each semester or every year; consult with your sociology advisor before registering each semester. A sociology capstone class is required for the major. If you complete more than one sociology capstone class, the hours from the additional course(s) will count as elective hours. **Note:** A capstone class will count as a capstone **ONLY** if you have senior standing.

Students seeking the Bachelor of Arts in Sociology meet the College of Arts and Science writing in the major requirement by completing the following courses: SOC 262, SOC 482, and SOC 459 or SOC 470.

Students majoring in one concentration may not minor in the other concentration. Students may not double major in the sociology and criminology concentration

### Program Requirements

(39-40 semester hours)

**Note:** All 300 and 400 level sociology courses require SOC 151 or SOC 153 as a prerequisite. Prerequisites may be waived with permission of instructor. Credit toward the sociology major **cannot** be granted for both SOC 151 and SOC 153.

## Sociology Major

Code	Title	Credit Hours
<b>Core Curriculum</b>		
SOC 151 or SOC 153	Social Relations <sup>1</sup> Sociology in a Global Context	3
STA 261	Statistics	4
SOC 482	Sociological Theory	4
SOC 262	Research Methods	3
<b>Sociology Capstone course -select one of the following:</b>		3
SOC 459	Sociology Capstone	
SOC/SJS 470	Social/Political Activism	
Select one of the following concentrations:		22-23
<b>Criminology Concentration (22-23 hours)</b>		
Required Courses		
SOC 352 or CJS 271	Criminology Criminal Behavior	
SOC 409	Systems of Justice	
Criminology Electives (6-7 Credits)		
SOC 201 or SOC 202	Social Problems (Required Courses) Social Deviance	
SOC/SJS 323	Social Justice and Change	
SOC 410	Topics in Criminology	
SOC 412	Sociology of Law	
SOC 413	Juvenile Delinquency	
Students may complete an independent study (SJS/SOC 177, 277, 377, 477) if content is relevant (must be pre-approved by the CDA).		
Students may complete a special topics course (SOC 490) if content is relevant (must be pre-approved by the CDA).		
Engaged Learning Requirement (3 credits)		
SOC 440C	Internship in Criminology <sup>2</sup>	
Diversity Requirement (6 credits)		
ATH 301	Intercultural Relations	
ATH 325	Identity, Race, Gender, Class	
SOC 203	Sociology of Gender	
SOC 305	Introduction to the Sociology of Globalization	
SOC 272	Introduction to Disability Studies	
SOC 221	Sexualities	
SOC 318	Social Forces and Aging	
SOC 348	Race and Ethnic Relations	
SOC 362	Family Poverty	
SOC 372	Social Stratification	
SOC 375	(Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice	
WGS 201	Introduction to Women's Studies	
Credit requirements can be met by taking additional SJS or SOC courses or by completing any of the related courses (list available from the CDA).		
<b>Sociology Concentration (22-23 hours)</b>		

### Required Course

SOC 372	Social Stratification	
Related Hours (minimum of 20 additional SOC hours, with at least 9 hours at or above the 300 level)		
Total Credit Hours		39-40

<sup>1</sup> Only one of these courses may count toward major credit requirements.

<sup>2</sup> Maximum of 4 credits from SOC 440C count toward the major.

## Spanish- Bachelor of Arts

For information, contact the Department of Spanish and Portuguese, 268 Irvin Hall, 513-529-4500.

No courses in Spanish may be taken credit/no credit. Courses taken cannot fulfill more than one requirement for the Spanish major.

## Program Requirements

(36 semester hours in SPN)

**Note:** SPN 101, SPN 102, SPN 111, SPN 201, SPN 202 or SPN 203, and SPN 211, do not count in the required 36 hours.

Code	Title	Credit Hours
<b>Required Core Courses</b>		
SPN 311	Grammar Review and Introductory Composition	3
SPN 312	Introduction to Spanish Language/Linguistics	3
SPN 315	Intro to Hispanic Literatures	3
<b>Required Intermediate Courses</b>		
SPN 351 or SPN 361	Cultural History of Spain I Spanish American Cultural History I	3
SPN 352 or SPN 362	Cultural History of Spain II Spanish American Cultural History II	3
SPN 381 or SPN 382	Spanish Language and Hispanic Culture I Spanish Language and Hispanic Culture II	3
<b>Required Advanced Courses</b>		
Select from any 400/500 SPN courses		6
<b>Required Capstone Course</b>		
SPN 490	Issues in Hispanic Literature, Linguistics, or Culture	3
<b>Major Electives</b>		
Select 9 hours from the following:		9
Any 300 or 400-level SPN course		
POR 381 or POR 383	Afro-Brazilian Diaspora Through Film and Arts Brazilian Women through Literature and Film	
<b>Study Abroad Requirement</b>		
9 hours in an approved study abroad program in a Spanish-speaking country (can be used to satisfy other major requirements--no additional hours required)		
Total Credit Hours		36

Students seeking the Bachelor of Arts in Spanish meet the College of Arts and Science writing in the major requirement by completing SPN 316 (Intermediate Spanish Composition).

## Teacher Licensure

Students who wish to combine teacher licensure with an Arts and Science major must observe the rules, procedures, and restrictions pertaining to admission to a licensure cohort as outlined in the College of Education Health and Society chapter. For information, contact the Office of Student Services in the College of Education Health and Society, 202 McGuffey Hall, 513-529-6418.

## Speech Pathology and Audiology- Bachelor of Science

For information, contact the Department of Speech Pathology and Audiology, 2 Bachelor Hall, 513-529-2500.

Miami offers the Bachelor of Science in speech pathology and audiology. The State of Ohio requires a graduate degree in order to practice as a speech-language pathologist or audiologist; you cannot be licensed in Ohio without the required graduate degree. More information is available from the Department of Speech Pathology and Audiology and on the Department's website.

## Special Admission Requirements

Enter the program as a pre-speech pathology and audiology major and take these four courses:

Code	Title	Credit Hours
<b>SPA Pre-major courses:</b>		
SPA 127	Introduction to Communication Disorders	3
SPA 222	Anatomy and Physiology Speech Production	3
SPA 223	Theories of Language Development	3
SPA 225	Foundations of Neurology	3
Total Credit Hours		12

Students are accepted into the major after taking the four pre-major courses and if they have earned a cumulative GPA of 3.00 and a 3.00 in the SPA pre-major courses. No tests or interviews are required for consideration as a major student.

## Program Requirements

(60 semester hours)

Code	Title	Credit Hours
<b>SPA Required Major Courses</b>		
SPA 316	Introduction to Audiology	3
SPA 326	Aural Rehabilitation	3
SPA 334	Clinical Phonetics and Articulation Disorders	3
SPA 393	Junior Clinical Experience	1
SPA 402	Counseling Strategies for Speech Pathologists and Audiologists	3

SPA 426	Language Disorders	3
SPA 427	Alternative Communication Systems for the Severely Handicapped	3
SPA 435	Speech and Hearing Science	3
SPA 493	Senior Seminar in Speech Pathology and Audiology	2

### SPA Required Related Courses

BIO 161	Principles of Human Physiology	4
EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
or PSY 111	Introduction to Psychology	
EDP 256	Psychology of the Exceptional Learner	3
or EDP 272	Introduction to Disability Studies	
FSW 261	Diverse Family Systems Across the Life Cycle	3
or FSW 245	Children and Families: Ages Conception - 12	
PHY 131	Physics for Music	3
or PHY 101	Physics and Society	

STA 261	Statistics	4
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### SPA Elective Courses

SPA 101	Beginning ASL I	4
SPA/DST 312	Deaf Culture: Global, National and Local Issues	3
SPA 413	Senior Seminar in Communication Disorders	3
SPA 416	Research Design	3

Total Credit Hours		60
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## Strategic Communication- Bachelor of Arts

For more information, please contact the Department of Media, Journalism, and Film, 120 Williams Hall, 513-529-3521.

Strategic communication is the study of how organizations and individuals use communication to negotiate their role in society. Public relations is a central aspect of strategic communication and involves the study of how organizations utilize responsible behavior and two-way communication in order to influence opinions and behavior of key publics (e.g., employees, consumers, government, community, media) as well as to respond and adapt to the concerns of these publics.

Students explore communication contexts, theories, and processes as a means of understanding and critically analyzing social influence. In addition, students learn to evaluate challenges and engage in strategic communication to respond to them. This degree is for those planning to enter graduate school in communication and related disciplines, including law school, and/or to apply this knowledge to their chosen career (e.g., public relations, corporate, nonprofit, public sector, social issues, public affairs or related areas that call for a strong liberal arts background).

You are encouraged to join Miami University's chapter of the Public Relations Student Society of America (PRSSA), a national organization for students. PRSSA members learn more about public relations and strategic communication, network with other students and

professionals across the country, gain practical hands-on experience through a variety of committee activities and a student-run public relations firm, locate job and internship opportunities, serve their community and develop strong leadership skills. More information is available in the Department of Media, Journalism and Film.

## Program Requirements

(39 semester hours)

The Strategic Communication major requires students to choose and complete a **second major** outside the Department of Media, Journalism and Film.

Code	Title	Credit Hours
<b>Foundation courses</b>		
MAC 143	Introduction to Media	3
MAC 146	Media Aesthetics	3
STC 135	Principles of Public Speaking	3
STC 259	Introduction to Strategic Communication and Public Relations	3
<b>Core courses</b>		
JRN 201	Reporting and News Writing I	3
STC 262	Empirical Research Methods	3
STC 359	Strategic Communication Planning	3
<b>Theory and Contexts</b>		
Communication Theory:		
Select one of the following:		3
STC 239	Theories of Communication	
STC 339	Introduction to Organizational Communication	
STC 431	Persuasion Theory and Research	
STC 437	Advocacy in Contemporary America	
Communication and Issues of Diversity:		
Select one of the following:		3
MAC 446	Media Globalization	
MAC 461	Gender, Sexuality and Media	
STC 436	Intercultural Communication	
Communication and Media Elective:		
Select one of the following:		3
AMS 303	Consumer Culture	
AMS 305	American Icons	
JRN 301	Journalism Law and Ethics	
MAC 209	Advertising in Consumer Culture	
MAC 215	Media History	
MAC 325	Social Media Cultures	
MAC 353	Audience Studies	
MAC 355	Media Technology & Culture	
MAC 443	Media Economics	
MAC 445	Electronic Media Policy and Regulation	
Select any MAC, JRN, or STC course at 200-level or above		
<b>Creation and Practice</b>		
Advanced Writing Requirement:		
Select one of the following:		3

MAC 213	Writing for Media	
MAC 258	Copywriting for Electronic Media	
Select any JRN course at 300-level or above		
Advanced Media Practice Requirement:		
Select one of the following:		3
JRN 316	Editing and Design	
MAC 353	Audience Studies	
MAC 425	Inside Hollywood	
MAC 426	Inside Washington	
MAC 443	Media Economics	
MAC 462	Red Atlantic: Practicum in U.K. Media, Advertising & Public Relations	
STC 439	Advanced Organizational Communication	
STC 499	Inside New York or Inside Chicago	
<b>Senior Experience</b>		
STC 459	Advanced Public Relations <sup>1</sup>	3
Total Credit Hours		39

<sup>1</sup> May also use special topics as approved by chair or CDA.

**Note:** Students seeking the Bachelor of Arts in Strategic Communication meet the College of Arts and Science writing in the major requirement by completing the following course: JRN 201.

## Sustainability Co-Major

For more information, contact the Institute for the Environment and Sustainability, 118 Shideler Hall, 513-529-5811.

The Sustainability Co-major emphasizes human-nature interaction in understanding environmental patterns and processes. Students are prepared to pursue a wide variety of career paths and post-graduate degrees in sustainability, especially those with design, management, and policy specializations. The term "co-major" indicates that students must complete another major at Miami University. The Sustainability Co-major complements the primary major, which provides significant depth and breadth in an academic discipline. There is no specific degree designation for the co-major; students receive the degree designation of their primary major.

## Program Requirements

(37-42 semester hours)

**Complete a major in one of the divisions of the university.**

Code	Title	Credit Hours
<b>Introductory Experience</b>		
IES 274	Introduction to Environment and Sustainability	3
<b>Foundations to Sustainability</b>		
<b>Ecological Dimensions:</b>		
Select one of the following:		3
BIO 131	Plants, Humanity, and Environment	
BIO 121	Environmental Biology	
BIO 176	Ecology of North America	
<b>Physical Dimensions:</b>		

Select one of the following:	4
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GEO 121	Earth's Physical Environment
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GLG 121	Environmental Geology
& GLG 115L	and Understanding the Earth

**Social Dimensions:**

Select one of the following:	3
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ARC 188	Ideas in Architecture
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ATH 175	Peoples of the World
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ECO 131	Economic Perspectives on Inequality in America
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ECO 201	Principles of Microeconomics
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GEO 101	Global Forces, Local Diversity
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POL 261	Public Administration
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**Integrative Perspectives****Natural Resources & Ecosystems:**

Select one of the following:	3-4
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BIO 204	Evolution of Plant Biodiversity: Genes to Biosphere
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BIO 206	Evolutionary Biology
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BIO 209	Fundamentals of Ecology
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GEO 271	Human Dimensions of Natural Resource Conservation
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Select two of the following: <sup>1</sup>	6-8
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BIO/MBI 333	Field Ecology
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BIO/GEO 431	Global Plant Diversity
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BIO/GEO 432	Ecoregions of North America
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BIO 351	Environmental Education: Focus on Natural History
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BIO 467	Conservation Biology
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BIO 401	Plant Ecology
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BIO 463	Limnology
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CHM 491	Chemistry in Societal Issues
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GEO 333	Global Perspectives on Natural Disasters
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GEO 425	Hydrogeography
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GLG 307	Water and Society
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GEO 426	Watershed Management
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GLG 335	Ice Age Earth
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GLG 408	Introduction to Hydrogeology
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GLG 428	Hydrogeological Modeling: Groundwater Flow and Contaminant Transport and Fate
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**Social Systems & Human Landscape:**

Select one of the following:	3
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IES 211	Energy and Policy
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BUS/IES 494/ BUS 594/ IES 494	Sustainability Perspectives in Resources and Business
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GEO 454	Urban Geography
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IES 419 or SJS 419	Environment, Society & Justice
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Select two of the following: <sup>1</sup>	6-7
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ARC 406	Seminars (406C: Sustainable Design Case Studies)
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ARC 413	Environmental Systems I
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ATH 471	Ecological Anthropology
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ECO 406	Environmental Economics
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GEO 451	Urban and Regional Planning
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HST 397	American Environmental History
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IES 431	Principles and Applications of Environmental Science
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IES 450	Environmental Law
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MKT 412	Sustainable Marketing Management
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MME 451	Sustainability Considerations in Design and Development
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PHL 376	Environmental Philosophy
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POL 362	Public Management, Leadership, and Administrative Politics
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POL 363	Administrative Law
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WGS/GEO 406	Indigenous Peoples and Their Sacred Lands
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WGS/GEO 436	Women, Gender and the Environment
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**Environmental Measures & Metrics:**

Select one of the following:	3-4
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GEO 441	Geographic Information Systems
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GEO 444	GIScience Techniques in Landscape Ecology
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IES 411	Environmental Protocols
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ISA 205	Business Statistics
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STA 261	Statistics
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STA 301	Applied Statistics
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STA 475	Data Analysis Practicum
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**Project-Based Synthesis:**

IES 474	Sustainability in Practice	3
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Total Credit Hours	37-42
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<sup>1</sup> A workshop or one-time seminar on sustainability may be substituted with permission of advisor.

## Urban and Regional Planning- Bachelor of Arts

For information, contact the Department of Geography, 118B Shideler Hall, 513-529-5010.

The Urban and Regional Planning major provides an integrated perspective on towns and cities, and how to promote more efficient and sustainable development. Students learn to interpret urban contexts, analyze the nature and scope of social and environmental problems, and apply planning concepts and techniques through collaborative problem solving. The major prepares students with broad knowledge and specialized skills for diverse careers in public service, consulting, and development.

## Program Requirements

(39-41 semester hours)

Code	Title	Credit Hours
<b>Urban Contexts</b>		
GEO 101	Global Forces, Local Diversity	3
GEO 201	Geography of Urban Diversity	3
<b>Planning Concepts and Techniques</b>		
GEO 451	Urban and Regional Planning	3
GEO 459	Advanced Urban and Regional Planning <sup>1</sup>	3
<b>Development and Planning in Practice</b>		
Select two of the following:		6
GEO 352	Geographies of Urban Change	
GEO 454	Urban Geography	
GEO 462	Citizenship and the City	
GEO 467	Land Use, Law and the State: Geographic Perspectives	
GEO 475	Global Periphery's Urbanization	
<b>Spatial Analysis and Graphical Communication</b>		
GEO 242	Mapping a Changing World	3
GEO 441	Geographic Information Systems	3
ARC 211	Introduction to Landscape and Urban Design	3
	or ART/IMS 259 Art and Digital Tools I	
<b>Field Research Experience</b>		
Select one of the following:		3
GEO 491	Senior Seminar	
GEO 493	Urban Field Experience	
<b>Multidisciplinary Focus</b>		
Select at least 9 hours from any of the following:		9
Urban Social Issues		
ARC 405Q	Housing Case Studies	
ARC 427	The American City Since 1940	
ATH/BWS 325	Identity, Race, Gender, Class	
BWS/SOC 348	Race and Ethnic Relations	
BWS/SOC 362	Family Poverty	
GEO 205	Population and Migration	
GEO 276	Geography of the Global Economy	
GEO 476	Global Poverty	
SJS 323	Social Justice and Change	
Select two of the following:		6
Selected GEO 460 courses with permission of chief advisor		
Environment and Sustainable Design		
ARC 435	Theory and History of Landscape Architecture	
GEO 271	Human Dimensions of Natural Resource Conservation	
GEO 333	Global Perspectives on Natural Disasters	
GEO 426	Watershed Management	
GEO 432	Ecoregions of North America	
GEO 436	Women, Gender, and the Environment	
IES 274	Introduction to Environment and Sustainability	
IES 450	Environmental Law	

SJS/IES 419	Environment, Society & Justice
Selected GEO 460 courses with permission of chief advisor	
Administration and Economic Development	
ACC 211	Accounting for the Non-Business Major
ECO 201	Principles of Microeconomics
ECO 331	Public Sector Economics
ECO 332	Health Economics
ECO 385	Government and Business
FIN 301	Introduction to Business Finance
FIN 331	Real Estate Principles
GEO 276	Geography of the Global Economy
POL 261	Public Administration
POL 268	State and Local Government and Politics
POL 362	Public Management, Leadership, and Administrative Politics
POL 363	Administrative Law
POL 364	Federalism and Intergovernmental Relations
POL 467	Public Budgeting
Selected GEO 460 courses with permission of chief advisor	
Geospatial and Analytical Techniques	
GEO 442	Advanced Geographic Information Systems
GEO 443	Python Programming for ArcGIS
GEO 444	GIScience Techniques in Landscape Ecology
GEO 447	Aerial Photo Interpretation
GEO 448	Techniques and Applications of Remote Sensing
STA 261	Statistics
	or ISA 125 Introduction to Business Statistics
Selected GEO 460 courses with permission of chief advisor	
Total Credit Hours	39

<sup>1</sup> **Portfolio Requirement:** All students will develop a portfolio of their work (plans, maps, research papers, presentations, resume) in courses across the planning curriculum, and will be compiled and assessed within GEO 459.

Students seeking the Bachelor of Arts in Urban and Regional Planning meet the Miami Plan Advanced Writing and College of Arts and Science writing in the major requirements by completing the following courses: GEO 201 and GEO 451 .

## Women's, Gender, and Sexuality Studies- Bachelor of Arts

For information, contact the Women's, Gender, and Sexuality Studies Program Office, 126 MacMillan Hall, 513-529-4616.

Women's Studies is an interdisciplinary program that investigates how our lives are affected by gender race, class, age, sexuality, religion,

(dis)ability, gender identity, and nationality. Women's, Gender, and Sexuality Studies emphasizes the importance of understanding gender as a part of wider social and political structures of power, knowledge, experience, culture, embodiedness, intimacy, and labor. Women's, Gender, and Sexuality Studies courses are organized around contemporary feminist research and theory, and focus intersectionally on women, gender, and sexuality as subjects of inquiry. Our coursework also focuses on how theory and practice come together. Students may choose from courses spanning departments, disciplines, divisions and ideologies. The Women's, Gender, and Sexuality Studies program provides a context in which women's work and women's issues are explored in-depth, celebrating women's creativity, women's lives, and women's work. In Women's, Gender, and Sexuality Studies, students find an active and supportive community, close interaction with faculty, opportunities to take on leadership roles, and an academic program that allows them to cross the traditional disciplinary boundaries.

Flexibility of the major requirements allows you to design a program to suit your needs and interests. This major prepares you for graduate or professional school and for a career in research and writing, a nonprofit agency, public policy, social services, business, law, education, or communication.

## Departmental Honors

To receive departmental honors you must complete WGS 470, register for one additional credit of WGS 470 which entails the completion of a special project, and have a cumulative GPA of 3.50 in the major. Students must register their intent to pursue departmental honors and file a proposal for their project in the WGS program office, 126 MacMillan.

## Program Requirements

(30-31 semester hours)

Code	Title	Credit Hours
<b>Core courses</b>		
WGS 201	Introduction to Women's Studies	3
WGS/AAA/AMS/ BWS/LAS 211	Writing with Purpose: Interdisciplinary Inquiry and Communication	3
WGS 301	Women and Difference: Intersections of Race, Class, and Sexuality	3
Select one of the following theory courses:		3
WGS/PHL 355	Feminist Theory	
WGS/ENG 356	Women and Gender in Film	
WGS/ENG 435	Queer Theory	
WGS/BWS/ENG 437	Black Feminist Theory	
Feminist theory course approved by a WGS advisor		
Select one of the following capstones:		3
WGS 401	The Role of Women in a Transforming Society	
WGS/BWS/ENG 432	Feminism and the Diaspora: U.S. Women of Color	

### Focus Area

Select at least 15 hours of WGS or WGS cross-listed courses <sup>1</sup> 15

Total Credit Hours 30

<sup>1</sup> A maximum of 6 semester hours, taken in an approved internship, community action, or service learning experience, may be substituted for course work. A course cannot count both as a core course and toward one's additional 15 hours.

Students seeking the Bachelor of Arts in Women's, Gender and Sexuality Studies meet the College of Arts and Science writing in the major requirement by completing the following courses: WGS 211/AAA 211/AMS 211/BWS 211/LAS 211 and either WGS 432 or WGS 401.

## Zoology- Bachelor of Arts

For information, contact the Department of Biology, 212 Pearson Hall, 513-529-3100.

Zoology is the natural science that focuses on the study of animals. The zoology major can be tailored to meet the needs of students interested in the health sciences, animal physiology, cell and molecular biology, ecology or environmental studies, or evolution and systematics. It is possible to complete a Zoology Major while earning either the Bachelor of Arts or Bachelor of Science. Students may double major in Botany and Zoology, but in that case only nine credits of the Advanced Hours requirement may be used for both degrees. Students may not double major in Biology and Zoology.

## Program Requirements

(32 semester hours, plus 18 related hours)

Code	Title	Credit Hours
<b>Core courses</b>		
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
<b>Advanced courses requirement</b>		24
Select 24 hours in zoology-focused biology courses at 200 level or above. Please refer to the footnote below for courses that will not count. <sup>1, 2</sup>		
<b>Related Hours</b>		18
One year of chemistry:		
CHM 141	College Chemistry or CHM 141R College Chemistry or CHM 141H College Chemistry	
CHM 144	College Chemistry Laboratory or CHM 144H College Chemistry Laboratory or CHM 144M College Chemistry Laboratory for Majors	
CHM 142	College Chemistry or CHM 142H College Chemistry or CHM 142N College Chemistry for Majors	
CHM 145	College Chemistry Laboratory or CHM 145H College Chemistry Laboratory	

or CHM 145M College Chemistry Laboratory

Remaining related courses <sup>3</sup>	
Total Credit Hours	50

#### Advanced Course Requirement:

<sup>1</sup> No specific courses are required toward the advanced course requirement. However, the following courses will not count: BIO 204, 205, 221, 232, 241, 244, 302, 306, 314, 325, 401, 402, 403, 425, 431, 432, 490.

IES 275 may be used towards the advanced hour requirement. One 400-level course is recommended.

<sup>2</sup> No more than three semester hours of independent study/research/internship may apply to the major.

#### Related Hour Requirement:

<sup>3</sup> Remaining related courses may be chosen from BIO, CHM, GEO, GLG, MTH, MBI, PHY, PSY, STA, and CSE. A year of organic chemistry, a year of physics (with a lab), and a year of mathematics (including calculus and statistics) are highly recommended.

Students seeking the Bachelor of Arts in Zoology meet the College of Arts and Science writing in the major requirement by completing the following courses: two W Biology courses at the 200- or 300-level and one biology W course at the 400-level. As an alternative to the 400-level course, students may complete an independent study that includes technical science writing. Upon completion of an independent study, the student must submit, with the signed support of a faculty member, a letter of certification indicating that s/he has successfully completed the technical science writing requirement.

## Zoology- Bachelor of Science

For information, contact the Department of Biology, 212 Pearson Hall, 513-529-3100.

Zoology is the natural science that focuses on the study of animals. The zoology major can be tailored to meet the needs of students interested in the health sciences, animal physiology, cell and molecular biology, ecology or environmental studies, or evolution and systematics. It is possible to complete a Zoology Major while earning either the Bachelor of Arts or Bachelor of Science. Students may double major in Botany and Zoology, but in that case only nine credits of the Advanced Hours requirement may be used for both degrees. Students may not double major in Biology and Zoology.

## Program Requirements

(36 semester hours plus related hours)

Code	Title	Credit Hours
<b>Core Courses</b>		
Select all of the following:		
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO 203	Introduction to Cell Biology	3
BIO 209	Fundamentals of Ecology	3
BIO 305	Human Physiology	4

BIO 342 Genetics 3

**Advanced Courses Requirement**<sup>1,2</sup> 28

Select at least one 400 level course, plus additional advanced zoology-focused Biology courses at the 200 level or above to total 36 hours. Please refer to the footnote below for courses that will not count.<sup>1</sup>

#### Related Hours (48 required)

Two years of chemistry are required: 17-19

CHM 141 College Chemistry  
or CHM 141R College Chemistry  
or CHM 141H College Chemistry

CHM 144 College Chemistry Laboratory  
or CHM 144H College Chemistry Laboratory  
or CHM 144M College Chemistry Laboratory for Majors

CHM 142 College Chemistry  
or CHM 142H College Chemistry  
or CHM 142M College Chemistry for Majors

CHM 145 College Chemistry Laboratory  
or CHM 145H College Chemistry Laboratory  
or CHM 145M College Chemistry Laboratory

Select one of the following options:

#### Option 1:

CHM 241 Organic Chemistry  
& CHM 244 and Organic Chemistry Laboratory

CHM 242 Organic Chemistry  
& CHM 245 and Organic Chemistry Laboratory

#### Option 2:

CHM 231 Fundamentals of Organic Chemistry  
& CHM 332 and Outlines of Biochemistry  
& CHM 332L and Outlines of Biochemistry Lab

Select one of the following options: 8-10

#### Option 1:

PHY 161 Physics for the Life Sciences with  
& PHY 162 Laboratory I  
and Physics for the Life Sciences with  
Laboratory II

#### Option 2:

PHY 191 General Physics with Laboratory I  
& PHY 192 and General Physics with Laboratory II

Select at least eight semester hours of mathematics<sup>3</sup> 8

Select additional hours to total 48<sup>4</sup>

<sup>1</sup> No specific courses are required toward the advanced course requirement. However, the following plant-based courses will not count: BIO 204, 205, 221, 232, 241, 244, 302, 306, 314, 325, 401, 402, 403, 425, 431, 432, 490.

One 400-level course other than BIO 400, 419.R, or 477 must be taken (minimum three semester hours).

<sup>2</sup> No more than three semester hours of independent study/research/internship may apply to the major.

<sup>3</sup> Mathematics hours must include a calculus course and a statistics course.

<sup>4</sup> From chemistry, geography, geology, mathematics (200 level or above), microbiology, physics, psychology, statistics (200 level or above), computer science and software engineering, IES 431.

## Actuarial Science Minor

For information, contact the Department of Statistics, 311 Upham Hall, 513-529-7828.

This minor is designed for students who are preparing for a possible career as an actuary. Courses in the minor may also be used to satisfy the requirements of a major.

All courses in this minor must be taken for a grade, not credit/no-credit.

This minor satisfies the Thematic Sequence requirement of the Miami Plan for all students including those majoring in the Departments of Mathematics or Statistics.

### Program Requirements

Code	Title	Credit Hours
ACC 221	Introduction to Financial Accounting	3
ACC 222	Introduction to Managerial Accounting	3
ECO 201	Principles of Microeconomics	3
ECO 202	Principles of Macroeconomics	3
FIN 301	Introduction to Business Finance	3
STA 401	Probability	3
STA 462	Inferential Statistics	3
STA 463	Regression Analysis	4
Total Credit Hours		25

Students are encouraged to select MTH 447, FIN 401, and/or FIN 404 as an elective course that will enhance this program.

Students in the Bachelor of Arts in Mathematics may count at most two courses from STA 401, STA 462, or STA 463 toward the requirements of the major.

The prerequisites for the statistics courses in the program include calculus, linear algebra, introductory statistics, and an introduction to statistical model (STA 363).

## Aerospace Studies Minor

For information, contact the Department of Aerospace Studies, 50 Millett Hall, 513-529-2031.

This minor is an interdisciplinary program open to all majors. It introduces students to the broad field of air and space service and provides specific information on the organization and operation of the United States Air Force.

Courses may not be taken on a credit/no-credit basis. A minimum 2.00 GPA is required for all courses in the minor. If there is a specific Political Science (POL) 300 level regional course that a student would like to substitute for one of the listed POL courses, they may be substituted with the approval of the Aerospace Studies Chair.

### Program Requirements

(19 semester hours)

Code	Title	Credit Hours
Required sequence:		
AES 121	Heritage and Values of the United States Air Force	1
AES 122	Heritage and Values of the United States Air Force	1
AES 221	Team and Leadership Fundamentals	1
AES 222	Team and Leadership Fundamentals	1
AES 332	Leading People and Effective Communication	3
AES 431	National Security/Leadership Responsibilities/Commissioning Preparation	3
Select one of the following:		3
AES 331	Leading People and Effective Communication	
MGT 291	Introduction to Management & Leadership	
NSC 211	Leadership and Management	
Select at least one course in each of two departments for a minimum of six hours:		6
AES 432	National Security/Leadership Responsibilities/Commissioning Preparation	
GEO 301	Geography of Sub-Saharan Africa	
GEO 308	Geography of East Asia	
GEO 378	Political Geography	
GEO 408	Geography of the Silk Road (The Heart of Asia)	
HST 222	U.S. Foreign Relations Since 1898	
HST 224	Africa to 1884	
HST 225	The Making of Modern Africa	
HST 296	World History Since 1945	
HST 333	Reconstruction of Europe Since 1945	
HST 354	Modern Chinese History	
HST 356	Modern Japanese History	
HST 375	The Soviet Union and Beyond	
HST/BWS/LAS 385	Race, Science, and Disease in the Americas	
NSC 311	Evolution of Warfare	
POL 221	Comparative Politics	
POL 271	World Politics	
POL 331	Communism and Soviet Politics, 1917-1991	
POL 332	Post-Soviet Russian Politics	
POL 333	Politics of Western Europe	
POL 334	Politics of Eastern Europe	
POL 336	Politics of the Middle East	
POL 337	Politics of Latin America	
POL 338	Contemporary African Politics	
POL 339	Nationalism, Islam and Democracy in Arab Politics	
POL 373	American Foreign Policy	

POL 374	Foreign Policy Analysis
POL 376	U.S. National Security Policy
POL 382	International Law
POL 387	International Security Issues
POL 489	Conflict Management in a Divided World

Total Credit Hours 19

## American Studies Minor

For information, contact the program advisor in the Department of Global and Intercultural Studies, 120 MacMillan Hall, 513-529-5333.

This interdisciplinary minor is open to all students and provides valuable context for majors from across the university including business, communication, education, fine arts and science; it also complements well-established liberal arts fields such as political science, English, history, sociology, and psychology. Focusing broadly on American culture and society in global context, the minor fosters critical and creative thinking, intercultural awareness, interdisciplinary research skills, synthetic analytical skills, strong writing and oratory skills, an understanding of multiple kinds of media and texts, and a broad understanding of social, cultural, and historical contexts—skills necessary to succeed in professional work in any field. Students take three core courses in American Studies and then work with the program director to develop an area of concentration that reflects their specific intellectual interests. This allows students to individually tailor the minor to support work they are doing in their major field.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Core Courses:		
AMS 205 or AMS 207	Introduction to American Cultures America: Global and Intercultural Perspectives	3
AMS 206	Approaches to American Culture	3
Select any two courses from the five below: <sup>1</sup>		6
AMS 301	American Identities	
AMS 302	Immigrant America	
AMS 303	Consumer Culture	
AMS 305	American Icons	
AMS 310	Special Topics in American Studies	
American Culture Focus:		
With the approval from the CDA, students take 6 additional semester hours from AMS courses cross-listed with other departments or courses examining U.S. society and culture offered by other departments. Culture focus hours must include 2 disciplines.		6
Total Credit Hours		18

<sup>1</sup> With the approval of the CDA, the second course can be one of the courses above OR it can be a 300-level cross-listed AMS class.

## Anthropology Minor

For information, contact the Department of Anthropology, 120 Upham Hall, 513-529-8399.

The Anthropology Minor is designed to help students pursue their interests in human communication, biology, and culture, in the past and present, without fulfilling the full range of requirements of the major. Anthropology is the ideal complement to a number of majors and pre-professional degrees. Anthropological holism encourages critical thinking and interdisciplinarity, while the cross-cultural approach of anthropology will be of particular importance to those interested in adding global and pan-human perspectives to their major course of study.

Students planning to take this minor should inform the chief departmental advisor and formally declare this minor. A minimum GPA of 2.00 is required for all courses in the minor. These courses must be taken for a grade, not credit/no-credit. This minor is not open to an anthropology major.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select one of the following:		3
ATH 145	Lost Cities & Ancient Civilizations	
ATH 155	Introduction to Anthropology	
ATH 175	Peoples of the World	
ATH 185	Cultural Diversity in the U.S.	
Select two of the following:		8
ATH 212	Introduction to Archaeological Theory and Methods	
ATH 231	Foundations of Cultural Anthropology	
ATH 255	Foundations of Biological Anthropology	
ATH 265	Introduction to Linguistic Anthropology	
Additional anthropology courses:		
Take additional ATH courses to total at least 18 semester hours. At least one course must be at the 300-level or above.		7
Total Credit Hours		18

**Note:** Only four credits of field method courses (ATH 415, ATH 426 and ATH 491) count toward the 18 hours needed for the minor.

## Arabic Minor

For information, contact the program advisor in the Department of German, Russian, Asian, Middle Eastern Languages and Cultures, 172 Irvin Hall, 513-529-2526.

The Arabic minor provides systematic Arabic language training in the four modalities (speaking, listening, writing, and reading) as well as cultures of the Arabic speaking world. A minimum GPA of 2.50 is required for courses taken at Miami. Courses for the Arabic minor must be taken for a grade (not credit/no credit). Study abroad in

Miami's summer program at the Jordan University or other program is recommended.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
ARB 201	Intermediate Modern Arabic	3
ARB 202	Intermediate Modern Arabic	3
ARB 301	Advanced Arabic	3
ARB 302	Advanced Arabic	3
Select two of the following:		6
ARB 230	Topics in Arabic Literature in Translation	
ARB 311	Media Arabic	
HST 241	Introduction to Islamic History	
POL 336	Politics of the Middle East	
REL 226	Introduction to Islam	
Total Credit Hours		18

## Archaeology Minor

For information, contact the Department of Anthropology, 120 Upham Hall, 513-529-8399.

The Archaeology Minor allows students to develop their skills in archaeological approaches to the human past, including field and laboratory techniques, material culture analysis, and cultural heritage management. This transdisciplinary minor is ideal for students interested in focusing their studies on the deep and diverse history of humans by analyzing and preserving the material remains of past communities. Archaeology combines critical thinking, scientific methods, and experiential research, making it a fitting and unique complement to a variety of student majors.

Students planning to take this minor should inform the chief departmental advisor and formally declare this minor. A minimum GPA of 2.00 is required for all courses in the minor. These courses must be taken for a grade, not credit/no-credit. Minor may be completed with an Anthropology Major, please see notes section below on restrictions.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Core Courses:</b>		
Select one introductory course:		3
ATH 145	Lost Cities & Ancient Civilizations	
CLS 101	Greek Civilization in its Mediterranean Context	
CLS 102	Roman Civilization	
Take the following theory and methods courses:		
ATH 212	Introduction to Archaeological Theory and Methods	4
ATH 416	Applying Archaeology	3

## Elective Courses (to total 18 credit hours): 8

ART 382	Greek and Roman Sculpture	
ART 384	Greek and Roman Decorative Arts	
ATH 314	Old World Archaeology	
ATH 312	North American Archaeology	
ATH 313	Latin American Archaeology	
ATH 355	Paleoanthropology	
ATH 415	Field Methods in Archaeology	
ATH 388	Culture, Art, and Artifacts	
ATH 431	Archaeology of Power	
CCA 222	Museums and Collections: Beyond the Curio Cabinet	
CCA 232	Museums Today: Content, Practices and Audiences	
CLS 216	Greek and Roman Cities	
CLS 299	Discovering Greece <sup>1</sup>	
CLS 323	Discoveries of Archaeology	
GEO 441	Geographic Information Systems	
GEO 448	Techniques and Applications of Remote Sensing	
GLG 354	Geomorphology	
GLG 436	Paleoclimatology	
Total Credit Hours		18

<sup>1</sup> CLS 299 is a 6 credit, Winter-Term study abroad course. Students may petition to have up to 3 credits from this course count toward the Archaeology Minor.

Notes:

- No more than 6 credit hours of variable content courses may count towards the minor: ATH 340; ATH 390; ATH 177, 277, 377, 477; ATH 480; ATH 491.
- Only 9 credit hours may overlap with any other major/minor.

## Bioinformatics Minor

For information, contact the Department of Computer Science and Software Engineering, 205 Benton Hall, 513-529-0340.

Bioinformatics, or the application of computational techniques to molecular biology problems, is a fast-growing field of significant importance in both academia and industry. Students completing a bioinformatics minor will gain the basic knowledge of biology and programming needed to work in this area, as well as an understanding of how computational techniques can be used to advance our knowledge of biology and the life sciences.

## Program Requirements

(19-20 semester hours)

Code	Title	Credit Hours
<b>Required Courses</b>		
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4

BIO/CSE/MBI 256	Introduction to Programming for the Life Sciences	3
or CSE 271	Object-Oriented Programming	
BIO/CHM/CSE/MBI 466	Bioinformatics Computing Skills	3
Select one of the following:		3-4
STA 363	Introduction to Statistical Modeling	
STA 402	Statistical Programming	
STA 463	Regression Analysis	
STA 466	Experimental Design Methods	
BIO, CHM, CSE, or MBI at the 200-level or above (BIO 342, MBI 365, or CSE 443 are strongly recommended)		3
BIO/MBI 485/ CSE 456	Bioinformatics Principles	3
Total Credit Hours		19-20

## Chinese Minor

For information, contact the Department of German, Russian, Asian, Middle Eastern Languages and Cultures, 172 Irvin Hall, 513-529-2526.

This minor offers students substantial language training and fundamental cultural understanding. Three years course work or the equivalent training in language gives students adequate skills for daily communication and some tools for handling more sophisticated materials. Literature and culture courses provide students with knowledge of traditional and modern Chinese world views and social realities.

Chinese language and culture and literature credits transferred to Miami from other institutions may be used to fulfill the requirements. The courses must be passed with a 2.00 GPA. Courses taken on a credit/no-credit basis may not be applied to the minor.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select 18 hours, at least 12 of which must be in Chinese language.		
Chinese language		
CHI 201	Second Year Chinese	
CHI 202	Second Year Chinese	
CHI 301	Third Year Chinese	
CHI 302	Third Year Chinese	
CHI 311	Business Chinese I	
CHI 312	Business Chinese II	
CHI 330	Chinese Verbal Theatre Performance <sup>1</sup>	
CHI 401	Fourth Year Chinese I	
CHI 402	Fourth Year Chinese II	
Chinese culture		
CHI 251	Traditional Chinese Literature in English Translation	
CHI 252	Modern Chinese Literature in English Translation	
CHI 253	Three Kingdoms	

CHI 254	Modern Chinese Autobiography
CHI 255	Drama in China and Japan in Translation
CHI 257	Chinese Satire
CHI 264	Chinese Cinema and Culture
CHI 271	Chinese Culture Live
JPN 255	Drama in China and Japan in English Translation

<sup>1</sup> Maximum 6 hours

## Classical Humanities Minor

For information, contact the Department of Classics, 105 Irvin Hall, 513-529-1480.

This minor offers students the opportunity to become acquainted with the rich spectrum of classical literature, language, art, and civilization. A minimum 2.00 GPA is required for all courses in the minor. These courses must be taken for a grade, not credit/no-credit.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select two of the following:		6
CLS 101	Greek Civilization in its Mediterranean Context	
CLS 102	Roman Civilization	
CLS 121	Introduction to Classical Mythology	
Select three semester hours of the following classical literature and language courses:		3
CLS 211	Greek and Roman Epic	
CLS 212	Greek and Roman Tragedy	
CLS 213	Greek and Roman Comedy	
CLS 215	Greek and Roman Historians	
CLS 218	Greek and Roman Erotic Poetry	
CLS 317	Greek and Roman Philosophical Writers	
CLS 331	From Epic to Romance	
CLS 333	The Greeks in the Near East and Central Asia	
CLS 334	Egypt in Greco-Roman History and Fiction	
Any approved course in classical literature		
Any Greek course <sup>1</sup>		
Any Latin course <sup>2</sup>		
Select three semester hours of the following classical civilization courses:		3
CLS 216	Greek and Roman Cities	
CLS 222	Race and Ethnicity in Antiquity	
CLS 235	Women in Antiquity	
CLS 321	Justice and the Law in Antiquity	
CLS 361	Antiquity Through a Lens	
ART 382	Greek and Roman Sculpture	

ART 383	Greek and Roman Painting	
Any approved course in classical civilization		
Select six additional hours from the last two groups above		6
Total Credit Hours		18

<sup>1</sup> Except GRK 101 and GRK 102

<sup>2</sup> Except LAT 101, LAT 102, LAT 121, and LAT 201

## Comparative Religion Minor

For information, contact the Department of Comparative Religion, 200 Upham Hall (513-529-4300).

In virtually all cultures, religion has developed as a powerful dimension of social, political, and economic life. Religion has also had enormous impacts on literature, the arts, and human thought. A brief glance at today's headlines will show how religion permeates every corner of human affairs. Comparative Religion courses relate to virtually every aspect of human affairs: ethics, culture, art, family and more, therefore enhancing proficiencies relevant to a student's primary major.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Required course:</b>		3
REL 201	Methods for the Study of Religion	
<b>Elective Courses</b>		15
At least 15 additional semester hours in Comparative Religion, nine hours of which must be at the 300 level or above.		
Total Credit Hours		18

## Creative Writing Minor

For information, contact the Department of English, 356 Bachelor Hall, 513-529-5221.

This minor offers students a chance to use their elective hours to strengthen their degree, satisfy a personal interest, or enhance their career opportunities. It explores intersections between creative practice and critical practice through the writing and study of fiction, creative nonfiction, poetry, screenwriting, graphic narratives and digital literature. Students transform their ideas into polished final products with the support of peers and faculty. This minor is open to all majors except English: Creative Writing.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Required Course</b>		
ENG 226	Introduction to Creative Writing: Short Fiction and Poetry	3
<b>Writing Courses</b>		

Select two of the following: 6

ENG 320	Intermediate Creative Writing: Fiction
ENG 323	Intermediate Creative Writing: Creative Nonfiction
ENG 330	Intermediate Creative Writing: Poetry
ENG/THE 418	Playwriting
ENG 420	Advanced Creative Writing: Fiction Workshop
ENG 422	Advanced Creative Writing: Screenwriting Workshop
ENG 423	Advanced Creative Writing: Nonfiction Workshop
ENG 430	Advanced Creative Writing: Poetry Workshop

#### Electives

Select three of the following (no more than one course at the 100 level): 9

ENG 122	Popular Literature
ENG 123	Introduction to Poetry
ENG 124	Introduction to Fiction
ENG 125	Introduction to Drama
ENG 129	Books You Need To Read
ENG 134	Introduction to Shakespeare
ENG 163	Literature and Travel
ENG 169	Disability and Literature
ENG 171	Humanities and Technology
ENG/MAC 213	Writing for Media
ENG 220	Literature and Film
ENG 221	Shakespeare and Film
ENG 231	The Short Story
ENG 232	Women Writers
ENG 237	GLBTQ Literature
ENG 238	Narrative and Digital Technology
ENG 246	Native American Literature
ENG 248	Asian American Literature
ENG 251	Introduction to European Literature
ENG 254	Latino/a Literature and the Americas
ENG 262	Children's Literature
ENG 269	Colonial & Postcolonial Literature
ENG 272	English Literature to 1660
ENG 273	English Literature 1660-1900
ENG 274	English Literature 1901 to Present
ENG 275	American Literature to 1900
ENG 276	American Literature 1900 to the Present
ENG 293	Contemporary American Fiction
ENG 311	Reading for Creative Writing: Contemporary Literature
ENG 327	Medieval Literature
ENG 328	Sixteenth-Century English Literature
ENG 331	Seventeenth-Century English Literature
ENG 332	Early British Women Writers
ENG 335	English Literature of the 18th Century

ENG 336	African American Writing, 1746-1877
ENG 337	African American Writing, 1878-1945
ENG 338	African American Writing, 1946-Present
ENG 339	British Romanticism, 1789-1837
ENG 343	Victorian Literature, 1837-1901
ENG 345	British Modernism, 1890-1945
ENG 347	Postwar/Postcolonial British Literature, 1945-Present
ENG 348	Ethnic American Literatures
ENG 349	Early American Literature
ENG 352	Antebellum American Literature
ENG 353	American Realism and Naturalism
ENG 354	American Modernism
ENG 355	Contemporary American Literature
ENG 356	Women and Gender in Film
ENG 360	Interdisciplinary Special Topics
ENG 372	Shakespeare's Principal Plays: Early Works
ENG 373	Shakespeare's Principal Plays: Late Works
ENG 374	English Renaissance Drama
ENG 386	Studies in Drama and Performance
ENG 387	Studies in Poetry
ENG 388	Studies in Prose
ENG 390	Studies in American Regionalism
Total Credit Hours	18

## Criminology Minor

For information, contact the Department of Sociology and Gerontology, 375 Upham Hall, 513-529-2628.

The Criminology minor focuses on the social-scientific study of crime and the criminal justice system, including juvenile and adult criminal behavior, policing, the criminal and civil courts, and corrections. Suitable for students in any major.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select one of the following:		3-4
SOC 151	Social Relations	
SOC 153	Sociology in a Global Context	
SOC 165	Introduction to Social Justice Studies	
or SJS 165	Introduction to Social Justice Studies	
Select one of the following:		3
SOC 352	Criminology	
CJS 271	Criminal Behavior	
Engaged Learning Requirement:		3
SOC 440C	Internship in Criminology <sup>1</sup>	
Advanced Criminology Courses:		6
SOC 409	Systems of Justice	

SOC 410	Topics in Criminology <sup>1</sup>	
SOC 412	Sociology of Law	
SOC 413	Juvenile Delinquency	
SOC 451	Family Violence	
SJS 177	Independent Studies <sup>1</sup>	
or SOC 177	Independent Studies	
SJS 277	Independent Studies <sup>1</sup>	
or SOC 277	Independent Studies	
SJS 377	Independent Studies <sup>1</sup>	
or SOC 377	Independent Studies	
SJS 477	Independent Studies <sup>1</sup>	
or SOC 477	Independent Studies	
SOC 490	Current Issues in Sociology <sup>1</sup>	
Diversity Requirement:		3
ATH 301	Intercultural Relations	
SOC 203	Sociology of Gender	
or WGS 203	Sociology of Gender	
SOC 221	Sexualities	
SOC 272	Introduction to Disability Studies	
or DST 272	Introduction to Disability Studies	
or EDP 272	Introduction to Disability Studies	
SOC 318	Social Forces and Aging	
SOC 348	Race and Ethnic Relations	
SOC 372	Social Stratification	
WGS 201	Introduction to Women's Studies	
Total Credit Hours		18-19

<sup>1</sup> Only 3 credit hours may count toward the minor. For independent studies, the content must be relevant to the study of criminology and pre-approved by the Chief Departmental Advisor.

## Critical Race and Ethnic Studies Minor

For information, contact the program advisor in the Department of Global and Intercultural Studies, 120 MacMillan Hall, 513-529-5333.

The **Critical Race and Ethnic Studies** minor fosters the critical and interdisciplinary study of race, ethnicity, and/or indigeneity in an increasingly interconnected world. Students develop a deep understanding of the particular historical, social, cultural, and political experiences of individual racialized groups within and beyond the United States, as well as the relations among them.

(18 semester hours)

Code	Title	Credit Hours
Core Course:		
CRE 151	Introduction to Critical Race and Ethnic Studies	3
Electives - Choose 15 credit hours from list, two which must be 300-level or above:		15
AAA 201	Introduction to Asian/ Asian American Studies	
AAA/REL 203	Global Religions of India	

AAA 207	Asia and Globalization	BWS/FSW/SOC 362	Family Poverty
AAA/BWS/LAS/WGS 211	Writing with Purpose: Interdisciplinary Inquiry and Communication	BWS/HST 365	Civil War and Reconstruction Era
AAA/ENG 248	Asian American Literature	BWS 370	Selected Topics/Black World Studies
AAA/ENG/FST 249	Asian & Asian American Cinema	BWS/ENG/POR/FST 381	Afro-Brazilian Diaspora Through Film and Arts
AAA/ENG 269	Colonial & Postcolonial Literature	BWS/ENG/FST/POR/WGS 383	Brazilian Women through Literature and Film
AAA/EDL 334	Transnational Youth Cultures	BWS/LAS/HST 385	Race, Science, and Disease in the Americas
AAA/ENG/WGS 351	Cultural Politics of Gender and Sexuality in Asian/America	BWS/HST 386	Race in U.S. Society
AMS 207	America: Global and Intercultural Perspectives	BWS/CJS 401	Race and Criminal Justice
AMS 301	American Identities	BWS/WGS 402	Engaged Learning Practicum
AMS 302	Immigrant America	BWS/ENG/WGS 432	Feminism and the Diaspora: U.S. Women of Color
AMS/ENG 348	Ethnic American Literatures	EDT 202	Global Childhood Education: Diversity, Education & Society
ATH 185	Cultural Diversity in the U.S.	EDT 205	Race, Cultural Diversity, and Equity in Education
ATH 304	Native North America: Anthropological Perspectives	ENG/AMS 246	Native American Literature
ATH 312	North American Archaeology	ENG/AMS 348	Ethnic American Literatures
ATH 313	Latin American Archaeology	GIC 360	Topics in Global and Intercultural Studies ((Global Indigeneity))
ATH 364	Language and Culture in Native North America	HST/AMS 371	Native American History to 1840
BWS 156	Introduction to Africa	HST 372	Native American History since 1840
BWS 181	Introduction to Civil Rights and Social Movements	IDS 259	Introduction to the Miami Tribe of Oklahoma
BWS 182	Human Rights & Social Movements	LAS/ENG 254	Latino/a Literature and the Americas
BWS/FST/LAS/MUS 204	Brazilian Culture Through Popular Music	LAS/HST 260	Latin America in the United States
BWS/HST 221	African-American History	LAS/AMS 315	Latin American Diaspora: Communities, Conditions and Issues
BWS/CLS 222	Race and Ethnicity in Antiquity	LAS/ATH/BWS/WGS 325	Identity, Race, Gender, Class
BWS/HST 224	Africa to 1884	LAS/SPN 332	Latin American Popular Culture
BWS/HST 225	The Making of Modern Africa	MUS/AMS 285	Introduction to African American Music
BWS/HST/LAS 243	History of the Atlantic Slave Trade, 1400s to 1800s	MUS/AMS 386	The History and Development of Hip Hop Culture in America
BWS 248	African-American Experience	PSY/AAA 210	Psychology Across Cultures
BWS/SJS/SOC 265	Critical Inquiry: Penny Lecture Series	SJS 215	EMPOWER I: Educational and Economic Justice and Service-Learning
BWS/ART 276	Introduction to the Art of the Black Diaspora	SPN/LAS 332	Latin American Popular Culture
BWS/KNH/SOC 279	African Americans in Sport	REL/AMS 346	Issues in the Study of Native American Religions
BWS/GEO 301	Geography of Sub-Saharan Africa	WGS/GEO 309	Native American Women
BWS/ATH 307	The Middle East: Anthropological Perspectives	WGS/GEO 406	Indigenous Peoples and Their Sacred Lands
BWS/HST 324	Images of Africa		
BWS/ART 335	Arts of West Africa		
BWS/ENG 336	African American Writing, 1746-1877		
BWS/ENG 337	African American Writing, 1878-1945		
BWS/ENG 338	African American Writing, 1946-Present		
BWS 339/POL 338	Contemporary African Politics		
BWS/HST 342	Africa Since 1945		
BWS/SOC 348	Race and Ethnic Relations		

Total Credit Hours

18

## East Asian Studies Minor

For information, contact the program advisor in the Department of Geography, 118B Shideler Hall, 513-529-5558.

This interdisciplinary minor is open to all majors. It introduces students to cultures of East Asian countries, including art, literature,

history, geography, religion, sociology, economics, and political systems.

## Program Requirements

(18 semester hours)

### Language Proficiency

You must attain a second-year language proficiency in either Chinese, Japanese or Korean. Completion of CHI 202, JPN 202, KOR 202, or a higher level course in one of these languages will fulfill this requirement. Contact the program advisor for proficiency assessment if necessary.

### Course Requirements

Select courses from Group I and II.

Code	Title	Credit Hours
<b>Group 1 (200 level)</b>		
Select six semester hours of East Asia courses: <sup>1</sup>		6
ART 286	History of Asian Art, China, Korea, and Japan	
CHI 251	Traditional Chinese Literature in English Translation	
CHI 252	Modern Chinese Literature in English Translation	
CHI 253	Three Kingdoms	
CHI 254	Modern Chinese Autobiography	
CHI/JPN 255	Drama in China and Japan in Translation	
CHI 257	Chinese Satire	
CHI/FST 264	Chinese Cinema and Culture	
CHI 271	Chinese Culture Live	
GEO/ITS/SOC 208	The Rise of Industrialism in East Asia	
JPN 231	Japanese Tales of the Supernatural in English Translation	
JPN 260	Topics in Japanese Literature in English Translation	
JPN 266	Survey of Japanese Cinema	
Related courses		
PHL 106	Thought and Culture of India	
<b>Group II (300-400 level)</b>		
Select 12 semester hours from East Asia, China, or Japan: <sup>2</sup>		12
East Asia:		
GEO 308	Geography of East Asia	
GEO 408	Geography of the Silk Road (The Heart of Asia)	
China:		
ART 311	Chinese Painting History	
CHI 301	Third Year Chinese	
CHI 311	Business Chinese I	
CHI 330	Chinese Verbal Theatre Performance	
HST 353	History of Chinese Civilization	
HST 354	Modern Chinese History	

HST 383	Women in Chinese History	
HST 400	Senior Capstone in History	
HST 434	China along the Silk Road before 1600	
Japan:		
HST 356	Modern Japanese History	
JPN 301	Third Year Japanese	
Related course:		
REL 223	Introduction to Buddhism	
Total Credit Hours		18

- <sup>1</sup> Or three hours from East Asia and three hours from Related Courses
- <sup>2</sup> Or from a combination of East Asia, China, Japan, AND one Related course

Other courses, including one-time offerings, and honors and summer workshop courses may count toward this minor. For approval, contact the program advisor.

## Economics Minor

For information, contact the Department of Economics, 2054 Farmer School of Business, 513-529-2836.

This minor is designed for students who are interested in exploring how their major area of specialization connects to the wider world of the workplace and the economy. Students who are preparing for law school or a master's degree in business administration (M.B.A.) program will find this minor valuable.

The 18 hours of economics must be completed with at least a 2.00 GPA. Either ECO 315 or ECO 317 must be taken at Miami.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Required Courses</b>		
ECO 201	Principles of Microeconomics	3
ECO 202	Principles of Macroeconomics	3
ECO 315	Intermediate Microeconomic Theory	3
or ECO 317	Intermediate Macroeconomic Theory	
<b>Electives</b>		
Select nine hours of advanced economics at the 300 level or above, which may include the other intermediate theory course. <sup>1</sup>		9
Total Credit Hours		18

- <sup>1</sup> Prerequisites for all 300- and 400-level courses include ECO 201 and ECO 202 unless otherwise stated.

## English Literature Minor

For information, contact the Department of English, 356 Bachelor Hall, 513-529-5221.

This minor offers students a chance to use their elective hours to satisfy a personal interest, to strengthen their degree, or to enhance their career opportunities.

When you begin this minor, you must register with the chief departmental advisor, and you must check your progress with the advisor at least once a year until you complete the minor. Courses taken credit/no-credit will not count toward the minor. A minimum 2.00 GPA is required for all courses in the minor. This minor is open to all majors except English: Literature.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Required course</b>		
ENG 298	Introduction to Literary and Cultural Studies	3
<b>Additional courses</b>		
Select 15 hours of the following: <sup>1, 2</sup>		15
ENG 122	Popular Literature	
ENG 123	Introduction to Poetry	
ENG 124	Introduction to Fiction	
ENG 125	Introduction to Drama	
ENG 129	Books You Need To Read	
ENG 134	Introduction to Shakespeare	
ENG 163	Literature and Travel	
ENG 169	Disability and Literature	
ENG 171	Humanities and Technology	
ENG 220	Literature and Film	
ENG 221	Shakespeare and Film	
ENG 231	The Short Story	
ENG 232	Women Writers	
ENG 237	GLBTQ Literature	
ENG 238	Narrative and Digital Technology	
ENG 246	Native American Literature	
ENG 248	Asian American Literature	
ENG 251	Introduction to European Literature	
ENG 254	Latino/a Literature and the Americas	
ENG 262	Children's Literature	
ENG 269	Colonial & Postcolonial Literature	
ENG 272	English Literature to 1660	
ENG 273	English Literature 1660-1900	
ENG 274	English Literature 1901 to Present	
ENG 275	American Literature to 1900	
ENG 276	American Literature 1900 to the Present	
ENG 293	Contemporary American Fiction	
ENG 327	Medieval Literature	
ENG 328	Sixteenth-Century English Literature	
ENG 331	Seventeenth-Century English Literature	
ENG 332	Early British Women Writers	
ENG 335	English Literature of the 18th Century	

ENG 336	African American Writing, 1746-1877
ENG 337	African American Writing, 1878-1945
ENG 338	African American Writing, 1946-Present
ENG 339	British Romanticism, 1789-1837
ENG 343	Victorian Literature, 1837-1901
ENG 345	British Modernism, 1890-1945
ENG 347	Postwar/Postcolonial British Literature, 1945-Present
ENG 348	Ethnic American Literatures
ENG 349	Early American Literature
ENG 350	Topics in Film
ENG 351	Cultural Politics of Gender and Sexuality in Asian/America
ENG 352	Antebellum American Literature
ENG 353	American Realism and Naturalism
ENG 354	American Modernism
ENG 355	Contemporary American Literature
ENG 356	Women and Gender in Film
ENG 360	Interdisciplinary Special Topics
ENG 370	Introduction to Literary and Cultural Theory
ENG 372	Shakespeare's Principal Plays: Early Works
ENG 373	Shakespeare's Principal Plays: Late Works
ENG 374	English Renaissance Drama
ENG 386	Studies in Drama and Performance
ENG 387	Studies in Poetry
ENG 388	Studies in Prose
ENG 390	Studies in American Regionalism
ENG 435	Queer Theory
ENG 437	Black Feminist Theory
ENG 440	Major English and American Writers
ENG 450	Studies in Genre
ENG 470	Studies in Literary Theory
ENG 490	Special Topics in Literary Study

Total Credit Hours 18

<sup>1</sup> At least one course must be a 400-level seminar.

<sup>2</sup> No more than two courses can be at the 100-level.

## Ethics, Society, and Culture Minor

For information, contact the Department of Philosophy, 212 Hall Auditorium, 513-529-2440.

This minor offers students not majoring in philosophy an opportunity to pursue philosophical questions concerning ethics, culture, and society -- what it means to live in the world with others. Students wishing to sign up for the minor should register their interest with the chief departmental advisor. A minimum 2.00 GPA is required for all courses in the minor, and courses must be taken for a grade, not credit/no credit.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select one of the following:		3
PHL 103	Society and the Individual	
PHL 105	Theories of Human Nature	
PHL 131	Introduction to Ethics	
Select from the following to total at least 15 hours:		15
PHL 205	Science and Culture	
PHL 241	Philosophy of Art	
PHL 265	Confronting Death	
PHL 311	Ethical Theory	
PHL 312	Contemporary Moral Problems	
PHL 331	Political Philosophy	
PHL 335	Philosophy of Law	
PHL 355	Feminist Theory	
PHL 375	Medical Ethics	
PHL 376	Environmental Philosophy	
PHL 411	Advanced Ethical Theories	
PHL 394	Existentialism	
PHL 459	Political Philosophy Seminar	
PHL 470	Advanced Aesthetics	
Total Credit Hours		18

## European Studies Minor

For information, contact the Department of GRAMELAC in 170 Irvin Hall, 513-529-2526, [gramelac@miamioh.edu](mailto:gramelac@miamioh.edu).

This minor, open to all students in the university, introduces the European region from multiple perspectives of humanities, social sciences, and fine arts. It provides students at Miami's campuses, including the John E. Dolibois European Center (MUDEC) in Luxembourg or other European programs, with a framework for integrating their studies into the overall curriculum at Miami. A minimum 2.00 GPA is required for all courses in the minor.

## Program Requirements <sup>1</sup>

(18 semester hours)

Code	Title	Credit Hours
Select at least one course in each category of the following:		
A social science course on modern Europe		3-6
A modern European culture course from literature, art, architecture, music, theatre or cinema		3-6
A modern European language course at the 300-level or above, taught in that language		3
Additional Europe-focused courses to reach a total of 18 semester hours		3-9
Total Credit Hours		18

<sup>1</sup> Appropriate courses taken in European study abroad programs, including MUDEC, may be substituted for above courses with the approval of the European Area Studies advisor.

The European Studies Advisor must approve all selected courses.

## Film Studies Minor

For information, contact the Department of Media, Journalism and Film, **120 Williams Hall**, 513-529-3521.

Film studies is an interdisciplinary minor that offers a broad and diverse overview of the medium and art form of film and its interaction with culture, technology and society.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Core courses take both:		
FST 201	Film History and Analysis	3
FST 401	Seminar in Film Study	3
Electives- take 12 hours from any of the following courses:		12
CMS 225	Linking Film and New Media	
FST/ATH 135	Film as Ethnography	
FST 206	Diversity and Culture in American Film	
FST/ENG 220	Literature and Film	
FST/ENG 221	Shakespeare and Film	
FST/AMS/ITL 222	Italian American Culture	
FST/ENG 235	Classical Hollywood Cinema	
FST/ENG 236	Experimental Film	
FST/HST 252	History at the Movies	
FST/GER 261	German Film in Global Context	
FST/ITL 262	Italian Cinema	
FST/RUS 263	Soviet and Post-Soviet Russian Cinema	
FST/CHI 264	Chinese Cinema and Culture	
FST 282	Sexualities and Film	
FST 301	Film Theory	
FST 330	Film Auteurs	
FST/ATH 345	Global Media, Ethnography, and Film	
FST 350	Topics in Film	
FST 356	Women and Gender in Film	
FST 360	Film Genres	
FST/FRE 460	Topics in French Cinema	
MAC 146	Media Aesthetics	
MAC 211	Introduction to Video Production	
MAC/ENG 213	Writing for Media	
MAC 311	Digital Film Production	
MAC 414	Capstone Pictures: Project in Digital Narrative Film Production	
Total Credit Hours		18

## French Minor

For information, contact the Department of French and Italian, 207 Irvin Hall, 513-529-7508.

This minor provides direction, coherence, and recognition in French studies for non-majors. It is designed to expand your area of interest and expertise and to broaden your career options. Students are encouraged to participate in the Department's summer programs abroad.

### Program Requirements

(18 semester hours)

You must accumulate 18 semester hours at 200 level or above and maintain a 2.50 GPA. FRE 301 is required. No courses in translation count toward the minor; all courses must be taken for a grade, not credit/no-credit. You must plan your program with an advisor.

## Geography Minor

For information, contact the Department of Geography, 118B Shideler Hall, 513-529-5010.

In the Geography Minor students explore interactions between people, places, and environments, integrating social and natural sciences to understand global issues and address them locally. Geography minors learn diverse methods, like geospatial analysis, for studying and managing human and environmental change.

This minor is not available to majors in geography.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Foundation Human</b>		
GEO 101	Global Forces, Local Diversity	3
or GEO 111	World Regional Geography: Patterns and Issues	
<b>Foundation Physical</b>		
GEO 121	Earth's Physical Environment	3-4
or GEO 122	Geographic Perspectives on the Environment	
<b>Connecting Geographic Patterns and Processes</b>		
Select one course from two different areas of the following:		6-7
<b>Integrating Human and Physical Processes:</b>		
GEO 211	Global Change	
<b>People and Places:</b>		
GEO 201	Geography of Urban Diversity	
GEO 205	Population and Migration	
GEO 276	Geography of the Global Economy	
<b>Environmental Principles and Processes:</b>		
GEO 221	Regional Physical Environments	
GEO 271	Human Dimensions of Natural Resource Conservation	
IES 275	Principles of Environmental Science	
IES 274	Introduction to Environment and Sustainability	

### Geovisualization and Mapping:

GEO 241 Map Interpretation

GEO 242 Mapping a Changing World

### Regions:

GEO 208 The Rise of Industrialism in East Asia

GEO 301 Geography of Sub-Saharan Africa

GEO 308 Geography of East Asia

GEO 406 Indigenous Peoples and Their Sacred Lands

GEO 408 Geography of the Silk Road (The Heart of Asia)

A study away, study abroad, or summer workshop experience approved by advisor

### Specializations<sup>1</sup>

Select three credit hours in GEO courses at 300 level or above 3

Select three credit hours in GEO courses at 400 level or above 3

Total Credit Hours 18-20

<sup>1</sup> Students are encouraged to consult with their advisor (mary.henry@miamioh.edu) and review departmental publications for suggested specialization courses that align with each student's interests and post-graduation plans. The following topics of specializations are available: urban geography, physical geography, environmental geography and planning, development geography, and geospatial technology.

## Geology Minor

For information, contact the Department of Geology & Environmental Earth Science, 118D Shideler Hall, 513-529-3216.

A minimum GPA of 2.25 is required for all courses in the minor. No courses may be taken credit/no-credit. This minor is not available to majors in geology, earth science, environmental earth science or earth science education. Courses must be selected observing all prerequisites. Substitutions may be made with approval of department.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select one of the following:		
		3
GLG 111	The Dynamic Earth	
GLG 121	Environmental Geology	
GLG 141	Geology of U.S. National Parks	
Select this laboratory:		1
GLG 115L	Understanding the Earth	
<b>Electives</b>		
Select any combination of Geology courses at 200-level or above of the following:		14
GLG 201	Mineralogy	
GLG 204	Survival on an Evolving Planet	
GLG 211	Chemistry of Earth Systems	

GLG 244	Oceanography
GLG 261	Geohazards and the Solid Earth
GLG 301	Sedimentology and Stratigraphy
GLG 307	Water and Society
GLG 322	Structural Geology
GLG 335	Ice Age Earth
GLG 354	Geomorphology
GLG 357	Igneous/Metamorphic Petrology
GLG 402	Geomicrobiology
GLG 408	Introduction to Hydrogeology
GLG 411A	Field Geology
GLG 417	Forensic Isotope Geochemistry
GLG 427	Isotope Geochemistry
GLG 428	Hydrogeological Modeling: Groundwater Flow and Contaminant Transport and Fate
GLG 432	X-ray Powder Diffraction and Clay Analysis
GLG 435	Soils and Paleosols
GLG 436	Paleoclimatology
GLG 450	Sedimentary Basin Analysis
GLG 461	Geophysics
GLG 467	Seismology
GLG 492	Global Tectonics
GLG 496	Isotopes in Environmental Processes
Total Credit Hours 18	

In addition, students may apply to the minor a maximum of three credits from any Geology workshop with the approval of the CDA.

## German Minor

For information, contact the Department of German, Russian, Asian, Middle Eastern Languages and Cultures, 172 Irvin Hall, 513-529-2526.

Students must accumulate 18 semester hours at 200 level or above. GER 201 and GER 202 may count. All German courses (except those offered only credit/no credit) must be taken for a grade. You must coordinate your program with a department advisor.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Language skill</b>		
GER 301	German Language Through the Media	3
<b>Literature</b>		
GER 311	Passionate Friendships in German Literature from the Middle Ages to the Present	3
or GER 312	Coming of Age in German Life and Thought	
<b>Culture</b>		
GER 321	Cultural Topics in German-Speaking Europe Since 1870	3

or GER 322 Comparative Study of Everyday Culture: German-Speaking Europe and the U.S.A.

### Advanced Study

Select one GER course at 400 level or above 3

**Electives to total 18** 6

One three-hour GER course taught in English may be taken toward the minor; GER 219/ENG 219/ATH 219

GER 201, GER 202, GER 151-400 may be taken

Total Credit Hours 18

## Gerontology Minor

For information, contact the Department of Sociology and Gerontology, 375 Upham Hall, 513-529-2628.

Rapid and significant growth of the older population is a global phenomenon; virtually every person in the world has become or is in the process of becoming part of an aging society. The aging of society has an impact on every aspect of our lives and on all of our social institutions.

The gerontology minor offers three in-depth concentration areas or tracks: 1) applied research provides students with an opportunity to work with research data; 2) aspiring health professions focuses on aging and health; and 3) policies and programs focuses on policies and their relationship to multiple facets of later life. Students in all tracks of the gerontology minor also complete a pre-internship course (GTU 244) and an internship (GTU 440R or GTU 440P).

## Program Requirements

(21-22 semester hours)

Code	Title	Credit Hours
All students take these:		
GTU 154	Big Ideas in Aging	3
GTU 244	Pre-Internship in Gerontology	2
SOC 262	Research Methods	3
Select one of the following:		3
GTU 260	Global Aging	
GTU/SOC 318	Social Forces and Aging	
GTU 354	Issues & Controversies in Aging	
<b>Select one track:</b>		10-11
Applied Research Track		
GTU 362	Applied Research in Gerontology	
GTU 479	Research on Inequality in Aging & Health	
GTU 440R	Gerontology Research Capstone Internship	
Aspiring Health Professions		
GTU 456	Aging & Health	
GTU 479	Research on Inequality in Aging & Health	
GTU 440R	Gerontology Research Capstone Internship	
or GTU 440P	Gerontology Practice Capstone Internship	
Policies and Programs Track		

GTY 456	Aging & Health	
GTY 465	Policies & Programs in an Aging Society	
GTY 440P	Gerontology Practice Capstone Internship	
Total Credit Hours		21-22

## Global Health Minor

For information, contact the Department of Anthropology, 120 Upham Hall, 513-529-8399.

This transdisciplinary minor is for students interested in better understanding the complexities of global health and developing the foundational knowledge and skills necessary in addressing global health problems. It is designed to complement a variety of majors and the minor can be completed in two years.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Gateway Course:		
GHS 101	Introduction to Global Health	3
Select one methods course from the following:		3-4
ATH 425	Ethnographic Field Methods	
GHS 201	Data and Decisions in Global Health	
ECO 311	Examining Economic Data and Models	
IMS 261	Information and Data Visualization	
MBI 361	Epidemiology	
PSY 293	Introduction to Psychological Statistics	
SOC 262	Research Methods	
STA 301	Applied Statistics	
Special Topics (to be taken 3 times):		3
GHS 301	Seminar in Global Health <sup>1</sup>	
Off Campus Global Health Experience (submit an application to the Global Health advisor for supervision):		2
GHS 401	Global Health Experience	
Culminating Global Health Experience:		4
ATH 448 & GHS 491	Developing Solutions in Global Health and Global Health Leadership	
GHS 477	Independent Studies <sup>2</sup>	
Related hours (to equal 18 total hours) <sup>3</sup>		2-3

<sup>1</sup> Students may petition to submit a second related hours course for 1 of these 3 seminars.

<sup>2</sup> This is a thesis option to conduct original global health research and must be pre-approved and supervised by a faculty member affiliated with the Global Health minor.

<sup>3</sup> An up-to-date list of related hours courses is available on the GHS website (<http://miamioh.edu/cas/academics/programs/ghs/>), or any language course TAUGHT IN THE TARGET LANGUAGE at the 200 level or above from the following: American Sign Language, Arabic, Chinese, French, German, Hebrew, Italian, Japanese, Korean, Portuguese, Russian, Spanish.

## Global Perspectives on Sustainability Minor

For information, contact the Institute for the Environment and Sustainability, 118 Shideler Hall, 513-529-5811.

This interdisciplinary minor introduces students to the foundations of environmental sustainability and its complexities with an emphasis on the approaches taken by people living under different geographic and economic conditions. Of special importance in this minor is increasing student understanding of the issues and problems faced by the majority of global citizens who live in lower-income countries or less industrially-developed parts of the world.

## Program Requirements

(22 semester hours)

Code	Title	Credit Hours
<b>Background courses</b>		
Select one from each category of the following:		6
Category I: Natural Science		
BIO 121	Environmental Biology	
BIO 131	Plants, Humanity, and Environment	
GEO 271	Human Dimensions of Natural Resource Conservation	
GLG 121	Environmental Geology	
PHY 121	Energy and Environment	
Category II: Social Science		
ATH 175	Peoples of the World	
GEO 101	Global Forces, Local Diversity	
ITS 201	Introduction to International Studies	
POL 270	Current World Problems	
POL 271	World Politics	
<b>Sustainability Foundation</b>		
Select the following:		3
IES 274	Introduction to Environment and Sustainability	
<b>Advanced courses on Environmental and Sustainability Issues</b>		
Select at least six hours of the following:		6
ARC 413	Environmental Systems I	
AMS/HST/WST 397	American Environmental History	
ATH 448	Developing Solutions in Global Health	
ATH 471	Ecological Anthropology	
BIO 333	Field Ecology	
BIO 401	Plant Ecology	
BIO 451	Conservation Education and Community Engagement	
BIO 467	Conservation Biology	
CPB 244	Introduction to Environmental Engineering	
CPB 405	Industrial Environmental Control	

CPB 441	Pollution Prevention in Environmental Management
ECO 406	Environmental Economics
GEO 333	Global Perspectives on Natural Disasters
GEO/WGS 436	Women, Gender, and the Environment
GLG 307	Water and Society
GLG 311	Geoenvironmental Field Methods
IES 411	Environmental Protocols
IES 419	Environment, Society & Justice
IES/ENG/JRN 429	Environmental Communication
IES 431	Principles and Applications of Environmental Science
IES 450	Environmental Law
IES 474	Sustainability in Practice
IES/BUS 494	Sustainability Perspectives in Resources and Business
ITS 302	Problems of Non-Western Societies
PHL 376	Environmental Philosophy
SJS 487	Globalization, Social Justice and Human Rights
WGS 302	Geography and Gender

**Advanced Area Focus: (this course should complement the field of study)**

Select at least 3 hours from the following: 3

ATH 304	Native North America: Anthropological Perspectives
ATH 305	Latin America: Anthropological Perspectives
ATH 306	Russia and Eurasia: Anthropological Perspectives
ATH/BWS 307	The Middle East: Anthropological Perspectives
ATH 308	South Asia: Anthropological Perspectives
BWS/GEO 301	Geography of Sub-Saharan Africa
BWS 339/ POL 338	Contemporary African Politics
BWS 362	Family Poverty
BWS/HST 342	Africa Since 1945
GEO 308	Geography of East Asia
GEO/WGS 406	Indigenous Peoples and Their Sacred Lands
GEO 408	Geography of the Silk Road (The Heart of Asia)
GEO 475	Global Periphery's Urbanization
HST 325	Images of Africa
HST 353	History of Chinese Civilization
HST 354	Modern Chinese History
ITS 302	Problems of Non-Western Societies
LAS 385	Race, Science, and Disease in the Americas
LAS 410	Current Latin American Issues
POL 334	Politics of Eastern Europe

POL 336	Politics of the Middle East
POL 337	Politics of Latin America
POL 338	Contemporary African Politics
POL/WGS 346	Global Gender Politics
POL 378	Latin America: The Region and the World
WGS 406	Indigenous Peoples and Their Sacred Lands

**Field courses or internship**

Select a minimum of four hours. Students may also take other appropriate field courses or internship with advisor approval. 4

IES/GEO/GLG/ LAS 412	Tropical Ecosystems of Costa Rica
IES 423/ GEO 413/GLG/ LAS 413	Tropical Marine Ecology

Total Credit Hours 22

## History Minor

For information, contact the Department of History, 254 Upham Hall, 513-529-5121.

If you are not majoring in history, this minor is an opportunity for you to satisfy an interest, strengthen your degree, and enhance your preparation for a career or further education.

A minimum 2.00 GPA is required for all courses in the minor. These courses must be taken for a grade (not credit/no-credit).

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select six semester hours of the following: <sup>1</sup>		6
HST 111 & HST 112	Survey of American History and Survey of American History	
HST 197 & HST 198	World History to 1500 and World History Since 1500	
Select 12 semester hours in HST at 200 level and above		12
Total Credit Hours		18

<sup>1</sup> Includes two introductory survey courses that need not be in sequence.

## Horticulture Minor

For information, contact the Department of Biology, 212 Pearson Hall, 513-529-3100.

This minor gives you a general understanding of horticulture and related fields.

Courses used for this minor cannot be used for the minor in Plant Sciences, except for BIO 115, BIO 116, or BIO 191. Only 10 credit hours may count in both the horticulture minor and the A.B. or B.S. in Botany or Biology. Advanced courses must represent at least 10 hours of the total of 18 hours. College chemistry and BIO 191 are

recommended for this minor. A minimum 2.00 GPA is required for all courses in the minor; no courses for the minor may be taken credit/no-credit.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select at least one of the following: 3-4		
BIO 101	Biotechnology: Coming of Age in the 21st Century	
BIO 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	
BIO 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	
BIO 126	Evolution: Just a theory?	
BIO 131	Plants, Humanity, and Environment	
BIO 155	Field Botany	
BIO 176	Ecology of North America	
BIO 181	Medicinal and Therapeutic Plants	
BIO 191	Plant Biology	
Take the following:		
BIO 306	Basic Horticulture	3
Select at least one of the following: 3-4		
BIO 221	Plant Propagation	
BIO 241	Botanical Principles in Landscape Gardening	
BIO 244	Viticulture and Enology	
Select additional hours from the following: 9		
BIO 302 or BIO 205	Plant Taxonomy Dendrology	
BIO 314	Plant and Fungal Diversity	
BIO 340	Internship	
BIO 425	Environmental Plant Physiology	
Total Credit Hours		18-20

## Individualized Studies Minor

For information, contact the Western Program, 111 Peabody Hall (513-529-2233).

The minor in Individualized Studies is available to students in all majors and is designed to broaden their educational experience and widen professional opportunities. The pair of required WST courses teach students to integrate knowledge from a range of disciplines and perspectives. These serve as an introduction to student exploration of individually-created themes that have captured their interests through courses offered by other programs and majors. Plan of study for each student must be approved by a Western Program advisor.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
WST 201	Self and Place	3
WST 301	Interdisciplinary Problems and Questions	3
Select 4 additional courses at 200-400 level, with not more than one at 200-level, that explore an individualized theme approved by a Western Program advisor. <sup>1</sup>		12
Total Credit Hours		18

<sup>1</sup> At least 3 of the 4 courses must be taken after approval of the plan of study.

## Italian Minor

For information, contact the Department of French and Italian, 207 Irvin Hall, 513-529-7508.

This minor offers certified recognition of proficiency in Italian language and successful completion of a program in Italian culture and literature. It increases your understanding of a culture of major influence.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select at least 18 semester hours of Italian above 100 level, including the following: 18		
ITL 301	Culture, Society and Politics in Perspective	
ITL 302	Introduction to Italian Literature	
Total Credit Hours		18

A minimum 2.00 GPA is required for all courses in the minor. Courses must be taken for a grade (not credit/no-credit). Your program must be planned with an advisor.

Students are encouraged to attend the Miami University Summer Language Institute in Italy (Reggio Emilia).

## Japanese Minor

For information, contact the Department of German, Russian, Asian, and Middle Eastern Languages and Cultures, 172 Irvin Hall, 513-529-2526.

This minor provides exposure to literature and culture along with systematic language training in speaking, listening, reading, and writing.

Japanese language, culture, and relevant courses transferred from other institutions may be used to fulfill requirements. A minimum 2.00 GPA is required for all courses in the minor.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select four courses from the following: <sup>1</sup>		12
JPN 201	Second Year Japanese	
JPN 202	Second Year Japanese	
JPN 301	Third Year Japanese	
JPN 302	Third Year Japanese	
JPN 401	Fourth Year Japanese	
JPN 402	Fourth Year Japanese	
Select two courses from the following:		6
ATH/ENG/GER 219	Introduction to Linguistics	
JPN 231	Japanese Tales of the Supernatural in English Translation	
JPN 255	Drama in China and Japan in English Translation	
JPN 260	Topics in Japanese Literature in English Translation	
JPN 266	Survey of Japanese Cinema	
JPN 381	Introduction to Japanese Linguistics	
JPN 401 & JPN 402	Fourth Year Japanese and Fourth Year Japanese <sup>2</sup>	

<sup>1</sup> Other courses, including one-time offerings, honors courses, etc., may count; contact the Japanese program advisor.

<sup>2</sup> If not used for language hours

## Latin American Latino/a & Caribbean Studies Minor

For information, contact the LAS Program, 120 MacMillan Hall, 513-529-5333.

Latin American, Latino/a & Caribbean Studies (LAS) offer an interdisciplinary minor that is open to all students and is a valuable complement to a wide range of majors. Students may enroll in the program by declaring intent with an LAS advisor. All students must complete at least 18 credit hours. In addition to taking an introductory LAS course, students must take 6 additional credits of LAS courses, or their cross-listed equivalents, as part of their core courses, including at least one LAS course at the 300-level or higher. At least 9 credit hours that count toward the LAS minor must come from outside of the student's major.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Introductory courses</b>		
Select one of the following:		3
LAS 208/ATH 206	Introduction to Latin America	
LAS/HST 217	Modern Latin American History	
LAS 260	Latin America in the United States	
<b>Core courses</b>		
Select 12 hours		12

Related hours	
Select up to three hours	3
Total Credit Hours	18

### Core courses

Code	Title	Credit Hours
AMS 302	Immigrant America	3
ART 317	The Arts of Colonial Latin America	3
ATH 305	Latin America: Anthropological Perspectives	3
ATH 313	Latin American Archaeology	3
ATH 415	Field Methods in Archaeology	1-6
BWS/FST/LAS/MUS 204	Brazilian Culture Through Popular Music	3
ENG/LAS 254	Latino/a Literature and the Americas	3
HST/LAS/BWS 243	History of the Atlantic Slave Trade, 1400s to 1800s	3
HST 400	Senior Capstone in History	3
LAS 204	Brazilian Culture Through Popular Music	3
LAS 207	Latin America before 1910	3
LAS 208/ATH 206	Introduction to Latin America	3
LAS 211	Writing with Purpose: Interdisciplinary Inquiry and Communication	3
LAS/HST 217	Modern Latin American History	3
LAS 260	Latin America in the United States	3
LAS 277	Independent Studies	1-5
LAS 300	Special Topics	1-3
LAS 277X	Service-Learning (concurrent registration in MPF course)	1
LAS 315	Latin American Diaspora: Communities, Conditions and Issues	3
LAS/HST 319	Revolution in Latin America	3
LAS 325	Identity, Race, Gender, Class	3
LAS/SPN 332	Latin American Popular Culture	3
LAS 377	Independent Studies	1-5
LAS/HST/BWS 385	Race, Science, and Disease in the Americas	3
LAS 390	Special Topics	3
LAS 410	Current Latin American Issues	1-3
LAS/GLG/IES 412	Tropical Ecosystems of Costa Rica	5
LAS 413	Tropical Marine Ecology	5
LAS 424	Seminar on Modern Architecture in Latin America	3
LAS 477	Independent Studies	3-4
POL 337	Politics of Latin America	3
POL 378	Latin America: The Region and the World	3
POR 204	Brazilian Culture Through Music and Film	3
POR 383	Brazilian Women through Literature and Film	3
SPN 315	Intro to Hispanic Literatures	3

SPN 361	Spanish American Cultural History I	3
SPN 362	Spanish American Cultural History II	3
SPN 430	Selected Topics in Literature and Culture: Spanish America	3
SPN 450	Topics in Hispanic Culture and Language	1-4
SPN 461	Spanish American Film, Visual, and Digital Studies	3
SPN 462	Contemporary Spanish American Literature	3
SPN 463	Spanish American Interdisciplinary Studies	3

## Related hours

Code	Title	Credit Hours
AMS 207	America: Global and Intercultural Perspectives	3
ATH 175	Peoples of the World	3
ATH 185	Cultural Diversity in the U.S.	3
ATH 312	North American Archaeology	3
EDL 204	Sociocultural Studies in Education	3
FSW 206	Social Welfare: Impact on Diverse Groups	4
GEO 111	World Regional Geography: Patterns and Issues	3
HST 371	Native American History to 1840	3
HST 386	Race in U.S. Society	3
IDS 159	Strength Through Cultural Diversity	3
ITS 201	Introduction to International Studies	3
LAS 413/IES 423	Tropical Marine Ecology	5
MUS 186	Global Popular Music	3
SJS 215	EMPOWER I: Educational and Economic Justice and Service-Learning	3
SOC 153	Sociology in a Global Context	3
SOC 348	Race and Ethnic Relations	3

## Study Abroad

The LAS Program highly values study abroad in all Latin American contexts and will extend credit by petition to international study experiences that fulfill program criteria.

## Linguistics Minor

For information, contact the Linguistics Advisor, 356 Bachelor Hall, 513-529-5221.

Linguistics is the study of language. Linguists look at how people use language and try to find the rules that govern that use. Because linguistics touches so many areas of study, a minor in linguistics is useful for students majoring in foreign languages, English, sociology, anthropology, psychology, mathematics, communication, philosophy, or computer science. A minimum 2.00 cumulative GPA is required to earn the minor.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select the following:		
ENG/GER/ATH 219	Introduction to Linguistics	3
Select one of the following capstones:		
ENG 405	Advanced Linguistics: The Research Program of Noam Chomsky	3
ENG 406	Discourse Analysis: Speech Acts in Context	
Select at least twelve semester hours of the following:		
ATH 265	Introduction to Linguistic Anthropology	12
ATH 361	Language and Power	
ATH 364	Language and Culture in Native North America	
ATH 465	Ethnography of Communication	
ENG 301	History of the English Language	
ENG 302	Structure of Modern English	
ENG 410	Selected Topics in Linguistics	
FRE 341	Conversation and Current Events in France	
MTH 483	Introduction to Mathematical Logic	
PHL 373	Symbolic Logic	
PSY 374	Psychology of Language and Thought	
SPN 481	Spanish Phonology and Syntax	
SPN 482	Language Variation in Spanish	
STC 436	Intercultural Communication	
Total Credit Hours		18

**Note:** When initiating the minor, students must register with the Linguistics advisor and thereafter check their progress with the advisor at least once a year until the minor is complete.

## Lusophone Studies Minor

For information, contact the Department of Spanish and Portuguese, 268 Irvin Hall, 513-529-4500.

A Lusophone studies minor serves to introduce students to the rich culture of Portuguese-speaking peoples and countries, especially Brazil. Portuguese is the seventh-most spoken language in the world. Knowledge of the Lusophone cultures is essential for understanding the political, economic, and social world with which the United States has increasing ties.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Required courses</b>		
POR 111	Accelerated Introduction to Portuguese	4
POR 211	Intermediate Portuguese	4

**Taught in English**

Core courses: Take 6 credits from the following	6
POR 204 Brazilian Culture Through Music and Film	
POR/BWS/ENG/ Afro-Brazilian Diaspora Through Film and Arts	
FST 381	
POR/BWS/ENG/ Brazilian Women through Literature and Film	
FST/WGS 383	
Related hours: Select courses to reach a minimum of 18 credit hours	4
ATH 305 Latin America: Anthropological Perspectives	
LAS 208 Introduction to Latin America	
LAS 217 Modern Latin American History	
LAS 243 History of the Atlantic Slave Trade, 1400s to 1800s	
POL 337 Politics of Latin America	
Additional courses can be pre-approved by the minor advisor.	
<b>Total Credit Hours</b>	<b>18</b>

## Mathematics Minor

For information, contact the Department of Mathematics, 123 Bachelor Hall, 513-529-5818.

This minor provides students with an increased understanding of, and competence in, mathematics. Building on a base of calculus and linear algebra, already required for many majors, the program leads students through an introductory proof course, a theoretical course, and an applications course.

A minimum 2.00 GPA is required for all courses in the minor. All courses must be taken for a grade, not credit/no-credit. This minor is not available to majors in mathematics, mathematics and statistics, or mathematics education.

## Program Requirements

(20-22 semester hours)

Code	Title	Credit Hours
Select one of the following:		4-5
MTH 249	Calculus II	
or MTH 249H	Calculus II	
MTH 251	Calculus II	
Select one of the following:		4
MTH 252	Calculus III <sup>1</sup>	
Select one of the following:		5-6
MTH 222 & MTH 331	Introduction to Linear Algebra and Proof: Introduction to Higher Mathematics	
MTH 222T & MTH 331T	Introduction to Linear Algebra (Honors) and Proof: Introduction to Higher Mathematics (H)	
Select at least 7 additional semester hours in mathematics courses at the 300 level or above, including:		7

At least one of the following:

MTH 411	Foundations of Geometry
MTH 421	Introduction to Abstract Algebra
MTH 441	Real Analysis
MTH 451	Introduction to Complex Variables
At least one of the following:	
MTH 347	Differential Equations
MTH 432	Optimization
MTH 435	Mathematical Modeling Seminar
MTH 437	Game Theory and Related Topics
MTH 438	Theory and Applications of Graphs
MTH 439	Combinatorics
MTH 447	Topics in Mathematical Finance
MTH 453	Numerical Analysis
MTH 495	Introduction to Applied Nonlinear Dynamics
or MME 495	Introduction to Applied Nonlinear Dynamics

At least six semester hours at 400 level.

**Total Credit Hours** 20-22

<sup>1</sup> The Honors version of this course will also apply.

**Note:** You may count at most one semester hour from MTH 430 or MTH 477 and three semester hours of PHY 483. MTH 330 does not count toward the minor. Students who have taken MTH 245 as a requirement for a major may count one hour of MTH 245 to the 10 hours at the 300 level, and for them, MTH 245 substitutes for MTH 347 in the list of "applications" courses.

## Medical Humanities Minor

For information, contact the Department of English, 356 Bachelor Hall, 513-529-5221

This minor offers students, including students interested in health careers, an interdisciplinary program of study that will enhance their understanding of the humanistic dimensions of medicine and their ability to communicate effectively. Students will investigate the historical, philosophical, literary and ethical issues of medicine in the past and today and focus on changing concepts and perceptions of disease, health, medical authority and patient experiences. Students will be prepared to respond to a dynamic range of professional and personal issues related to health and illness, life and death. This program stresses critical thinking, reflection and clear and informed communication.

## Program Requirements

Code	Title	Credit Hours
Core Course- Choose one:		3
HST 236	Medicine and Disease in Modern Society	
PHL 205	Science and Culture	
WGS 204	Gender, Science, & Technology	
Electives - 15 hours, from at least two different departments. May choose from unused core courses above or:		15

ATH 348	Introduction to Medical Anthropology
ATH 368	Key Questions in Psychological Anthropology
ATH 428	Anthropology of Women's Health
HST 352	
HST 385	Race, Science, and Disease in the Americas
PHL 375	Medical Ethics
PHL 360A	
Other special topics courses on appropriate topics may be approved by petition.	
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Total Credit Hours	18

## Molecular Biology Minor

For more information, contact the Department of Biology, 513-529-3100.

The molecular biology minor is offered cooperatively by the Departments of Biology, Chemistry and Biochemistry and Microbiology.

This minor enables students to pursue in-depth a multidisciplinary study of biological phenomena at the molecular level. It provides a strong foundation for students planning careers in biotechnology or advanced work at the graduate level. A minimum 2.00 GPA is required for all courses in the minor.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
CHM 332 or CHM 432	Outlines of Biochemistry Fundamentals of Biochemistry	4
BIO 203 or MBI 201	Introduction to Cell Biology General Microbiology	3-4
MBI 365 or BIO 444	Molecular and Cell Biology Molecular Biology	3
Select at least one course from each of the three departments (BIO, CHM and MBI)		6-12
Select one advanced laboratory course of the following:		2-4
BIO/CHM/MBI 424	Advanced Experimental Techniques in Structural and Functional Genomics	
BIO 464	Laboratory in Cell and Molecular Biology	
CHM 438	Biochemistry Laboratory	
MBI 465	Microbial and Molecular Genetics Laboratory	
Or earn at least two credits of directed research in molecular biology		
Additional courses to bring total semester hours to 18:		
BIO 203	Introduction to Cell Biology	
BIO 255	Introduction to Biotechnology	
BIO 342	Genetics	
BIO 361	Patterns in Development	
BIO 403	Plant Development	

BIO/CHM/MBI 424	Advanced Experimental Techniques in Structural and Functional Genomics
BIO 444	Molecular Biology
BIO 449	Biology of Cancer
BIO 464	Laboratory in Cell and Molecular Biology
BIO/CHM/CSE/MBI 466	Bioinformatics Computing Skills
BIO 471	Molecular Physiology
BIO/MBI 485/CSE 456	Bioinformatics Principles
CHM 332	Outlines of Biochemistry
CHM 430	Topics in Biochemistry
CHM 432	Fundamentals of Biochemistry
CHM 438	Biochemistry Laboratory
CHM 471	Biophysical Chemistry I
CHM 472	Biophysical Chemistry II
MBI 201	General Microbiology
MBI 365	Molecular and Cell Biology
MBI 414 or MBI 415	Immunology Principles Immunology Principles and Practice
MBI 425	Microbial Physiology
MBI 445	Microbial Genetics
MBI 464	Human Viruses
MBI 465	Microbial and Molecular Genetics Laboratory

## Naval Science Minor

For more information, contact the Department of Naval Science, 67 Millett Hall, 513-529-3700.

This minor is an interdisciplinary program open to all majors. It introduces students to the broad field of naval service and provides specific information on the organization and operation of the United States Navy and Marine Corps. The naval science minor includes courses in physical and social sciences, formal reasoning, and computer science.

No courses may be taken credit/no-credit. A minimum 2.00 GPA is required for all courses in the minor.

## Program Requirements

(23 semester hours)

Code	Title	Credit Hours
Core sequence:		
NSC 101	Introduction to Naval Science	2
NSC 202	Sea Power and Maritime Affairs Seminar	3
NSC 211	Leadership and Management	3
NSC 402	Leadership and Ethics	3
Select six semester hours of the following:		6
NSC 201		
NSC 301	Navigation	
NSC 302	Naval Operations and Seamanship	

NSC 303	Naval Ship Systems I	
NSC 311	Evolution of Warfare	
NSC 377	Independent Studies	
NSC 411	Fundamentals of Maneuver Warfare	
Select one course each from two different departments:		6
CSE 151	Computers, Computer Science, and Society	
CSE 163	Introduction to Computer Concepts and Programming	
CSE 174	Fundamentals of Programming and Problem Solving	
HST 112	Survey of American History	
HST 222	U.S. Foreign Relations Since 1898	
HST 369	United States in the Modern Era	
ISA 235	Information Technology and the Intelligent Enterprise	
MGT 291	Introduction to Management & Leadership	
MTH 151	Calculus I	
MTH 249 or MTH 251	Calculus II	
PHY 191	General Physics with Laboratory I	
PHY 192	General Physics with Laboratory II	
POL 373	American Foreign Policy	
POL 376	U.S. National Security Policy	
POL 382	International Law	
POL 387	International Security Issues	
STA 261	Statistics	
Total Credit Hours		23

## Neuroscience Minor

For information, contact the Department of Biology, 212 Pearson Hall, 513-529-3100 or the Department of Psychology, 100 Psychology Building, 513-529-2400; this minor is offered cooperatively.

This minor enables students to pursue in depth a multidisciplinary study of the nervous system. It provides a basic framework for students planning advanced work at the graduate level.

A minimum 2.00 GPA is required for all courses in the minor.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Required courses</b>		
BIO 203 or MBI 365	Introduction to Cell Biology Molecular and Cell Biology	3
BIO 305 or BIO 161	Human Physiology Principles of Human Physiology	4
PSY 251	Introduction to Biopsychology	3
Select at least three courses of the following: <sup>1</sup>		9-11
BIO 454	Endocrinology	
BIO 457	Neuroanatomy	

BIO 464	Laboratory in Cell and Molecular Biology
BIO 465	Animal Behavior
BIO 469	Neurophysiology
BIO 471	Molecular Physiology
PSY 351	Advanced Biopsychology
PSY 352	Structured Research Experience in Behavioral Neuroscience
PSY 356	Psychopharmacology
PSY 451	Cognitive Neuroscience
PSY 456	Advanced Biological Bases of Behavior
PSY 458	Capstone in Neuroscience

#### Other relevant work

Course work in calculus, statistics, chemistry, computer science, and philosophy of science<sup>2</sup>

Total Credit Hours 19-21

<sup>1</sup> Select at least one course from each department.

<sup>2</sup> An independent research project (with PSY 477 or BIO 320) is recommended.

## Philosophy and Law Minor

For information, contact the Department of Philosophy, 212 Hall Auditorium, 513-529-2440.

This minor offers students not majoring in philosophy the opportunity to explore key features of legal reasoning and the philosophy of law, and to connect these to broader themes in social and political theory. The minor will provide students with intellectual skills (critical reading, identifying and developing arguments, written and oral communication) necessary for the study of law, and will acquaint students with foundational philosophical concepts operative in the law and legal institutions (such as liberty, equality, rights, and responsibility). Students wishing to sign up for the minor should register their interest with the chief departmental advisor. A minimum 2.00 GPA is required for all courses in the minor, and courses must be taken for a grade, not credit/no credit.

### Program requirements

Code	Title	Credit Hours
Required courses:		
PHL 273	Formal Logic	4
PHL 335	Philosophy of Law	4
Select one of the following:		3
PHL 103	Society and the Individual	
PHL 105	Theories of Human Nature	
PHL 131	Introduction to Ethics	
Select 9 hours from the following:		9
PHL 263	Informal Logic	
PHL 311	Ethical Theory	
PHL 312	Contemporary Moral Problems	
PHL 321	Problems of Metaphysics and Knowledge	
PHL 331	Political Philosophy	

PHL 355	Feminist Theory	
PHL 373	Symbolic Logic	
PHL 376	Environmental Philosophy	
PHL 411	Advanced Ethical Theories	
PHL 459	Political Philosophy Seminar	
Total Credit Hours		20

## Physics Minor

For information, contact the Department of Physics, 217 Kreger Hall, 513-529-5625.

This minor provides a foundation in classical and modern physics together with enhanced skills in electronics or computational physics. It is not available to majors in physics, engineering physics, or biological physics. Courses may not be taken on a credit/no-credit basis.

## Program Requirements

(23-28 semester hours)

Code	Title	Credit Hours
PHY 191	General Physics with Laboratory I	10
& PHY 192	and General Physics with Laboratory II	
PHY 281	Contemporary Physics I: Foundations	3
PHY 293	Contemporary Physics Laboratory	2
Select one of the following:		5-9
MTH 151	Calculus I	
& MTH 251	and Calculus II	
MTH 249	Calculus II	
Select one of the following:		3-4
PHY 282	Contemporary Physics II: Frontiers	
PHY 292	Electronic Instrumentation	
& PHY 294	and Laboratory in Electronic Instrumentation	
PHY 286	Introduction to Computational Physics	
Total Credit Hours		23-28

## Plant Sciences Minor

For information, contact the Department of Biology, 212 Pearson Hall, 513-529-3100.

Plants are essential to life on this planet, yet they are often overlooked as mere scenery. This minor will address this "plant blindness" by introducing students to the unique biology, diversity and uses of plants. A minimum 2.00 GPA is required for the minor; courses for the minor may not be taken credit/no-credit. At least 10 hours must be from advanced (200+ level) courses.

This minor is open to Biology majors (AB or BS), but only 10 credit hours may count in both the minor and the major. This minor is not open to Botany majors, nor can students earn both this minor and the minor in Horticulture.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select at least one of these:		3-8
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	
BIO 131	Plants, Humanity, and Environment	
BIO 155	Field Botany	
BIO 176	Ecology of North America	
BIO 181	Medicinal and Therapeutic Plants	
BIO 191	Plant Biology	
Select at least 10 hours from the following, to total at least 18 hours:		10-15
BIO 204	Evolution of Plant Biodiversity: Genes to Biosphere	
BIO 205	Dendrology	
BIO 221	Plant Propagation	
BIO 241	Botanical Principles in Landscape Gardening	
BIO 244	Viticulture and Enology	
BIO 302	Plant Taxonomy	
BIO 306	Basic Horticulture	
BIO 314	Plant and Fungal Diversity	
BIO 401	Plant Ecology	
BIO 402	Plant Anatomy	
BIO 403	Plant Development	
BIO 425	Environmental Plant Physiology	
Plant-related workshops (e.g. BIO299 Flora of the Bahamas) may count toward the minor by petitioning the Biology Department CDA.		
Total Credit Hours		18

## Political Science Minor

For information, contact the Department of Political Science, 218 Harrison Hall, 513-529-2000.

If you are not majoring in political science, this minor offers you an opportunity to satisfy an interest, strengthen your degree, or enhance your preparation for a career or further education.

This minor is not open to students with a major in the Department of Political Science.

## Program Requirements

(21 semester hours)

Code	Title	Credit Hours
<b>Take this course first</b>		
POL 241	American Political System	3
<b>Additional courses</b>		
Select at least one of the following: <sup>1</sup>		3
POL 201	Political Thinking	
POL 221	Comparative Politics	

POL 261	Public Administration	
POL 271	World Politics	
Select at least nine semester hours in political science at 300 level or above		9
Select additional hours in political science at 200 level or above		6
Total Credit Hours		21

<sup>1</sup> These courses are prerequisites to corresponding 300-400 level courses.

A minimum 2.00 GPA is required in all POL hours. All courses must be taken for a grade. At least 12 hours applied to the minor must be taken at Miami. Students are encouraged to consult with a faculty advisor when selecting courses.

## Rhetoric/Writing Minor

For information, contact the Department of English, 356 Bachelor Hall, 513-529-5221.

This minor provides students an understanding of how language and writing shape actions and attitudes and form persuasive discourse through study of rhetorical theory for writers, research methods in writing, and practice in a wide range of writing that college-educated graduates can be expected to produce in their civic and professional lives.

Courses taken credit/no-credit will not count toward the minor. A minimum 2.00 GPA is required for all courses in the minor. This minor is open to all majors except English: Professional Writing.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Required courses</b>		
ENG 171	Humanities and Technology	3
ENG 223	Rhetorical Strategies for Writers	3
Select one of the following upper-level courses:		3
ENG 407	Interactive Business Communication	
ENG 411	Visual Rhetoric	
ENG 412	Print and Digital Editing	
ENG 413	Grant and Proposal Writing	
ENG 415	Capstone in Professional Writing <sup>1</sup>	
ENG 416	Writing for Global Audiences	
<b>Elective courses</b>		
Select 9 hours from unused courses above, or from the following list:		9
BUS 284	Professional Communication for Business	
ENG 222	The Rhetoric of Information and Data Visualization	
ENG/IMS 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds	
ENG 225	Advanced Composition	

ENG 226	Introduction to Creative Writing: Short Fiction and Poetry	
ENG 302	Structure of Modern English	
ENG 310	Special Topics in Rhetoric and Persuasion	
ENG 313	Technical Writing	
ENG 315	Business Writing	
ENG 316	Legal Writing and Reasoning	
ENG 323	Intermediate Creative Writing: Creative Nonfiction	
ENG/IMS 407	Interactive Business Communication	
ENG/IMS/JRN 424/ENG 524/IMS/JRN 524	Ethics and Digital Media	
ENG 426	Developing & Publishing Digital Books	
ENG 481	Writing Center Theory and Practice	
Total Credit Hours		18

<sup>1</sup> ENG 495R may be substituted for ENG 415.

## Russian Minor

For information, contact the Department of German, Russian, Asian, Middle Eastern Languages and Cultures, 172 Irvin Hall, 513-529-2526.

You must have a minimum cumulative GPA of 2.50 for courses taken at Miami. Courses for the Russian minor must be taken for a grade (not credit/no-credit). Students may not sign up for both the Russian, East European, and Eurasian Studies minor and the Russian minor.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select 15 hours at the 100 level or above, including:		15
RUS 201	Intermediate Russian	
RUS 202	Intermediate Russian	
RUS 301	Advanced Russian	
RUS 302	Advanced Russian	
RUS 311	Reading in Russian	
or RUS 411	Advanced Conversation, Composition and Reading	
Select remaining 3 hours of the following:		3
RUS 133	Imagining Russia	
RUS 137	Russian Folklore	
RUS 250	Topics in Russian Literature in English Translation	
RUS 254	Introduction to Russian and Eurasian Studies	
RUS 255	Russian Literature in English Translation From Pushkin to Dostoevsky	
RUS 256	Russian Literature in English Translation: From Tolstoy to Nabokov	
RUS 257	Russian Literature in English Translation: From Pasternak to the Present	

RUS 263	Soviet & Post-Soviet Russian Cinema	
RUS 272	Cinemas and Cultures of Central and Eastern Europe	
RUS 311	Reading in Russian <sup>1</sup>	
or RUS 411	Advanced Conversation, Composition and Reading	
Total Credit Hours		18

<sup>1</sup> If not used already as a required course.

## Social Justice and Inequalities Minor

For information, contact the Department of Sociology and Gerontology, 375 Upham Hall, 513-529-2628.

The Minor in Social Justice Studies (SJS) offers a sociologically-based foundation of knowledge and skills to examine the essential connections between social values, structured inequalities, and social change.

### Program Requirements

(18-19 semester hours)

Code	Title	Credit Hours
SJS/SOC 165	Introduction to Social Justice Studies	3
SJS/SOC 323	Social Justice and Change	3
Select one of the following:		3
SOC/BWS 348	Race and Ethnic Relations	
SOC 372	Social Stratification	
Select two of the following:		6
SOC/WGS 203	Sociology of Gender	
SOC/FSW/WGS 221	Sexualities	
SOC 225	Work and Occupational Justice	
DST/EDP/WGS 278	Women and (Dis)ability: Fictions and Contaminations of Identity	
SOC 305	Introduction to the Sociology of Globalization	
Select one of the following:		3-4
SOC/GTY 318	Social Forces and Aging	
SOC/DST/EDP/WGS 375	(Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice	
SJS/SOC 487	Globalization, Social Justice and Human Rights (must be preapproved by instructor for Social Justice related content)	
SOC 440A	Internship - Applied Sociology <sup>1</sup>	
Total Credit Hours		18-19

<sup>1</sup> Must be preapproved by instructor for Social Justice related content.

## Sociology Minor

For information, contact the Department of Sociology and Gerontology, 375 Upham Hall, 513-529-2628.

This pre-professional minor is for non-sociology majors planning careers in law, medicine, dentistry, business, and social science. Depending on your option, the minor consists of three or four required courses and additional hours chosen from a set of electives. Not all courses are offered each semester or year.

You must declare this minor before or during your junior year. You may pursue only one Pre-professional sociology minor. A minimum overall GPA of 2.50 is required. All courses for this minor (excluding fieldwork) must be taken for a grade.

### Program Requirements: Pre-professional Minor

(18 semester hours)

#### Option in Law and Society

Code	Title	Credit Hours
<b>All of these:</b>		10-11
SOC 151	Social Relations	
or SOC 153	Sociology in a Global Context	
SOC 201	Social Problems	
or SOC 202	Social Deviance	
SOC 412	Sociology of Law	
<b>Select the remaining hours (to total at least 18 hours) from the following:</b>		8
SOC 201	Social Problems	
SOC 202	Social Deviance	
SOC 348	Race and Ethnic Relations	
SOC 352	Criminology	
SOC 372	Social Stratification	
SOC 454	Formal Organization	
Total Credit Hours		18-19

#### Option in Medical Sociology

Code	Title	Credit Hours
<b>All of these:</b>		9-10
SOC 151	Social Relations	
or SOC 153	Sociology in a Global Context	
SOC 357	Medical Sociology	
SOC 372	Social Stratification	
<b>Select remaining hours from the following, with at least 3 hours from SOC courses:</b>		9
SOC 201	Social Problems	
SOC 202	Social Deviance	
SOC 221	Sexualities	
SOC 257	Population	
SOC 318	Social Forces and Aging	
GTY 318	Social Forces and Aging	
SOC 358	The Sociology of Mental Disorders	

SOC 435	Death Studies
SOC 440	Internship in Sociology or Social Justice Studies
GTY 456	Aging & Health
EDP/SOC 272	Introduction to Disability Studies
DST 278	Women and (Dis)ability: Fictions and Contaminations of Identity
GTY 154	Big Ideas in Aging
GTY 365	Social Policy and Programs in Gerontology
KNH 125	Introduction to Public Health
KNH 321	National and Global Health Policy
KNH 362	Public Health Communication
PHL 375	Medical Ethics
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Total Credit Hours	18-19

## Option in Business and Society

Code	Title	Credit Hours
<b>All of these:</b>		7-8
SOC 151	Social Relations	
or SOC 153	Sociology in a Global Context	
SOC 201	Social Problems	
<b>Select at least two of the following:</b>		6
SOC 225	Work and Occupational Justice	
SOC 417	Economy and Society	
SOC 454	Formal Organization	
<b>Select from the following to total 18 hours:</b>		5
SOC 203	Sociology of Gender	
SOC 257	Population	
SOC 262	Research Methods	
SOC/BWS 348	Race and Ethnic Relations	
SOC 372	Social Stratification	
SOC 417	Economy and Society	
SOC 454	Formal Organization	
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Total Credit Hours		18-19

## Option in General Sociology

Code	Title	Credit Hours
<b>All of these:</b>		10-11
SOC 151	Social Relations	
or SOC 153	Sociology in a Global Context	
SOC 262	Research Methods	
SOC 482	Sociological Theory	
<b>Select remaining hours from SOC to equal a total of at least 18 hours.</b>		8
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Total Credit Hours		18-19

**Note:** The use of independent study hours or SOC 490/SOC 590 must be preapproved by the CDA in Sociology.

## Spanish Minor

For information, contact the Department of Spanish and Portuguese, 268 Irvin Hall, 513-529-4500.

The Spanish minor is designed to offer students whose major is in another field the ability to build upon their language, cultural, and interdisciplinary skills in Spanish. In an increasingly globalized world, a minor in Spanish provides a competitive edge for students in a wide variety of areas of concentration. You must plan your program with your advisor in the department. No courses for the Spanish major or minor may be taken credit/no-credit. This minor consists of Spanish courses above the 202 level.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select the following:		
SPN 311	Grammar Review and Introductory Composition	3
SPN 312	Introduction to Spanish Language/ Linguistics	3
or SPN 315	Intro to Hispanic Literatures	
Select one of the following sequences:		6
SPN 351 & SPN 352	Cultural History of Spain I and Cultural History of Spain II	
SPN 361 & SPN 362	Spanish American Cultural History I and Spanish American Cultural History II	
SPN 381 & SPN 382	Spanish Language and Hispanic Culture I and Spanish Language and Hispanic Culture II	
Select two courses of the following: <sup>1</sup>		6
Any 300 level course <sup>2</sup>		
SPN 420	Selected Topics in Literature and Culture: Spain	
SPN 430	Selected Topics in Literature and Culture: Spanish America	
SPN 440	Selected Topics in Spanish Language and Hispanic Culture	
SPN 450	Topics in Hispanic Culture and Language	
SPN 481	Spanish Phonology and Syntax	
SPN 482	Language Variation in Spanish	
SPN 483	History of the Spanish Language	
SPN 484	Second Language Acquisition: Spanish	
<hr/>		
Total Credit Hours		18

<sup>1</sup> Other 400 level courses may be taken with permission from the instructor.

<sup>2</sup> Excluding SPN 332.

## Statistical Methods Minor

For information, contact the Department of Statistics, 311 Upham Hall, 513-529-7828.

This minor builds on the statistical methods of estimation and hypothesis testing introduced in the introductory statistics course. It includes additional study of the statistical methods involved in regression analysis and experimental design as well as options for study of non-parametric, quality control, data visualization, and/or sampling methods. A Capstone experience in statistics may also be included as part of the minor.

This minor is not available to students majoring in mathematics, statistics, or mathematics and statistics.

To complete the minor in statistical methods, you must earn at least 18 semester hours with at least a 2.00 GPA. A course taken on a credit/no credit basis does not apply toward the minor.

### Program Requirements

(18 semester hours minimum)

Code	Title	Credit Hours
Required Courses:		6-7
STA 261 or STA 301	Statistics Applied Statistics	
STA 363	Introduction to Statistical Modeling	
Elective Courses (Select three of the following)		9
STA 333	Nonparametric Statistics	
STA 365	Statistical Monitoring and Design of Experiments	
STA 402	Statistical Programming	
STA 404	Advanced Data Visualization	
STA 432	Survey Sampling in Business	
STA 475	Data Analysis Practicum	
Select one of the following: <sup>1</sup>		3-5
MTH 151	Calculus I	
MTH 249	Calculus II	
Total Credit Hours		18-21

<sup>1</sup> Note: A petition to substitute a statistics related course for the calculus requirement (e.g. PSY 294) is welcomed.

## Statistics Minor

For information, contact the Department of Statistics, 311 Upham Hall, 513-529-7828.

Statistical methods are increasingly in use in decision-making and data analysis in business and industry. Moreover, basic research in the biological, management, and social sciences, as well as in some areas of humanities, is also increasingly statistical in nature. As a result, demand for persons knowledgeable in the science of statistics is on the rise. The minor in Statistics provides a program in statistics suitable for students with very good mathematical abilities.

This minor is not available to students majoring in either statistics or mathematics and statistics. This minor is available to all other students including those majoring in mathematics.

To complete the minor in Statistics, you must earn at least 18 semester hours with at least a 2.00 GPA. A course taken on a credit/no credit basis does not apply toward the minor.

### Program Requirements

(21 semester hours)

Code	Title	Credit Hours
MTH 251 or MTH 249	Calculus II Calculus II	4-5
STA 363	Introduction to Statistical Modeling	3
STA 401	Probability	3
STA 463	Regression Analysis <sup>1</sup>	4
STA 466	Experimental Design Methods	4
Select one of the following:		3
STA 333	Nonparametric Statistics	
STA 365	Statistical Monitoring and Design of Experiments	
STA 402	Statistical Programming	
STA 404	Advanced Data Visualization	
STA 427	Introduction to Bayesian Statistics	
STA 432	Survey Sampling in Business	
STA 462	Inferential Statistics <sup>2</sup>	
STA 475	Data Analysis Practicum	
STA 483	Analysis of Forecasting Systems	
Total Credit Hours		21-22

<sup>1</sup> Has MTH 222 as a prerequisite.

<sup>2</sup> Has MTH 252 as a prerequisite.

## Urban and Regional Analysis Minor

For information, contact the Department of Geography, 118B Shideler Hall, 513-529-5010.

Urban and regional planners develop programs and policies to guide future growth and redevelopment of urban, suburban, and rural communities. They assist elected officials in solving the social, economic, and environmental problems of their communities.

This minor is not available to urban and regional planning majors.

### Program Requirements

(20 semester hours)

Code	Title	Credit Hours
All of the following:		
GEO 101	Global Forces, Local Diversity	3
GEO 201	Geography of Urban Diversity	3
GEO 451	Urban and Regional Planning	3

GEO 459	Advanced Urban and Regional Planning	3
Select at least 8 hours of the following:		8
GEO 242	Mapping a Changing World	
GEO 352	Geographies of Urban Change	
GEO 441	Geographic Information Systems	
GEO 442	Advanced Geographic Information Systems	
GEO 444	GIScience Techniques in Landscape Ecology	
GEO 447	Aerial Photo Interpretation	
GEO 448	Techniques and Applications of Remote Sensing	
GEO 454	Urban Geography	
GEO 455	Race, Urban Change, and Conflict in America	
GEO 457	Global Cities, World Economy	
GEO 462	Citizenship and the City	
GEO 467	Land Use, Law and the State: Geographic Perspectives	
GEO 475	Global Periphery's Urbanization	
GEO 476	Global Poverty	
GEO 493	Urban Field Experience	
STA 261	Statistics	
or ISA 125	Introduction to Business Statistics	
Total Credit Hours		20

GEO 460/GEO 560 courses and other courses may be substituted with permission of your primary advisor (prythedl@miamioh.edu). A 2.00 grade point average is required for the courses in the minor. Courses for the minor may not be taken on a credit/no credit basis except by permission of the primary advisor.

## Women's, Gender, and Sexuality Studies Minor

For information, contact the Chief Departmental Advisor for the Women's, Gender, and Sexuality Studies Program, 126 MacMillan Hall, 513-529-4616.

The Women's, Gender, and Sexuality Studies Program is a dynamic, interdisciplinary program that investigates how our lives are affected by gender race, class, age, sexuality, religion, (dis)ability, gender identity, and nationality. Women's, Gender, and Sexuality Studies emphasizes the importance of understanding gender as a part of wider social and political structures of power, knowledge, experience, culture, embodiedness, intimacy, and labor. Women's, Gender, and Sexuality Studies courses are organized around contemporary feminist research and theory, and focus intersectionally on women, gender, and sexuality as subjects of inquiry. Our coursework also focuses on how theory and practice come together. Students may choose from courses spanning departments, disciplines, divisions and ideologies. The Women's, Gender, and Sexuality Studies program provides a context in which women's work and women's issues are explored in-depth, celebrating women's creativity, women's lives, and women's work. In Women's, Gender, and Sexuality Studies, students find an active and supportive community, close interaction with faculty, opportunities to take on leadership roles, and an academic

program that allows them to cross the traditional disciplinary boundaries.

This minor may be completed by any student. You are urged to choose your courses with an advisor. Women's, Gender, and Sexuality Studies courses may fulfill other departmental, college, or Miami Plan requirements.

A minimum 2.00 GPA is required for all courses in the minor. This minor fulfills the Miami Plan Thematic Sequence requirement.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Core courses</b>		
Select one of the following:		3
WGS 401	The Role of Women in a Transforming Society	
BWS/WGS/ENG 432	Feminism and the Diaspora: U.S. Women of Color	
Select one of the following:		3
WGS/ENG 356	Women and Gender in Film	
WGS/PHL 355	Feminist Theory	
WGS/ENG 435	Queer Theory	
WGS/BWS 437	Black Feminist Theory	
Feminist theory course approved by the WGS Advisor Committee		
<b>Other courses</b> <sup>1</sup>		
Select 12 hours from WGS courses and courses cross-listed with WGS		12
Total Credit Hours		18

<sup>1</sup> WGS 201 is strongly recommended, particularly as a first course for students considering this minor.

Courses, not cross-listed with the Women's, Gender, and Sexuality Studies Program, may be approved for this minor. Special topics courses offered by the program and selected honors seminars are offered most semesters.

## Geographic Information Science (GIS) Certificate

Geographic Information Science (GISci) is a suite of techniques for collecting, analyzing, and communicating information through geographic information systems (GIS), satellite and aerial imaging (Remote Sensing), global positioning systems (GPS), and related technologies. GISci is applied to problems in fields ranging from environmental science to urban planning to business decision-making. This certificate program builds qualifications for employment and/or further study in GISci.

Students interested in this certificate should contact Ms. Robbyn Abbitt (Department of Geography; 109 Shideler Hall; 513-529-5016; abbittrj@miamioh.edu)

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
GEO 441	Geographic Information Systems	3
GEO 442	Advanced Geographic Information Systems	3
GEO 443	Python Programming for ArcGIS	3
GEO 448	Techniques and Applications of Remote Sensing	3
Select two of the following:		6
GEO 242	Mapping a Changing World	
GEO 340	Internship <sup>1</sup>	
GEO 444	GIScience Techniques in Landscape Ecology	
GEO 445	Geographic Information Systems for Criminal Justice	
GEO 460	Advanced Systematic Geography <sup>Topic</sup> must be approved by advisor	
ENT 135	Computer-Aided Drafting	
CSE 174	Fundamentals of Programming and Problem Solving	
CSE 252	Web Application Programming	
CIT 214	Database Design and Development	
or ISA 245	Database Systems and Data Warehousing	
IMS 461	Virtual Reality	
Any GEO course focusing on GIS or remote sensing techniques		
Total Credit Hours		18

<sup>1</sup> With the expectation that the internship involves GIS.

## Global Readiness Certificate

This Certificate is designed for degree-seeking students of all majors who wish to position themselves strategically for employment in today's increasingly competitive, diverse, and global workforce. It combines Miami coursework, co-curricular activities, and community involvement focused on global readiness. The courses and experiences in this certificate program will provide students with the knowledge, awareness, and skills necessary for global and intercultural communication and teamwork. Prospective employers actively seek graduates with such competence to complement the technical skills that students attain in their academic programs.

In order to be eligible for this Certificate, students must be pursuing a bachelor's degree at Miami University.

## Program Requirements

(14-17 semester hours)

Code	Title	Credit Hours
<b>PRE-REQUISITES</b>		
<b>APPLICATION</b>		

A reflective, on-line application process requires student applicants to submit a brief autobiography and essay of intent. Students will receive provisional acceptance into the Certificate Program pending full attendance at the Orientation Learning Lab.

### ORIENTATION LEARNING LAB

Orientation learning lab including an overview of certificate requirements, assessment, major-specific considerations, and workshops with relevant campus departments.

### REQUIREMENTS (CATEGORIES A-C)

#### CATEGORY A: COURSEWORK (14-17 Credits):

Four sub-categories of coursework are required: (A.1, A.2, A.3, AND A.4)

1. Intercultural Perspectives Course of the Global Miami Plan: 3 Credits

A course in this category may not also be used to meet the Dual Perspectives requirement (below).

2. Dual Perspectives: 3 credits

Three credits selected from the "Approved List: Dual Perspectives" which includes courses that are both Global and Intercultural in their perspectives. Any course that includes both Global and Intercultural Perspectives of the Miami Plan may also be approved.

A course in this category may not also be used to meet the Intercultural Perspectives requirement (above).

3. Intergroup Dialogue: 2 Credits

One course on Intergroup Dialogue (2 credit sprint course minimum).

4. Study Abroad, Study Away, Internship or Equivalency: 6-9 credits. Students may take EITHER (A.3.a or A.3.b):

a. (9 Credits) A course pre-approved for the Global Readiness Certificate as Study Abroad, Study Away, or Internship Program PLUS IDS 154 (Introduction to Study Abroad--take two semesters before embarking on your program) AND IDS 156 (Study Abroad Re-Entry--taken upon return from your program); OR

b. (6 Credits) A course from a preferred list (Preferred List: High Impact Study Abroad) which intentionally integrates pre-departure and re-entry programming designed to foster global learning and intercultural development. (List forthcoming November 2018 and revised annually thereafter.)

#### CATEGORY B: LECTURES, PROGRAMS, AND OTHER EVENTS (6 Approved Events)

Participate in 2 or more approved events (Approved for Global Readiness Certificate) per semester, spanning at least 3 semesters (for a total of 6 Approved Events), from those listed as Approved on the One Miami: Diversity and Inclusion Calendar.

#### CATEGORY C: COMMUNITY ENGAGEMENT

Sustained participation (2 semesters minimum) in EITHER of the following (C.1 OR C.2):

1. Service Learning: Intercultural and international or domestic service learning experience from "Approved List: Community Engagement;" OR

2. Volunteerism: Sustained volunteerism to the local Oxford (or student's home town) community through Miami's Division of Community Engagement Services.

# College of Creative Arts

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Office of the Dean  
104 Center for Performing Arts  
Phone: 513-529-6010  
www.MiamiOH.edu/ccca

## Degrees and Majors Offered

**Bachelor of Arts in Architecture**  
**Bachelor of Arts in Art and Architecture History**  
**Bachelor of Arts in Interactive Media Studies**  
**Bachelor of Arts in Music**  
**Bachelor of Arts in Theatre**  
**Bachelor of Fine Arts**

- Communication Design
- Interior Design
- Studio Art

## Bachelor of Music

- Music Education
- Music Performance (including Composition)

## Bachelor of Science in Art

- Art Education

## Co-Majors

- Arts Management
- Art Therapy
- Fashion

## Minors

- 2D Fine Arts
- Architecture and Interior Design Studies
- Art and Architecture History
- Arts Entrepreneurship
- Arts Management
- Art Therapy
- Communication Design
- Dance
- Digital Innovation
- Fashion
- Games + Simulation
- Interactive Media Studies
- Museums and Society
- Music Composition
- Music Performance
- Music Theatre
- Photography
- Theatre Arts
- Urban Design

## General Information

The College of Creative Arts offers students the opportunity to develop artistic competence, to prepare for a variety of careers in the arts, and to gain a broad cultural and academic background.

Programs in the College lead to the following bachelor's degrees: Bachelor of Arts in Architecture; Bachelor of Arts in Art and Architecture History; Bachelor of Arts in Music; Bachelor of Arts in Theatre; Bachelor of Fine Arts in Communication Design, Interior Design, and Studio Art; Bachelor of Music in Music Education and Music Performance (including Composition); and Bachelor of Science in Art. Graduate degrees offered by the College are described in the section for the Graduate School.

## Accreditation

The Department of Architecture + Interior Design is accredited by the National Architectural Accrediting Board and the Council for Interior Design Accreditation. The Department of Art is accredited by the National Association of Schools of Art and Design and the Ohio Department of Education. The Department of Music is an accredited institutional member of the National Association of Schools of Music and the Ohio Department of Education, and both departments of Art and Music are accredited by the National Council of Accreditation for Teacher Education. The Department of Theatre is accredited by the National Association of Schools of Theatre.

The Department of Architecture + Interior Design holds membership in the Association of Collegiate Schools of Architecture and the Interior Design Educators Council. The Department of Art holds membership in the College Art Association. The Department of Theatre holds membership in the Association for Theatre in Higher Education, Black Theatre Network, and the United States Institute for Theatre Technology.

## Special Admission Requirements

In addition to the requirements for admission to the University, there are additional requirements that must be fulfilled in order to declare a major in the College of Creative Arts. Specific requirements are described in the sections on architecture and interior design, art, music, and theatre. They do not apply to students in other divisions who wish to register for individual courses.

Admission into a specific program within the College of Creative Arts is considered at the departmental level and is based on one or more of the following:

1. scholastic achievement;
2. creative ability and/or achievement as determined by audition or portfolio review;
3. motivation to study in a specific arts area expressed in a written statement or interview;
4. recommendation from high school music/theatre teacher or studio instructor;
5. space availability.

All degree programs in the College of Creative Arts with the exception of the majors in Art and Architecture History and Interactive Media Studies require either a portfolio review or audition. These reviews are conducted prior to admission. Please contact the appropriate department for specific guidelines.

Students in other divisions who wish to participate in ensembles, productions, and certain activities are also subject to review and/or audition. Time and format of these proceedings are determined by the sponsoring department and are not part of the general admission process.

## Course Load

Students in the College of Creative Arts may not register for more than 20 hours in a semester without approval of the assistant dean.

## Global Miami Plan

It is important that you consult with your academic advisor to be sure that you select courses that also meet requirements for your major.

## Requirements for Graduation

Candidates for degrees must comply with all university academic regulations and must complete one of the curricula outlined. A minimum of 124 semester hours is required for graduation by all departments in the College of Creative Arts. Miami Plan courses are included in this total.

**Please note: students transferring into creative arts majors may need longer than four years to complete the professional requirements for the bachelor's degree.**

## No-Major Option

If you were not directly admitted into the creative arts major of your choice or if you are undecided about making a commitment to one of these fields, you can choose the Creative Arts Undeclared major. This allows a student to strengthen their application to a selected degree program and/or to explore various options for majors in the arts. Note that this may extend the time required to complete the degree.

The following first-year course recommendations allow you to choose a broad range of electives and sample creative arts courses on a space-available basis. Please see a divisional advisor to plan a course of study.

### Architecture or Interior Design: No-major option (suggested first-year courses)

Code	Title	Credit Hours
ARC 105	Introduction to Architecture	3
ARC 107 or ARC 188	Global Design Ideas in Architecture	3
ARC 113	Methods of Presentation, Representation and Re-Presentation (offered fall semester only)	2
ARC 114	Methods of Presentation, Representation and Re-Presentation (offered spring semester only; ARC 113 is prerequisite)	2
ARC 212	Principles of Environmental Systems (offered fall semester only)	3
ARC 222	History of Architecture II (offered spring semester only)	3

Studio art courses to build work for portfolio (take fall semester). Select from:

ART 111 or ART 121	Design and Composition Observational Drawing
ART 140	Beginning Glass
ART 147	Beginning Art Photography
ART 149	Beginning Digital Photography

ART 155	Beginning Drawing	
ART 160	Beginning Ceramics	
ART 165	Beginning Metals	
ENG 111	Composition and Rhetoric	3
Miami Plan Foundation IV or IC Perspective courses		

### Art, Art Education, or Communication Design: No-major option (suggested first-year courses)

Code	Title	Credit Hours
ART 111	Design and Composition	3
ART 121	Observational Drawing	3
ART 151	Pre-Communication Design (for those students interested in communication design; offered spring semester only)	1
ART 195	Introduction to Art Education (for those students interested in art education)	3
ART 102	Color Theory and Practice	1.5
ART 103	Creative Practices in New Technology	1.5
ART 104	Problem Solving	1.5
ART 105	Technical Drawing	1.5
ART 281	Contemporary Art Forum	1
ART 187 or ART 188	History of Western Art: Prehistoric-Gothic History of Western Art: Renaissance - Modern	3
ENG 111	Composition and Rhetoric	3
Miami Plan Foundation courses		

### Music: No-major option (suggested first-year courses)

Code	Title	Credit Hours
MUS 185 or MUS 186	The Diverse Worlds of Music Global Popular Music	3
ENG 111	Composition and Rhetoric	3
Miami Plan Foundation courses		

### Theatre: No-major option (suggested first-year courses)

Code	Title	Credit Hours
THE 101	Introduction to Theatre: Drama and Analysis	3
ENG 111	Composition and Rhetoric	3
Miami Plan Foundation courses		

- Department of Architecture + Interior Design
- Department of Art
- Department of Music
- Department of Theatre
- Armstrong Institute for Interactive Media Studies

# Department of Architecture and Interior Design

## Architecture + Interior Design

### Architecture: Bachelor of Arts in Architecture

This pre-professional degree program prepares graduates to enter a professional graduate program to become a registered/licensed architect or to enter an architectural field at a pre-professional level. Miami offers a graduate program that leads to the professional degree Master of Architecture.

First- and second-year courses introduce the basics of architecture and the range of opportunities available in the field. Third- and fourth-year courses focus on advanced architectural design, landscape, and urban design. Throughout the program, you are exposed to the interdisciplinary nature of architecture.

For information, contact the Department of Architecture + Interior Design, 101 Alumni Hall, 513-529-7210.

### Interior Design: Bachelor of Fine Arts

This professional degree program prepares graduates to enter the interior design field or a graduate program in interior design, architecture, or a related discipline.

The curriculum promotes competency in fundamental design, design process, and visual communication, and an understanding of interior materials and systems, history and theory, and professional procedures. Graduates integrate the various aesthetic, social, technical, and graphic requirements of interior design problems.

The program balances liberal learning with a comprehensive professional education. It emphasizes interdisciplinary learning (reflective of the discipline and of trends in practice) by requiring several courses outside the major and by emphasizing interdisciplinary courses and projects. The program promotes independent, self-directed course work and research, with the intention of developing in the student a specialized knowledge as a complement to a broad-based, generalized understanding of the discipline.

For information, contact the Department of Architecture + Interior Design, 101 Alumni Hall, 513-529-7210.

### Architecture + Interior Design: Special Admission Requirements

Admission is possible **only in the fall semester**. The applicant must meet all curricular requirements mandated by the university for entering students. Courses in studio art or other creative areas (music, drama, creative writing) are strongly encouraged because they help the student develop creative potential as well as critical judgment.

Evidence of creative aptitude must be submitted in the form of a portfolio, due by the same deadline date as other admission materials. A departmental visit is highly recommended. The departmental admissions committee will evaluate your scholastic achievements and general academic profile in addition to the evidence of creativity revealed in the portfolio submission. Please

contact the Department of Architecture + Interior Design for further information, or review portfolio submission guidelines online.

To transfer into the architecture or interior design program, you must meet the above criteria (including portfolio submission) and should have a minimum 3.00 cumulative GPA. Advanced standing for accepted transfer students is dependent on the strength of the student's academic profile, the portfolio, and available space. Transfers after the second year are generally restricted to students coming from other undergraduate professional or pre-professional architecture and interior design programs.

### National Architectural Accrediting Board (NAAB) Statement

The following statement is required by the NAAB.

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted a 6-year, 3-year, or 2-year term of accreditation, depending on the extent of its conformance with established educational standards.

Doctor of Architecture and Master of Architecture degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree.

The Department of Architecture + Interior Design at Miami University offers the following NAAB-accredited degree programs:

- Master of Architecture II (pre-professional degree + 60 graduate credits)
- Master of Architecture III (non-pre-professional degree + 105 graduate credits)
- Next accreditation visit for all programs: 2023

### Special Curriculum Requirements

#### Change of Major Within Department

During the spring semester of the first year in the program, majors in architecture or interior design may apply to the alternate major. Internal applicants will be given first priority as available spots are filled.

#### Advancing to Upper-class Standing

Your work is reviewed at the close of your first, second, and third years. Regardless of grades in individual courses, the faculty may deny a student further registration as a major in the department if they conclude this is in the student's best interest. In this event, it may be possible for a student to apply to change to another program in the College of Creative Arts or another academic division and, subject to regulations of that division, continue to register for certain courses in architecture on an elective basis.

#### Departmental Honors

You are eligible to graduate with departmental honors if you meet the following conditions.

- Cumulative GPA of 3.50 or better.
- Significant contribution to one or more of the following:
  - Enhancement of departmental life. This may include assisting in lower-division courses as an undergraduate associate, serving as an officer in a student organization such as AIAS, IIDA, APX, or SAC, or working on student-initiated departmental activities.
  - Advanced research effort. This may include helping faculty with research projects or undertaking an independent research project (e.g., Undergraduate Summer Scholar program).
  - Socially responsive volunteering. This may include assisting organizations such as Habitat for Humanity or Over-the-Rhine Community Housing, preferably in an architectural capacity, or collaborating with faculty in similar efforts beyond minimum classroom requirements.

### Admission to Graduate Program

If you intend to continue into a Master of Architecture program, three of your four junior and senior design studios must focus on building design, and it is advisable to take support courses that will be required as prerequisites at the graduate level. Prerequisites for Miami's Master of Architecture program include ARC 410/ARC 510, ARC 417/ARC 517, and ARC 418/ARC 518. See the Courses of Instruction section in this Bulletin for the Master of Architecture degree and consult with your advisor.

- Bachelor of Arts in Architecture
- Bachelor of Arts in Art and Architecture History
- Bachelor of Fine Arts in Interior Design

## Architecture - Bachelor of Arts in Architecture

For information, please contact the Department of Architecture + Interior Design, 101 Alumni Hall, 513-529-7210.

This pre-professional degree program prepares graduates to enter a professional graduate program to become a registered/licensed architect or to enter an architectural field at a pre-professional level. Miami offers a graduate program that leads to the professional degree Master of Architecture.

First- and second-year courses introduce the basics of architecture and the range of opportunities available in the field. Third- and fourth-year courses focus on advanced architectural design, landscape, and urban design. Throughout the program, you are exposed to the interdisciplinary nature of architecture.

### Program Requirements

(88 semester hours minimum)

#### First Year

ARC 101 & ARC 102	Beginning Design Studio and Beginning Design Studio	10
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#### Credit Hours

ARC 113 & ARC 114	Methods of Presentation, Representation and Re-Presentation and Methods of Presentation, Representation and Re-Presentation	4
ARC 103	Shop Methods and Materials	1
Credit Hours		15
<b>Second Year</b>		
ARC 201 & ARC 202	Architecture Studio and Architecture Studio	10
ARC 211 & ARC 212	Introduction to Landscape and Urban Design and Principles of Environmental Systems	6
ARC 213 & ARC 214	Graphic Media III and Graphic Media IV	4
ARC 221 & ARC 222	History of Architecture I and History of Architecture II	6
Credit Hours		26
<b>Third Year</b>		
ARC 301 & ARC 302	Architecture Studio and Architecture Studio <sup>1</sup>	12
Required ARC electives <sup>2,3</sup>		11
Credit Hours		23
<b>Fourth Year</b>		
ARC 401 & ARC 402C	Architecture Studio and Senior Studio Capstone Experience <sup>1</sup>	12
Required ARC electives <sup>2,3</sup>		12
Credit Hours		24
Total Credit Hours		88

<sup>1</sup> A pre-approved six credit hour summer studio may be substituted for a maximum of one upper-division studio (ARC 301, ARC 302, ARC 401, ARC 402). ARC 402C is offered as a Miami Plan Capstone.

<sup>2</sup> Required ARC electives must be met by a minimum of:
 

- Nine credit hours of history/theory
- 12 credit hours of environmental systems + practice (see advisor for Master of Architecture prerequisites)
- Two credit hours of communication process

<sup>3</sup> If you intend to continue into a Master of Architecture program, three of your four junior and senior design studios must focus on building design, and it is advisable to take support courses that will be required as prerequisites at the graduate level. Prerequisites for Miami's Master of Architecture program include ARC 410/ARC 510, ARC 417/ARC 517, and ARC 418/ARC 518. See the Courses of Instruction section in this Bulletin for the Master of Architecture degree and consult with your advisor.

## Bachelor of Arts in Art and Architecture History

This major focuses on the different roles that art, architecture, and visual culture have played in human development. Emphasis is placed on how art reflects not only its specific history, but the aesthetic,

social, philosophical, and religious values of the culture that produced it.

Students develop research and writing skills to better understand and critically evaluate the manifestations of the visual arts throughout the world. Additionally, they gain experience through internships and international study opportunities. The program prepares students for careers in communications and publishing, at museums, galleries, and historical societies, as well as in corporations, education, and all areas of the visual arts, including arts administration.

The art and architecture history major is an interdisciplinary major that includes the Departments of Art, Architecture + Interior Design, and Classics and the Miami University Art Museum. For more information, contact the Department of Art, 124 Art Building, 513-529-2900, or the Department of Architecture + Interior Design, 101 Alumni Hall, 513 529-7210.

**A complete description of the major curriculum is found under the Department of Art section of the Bulletin.**

## Interior Design - Bachelor of Fine Arts

For information, contact the Department of Architecture + Interior Design, 101 Alumni Hall, 513-529-7210.

This professional degree program prepares graduates to enter the interior design field or a graduate program in interior design, architecture, or a related discipline.

The curriculum promotes competency in fundamental design, design process, and visual communication, and an understanding of interior materials and systems, history and theory, and professional procedures. Graduates integrate the various aesthetic, social, technical, and graphic requirements of interior design problems.

The program balances liberal learning with a comprehensive professional education. It emphasizes interdisciplinary learning (reflective of the discipline and of trends in practice) by requiring several courses outside the major and by emphasizing interdisciplinary courses and projects. The program promotes independent, self-directed course work and research, with the intention of developing in the student a specialized knowledge as a complement to a broad-based, generalized understanding of the discipline.

## Program Requirements

(86 semester hours minimum)

### First Year

Fall		Credit Hours
ARC 101	Beginning Design Studio	5
ARC 113	Methods of Presentation, Representation and Re-Presentation	2
ARC 103	Shop Methods and Materials	1
Credit Hours		8

### Spring

ARC 102	Beginning Design Studio	5
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ARC 114	Methods of Presentation, Representation and Re-Presentation	2
Credit Hours		7

### Second Year

#### Fall

ARC 203	Interior Design Studio	5
ARC 213	Graphic Media III	2
ARC 212	Principles of Environmental Systems	3
ARC 221	History of Architecture I	3
ARC 225	Design: Behavior, Perception, Aesthetics	3
Credit Hours		16

#### Spring

ARC 204	Interior Design Studio	5
ARC 214	Graphic Media IV	2
ARC 222	History of Architecture II	3
Credit Hours		10

### Third Year

#### Fall

Elective Studio <sup>1</sup>		3-6
ARC 321	History of Interiors	3
ARC 417	Architectural Materials	3
Business Elective <sup>2</sup>		3
Credit Hours		12-15

#### Spring

ARC 304	Interior Design Studio	6
ARC 309	Furniture Design and Construction	3
ARC 414	Environmental Systems II	3
ARC 419	Materials of Interior Design	3
Credit Hours		15

### Fourth Year

#### Fall

ARC 403	Interior Design Studio <sup>3</sup>	6
ARC 436	Independent Research & Programming	3
ARC 444	Professional Practice in Interior Design	3
Credit Hours		12

#### Spring

ARC 408	Interior Design Studio <sup>4</sup>	6
Credit Hours		6

Total Credit Hours		86-89
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<sup>1</sup> Elective Studio (3 credit hours minimum) must be taken outside the major or through off-campus study. ARC303 or other Architecture Studio course may count toward Elective Studio.

<sup>2</sup> Business Elective may be fulfilled by any course from the following programs: ACC, BUS, ECO, ESP, FIN, MGT, MKT, or CCA Arts Management.

<sup>3</sup> ARC 404C Building Information Modeling is a recommended General Elective to pair with ARC 403.

<sup>4</sup> ARC 408 is offered as a Global Miami Plan Capstone.

## Department of Art

The Department of Art offers these degrees: Bachelor of Arts in Art and Architecture History; Bachelor of Fine Arts in Studio Art; Bachelor of Fine Arts in Communication Design; and Bachelor of Science in Art with Multi-Age Visual Arts Licensure Program (prekindergarten through grade 12; ages 3-21) for those preparing to teach in public schools. You can receive a B.F.A. and a B.S. degree at the same time; this may take additional time beyond the 124 semester hours required for a degree.

These art programs prepare producing and exhibiting artists, designers, art and architectural historians, professionals in related fields, and art teachers for careers in art, design, and related art fields. Course offerings include basic studio areas, art education, history of art and architecture, communication design, and advanced studio disciplines.

The Department of Art also offers minors in Art and Architecture History, Art Therapy, Fashion, Museums and Society, and studio art disciplines.

The department also offers graduate programs leading to a Master of Fine Arts degree in various concentrations. More information on this program is available in the Graduate Fields of Study section or from the Graduate School.

### Admission Requirements: B.F.A. in Communication Design, B.F.A. in Studio Art, and B.S. in Art Education

The admission process for the B.F.A. (studio art, communication design) and B.S. (art education) programs within the Department of Art includes submission of a portfolio of digital images of recent work for review by the art faculty. The purpose of the review is to assess artistic potential, to approve admission to the department, and to award departmental scholarships. Please understand that an impressive portfolio is a goal to be achieved during study, **not** a prerequisite for entrance. Your portfolio should consist of 12 to 15 digital images of recent work. For additional information about the communication design first-year portfolio review, please see the program description in this Bulletin. Please see the Department of Art website or contact the Department of Art for the detailed requirements and format of a portfolio review.

### Transfer Admission Requirements Bachelor of Fine Arts

Students from other majors who are enrolled at the Hamilton, Middletown, or Oxford campuses who wish to be admitted to the department must undergo a portfolio review. Portfolios should include 15 examples of your university artwork and a current transcript. Portfolios may be submitted only after you have successfully completed a minimum of six credit hours of art studio courses. If only the minimum of six credit hours is completed, you must also enroll in at least six additional hours of art studio at the time your portfolio is submitted. Register for a portfolio review in the departmental office; the department designates a time during

each semester to review portfolios and make admission decisions. **Students planning on transferring into the Department of Art may not take 300-400 level studio art classes until they have successfully passed the portfolio review.**

Students from other universities and colleges who wish to transfer to the department must be admitted to Miami University and submit a portfolio to the Department of Art at the time of their application to the university. Communication/graphic design students from other institutions are encouraged to contact Miami's communication design faculty. Transfer credit (comparable art studio courses taken at other universities and colleges) may fulfill part or all of the required prerequisites of art studio courses needed for admission consideration; however, a portfolio of artwork is still required for admission consideration.

Students who are denied admission in their initial attempt may apply a second time. Students who are denied in their second attempt are ineligible for further admission consideration.

### Bachelor of Science in Art with Multi-Age Visual Arts Licensure

Students who were not initially admitted from a portfolio review to the Department of Art or as art education majors may seek admission after successfully completing ART 195 Introduction to Art Education. In addition, a student must have completed at least six hours of studio work and be enrolled in at least six additional hours of studio classes. An art education review, which involves a portfolio of artwork, a statement of intent and commitment to the profession, a resume emphasizing work experience related to children/adolescents, and a minimum GPA of 2.50, is required. Art education reviews occur every semester, usually at the end of the fourth week. The Art Education Retention Policy, as outlined in departmental literature, requires majors to demonstrate success in progressing toward the degree and licensure, including professional dispositions. Due to enrollment constraints, a limited number of transfer students are accepted each year.

- Art Education- Bachelor of Science in Art with Multi-Age Visual Arts Licensure
- Bachelor of Arts in Art and Architecture History
- Communication Design- Bachelor of Fine Arts
- Studio Art - Ceramics, Metals, Painting, Photography, Printmaking, and Sculpture- Bachelor of Fine Arts

### Art Education- Bachelor of Science in Art with Multi-Age Visual Arts Licensure

This program prepares the student for licensure as an art teacher in Ohio Public Schools. It leads to the Bachelor of Science in Art with Multi-Age Visual Arts License (Prekindergarten through grade 12, ages 3-21). Accredited by the National Association of Schools of Art and Design (NASAD), Council for the Accreditation of Educator Preparation (CAEP), and the State of Ohio Department of Education Teacher Licensure Standards, it is in compliance with current guidelines from Ohio's Academic Content Standards (Visual Arts) and the National Art Education Association (NAEA).

A student must plan a program with an art education advisor in the Department of Art and demonstrate progress toward candidacy for licensure by successfully completing key assessments and indicators and achieving benchmarks to pass programmatic reviews.

For information, contact an advisor in the Department of Art, 124 Art Building, 513-529-2900.

## Program Requirements

(91 semester hours)

<b>First Year</b>		<b>Credit Hours</b>
ART 102	Color Theory and Practice	1.5
ART 103	Creative Practices in New Technology	1.5
ART 104 or ART 105	Problem Solving or Technical Drawing	1.5
ART 106	Introduction to Figure Drawing	1.5
ART 111	Design and Composition	3
ART 121	Observational Drawing	3
ART 187	History of Western Art: Prehistoric-Gothic	3
ART 188	History of Western Art: Renaissance - Modern	3
ART 195	Introduction to Art Education	3
ART 281	Contemporary Art Forum	1
Credit Hours		22
<b>Second Year</b>		
ART 295	Elementary Art Methods	3
ART 296	Secondary Art Methods	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
200 level studio		3,3,3,3
ART 231	Painting I	
ART 241	Printmaking I	
ART 255 or ART 257	Introduction to Digital Imaging or Photography	
ART 261	Ceramics I	
ART 264	Jewelry Design and Metals I	
ART 271	Sculpture I	
Credit Hours		21
<b>Third Year</b>		
ART 395	Art Across the Curriculum	3
ART 493	Professional Dispositions in Art Education	3
EDP 256	Psychology of the Exceptional Learner	3
EDP 279 or ART 259 or ART 255	Technology + Media Literacy and Learning or Art and Digital Tools I or Introduction to Digital Imaging	3
200 level studio		3,3
ART 231	Painting I	

ART 241	Printmaking I	
ART 255 or ART 257	Introduction to Digital Imaging or Photography	
ART 261	Ceramics I	
ART 264	Jewelry Design and Metals I	
ART 271	Sculpture I	
300 level studio focus		3
ART 331	Painting II	
ART 332	Painting III	
ART 341	Printmaking II	
ART 342	Printmaking III	
ART 343	Fundamentals of Communication Design	
ART 357	Photography II	
ART 358	Photography III	
ART 361	Ceramics II	
ART 362	Ceramics III	
ART 364	Jewelry Design and Metals II	
ART 365	Jewelry Design and Metals III	
ART 371	Sculpture II	
ART 372	Sculpture III	
ART 450	Letterpress Printing	
Select the following:		
MUS 226 or EDT 446A	Improving Reading through the Music Content Area or Integrating Literacy Across the Content Areas	3
Credit Hours		24

<b>Fourth Year</b>		
300-level studio focus		3
ART 331	Painting II	
ART 332	Painting III	
ART 341	Printmaking II	
ART 343	Fundamentals of Communication Design	
ART 357	Photography II	
ART 358	Photography III	
ART 361	Ceramics II	
ART 362	Ceramics III	
ART 364	Jewelry Design and Metals II	
ART 365	Jewelry Design and Metals III	
ART 371	Sculpture II	
ART 372	Sculpture III	
ART 450	Letterpress Printing	
Select the following:		
ART 495	Art Education Practicum	3
Upper-Level Art History		3
ART 276	Introduction to the Art of the Black Diaspora	
ART 286	History of Asian Art, China, Korea, and Japan	
ART 309	The Arts of African Peoples	
ART 311	Chinese Painting History	

ART 326	Modern & Contemporary East Asian Art	
ART 335	Arts of West Africa	
ART 487	Art of the Early 20th Century	
ART 489	Postwar to Postmodern, 1945-1980	
Select the following:		
ART 419	Supervised Student Teaching in Art <sup>2</sup>	15
	Credit Hours	24
	Total Credit Hours	91

<sup>1</sup> ART 255 can NOT "double dip" as your technology requirement AND your photography requirement.

<sup>2</sup> No other courses should be taken during student teaching.

Students must also complete all Global Miami Plan requirements.

## Art and Architecture History - Bachelor of Arts in Art and Architecture History

This major focuses on the different roles that art, architecture, and visual culture have played in human development. Emphasis is placed on how art reflects not only its specific history, but the aesthetic, social, philosophical, and religious values of the culture that produced it.

Students develop research and writing skills to better understand and critically evaluate the manifestations of the visual arts throughout the world. Additionally, they gain experience through internships and international study opportunities. The program prepares students for careers in communications and publishing, at museums, galleries, and historical societies, as well as in corporations, education, and all areas of the visual arts, including arts administration.

Art and architecture history is an interdisciplinary major that includes the Departments of Art, Architecture + Interior Design, and Classics and the Miami University Art Museum. For more information, contact the Department of Art, 124 Art Building, 513-529-2900, or the Department of Architecture + Interior Design, 101 Alumni Hall, 513-529-7210.

### Program Requirements

(48 hours, plus two years foreign language)

**Students should take courses in both architecture and art history**

Code	Title	Credit Hours
<b>Level One: Introductory Courses</b>		
Select three hours of the following:		3
ARC 107	Global Design	
ARC 221	History of Architecture I <sup>1</sup>	
ARC 222	History of Architecture II <sup>1</sup>	
Select six hours of the following:		6
ART 162	Arts of Africa, Oceania and Native America	

ART 187	History of Western Art: Prehistoric-Gothic	
ART 188	History of Western Art: Renaissance - Modern	
Sophomore Seminar:		3
ART 285	Writing and the Visual Arts	

### Level Two: Themed Courses

Thematic, cross-cultural, and cross-disciplinary approaches to the history of art and architecture. Courses at this level include a writing component.

Select six hours of the following:<sup>2</sup> 6

ARC 221	History of Architecture I <sup>1</sup>	
ARC 222	History of Architecture II <sup>1</sup>	
ART 276	Introduction to the Art of the Black Diaspora	
ART 283	Modern America	
ART 286	History of Asian Art, China, Korea, and Japan	
ART 389	The History of Photography	
CLS 323	Discoveries of Archaeology	
CLS 332	Classical Mythology and the Arts	

### Level Three: Area Courses

Courses designed to explore issues of style and how it changes according to function, context, and chronology. Courses at this level have an integrated lecture component that will include student research and writing significantly beyond what is expected in Level Two courses.

Select at least one course from each of the Level Three Area Courses (below).<sup>2,3</sup> 15

### Level Four: Seminar

Faculty-mentored seminars in which students are responsible for extensive research on a specified aspect of the course which they will present to the instructor and their classmates. Topics vary.

ARC 405	Seminars	3
or ART 480	Seminar in Art History	

### Foreign Language Requirement

At least two years foreign language (completion of 202 or equivalent). Students planning to pursue graduate studies in art and architecture history should discuss additional language study with an advisor.

### Studio Requirement

Select six hours of studio courses. 6

Any studio course will apply. Suggested courses are:

ARC 101 & ARC 102	Beginning Design Studio and Beginning Design Studio	
ART 102	Color Theory and Practice	
ART 103	Creative Practices in New Technology	
ART 104	Problem Solving	
ART 105	Technical Drawing	
ART 111	Design and Composition	
ART 121	Observational Drawing	

### Field Study

ART 391	Field Study in Art and Architecture History	3
<b>Capstone</b> <sup>4</sup>		
ART 498	History and Methods in Art and Architectural History	3
Total Credit Hours		48

<sup>1</sup> ARC 221, ARC 222 count for either Level One or Level Two, but not both.

<sup>2</sup> ART 420 Special Lecture Topics in Art History may count in this category with advisor approval.

<sup>3</sup> A single course may not fill requirements in more than one area.

<sup>4</sup> Required during the fall semester of the senior year.

All courses for the major must be taken for a grade, not credit/no credit.

Students must also complete all Global Miami Plan requirements.

### Level Three: Area Courses

#### Art of Asia, Africa, or the Americas

Code	Title	Credit Hours
ART 309	The Arts of African Peoples	3
ART 311	Chinese Painting History	3
ART 326	Modern & Contemporary East Asian Art	3
ART 335	Arts of West Africa	3

#### European Art

Code	Title	Credit Hours
ART 314	The Renaissance in Italy	3
ART 315	High Renaissance and Mannerism	3
ART 316	Baroque Art in Europe	3
ART 317	The Arts of Colonial Latin America	3
ART 386	Art of the Weimar Republic	3
ART 486	Art of the Late 19th Century	3
ART 487	Art of the Early 20th Century	3
ART 488	Art in the Age of Revolution: 1789-1848	3

#### Pre-Modern Art (of any geographic area or areas)

Code	Title	Credit Hours
ART 311	Chinese Painting History	3
ART 314	The Renaissance in Italy	3
ART 315	High Renaissance and Mannerism	3
ART 316	Baroque Art in Europe	3
ART 317	The Arts of Colonial Latin America	3
ART 382	Greek and Roman Sculpture	3
ART 383	Greek and Roman Painting	3
ART 384	Greek and Roman Decorative Arts	3
ART 488	Art in the Age of Revolution: 1789-1848	3

#### Modern/Postmodern Art

Code	Title	Credit Hours
ARC 321	History of Interiors	3
ARC 426/526	Architecture and Society	3
ARC 427/527	The American City Since 1940	3
ARC 451/551	Contemporary Architectural Theory and Practice	3
ART 326	Modern & Contemporary East Asian Art	3
ART 386	Art of the Weimar Republic	3
ART 406	Art Since 1980	3
ART 486/586	Art of the Late 19th Century	3
ART 487/587	Art of the Early 20th Century	3
ART 489/589	Postwar to Postmodern, 1945-1980	3

### Departmental Honors

To graduate with departmental honors in art and architecture history, students must maintain a 3.50 GPA in the major and complete an honors thesis. Thesis proposals are submitted during the junior year. Successful applicants earn six upper division hours<sup>1</sup> for research and writing (ARC 477C), after which the thesis is submitted for approval to the Departmental Honors Committee.

<sup>1</sup> These credit hours are in addition to the upper-division credits required for the major.

### Arts Management Co-Major

Given the challenges for artists, arts, and cultural organizations to survive in an increasingly competitive business environment, the need for educated arts managers is increasing. The practice of arts management is a synthesis of art, creativity, innovation, management, and entrepreneurship. The co-major will prepare students to balance aesthetic understanding with specialized skills in generating income, managing boards, stimulating public access, and sustaining the mission and vision of organizations whose primary purpose is the delivery, presentation, and preservation of arts and culture. These skills are applicable to arts councils, museums, community art centers, galleries, orchestras, theatres, and other creative enterprises.

A minimum overall 2.00 GPA is required for courses in the co-major. All courses except the internship must be taken for a grade (not credit/no-credit). A high school diploma is required for admission to the co-major.

For information, contact Todd Stuart, Director of Arts Management, 129 Center for Performing Arts, 513-529-2371.

### Program Requirements

(30-31 semester hours)

Code	Title	Credit Hours
Core courses:		
CCA 111	Innovation, Creativity and Design Thinking	3
CCA 201	Introduction to Arts Management	3
CCA 302	Arts Marketing	1.5

CCA 303	Arts Engagement	1.5
CCA 304	Financial Management in the Arts	1.5
CCA 305	Development and Fundraising in the Arts	1.5
CCA 306	Arts Entrepreneurship	1.5
CCA 307	Arts Venture Creation	1.5
CCA 256 or CCA 340	Arts Management Practicum Internship	3
CCA 401	Strategic Planning for the Arts	3
<b>Select a track</b>		9-10

**TRACK 1 - GENERAL BUSINESS**

Select 9 hours of the following:

ACC 211	Accounting for the Non-Business Major
ECO 201	Principles of Microeconomics
ESP 101	Entrepreneurship Foundations
ESP 201	Introduction to Entrepreneurship and Business Models ( (ESP 101 is pre-/co-requisite))
MGT 111	Introduction to Business
MGT 211 or MGT 291	Introduction to Management for Non-business Majors Introduction to Management & Leadership
MKT 211 or MKT 291	Business Concepts in Customer Engagement Principles of Marketing

**TRACK 2 - BUSINESS INTENSIVE - MIAMI PRIME**

Select the following:

BUS 301	Basics of Business I
BUS 302	Basics of Business II
BUS 303	Business Process Integration

**TRACK 3 - ENTREPRENEURSHIP**

Students must declare the Entrepreneurship thematic sequence to have access to this option.

Select the following:

ESP 101	Entrepreneurship Foundations
ESP 201	Introduction to Entrepreneurship and Business Models
ESP 251	Entrepreneurial Value Creation and Capture
ESP 252	Entrepreneurial Mindset: Creativity and Organization

**TRACK 4 - CREATIVE ARTS**

Farmer School of Business majors must take this track. Not open to College of Creative Arts majors.

Select nine hours from ARC, ART, MUS, THE, or CCA111, CCA222, or CCA232. Students may apply FAS or IMS courses with prior approval of the Director of Arts Management & Entrepreneurship.<sup>1</sup>

Total Credit Hours 30-31

<sup>1</sup> No more than two of the same music ensemble (MUS100A-MUS100Z) may count toward the co-major.

## Art Therapy Co-Major

For information, contact the Department of Art

The primary goal of the co-major is to prepare students interested in pursuing a career in art therapy to apply to art therapy graduate programs. Art therapists can work in any setting that employs helping professions, for example: hospitals, schools, correctional facilities, domestic violence shelters, geriatric facilities, psychiatric facilities, residential facilities, day programs for developmental disabilities and chronic mental illness, etc. Art therapy uses the art process and the therapeutic relationship between the client and art therapist to process trauma, enhance self-esteem, improve relational abilities, decrease anxiety/depression, and increase an overall enhanced sense of well-being. Students who pursue and complete a master's degree in art therapy will be eligible for mental health licensure in their state, which grants the ability then to have four broad career opportunities (Art Therapist, Art Educator\*, Counselor, and Artist).

The art therapy co-major builds upon the minor and the foundation of three lateral, human-centered perspectives significant to the field of art therapy: art studio, art education, and psychology. Students will explore connections between art production, methods of facilitating art experiences with people across the lifespan, and an understanding of human behaviors. Introduction to Art Therapy will tie the courses together through presenting exploratory art-making activities, foundational readings, and possible pathways to a career in the profession. The co-major curriculum provides students with an interest in art therapy additional skills and competencies from more in depth coursework. Advanced coursework in both a 2D studio area and 3D studio area is required.

The term co-major indicates that students must be currently enrolled in and complete another major at Miami University; the co-major complements the primary major. There is no specific degree designation for the co-major; students receive the designation of their primary major. Students may earn either the Art Therapy minor or Art Therapy co-major. A minimum overall 2.0 GPA is required for courses in the minor and co-major. All courses must be taken for a letter grade (not credit/no credit).

\*Check state licensure requirements for public school contexts

## Program Requirements

Code	Title	Credit Hours
ART 111	Design and Composition	3
ART 121	Observational Drawing	3
ART 194	Introduction to Art Therapy	3
ART 195	Introduction to Art Education	3
PSY 111 & PSY 112	Introduction to Psychology and Foundational Experiences in Psychology <sup>1</sup>	3-4
or PSY 112M	Foundational Experiences for Majors	
PSY 231	Developmental Psychology	3
PSY 242	Abnormal Psychology	3
Choose one psychology elective from the following:		3
PSY 210	Psychology Across Cultures	
PSY 241	Personality	
PSY 251	Introduction to Biopsychology	

PSY 271	Survey of Perception, Action, and Cognition	
Choose one 2D medium to take at 200 level and 300 level:		6
ART 231 & ART 331	Painting I and Painting II	
ART 241 & ART 341	Printmaking I and Printmaking II	
ART 257 & ART 357	Photography and Photography II	
Choose one 3D medium to take at 200 level and 300 level:		6
ART 261 & ART 361	Ceramics I and Ceramics II	
ART 264 & ART 364	Jewelry Design and Metals I and Jewelry Design and Metals II	
ART 271 & ART 371	Sculpture I and Sculpture II	
Total Credit Hours		36-37

<sup>1</sup> PSY 112 waived for non-psychology majors with AP or transfer credit for PSY111.

## Communication Design- Bachelor of Fine Arts

The mission of the Communication Design major is to enable learners to gain the design thinking, knowledge, and skills required of practicing designers in areas like communication design, user experience design, and branding. Learners grow these competencies through exercises, projects, and learning experiences designed to develop practical, analytical, creative, emotional, and social intelligence. Graduates are prepared to enter a wide range of design practices as adaptable problem solvers who consider context and stakeholder needs as drivers for design.

### Portfolio Review

In addition to the entrance portfolio review required by the Department of Art, students desiring to pursue the Communication Design major must undergo an additional portfolio review. This review occurs in the spring semester of the first year before registration for the fall semester. This portfolio and interview process determines advancement into the degree program in the second year. A limited number of students are admitted each year. In order to submit a portfolio for admission into the Communication Design major, students must be enrolled in ART 151 Pre-Communication Design, and must have completed or be enrolled in ART 102 Color Theory and Practice, ART 105 Technical Drawing, ART 111 Design and Composition, and ART 121 Observational Drawing.

### Transfer Admission

Students who wish to transfer from another institution and enter this program must satisfy admission requirements of the Communication Design program in addition to those of the art department and university.

For information, contact the advisor in the Department of Art, 124 Art Building, 513-529-2900.

## Program Requirements

(87 semester hours minimum)

First Year		Credit Hours
ART 102	Color Theory and Practice	1.5
ART 103	Creative Practices in New Technology	1.5
ART 104	Problem Solving	1.5
ART 105	Technical Drawing	1.5
ART 111	Design and Composition	3
ART 121	Observational Drawing	3
ART 151	Pre-Communication Design	1
ART 187	History of Western Art: Prehistoric-Gothic	3
ART 188	History of Western Art: Renaissance - Modern	3
ART 281	Contemporary Art Forum	1
Credit Hours		20

Second Year		Credit Hours
ART 221	Intermediate Drawing 1	3
ART 248	Design Research Methods Basics	1.5
ART 249	Letterpress for Designers	1.5
ART 251	Typography	3
ART 252	Image	3
ART 253	Design Systems	3
ART 254	Communication Design Studio 1	3
Select one of the following:		3
ART 222	Intermediate Drawing 2	
ART 231	Painting I	
ART 241	Printmaking I	
ART 255	Introduction to Digital Imaging	
ART 257	Photography	
ART 261	Ceramics I	
ART 264	Jewelry Design and Metals I	
ART 271	Sculpture I	
ART 320	Thematic Studio	
Credit Hours		21

Third Year		Credit Hours
ART 352	Communication Design Studio 2	3
ART 353	The Business of Design	3
ART 354	Design for Use	6
ART 455	A History of Design	3
ART 460	Special Topics Design Studio	3
Non-western Art History Course		3
Summer Internship		
ART 340	Internship	3
Credit Hours		24

Fourth Year		Credit Hours
ART 451	The Professional Portfolio	3
ART 452	Communication Design Studio 3: Degree Project	3
ART 453	Highwire Brand Studio	4

Electives	12
Credit Hours	22
Total Credit Hours	87

## Studio Art - Ceramics, Metals, Painting, Photography, Printmaking, and Sculpture- Bachelor of Fine Arts

The Bachelor of Fine Arts in Studio Art has six different concentration choices: ceramics, metals and jewelry design, painting, photography, printmaking, and sculpture.

This degree program emphasizes the development of visual language through in-depth study of one or more of these studio areas. Over the span of the program, students are exposed to traditional areas of artistic craftsmanship as well as innovative trends and technologies such as courses in animation and digital imaging. Majors develop professional portfolios to gain entry-level positions in art-related fields or to pursue post-graduate study.

Degree candidates exhibit their work in professional settings on campus through the senior capstone experience and off-campus both regionally and nationally. Our studio faculty are practicing, internationally exhibiting artists and our program is an engaged and supportive community where instructors offer personalized attention and professional mentoring.

If you intend to continue into graduate studies in studio art, you should take a 300- and 400-level course sequence in your concentration area and additional studies in the history of art.

### Program Requirements

(85.5 semester hours)

First Year		Credit Hours
ART 102	Color Theory and Practice	1.5
ART 103	Creative Practices in New Technology	1.5
ART 104	Problem Solving	1.5
ART 105	Technical Drawing	1.5
ART 106	Introduction to Figure Drawing	1.5
ART 111	Design and Composition	3
ART 121	Observational Drawing	3
ART 187 or ART 286	History of Western Art: Prehistoric-Gothic or History of Asian Art, China, Korea, and Japan	3
ART 188	History of Western Art: Renaissance - Modern	3
ART 281	Contemporary Art Forum (maximum 8)	1,1
Credit Hours		21.5

#### Second Year

ART 221 & ART 222	Intermediate Drawing 1 and Intermediate Drawing 2	6
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ART 231	Painting I	3
ART 281	Contemporary Art Forum (maximum 8)	1
Two-dimensional 200-level studio (take one):		3
ART 241	Printmaking I	
ART 257	Photography	
Three-dimensional 200-level studio course (take one):		3
ART 261	Ceramics I	
ART 264	Jewelry Design and Metals I	
ART 271	Sculpture I	
Select one additional 200-level studio, either 2D or 3D <sup>1</sup>		3
Credit Hours		19

#### Third Year

Studio concentration: one 300-level studio in an area of concentration per semester		3,3
Studio elective outside concentration (200- or 300-level): could be a second concentration		3,3
ART 320	Thematic Studio (maximum 12, repeatable)	3,3
ART 496	Seminar on Theory for Visual Artists (maximum 6)	3
ART 489	Postwar to Postmodern, 1945-1980	3
Credit Hours		24

#### Fourth Year

Studio concentration: (one 400-level studio in an area of concentration per semester)		3,3
Studio elective outside concentration (200-400 level): could be a second concentration		3,3
Upper-Level Art History Elective 300-400		3
Art Capstone and Studio Electives		6
Credit Hours		21
Total Credit Hours		85.5

<sup>1</sup> Studio core must be completed before registering for studio concentration in the junior year.

Students must also complete all Global Miami Plan requirements.

## Department of Music

The department offers the Bachelor of Music in music education, music performance, and music composition and the Bachelor of Arts in Music. The graduate degree, Master of Music, is offered in music education and music performance and is described in the Graduate section of the Bulletin.

The bachelor's degree programs offer preparation for careers in public school teaching, composition, performance, and for future study at the graduate level. It is also the objective of the department to provide courses in music theory and literature, applied music, and ensembles for non-music majors. Applied music and ensembles require audition.

The department's mission and goals are available on the department Web site: [www.MiamiOH.edu/music/](http://www.MiamiOH.edu/music/).

## Special Admission Requirements: Music Majors

All music majors require an audition or application for admission to the department. Each applied area (voice, piano, flute, etc.) has its own requirements for admission. For more information contact the Department of Music, 109 Presser Hall, 513-529-3014.

## Special Curriculum Requirements Applied Music

Music majors and performance minors who discontinue applied music study at Miami University for one semester (or more) are required to re-audition in order to be eligible to resume applied music study. This policy does not apply to anyone involved in student teaching or a Miami-sponsored study abroad program. After two semesters at a given level, Bachelor of Music majors and performance minors are required to take a jury to advance to the next level. Students who fail to advance to the next level of applied music after two attempts are not allowed to continue as either a music major or performance minor.

## Functional Piano

All music majors must complete the Functional Piano Requirement: completing through MUS 261 for music education, performance, and composition and MUS 161 for Bachelor of Arts in Music, or take a piano proficiency exam (offered one time in each of the fall and spring semesters). The proficiency exam is designed for students who have advanced piano skills (six to eight years of piano study). The exam may only be attempted during a student's first year as a music major. **Interested students must see the functional piano coordinator during the first two weeks of Fall semester to receive the exam requirements.**

Students with transfer credit in functional piano must demonstrate performance competency for the functional piano coordinator in order to receive credit toward the music degree.

## Recital Attendance and Chamber Music Experience

All Bachelor of Music majors must complete seven semesters of MUS 140 and one semester of MUS 139. Bachelor of Arts in Music majors must complete four semesters of MUS140 and one semester of MUS139.

## Departmental Honors

Music students may apply for departmental honors at the end of the junior year. Requirements for the program include a 3.50 cumulative GPA, sponsorship by a member of the music faculty, and approval of the department chair.

The program includes independent study (MUS 481-MUS 482) taken during the senior year and also requires a thesis, other scholarly document, or lecture/recital. The student is responsible for identifying two faculty members, in addition to the faculty sponsor, who will serve as readers of the thesis or jury members for the lecture recital. Successful students graduate with departmental honors.

- Music- Bachelor of Arts in Music
- Music Education- Bachelor of Music

- Music Performance- Bachelor of Music

## Music Education- Bachelor of Music

Two programs, both with licensure for age three through grade 12, are offered: choral/general program and instrumental music program. Both programs include 100 hours of field experiences in urban, suburban, and rural schools prior to student teaching. With successful completion of all degree requirements, a candidate applies for a State of Ohio Resident Educator License for Teaching Music, Pre-K through Grade 12. The State of Ohio has reciprocal agreements with many other states, whereby a person holding licensure in Ohio, under certain conditions, may receive licensure in other states that are part of the agreement.

Majors are assigned full-time supervised teaching during fall or spring semester of the senior year. During this semester, a student teacher cannot participate in any ensembles or carry any other academic work except with special permission of the faculty.

For information, please contact the Department of Music, 109 Presser Hall, 513-529-3014.

## Program Requirements: Choral/General Program

(98 semester hours minimum)

Complete the Global Miami Plan for Liberal Education or consult the Honors program requirements in the Bulletin according to your catalog year.

Complete department requirements.

Code	Title	Credit Hours
<b>Required Courses</b>		
MUS 101 & MUS 102	Theory of Music I and Theory of Music II	6
MUS 112	Lab Choir (take three times)	0
MUS 113	Choral Practicum	1,1
MUS 151 & MUS 152	Theory of Music: Aural Skills I and Theory of Music: Aural Skills II	2
MUS 175	Introduction to Music Education	3
Select one of the following two:		
MUS 185	The Diverse Worlds of Music	
MUS 186	Global Popular Music	
Select the following:		
MUS 201 & MUS 202	Theory of Music III and Theory of Music IV	6
MUS 211 & MUS 212	History of Western Music and History of Western Music	6
MUS 218	Beginning Guitar	1
MUS 221	Music Technologies	3
MUS 226	Improving Reading through the Music Content Area	3
MUS 235	Lyric Diction	2

MUS 249	Classroom Instruments: World Percussion	1
MUS 251 & MUS 252	Theory of Music: Aural Skills III and Theory of Music: Aural Skills IV	2
MUS 275	Sophomore Practicum in Music Education	1
MUS 352	Conducting I	2
MUS 354	Conducting II	2
MUS 355	General Music Teaching Techniques: Early Childhood and Elementary	3
MUS 356	Secondary General Music Techniques	2
MUS 419	Supervised Teaching in Music	12
MUS 456	Vocal Pedagogy	2
MUS 475	Senior Practicum in Music Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDL 204	Sociocultural Studies in Education	3
EDP 256	Psychology of the Exceptional Learner	3
<b>Applied Music Requirement</b>		
Seven semesters of applied study in the student's primary instrument.		
MUS 142	Applied Music	2,2
MUS 242	Applied Music	2,2
MUS 342A-MUS 342T		2,2
MUS 442	Applied Music	2
<b>Functional Piano Requirement</b>		
MUS 261	Functional Piano IV (or proficiency examination required)	1
<b>Major Instrument Requirement</b>		
MUS 454	Guitar Repertory and Pedagogy <sup>1</sup>	
<b>Minor Applied Requirement</b>		
An applied major in piano, guitar or band/orchestral instrument is required to take four hours of class or private voice in addition to major applied study.		
<b>Recital Attendance (seven semesters)</b>		
MUS 140	Recital Requirement	0
<b>Chamber Music Experience (one semester)</b>		
MUS 139	Chamber Music Experience	0
<b>Large Ensemble Requirement</b>		
Select one of the following large choral ensembles each semester except semester of student teaching: <sup>2</sup>		7
MUS 100A	Collegiate Chorale	
MUS 100B	Men's Glee Club	
MUS 100D	Choraliers	
MUS 100Q	Chamber Singers	
<b>Performance Requirement</b>		
Half recital in senior year		0
Total Credit Hours		98

- <sup>1</sup> Guitar majors only.
- <sup>2</sup> When meeting this requirement, students must complete at least two semesters in a mixed (SATB) ensemble (i.e., Collegiate Chorale (MUS 100A) or Chamber Singers (MUS 100Q). Piano or guitar majors must enroll as a singer in choral ensembles at least three semesters.

**Background Check and Fingerprint** are required once a year for all music education majors.

Admission to sophomore courses in music education contingent upon fulfillment of the following requirements: minimum overall GPA of 2.25 and minimum GPA of 2.8 in all music courses (including a maximum of one ensemble per semester).

Admission to junior courses in music education contingent upon fulfillment of the following requirements: minimum overall GPA of 2.25 and minimum GPA of 2.8 in all music courses (including a maximum of one ensemble per semester).

Admission to student teaching contingent upon fulfillment of the following requirements: minimum overall GPA of 2.25, minimum GPA of 2.80 in all music courses (including a maximum of one ensemble per semester), an ACT composite score of 21 or better or total SAT score of 930 or better; completion of the functional piano requirement; and completion of MUS113, MUS 352, MUS 354, MUS 355 and MUS 356.

Teacher licensure in Ohio and most other states requires completion of a baccalaureate teacher licensure program, passing a licensure examination, and recommendation by the accrediting institution. It is suggested students complete licensure exams (Professional Knowledge: Multi-Age/004 and OAE Music/032) prior to graduation. To be recommended for licensure, teacher candidates must also successfully complete the Educational Teacher Performance Assessment (edTPA) during their student teaching. Once completed, teacher candidates should apply for licensure. Details are available in 202 McGuffey Hall. All costs associated with licensure are the responsibility of the applicant.

It is the responsibility of the student to see that all university requirements are fulfilled.

## Program Requirements: Instrumental Music Program

(98 semester hours minimum)

Complete the Global Miami Plan for Liberal Education or consult the Honors program requirements in the Bulletin according to your catalog year.

Complete department requirements; your fourth year semesters are interchangeable.

Code	Title	Credit Hours
<b>Required Courses</b>		
MUS 101 & MUS 102	Theory of Music I and Theory of Music II	6
MUS 111	Lab Band (take twice)	0
MUS 151 & MUS 152	Theory of Music: Aural Skills I and Theory of Music: Aural Skills II	2

MUS 175	Introduction to Music Education	3
Select one of the following two:		3
MUS 185	The Diverse Worlds of Music	
MUS 186	Global Popular Music	
Select the following:		
MUS 201 & MUS 202	Theory of Music III and Theory of Music IV	6
MUS 211 & MUS 212	History of Western Music and History of Western Music	6
MUS 221	Music Technologies	3
MUS 226	Improving Reading through the Music Content Area	3
MUS 231	Class Instruments (Brass)	1
MUS 232A	Class Instruments (Woodwinds I)	1
MUS 232B	Class Instruments (Woodwinds II)	1
MUS 233	Class Instruments (Percussion) <sup>1</sup>	1
MUS 234A	Class Instruments (Strings I)	1
MUS 234B	Class Instruments (Strings II)	1
MUS 251 & MUS 252	Theory of Music: Aural Skills III and Theory of Music: Aural Skills IV	2
MUS 275	Sophomore Practicum in Music Education	1
MUS 345 or MUS 355	Elementary General Music for Instrumental Music Education Majors General Music Teaching Techniques: Early Childhood and Elementary	1
MUS 352	Conducting I	2
MUS 354	Conducting II	2
MUS 358	Marching Band Techniques <sup>2</sup>	2
MUS 359	Instrumental Methods- Elementary and Secondary	4
MUS 419	Supervised Teaching in Music	12
MUS 475	Senior Practicum in Music Education	3
EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3

**Applied Music Requirement**

Seven semesters of applied study in the student's primary instrument.

MUS 142	Applied Music	2,2
MUS 242	Applied Music	2,2
MUS 342A-MUS 342T		2,2
MUS 442	Applied Music	2

**Recital Attendance (seven semesters)**

MUS 140	Recital Requirement	0
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**Chamber Music Experience (one semester)**

MUS 139	Chamber Music Experience	0
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**Functional Piano Requirement**

MUS 261	Functional Piano IV (or proficiency examination required)	1
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**Minor Applied Requirement**

An applied major in piano or guitar is required to take four hours of class or private lessons in band or orchestral instrument in addition to major applied study.

**Large Ensemble Requirement**

Select one of the following large instrumental ensemble, in one's primary performance medium, each semester except semester of student teaching:<sup>3</sup>

MUS 100C	Symphony Orchestra	7
MUS 100E	Marching Band	
MUS 100F	Symphony Band	
MUS 100G	Wind Ensemble	

**Performance Requirement**

Half recital in senior year while registered for 400-level applied music 0

**Marching Band Requirement**

Wind and percussion majors must participate two semesters

Total Credit Hours	98
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- 1 Percussion majors substitute one-hour music elective course for MUS 233.
- 2 String instrument majors substitute MUS 433 for MUS 358. Guitar instrument majors substitute MUS 454 for MUS 358.
- 3 Entrance to each group is by audition. Piano majors may fulfill the ensemble requirement through enrollment in a vocal ensemble, an instrumental ensemble, accompanying (MUS 110/MUS 120), or chamber music as a pianist. Guitar majors may fulfill the ensemble requirement through enrollment in a vocal ensemble, an instrumental ensemble, or chamber music as a guitarist.

**Background Check and Fingerprint** are required once a year for all music education majors.

Admission to sophomore courses in music education contingent upon fulfillment of the following requirements: minimum overall GPA of 2.25 and minimum GPA of 2.8 in all music courses (including a maximum of one ensemble per semester).

Admission to junior courses in music education contingent upon fulfillment of the following requirements: minimum overall GPA of 2.25 and minimum GPA of 2.8 in all music courses (including a maximum of one ensemble per semester).

Admission to student teaching contingent upon fulfillment of the following requirements: minimum overall GPA of 2.25, minimum GPA of 2.80 in all music courses (including a maximum of one ensemble per semester), an ACT composite score of 21 or better or total SAT score of 930 or better; completion of the functional piano requirement; and completion of MUS 352, MUS 354, MUS 358 (except for stringed instrument and guitar majors), and MUS 359.

Teacher licensure in Ohio and most other states requires completion of a baccalaureate teacher licensure program, passing a licensure examination, and recommendation by the accrediting institution. It is suggested students complete licensure exams (Professional Knowledge: Multi-Age/004 and OAE Music/032) prior to graduation. To be recommended for licensure, teacher candidates must also successfully complete the Educational Teacher Performance Assessment (edTPA) during their student teaching. Once completed, teacher candidates should apply for licensure. Details are available

in 202 McGuffey Hall. All costs associated with licensure are the responsibility of the applicant.

It is the responsibility of the student to see that all university requirements are fulfilled.

## Music Performance- Bachelor of Music

For information contact the Department of Music, 109 Presser Hall, 513-529-3014.

### Program Requirements: Voice

(81 semester hours minimum)

Code	Title	Credit Hours
<b>Required Core Courses</b>		
MUS 101 & MUS 102	Theory of Music I and Theory of Music II	6
MUS 151 & MUS 152	Theory of Music: Aural Skills I and Theory of Music: Aural Skills II	2
Select one of the following:		3
MUS 185	The Diverse Worlds of Music	
MUS 186	Global Popular Music	
Select the following:		
MUS 201 & MUS 202	Theory of Music III and Theory of Music IV	6
MUS 211 & MUS 212	History of Western Music and History of Western Music	6
MUS 221	Music Technologies	3
MUS 235 & MUS 236	Lyric Diction and Lyric Diction	4
MUS 251 & MUS 252	Theory of Music: Aural Skills III and Theory of Music: Aural Skills IV	2
MUS 301	Counterpoint	3
MUS 352	Conducting I	2
MUS 420	Vocal Coaching (Take twice)	1,1
MUS 451 & MUS 452	Advanced Aural Skills I and Advanced Aural Skills II	2
MUS 456	Vocal Pedagogy	2
MUS 494	Senior Recital	0
<b>Applied Music Requirement</b>		
Eight semesters of applied study in voice.		
MUS 144A	Applied Music Voice- FR	3,3
MUS 244A	Applied Music Voice- SO	3,3
MUS 344A	Applied Music Voice- JR	3,3
MUS 444A	Applied Music Voice- SR	3,3
<b>Large Ensemble Requirement</b>		
Select one of the following large choral ensembles each semester: <sup>1</sup>		8
MUS 100A	Collegiate Chorale	
MUS 100D	Choraliers	
MUS 100Q	Chamber Singers	
MUS 100B	Men's Glee Club	
<b>Opera Production Requirement</b>		

MUS 426/526	Opera Production	1
Select one of the following: <sup>1</sup>		1
MUS 425/525	Grand Night: The Great American Songbook	
MUS 426/526	Opera Production (additional registration)	
<b>Recital Attendance (seven semesters)</b>		
MUS 140	Recital Requirement	0
<b>Chamber Music Experience (one semester)</b>		
MUS 139	Chamber Music Experience	0
<b>Functional Piano Requirement</b>		
MUS 261	Functional Piano IV (or proficiency examination needed)	1
<b>Language Requirement</b>		
One year in French, German, or Italian, in addition to Lyric Diction; may be met by university proficiency exam. Two years of the language in high school usually fulfills the requirement.		
<b>Performance Requirement</b>		
Half recital, junior year		0
Full recital, senior year (register for MUS 494)		0
Total Credit Hours		78

<sup>1</sup> Entrance to each group is by audition.

Students must also complete all Global Miami Plan requirements. It is the responsibility of the student to see that all university requirements are fulfilled.

### Program Requirements: Instrumental

(73-81 semester hours minimum)

Code	Title	Credit Hours
<b>Required Core Courses</b>		
MUS 101 & MUS 102	Theory of Music I and Theory of Music II	6
MUS 151 & MUS 152	Theory of Music: Aural Skills I and Theory of Music: Aural Skills II	2
Select one of the following:		3
MUS 185	The Diverse Worlds of Music	
MUS 186	Global Popular Music	
Select the following:		
MUS 201 & MUS 202	Theory of Music III and Theory of Music IV	6
MUS 211 & MUS 212	History of Western Music and History of Western Music	6
MUS 221	Music Technologies	3
MUS 251 & MUS 252	Theory of Music: Aural Skills III and Theory of Music: Aural Skills IV	2
MUS 301	Counterpoint	3
MUS 352	Conducting I	2
MUS 451 & MUS 452	Advanced Aural Skills I and Advanced Aural Skills II	2
MUS 494	Senior Recital	0

**Applied Music Requirement**

Eight semesters of applied study in the student's primary instrument.

MUS 144	Applied Music	3,3
MUS 244	Applied Music	3,3
MUS 344	Applied Music	3,3
MUS 444	Applied Music	3,3

**Large Ensemble Requirement**

Select one of the following large instrumental ensemble, in one's primary performance medium, each semester:<sup>1</sup>

MUS 100E	Marching Band	8
MUS 100F	Symphony Band	
MUS 100C	Symphony Orchestra	
MUS 100G	Wind Ensemble	

**Recital Attendance (seven semesters)**

MUS 140	Recital Requirement	0
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**Chamber Music Experience (one semester)**

MUS 139	Chamber Music Experience	0
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**Functional Piano Requirement**

MUS 261	Functional Piano IV (or proficiency examination needed)	1
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**Performance Requirement**

Half recital, junior year	0
Full recital, senior year (register for MUS 494)	0

**Major Instrument Requirements**

Complete requirements for Piano, Strings, Percussion, or Guitar	2-10
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Total Credit Hours	70-78
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<sup>1</sup> Entrance to each group is by audition. Piano majors may fulfill the ensemble requirement through enrollment in a large instrumental ensemble, a large vocal ensemble, accompanying (MUS 110/MUS 120), or chamber music as a pianist. Guitar majors may fulfill the ensemble requirement through enrollment in a large vocal ensemble, a large instrumental ensemble, or chamber music as a guitarist.

**Major Instrument Requirements****Piano**

Code	Title	Credit Hours
Select two of the following:		2
MUS 110	Vocal Accompanying <sup>1</sup>	
MUS 120	Instrumental Accompanying <sup>1</sup>	
MUS 100I & MUS 100J	Chamber Music Strings and Chamber Music - Piano	
MUS 430	Piano Pedagogy <sup>2</sup>	2
MUS 457 & MUS 458	Piano Literature and Piano Literature <sup>3</sup>	6
Total Credit Hours		10

<sup>1</sup> Fulfills either accompanying requirement or large ensemble requirement in a single semester, but not both.

<sup>2</sup> MUS 430 offered even-numbered spring semesters

<sup>3</sup> MUS 457 offered even-numbered fall semesters; MUS 458 offered odd-numbered spring semesters

**Strings**

Code	Title	Credit Hours
MUS 433	String Instrument Pedagogy <sup>1</sup>	1
MUS 100I	Chamber Music Strings (take twice)	1,1
Total Credit Hours		3

<sup>1</sup> MUS 433 offered odd-numbered fall semesters

**Percussion**

Code	Title	Credit Hours
MUS 100M	Miami University Percussion Ensemble (take twice)	1,1
Total Credit Hours		2

**Guitar**

Code	Title	Credit Hours
MUS 454	Guitar Repertory and Pedagogy	2
Total Credit Hours		2

Students must also complete all Global Miami Plan requirements. It is the responsibility of the student to see that all university requirements are fulfilled.

**Program Requirements: Music Composition**

(85 semester hours minimum)

The Music Composition concentration offers instruction in the craft and art of composing music. It is designed to prepare students for freelance work as composers, arrangers, and copyists, or for graduate work. As an academic degree within the department of music, there is a strong emphasis on musical analysis and critical thought. The study of digital and analog technology for the creation of music is an important component of the degree as well.

Code	Title	Credit Hours
<b>Required Core Courses</b>		
MUS 101 & MUS 102	Theory of Music I and Theory of Music II	6
MUS 151 & MUS 152	Theory of Music: Aural Skills I and Theory of Music: Aural Skills II	2
Select one of the following:		3
MUS 185	The Diverse Worlds of Music	
MUS 186	Global Popular Music	
Select the following:		
MUS 201 & MUS 202	Theory of Music III and Theory of Music IV	6
MUS 211 & MUS 212	History of Western Music and History of Western Music	6
MUS 221	Music Technologies	3

MUS 251 & MUS 252	Theory of Music: Aural Skills III and Theory of Music: Aural Skills IV	2
MUS 301	Counterpoint	3
MUS 306	Advanced Electronic Music	3
MUS 352	Conducting I	2
MUS 370	Orchestration	3
MUS 451 & MUS 452	Advanced Aural Skills I and Advanced Aural Skills II	2
MUS 494	Senior Recital	0

#### Applied Music Requirement

Eight semesters of applied composition, plus four semesters of applied study in the student's primary instrument (includes two semesters at 142 level and two semesters at 242 level).<sup>1</sup>

MUS 171	Composition Seminar	3,3
MUS 244Z	Applied Music-Composition	3,3
MUS 344Z	Applied Music-Composition	3,3
MUS 444Z	Applied Music-Composition	3,3
MUS 142	Applied Music	2,2
MUS 242	Applied Music	2,2

#### Large Ensemble Requirement

Select one of the following large music ensembles, in one's primary performance medium, each semester:<sup>2</sup> 8

MUS 100A	Collegiate Chorale	
MUS 100C	Symphony Orchestra	
MUS 100E	Marching Band	
MUS 100F	Symphony Band	
MUS 100Q	Chamber Singers	
MUS 100D	Choraliers	
MUS 100B	Men's Glee Club	
MUS 100G	Wind Ensemble	

#### Recital Attendance (seven semesters)

MUS 140	Recital Requirement	0
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#### Chamber Music Experience (one semester)

MUS 139	Chamber Music Experience	0
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#### Functional Piano Requirement

MUS 261	Functional Piano IV (or proficiency examination needed)	1
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#### Performance Requirement

	Full recital in the senior year featuring the student's original compositions (register for MUS 494)	0
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Total Credit Hours		82
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<sup>1</sup> Student must achieve sophomore standing in major applied area; typically this occurs at the end of the second semester of applied study.

<sup>2</sup> Entrance to each group is by audition. Pianists may fulfill the ensemble requirement through enrollment in a large instrumental ensemble, a large vocal ensemble, accompanying (MUS 110/MUS 120), or chamber music as a pianist. Guitarists may fulfill the ensemble requirement through enrollment in a large vocal ensemble, a large instrumental ensemble, or chamber music as a guitarist.

Students must also complete all Global Miami Plan requirements. It is the responsibility of the student to see that all university requirements are fulfilled.

## Music- Bachelor of Arts in Music

The B.A. in Music degree is designed for qualified undergraduate students interested in a broad liberal arts experience, complementing a focus in the music discipline. The degree prepares students for careers that utilize the arts, writing, creativity, expression, and imagination across job sectors nationally and globally. It is also compatible with interests in multiple majors and minors. Students choose from one of three possible tracks: Performance, Music in Culture, or Music Technology.

For information, contact the Department of Music, 109 Presser Hall, 513-529-3014.

## Program Requirements

Complete the Global Miami Plan for Liberal Education or consult the Honors program requirements in the Bulletin according to your catalog year.

Complete Department of Music requirements.

## PERFORMANCE TRACK

(48 semester hours minimum)

Code	Title	Credit Hours
<b>Required Core Courses</b>		
MUS 101 & MUS 102	Theory of Music I and Theory of Music II	6
MUS 142	Applied Music <sup>1</sup>	2,2,2,2
MUS 185 or MUS 186	The Diverse Worlds of Music Global Popular Music	3
MUS 151 & MUS 152	Theory of Music: Aural Skills I and Theory of Music: Aural Skills II	2
MUS 201 & MUS 202	Theory of Music III and Theory of Music IV	6
MUS 211 & MUS 212	History of Western Music and History of Western Music	6
Select two of the following: 6		
MUS 204	Brazilian Culture Through Music and Film	
MUS 206	Tracking Sounds: A History of Film Music	
MUS 221	Music Technologies	
MUS 225	And the Beat Goes On. . . The History of Rock and Roll	
MUS 285	Introduction to African American Music	
MUS 287	Enter the Diva: Women in Music	
MUS 301	Counterpoint	
MUS 304	Electronic Music	
MUS 306	Advanced Electronic Music	
MUS 385	The Roots of Black Music: Blues, Gospel and Soul	

MUS 370	Orchestration	
MUS 386	The History and Development of Hip Hop Culture in America	
MUS 404	Wind Band Ensemble Literature	
MUS 405	Choral Literature	
MUS 415	You Say You Want a Revolution: Rock and Roll and the Cultural Revolution of the 1960s	
MUS 490	Special Topics in Music	
Select a minimum of six hours of electives in the Department of Music. Elective hours may not include applied music.		6
<b>Large Ensemble Requirement</b>		
Select one of the following large ensembles for four semesters in the primary performance medium: <sup>2</sup>		1,1,1,1
MUS 100A	Collegiate Chorale	
MUS 100C	Symphony Orchestra	
MUS 100E	Marching Band	
MUS 100F	Symphony Band	
MUS 100Q	Chamber Singers	
MUS 100D	Choraliers	
MUS 100B	Men's Glee Club	
MUS 100G	Wind Ensemble	
<b>Foreign Language Requirement</b>		
Two years are required <sup>3</sup>		
<b>Functional Piano Requirement</b>		
MUS 161	Functional Piano II (or proficiency exam)	1
<b>Recital Attendance (four semesters)</b>		
MUS 140	Recital Requirement	0
<b>Chamber Music Experience (one semester)</b>		
MUS 139	Chamber Music Experience	0
Total Credit Hours		48

<sup>1</sup> Four semesters of applied music in the primary performance medium are required. Study at the 200 level requires Sophomore standing.

<sup>2</sup> Entrance to each group is by audition. Piano majors may fulfill the large ensemble requirement through enrollment in a large vocal ensemble, a large instrumental ensemble, accompanying (MUS 110/MUS 120), or chamber music as a pianist. Guitar majors may fulfill the large ensemble requirement through enrollment in a large vocal ensemble, a large instrumental ensemble, or chamber music as a guitarist.

<sup>3</sup> Completion of 202 in any foreign language offered at Miami University. Requirement may be met by a university proficiency exam.

## MUSIC IN CULTURE TRACK

(47 semester hours minimum)

Code	Title	Credit Hours
<b>Required Core Courses</b>		
MUS 101 & MUS 102	Theory of Music I and Theory of Music II	6

MUS 185 or MUS 186	The Diverse Worlds of Music Global Popular Music	3
MUS 151 & MUS 152	Theory of Music: Aural Skills I and Theory of Music: Aural Skills II	2
MUS 201 & MUS 202	Theory of Music III and Theory of Music IV	6
MUS 211 & MUS 212	History of Western Music and History of Western Music	6
Select three of the following:		9
MUS 204	Brazilian Culture Through Music and Film	
MUS 206	Tracking Sounds: A History of Film Music	
MUS 225	And the Beat Goes On... The History of Rock and Roll	
MUS 285	Introduction to African American Music	
MUS 287	Enter the Diva: Women in Music	
MUS 301	Counterpoint	
MUS 304	Electronic Music	
MUS 306	Advanced Electronic Music	
MUS 385	The Roots of Black Music: Blues, Gospel and Soul	
MUS 386	The History and Development of Hip Hop Culture in America	
MUS 415	You Say You Want a Revolution: Rock and Roll and the Cultural Revolution of the 1960s	
MUS 490	Special Topics in Music	
Select a minimum of six hours of electives outside the Department of Music. Courses must be at the 200 level or above. Select from the following programs: ATH, ART, CLS, GIC, HST, MAC, REL, SOC, THE.		6

### Music Electives

Select six hours of electives in the Department of Music. Elective hours may not include applied music. 6

### Ensemble Requirement

Two semesters of any ensemble are required <sup>1</sup>		1,1
MUS 100A	Collegiate Chorale	
MUS 100C	Symphony Orchestra	
MUS 100E	Marching Band	
MUS 100F	Symphony Band	
MUS 100K	Jazz Ensemble	
MUS 100Q	Chamber Singers	
MUS 100D	Choraliers	
MUS 100B	Men's Glee Club	
MUS 100G	Wind Ensemble	
MUS 100N	Steel Band	
MUS 100Z	Laptop Ensemble	

### Foreign Language Requirement

Two years are required<sup>2</sup>

### Functional Piano Requirement

MUS 161	Functional Piano II (or proficiency exam)	1
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### Recital Attendance (four semesters)

MUS 140	Recital Requirement	0
<b>Chamber Music Experience (one semester)</b>		
MUS 139	Chamber Music Experience	0
Total Credit Hours		47

<sup>1</sup> Entrance to each group is by audition.

<sup>2</sup> Completion of 202 in any foreign language offered at Miami University. Requirement may be met by a university proficiency exam.

## MUSIC TECHNOLOGY TRACK

(47 semester hours minimum)

Code	Title	Credit Hours
<b>Required Core Courses</b>		
MUS 101 & MUS 102	Theory of Music I and Theory of Music II	6
MUS 185 or MUS 186	The Diverse Worlds of Music Global Popular Music	3
MUS 151 & MUS 152	Theory of Music: Aural Skills I and Theory of Music: Aural Skills II	2
MUS 201 & MUS 202	Theory of Music III and Theory of Music IV	6
MUS 211 & MUS 212	History of Western Music and History of Western Music	6
<b>Music Technology Courses</b>		
Take these four courses:		12
MUS 221	Music Technologies	
MUS 304	Electronic Music	
MUS 308	Audio Recording Techniques	
MUS 381	Music for Games	
Also take three hours of any other IMS course at the 200 level or above.		3
<b>Music Electives</b>		
Select a minimum of six hours of electives in the Department of Music. Elective hours may not include applied music.		6
<b>Ensemble Requirement</b>		
Two semesters of Laptop Ensemble are required.		1,1
MUS 100Z	Laptop Ensemble	
<b>Foreign Language Requirement</b>		
Two years are required <sup>1</sup>		
<b>Functional Piano Requirement</b>		
MUS 161	Functional Piano II (or proficiency exam)	1
<b>Recital Attendance (four semesters)</b>		
MUS 140	Recital Requirement	0
<b>Chamber Music Experience (one semester)</b>		
MUS 139	Chamber Music Experience	0
Total Credit Hours		47

<sup>1</sup> Completion of 202 in any foreign language offered at Miami University. Requirement may be met by a university proficiency exam.

It is the responsibility of the student to check to see that all university requirements have been fulfilled.

## Department of Theatre

- Theatre: Bachelor of Arts in Theatre

## Theatre - Bachelor of Arts in Theatre

For information, contact the Department of Theatre, 119 Center for Performing Arts, 513-529-3053. The department offers a Bachelor of Arts in Theatre. The Master of Arts in Theatre is described in the Graduate Fields of Study section of this *Bulletin*.

The Bachelor of Arts in Theatre is intended for students who wish to pursue the study of theatre situated within a liberal arts tradition. The undergraduate program is committed to developing creative thinkers with artistic vision through a program that emphasizes the interplay between critical thinking and artistic practice. All courses must be taken for a grade.

## Special Admission Requirements: Theatre Majors

In addition to the general university application, you should complete a separate departmental information form and arrange an audition/interview with the department. Special admission on the basis of outstanding talent is available. You can submit a department application and schedule an on-campus interview at [www.MiamiOH.edu/theatre](http://www.MiamiOH.edu/theatre), or call the department office at 513-529-3053. Interview materials can also be submitted through the mail or electronically.

At the interview you must present two different examples of creative work you have done, whether in theatre or other related disciplines. These may include: stories, plays, creative writing, a monologue or song, pictures of three-dimensional art (ceramics, sculpture, mixed media), two-dimensional art you've created (drawing, painting, photography), biographies of characters you've played on the stage, character journals or process journals you've kept, photos of set pieces, props, or costumes you've built, set sketches, models, renderings, drafting, or mechanical drawing (hand or CAD), costume sketches, renderings, light plots and/or images of lighting you've designed, choreography notations, parts of prompt book, sound recordings of original compositions or effect manipulation, essays or research papers on theatre or drama, or any class project relating to theatre, digital movies you've made, web pages you've built. At the interview, theatre faculty will discuss your interest in theatre.

## Program Requirements

(45 semester hours)

**Please note that courses listed in more than one category may only be used to fulfill ONE requirement.**

Code	Title	Credit Hours
<b>Core Courses</b>		
THE 101	Introduction to Theatre: Drama and Analysis	3

THE 107	The Theatre Major: an Introduction to Theatre Resources and Skills	1
THE 131	Principles of Acting	3
THE 142	Theatre Organization and Communication	1
THE 251	Visual Communication for the Theatre	3
THE 291	World Stages	3
THE 292	World Stages	3
THE 301	Professional Practice in Theatre	1
THE 421	Fundamentals of Directing	3
THE 422	Politics and Ethics of Theatre and Performance: Representation, Race, Gender, Class and Sexuality	3

**Theatre Technology**

Select one theatre technology course: 3

THE 253	Costume Fundamentals
THE 257	Stagecraft and Theatre Technologies
THE 258	Scene Painting Fundamentals

**Theatre Skills**

Select nine semester hours of the following: 9

THE 151	Stage Makeup
THE 210	The Theatrical Toolbox (maximum 3)
THE 226	Acting Studio: Foundations
THE 227	Acting Studio: Integrating Text
THE 238	Playwriting Through Improvisation
THE 253	Costume Fundamentals
THE 257	Stagecraft and Theatre Technologies
THE 258	Scene Painting Fundamentals
THE 340	Internship
THE 342	Stage Management
THE 352	Scenic Design
THE 353	Costume Design
THE 354	Lighting Design
THE 416	Dramaturgy
THE 418	Playwriting
THE 432	Acting Shakespeare
THE 437/537	Auditions
THE 439/539	Special Techniques for the Actor (maximum 6)
THE 441/541	Methods and Styles of Play Directing
THE 450/550	Special Topics in Theatre Design and Technology
THE 455	Tutorial in Advanced Problems

**Theatre Studies**

Select three semester hours of the following: 3

THE 393	Topics in Intercultural Perspectives and Global Theatre and Performance
THE 394	Topics in Dramatic Literature and Cultural Performance
THE 395	The Musical in American Culture
THE 398	London Theatre
THE 423	Topics in Theatre and Performance Studies

THE 424	Topics in Applied Theatre, Practice, and Pedagogy
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**Production Practicum**

Select six experiences of production practicum of the following; limit of three in any one area to count toward degree: 6

THE 200	Production and Performance Practicum (maximum 8)
THE 400	Advanced Production and Performance Practicum (maximum 4)

Total Credit Hours 45

## Armstrong Institute for Interactive Media Studies

The Armstrong Institute for Interactive Media Studies (AIMS) empowers students, faculty, and industry to innovate through digital disruption and emerging technology. AIMS is a "horizontal program" that crosses all of Miami University, with faculty, students, and teaching space in all of the Oxford divisions: Arts & Science, Business, Creative Arts, Education, Engineering, and Libraries. AIMS offers a major and three minors, including a game minor, and a number of graduate offerings.

AIMS emphasizes cross-functional knowledge and places a heavy emphasis on making. Students in AIMS develop depth in areas as diverse as web and app design/development, interaction design, user experience design, social media, digital marketing, design thinking, visualization, game design and development, games and learning, digital and algorithmic art, robotics, mechatronics, mobile development, and digital entrepreneurship.

Students are admitted to the major upon successful completion of the following requirements:

- Incoming students can and should declare IMS as their major when they apply to Miami. There are no admission requirements beyond acceptance to Miami.
- For existing students, a 3.00 GPA and portfolio submission. There are a limited number of slots for existing students; acceptance into the AIMS academic programs is competitive and based on a number of criteria beyond GPA.
- Interactive Media Studies - Bachelor of Arts in Interactive Media Studies
- Digital Innovation Minor
- Interactive Media Studies Minor
- Games + Simulation Minor

## Interactive Media Studies- Bachelor of Arts in Interactive Media Studies

The BA in Interactive Media Studies (IMS) is an interdisciplinary degree designed to provide depth in theory and practice of interactive & digital design, development, business, innovation, and digital disruption.

Grounded in Miami University's tradition of liberal education, the BA in IMS represents the liberal arts of the 21st Century, providing a foundation in information and digital literacy supporting the study of digital startups, multimedia authorship/critical theory, digital & social media marketing, web & app development, virtual/augmented reality, game design/development, user-experience design, and more.

This foundation is then complemented with a set of electives providing depth in a selected area of interest, as well as a series of courses designed around working with external partners and building a portfolio. Admittance into the IMS major is competitive. Admission details can be found at <http://miamioh.edu/cca/aims/admission>.

The BA in IMS has four foundational pillars:

- Design
- Business
- Technology
- Collaboration & Making

These foundations provide the context for a set of four or more electives chosen to develop expertise and depth in one or more areas of IMS, all of which is tied together in the capstone client-based consulting agency within IMS as well as the IMS Thesis class.

For information, contact the Interactive Media Studies Program, 201 Laws Hall, 513-529-1637, or see [miamioh.edu/cca/aims/](http://miamioh.edu/cca/aims/).

### Program Requirements

## IMS Major - Digital Concentration (64 credit hours)

Code	Title	Credit Hours
<b>Introduction</b>		
IMS 101	Introduction to IMS	1
<b>Foundation: Design</b>		
IMS 254	Design Principles Applied	3
IMS 259	Art and Digital Tools I	3
IMS 354	Intermed Interaction Design	3
<b>Foundation: Business</b>		
IMS 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds	3
IMS 414	Web and Social Media Analytics	3
IMS 315	User Experience Research	3
IMS 418	Social Media Marketing and Online Community Management	3
or IMS 419	Digital Branding	
<b>Foundation: Technology</b>		
IMS 211	Introduction to Game Studies	3
or IMS 212	Introduction to Game Design	
IMS 222	Introduction to Interaction Design and Development	3
IMS 322	Intermediate Interaction Design and Development	3
<b>Advanced Web Course (Pick One)</b>		
IMS 351	Introduction to Mobile Application Development	3

IMS 422	Advanced Interaction Design and Development	
CSE 251	Introduction to Game Programming	
<b>Foundation: Collaboration</b>		
IMS 228	Collaborative Laboratory 1	2
IMS 229	Collaborative Laboratory 2	2
IMS 328	Collaborative Laboratory 3	2
IMS 340	Internship <small>Typically taken in Summer</small>	2
IMS 355	Principles and Practices of Managing Interactive Projects	3
or IMS 421	Digital Product Management	
<b>Integration</b>		
<b>Digital Concentration Focus Courses (12 credits) <sup>1</sup></b>		
Focus 1		3
Focus 2		3
Focus 3		3
Focus 4		3
IMS 452	Senior Degree Project	3
IMS 440	Interactive Media Studies Practicum	4
Total Credit Hours		64

<sup>1</sup> Digital concentration focus electives are any IMS class not counted for another requirement or could be any class in the table below. They are ideally determined in collaboration with an advisor and may not be applied to any other IMS degree requirement.

<sup>2</sup> We strongly recommend students take IMS 201 or IMS 203 to satisfy their Miami Plan Humanities requirement.

## IMS Major - Applied Concentration (64 credit hours minimum; requires second major)

Code	Title	Credit Hours
<b>Introduction</b>		
IMS 101	Introduction to IMS	1
<b>Foundation: Design</b>		
IMS 254	Design Principles Applied	3
IMS 259	Art and Digital Tools I	3
IMS 354	Intermed Interaction Design	3
<b>Foundation: Business</b>		
IMS 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds <small>Strongly Recommended</small>	3
or IMS 407	Interactive Business Communication	
IMS 414	Web and Social Media Analytics	3
IMS 315	User Experience Research	3
IMS 418	Social Media Marketing and Online Community Management	3
or IMS 419	Digital Branding	
<b>Foundation: Technology</b>		
IMS 222	Introduction to Interaction Design and Development	3

IMS 322	Intermediate Interaction Design and Development	3
Advanced Web Course (Pick One)		3
IMS 422	Advanced Interaction Design and Development	
CSE 251	Introduction to Game Programming	
IMS 351	Introduction to Mobile Application Development	
<b>Foundation: Collaboration</b>		
IMS 228	Collaborative Laboratory 1	2
IMS 229	Collaborative Laboratory 2	2
IMS 340	Internship <small>Typically taken in Summer</small>	2
IMS 355	Principles and Practices of Managing Interactive Projects	3
or IMS 421	Digital Product Management	
<b>Applied Expertise (21 Credit hours in another major) <sup>2</sup></b>		21
<b>Integration</b>		
IMS 452	Senior Degree Project	3-4
or IMS 440	Interactive Media Studies Practicum	
Total Credit Hours		64-65

<sup>2</sup> Applied expertise courses can be any set of courses, totaling a minimum of 21 hours, that are in a second Major. Courses used for this requirement may not be applied to any other IMS degree requirement.

## Digital Concentration Focus Courses

IMS majors who choose the Digital Concentration must complete four "Digital Concentration Focus Courses." **These can be any IMS courses not used for other IMS requirements. We encourage students to take IMS classes that help develop specific deep expertise.** If you want to complement that expertise with additional domain expertise offered by another department, the list of acceptable classes is provided below. Some of these courses are cross-listed with IMS. Please note that IMS students are not guaranteed to get into any of these courses offered by other departments. These courses may have prerequisites or enrollment restrictions. Students interested in taking any of these courses should first determine their enrollment eligibility and if needed, contact the department offering the course about their force-add process.

Code	Title	Credit Hours
ARC 404Y	Mind and Medium	3
ART 111	Design and Composition	3
ART 251	Typography	3
ART 256	Design, Perception & Audience	3
ART 343	Fundamentals of Communication Design	3
ART 344	Visual Identity Design	3
ART 345	Communication Design Prototyping	3
ART 353	The Business of Design	3
ART 453	Highwire Brand Studio	4
ART 496	Seminar on Theory for Visual Artists	3
CCA 111	Innovation, Creativity and Design Thinking	3

CMS 101	The Smartphone and Society	3
CMS 301	Comparative Approaches to Media Studies	3
CMS 401	Senior Seminar in Comparative Media Studies	3
CSE 174	Fundamentals of Programming and Problem Solving	3
CSE 201	Introduction to Software Engineering	3
CSE 211	Software Construction	3
CSE 212	Software Engineering for User Interface and User Experience Design	3
CSE 251	Introduction to Game Programming	3
CSE 252	Web Application Programming	3
CSE 271	Object-Oriented Programming	3
CSE 273	Optimization Modeling	3
CSE 274	Data Abstraction and Data Structures	3
CSE 278	Systems I: Introduction to Systems Programming	3
CSE 322	Software Requirements	3
EDL 204	Sociocultural Studies in Education	3
EDL 232	Introduction to Community-Based Leadership	3
EDP 272	Introduction to Disability Studies	3
EDP 279	Technology + Media Literacy and Learning	3
EDP 324	Research and Applied Writing Across the Disciplines	3
ENG 171	Humanities and Technology	3
ENG 213	Writing for Media	3
ENG 407	Interactive Business Communication	3
ENG 411	Visual Rhetoric	3
ENG 412	Print and Digital Editing	3
ENG 416	Writing for Global Audiences	3
ENG 424	Ethics and Digital Media	3
ENG 426	Developing & Publishing Digital Books	3
ESP 201	Introduction to Entrepreneurship and Business Models	3
ESP 251	Entrepreneurial Value Creation and Capture	3
ESP 252	Entrepreneurial Mindset: Creativity and Organization	3
ESP 321	Startup Entrepreneurship	3
ESP 331	Social Entrepreneurship	3
ESP 341	Corporate Entrepreneurship	3
ESP 351	Creativity in Entrepreneurship	3
ESP 401	Entrepreneurship: New Ventures	3
ESP 461	Entrepreneurial Consulting	3
FSW 295	Research and Evaluation Methods	3
ISA 245	Database Systems and Data Warehousing	3
ISA 281	Concepts in Business Programming	3
ISA 301	Business Data Communications and Security	3

ISA 305	Information Technology, Risk Management, Security and Audit	3
ISA 401	Business Intelligence and Data Visualization	3
ISA 403	Building Web and Mobile Business Applications	3
ISA 405	Information Security	3
ISA 414	Managing Big Data	3
ISA 481	Topics in Information Systems	3 to 4
ISA 491	Introduction to Data Mining in Business	3
MAC 211	Introduction to Video Production	4
MAC 325	Social Media Cultures	3
MKT 301	Strategic Thinking and Decision-Making in Marketing	3
MKT 335	Analytical Research and Reasoning for Marketers	3
MKT 419	Digital Branding	3
MKT 435	Building and Managing Strong Brands	3
MKT 442	Highwire Brand Studio	4-8
MME 375	Human Robot Interaction	3
MUS 221	Music Technologies	3
MUS 304	Electronic Music	3
MUS 306	Advanced Electronic Music	3
STA 261	Statistics	4
STA 301	Applied Statistics	3
STA 333	Nonparametric Statistics	3
STA 363	Introduction to Statistical Modeling	3
STA 402	Statistical Programming	3
STA 404	Advanced Data Visualization	3
STA 432	Survey Sampling in Business	3
STA 475	Data Analysis Practicum	3

## Fashion Co-Major

For information, please contact Prof. Della Reams, 226 Boyd Hall or [dreams@miamioh.edu](mailto:dreams@miamioh.edu), or Prof. Leslie Stoel, 3042 FSB/224 Boyd Hall or [stoelld@miamioh.edu](mailto:stoelld@miamioh.edu).

The co-major in Fashion emphasizes creativity and experimentation and offers students the opportunity to develop basic skills in product-making, fashion business decision-making, historical contexts, materials, design foundations, and the opportunity to build skill depth in one of three option areas: fashion corporate business, fashion design, or fashion entrepreneurship.

Admission to the co-major is selective; students must have a high school diploma to be considered for admission.

## Program Requirements

37-41 semester hours

Code	Title	Credit Hours
<b>Core Requirements</b>		
Basics		3
FAS 101	Introduction to the Fashion Industry	

Making - select 3 credit hours from the following:	3
ART 165	Beginning Metals
ART 264	Jewelry Design and Metals I
FAS 150	Fashion Sprint Special Topics (repeatable)
FAS 201	Apparel Construction Techniques
FAS 211	Draping for Fashion Design
FAS 212	Flat Pattern Drafting for Fashion Design
THE 450	Special Topics in Theatre Design and Technology
Fashion Business - select from the following:	3
FAS 451	Fashion Retail Planning and Buying
FAS 463	Fashion Trend Forecasting
MKT 291	Principles of Marketing
MKT 461	Principles of Retailing
History - select from the following:	3
ART 189	History of Western Dress
ART 233	Global Perspectives on Dress
FAS 281	Contemporary Fashion History of 20th-21st Century
Materials	3
FAS 221	Textiles for the Fashion Industry
Design Foundations	3
FAS 241	The Elements and Principles of Fashion Design, including Color Theory
Electives - select 3 credit hours from the following:	3
ART 104	Problem Solving
ART 106	Introduction to Figure Drawing
ART 121	Observational Drawing
ART/IMS 259	Art and Digital Tools I
ART 335	Arts of West Africa
ART 350	Illustration
FAS 332	Fashion Illustration
FAS 340	Internship
FAS 360	Fashion and Digital Tools
FAS 450	Advanced Special Topics in Fashion
IMS 319	Foundations in Digital 3-D Modeling and Animation
STC 259	Introduction to Strategic Communication and Public Relations
THE 353	Costume Design
Or any class in the co-major core not yet taken	

**Select one track** 16-20

FASHION CORPORATE BUSINESS TRACK

Select one option

Option 1: Business Prime (9CH; not open to FSB majors)

BUS 301 Basics of Business I

BUS 302 Basics of Business II

BUS 303 Business Process Integration

Option 2: General Business (9CH)

Select three from the following:

ACC 211	Accounting for the Non-Business Major
ACC 221	Introduction to Financial Accounting
ECO 201	Principles of Microeconomics
FIN 211	Financial Capital
ISA 211	Information Technology and Data Driven Decision Making in Business
MGT 111	Introduction to Business
MGT 211	Introduction to Management for Non-business Majors
MGT 291	Introduction to Management & Leadership

#### Fashion Business Electives

Select 9 credit hours of courses listed in Fashion Co-Major core (Fashion Business section) to complete Fashion Corporate Business track.

#### FASHION DESIGN TRACK

##### Making (6CH)

FAS 211	Draping for Fashion Design
FAS 212	Flat Pattern Drafting for Fashion Design

##### Studio (8CH)

FAS 341	Junior Fashion Studio
FAS 441	Senior Fashion Studio
FAS 442	Fashion Portfolio

##### Design Techniques (6CH)

FAS 332	Fashion Illustration
FAS 360	Fashion and Digital Tools

#### FASHION ENTREPRENEURSHIP TRACK (not open to Entrepreneurship majors or minors)

##### Fashion Entrepreneurship Core (10CH)

ESP 101	Entrepreneurship Foundations
ESP 201	Introduction to Entrepreneurship and Business Models
ESP 251	Entrepreneurial Value Creation and Capture
ESP 252	Entrepreneurial Mindset: Creativity and Organization

##### Fashion Entrepreneurship Elective (3CH)

Select from the following:

ESP 321	Startup Entrepreneurship
ESP 331	Social Entrepreneurship
ESP 351	Creativity in Entrepreneurship

##### Arts Management Elective (3CH)

Select at least 3 credit hours from the following:

CCA 306	Arts Entrepreneurship
CCA 307	Arts Venture Creation
CCA 340	Internship
CCA 401	Strategic Planning for the Arts

Total Credit Hours

37-41

## Creative Arts Minors

A minor is a specific program to be taken along with a major to complement your skills and increase your career opportunities. Taking

a minor is optional. Students may use a minor in lieu of a Thematic Sequence **only** if the minor includes at least nine credit hours outside the department of major. For further restrictions, see the Thematic Sequence subheading in the Liberal Education at Miami section of this *Bulletin*.

A minimum overall 2.00 GPA is required for courses in a minor and all courses must be taken for a letter grade. Additional requirements and qualifications for minors are included in the Other Requirements section. Students who complete a minor receive a notation on their final transcript.

Please contact the appropriate department to be assigned an advisor and to obtain a list of the most recent requirements.

- 2D Fine Arts
- Architecture and Interior Design Studies
- Art and Architecture History
- Arts Entrepreneurship
- Arts Management
- Art Therapy
- Communication Design
- Dance
- Digital Innovation
- Fashion
- Games + Simulation
- Interactive Media Studies
- Museums and Society
- Music Composition
- Music Performance
- Music Theatre
- Photography
- Theatre Arts
- Urban Design

## 2D Fine Arts Minor

The 2D Fine Arts minor provides studio access and focus to the university population other than majors in the Department of Art. Students will learn to creatively solve problems using design concepts, materials, and processes in one or more of the following concentrations: Painting, Photography, and Printmaking.

The minor explores art processes, developing concepts and techniques relevant to the materials, methods, and critically informed aesthetic thinking inherent in making visual art in two dimensions. The minor encourages breadth of exploration balanced with a requirement for a two-course focus in one concentration.

A minimum 2.50 GPA is required for admittance to the minor and is required for all courses in the minor. Students planning to take this minor should consult the Department of Art.

For information, please contact the Department of Art, 124 Art Building, 513-529-2900.

## Program Requirements

(18 hours minimum)

Code	Title	Credit Hours
Select one of the following:		3-4
ART 111	Design and Composition	
ARC 113 & ARC 114	Methods of Presentation, Representation and Re-Presentation and Methods of Presentation, Representation and Re-Presentation	
Select the following:		
ART 121	Observational Drawing	3
Select 12 hours from the following: <sup>1</sup>		12
ART 221	Intermediate Drawing 1	
Painting:		
ART 231	Painting I	
ART 331	Painting II	
ART 332	Painting III	
Printmaking:		
ART 241	Printmaking I	
ART 341	Printmaking II	
ART 342	Printmaking III	
Photography:		
ART 255	Introduction to Digital Imaging	
ART 257	Photography	
ART 357	Photography II	
ART 358	Photography III	
Total Credit Hours		18-19

<sup>1</sup> You must take at least two courses in a Painting, Printmaking, or Photography track to include a 200- and a 300-level course. It is possible to complete two different tracks.

## 2-D Fine Arts Minor (for majors in Art other than Studio)

The 2D Fine Arts minor for Art Majors is intended for students in the Department of Art who are not studio art majors; this includes students in Art Education, Art and Architecture History, and Communication Design. The minor explores art processes, developing concepts and techniques relevant to the materials, methods, and critically informed aesthetic thinking inherent in making visual art in two dimensions. The minor encourages breadth of exploration balanced with a requirement for a two-course focus in one concentration: painting, photography, or printmaking.

A minimum 2.50 GPA is required for admittance to the minor and is required for all courses in the minor. Students planning to take this minor should consult the Department of Art.

For information, please contact the Department of Art, 124 Art Building, 513-529-2900.

## Program Requirements

(18 hours minimum)

Code	Title	Credit Hours
Select the following:		
ART 111	Design and Composition	3

ART 121	Observational Drawing	3
Select one of the following:		3
ART 231	Painting I	
ART 241	Printmaking I	
ART 255	Introduction to Digital Imaging	
ART 257	Photography	
Select nine hours from the list below (at least 6 of the 9 hours in a Painting, Printmaking or Photography track): <sup>1</sup>		9
Painting:		
ART 331	Painting II	
ART 332	Painting III	
ART 431	Painting IV	
Printmaking:		
ART 341	Printmaking II	
ART 342	Printmaking III	
ART 441	Printmaking IV	
Photography:		
ART 357	Photography II	
ART 358	Photography III	
ART 457	Photography IV	
Total Credit Hours		18

<sup>1</sup> A meeting with the 2D Fine Arts advisor is necessary before beginning a track. In all cases, only nine hours can count for both the minor and the student's major.

## Architecture and Interior Design Studies Minor

The minor in Architecture and Interior Design Studies emphasizes design theory, practice, and technology related to the built environment, offering the opportunity to develop basic skills in design thinking and making, understand architectural and/or interior design history, investigate contemporary architectural theory, explore media in design processes, and learn about building technologies and their applications in diverse environmental contexts. A minimum 2.50 GPA is required for admission to the minor. Minimally, the program of study will include 18 semester hours completed with a 2.50 GPA. Courses must be taken for a grade (not credit/no-credit). Not open to Architecture or Interior Design majors.

## Program Requirements

A minimum of 18 credit hours is required for the minor.

Code	Title	Credit Hours
<b>Level One: Introductory Courses</b> <sup>1</sup>		6-9
Select 6-9 CH from the following courselists at the 100 or 200 level.		
<b>Level Two: Upper-Level Courses</b> <sup>1</sup>		9-12
Option 1: Select 9-12 CH from the following courselists at the 300 or 400 level.		
Option 2: Over-the-Rhine Residency Program (fall semester only)		
Total Credit Hours		18

<sup>1</sup> Note that at least one course (either introductory or upper-level) is required in each of the following three content areas.

## Content Areas

### History & Theory

Code	Title	Credit Hours
ARC 107	Global Design	3
ARC 188	Ideas in Architecture	3
ARC 221	History of Architecture I	3
ARC 222	History of Architecture II	3
ARC 225	Design: Behavior, Perception, Aesthetics	3
ARC 321	History of Interiors	3
ARC 405	Seminars (see course list for special topics offerings)	3
ARC 405V	Film & Mixed+MultiMedia	3
ARC 424	Seminar on Modern Architecture in Latin America	3
ARC 426	Architecture and Society	3
ARC 435	Theory and History of Landscape Architecture	3

### Design & Media

Code	Title	Credit Hours
ARC 105	Introduction to Architecture	3
ARC 309	Furniture Design and Construction	3
ARC 404	Seminars (see course list for special topics offerings)	3
ARC 405V	Film & Mixed+MultiMedia	3

### Technology

Code	Title	Credit Hours
ARC 212	Principles of Environmental Systems	3
ARC 406	Seminars (see course list for special topics offerings)	3
ARC 410	Statics & Strengths of Materials	3
ARC 413	Environmental Systems I	3
ARC 414	Environmental Systems II	3
ARC 417	Architectural Materials	3
ARC 418	Construction Methods	3
ARC 419	Materials of Interior Design (pre-req ARC 417 or permission of instructor)	3
ARC 444	Professional Practice in Interior Design (4th year standing or permission of instructor)	3

**Note: Study-abroad/study-away workshops (ARC399/499, typically 6 CH) may count in any of the above content areas with advisor approval.**

### Over-the-Rhine Residency Option (Fall semester only)

The Over-the-Rhine Residency Program provides the opportunity to participate in a semester-long residential immersion program in the Over-the-Rhine or Price Hill communities. Junior and senior students

interested in serving the community through an alternative classroom experience are encouraged to apply.

Code	Title	Credit Hours
ARC 405	Seminars (see course list for special topics offerings)	1-3
ARC 427	The American City Since 1940	3
EDL 377	Independent Studies	3
<b>Design/Build Studio</b>		<b>6</b>
ARC 301	Architecture Studio	
ARC 302	Architecture Studio	
ARC 401	Architecture Studio	
ARC 402C	Senior Studio Capstone Experience	

## Art and Architecture History Minor

A minor in art and architecture history establishes a foundation for further study in these areas and provides a better understanding of architecture, art, and visual culture in historical contexts and the contemporary world. Knowledge in these areas is a valuable complement to any major. But it is also the critical thinking skills that get developed as a result of the study of the history of art and architecture that are crucial to a student's academic and career goals.

To sign up for the minor, please contact Andrew Casper at [casperar@miamiOH.edu](mailto:casperar@miamiOH.edu).

For information, contact the Department of Art, 124 Art Building, 513-529-2900, or the Department of Architecture + Interior Design, 101 Alumni Hall, 513-529-7210.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select two of the following Introductory Courses:		6
ARC 107	Global Design	
ARC 221	History of Architecture I	
ARC 222	History of Architecture II	
ART 162	Arts of Africa, Oceania and Native America	
ART 187	History of Western Art: Prehistoric-Gothic	
ART 188	History of Western Art: Renaissance - Modern	
ART 286	History of Asian Art, China, Korea, and Japan	
Select three of the following upper-division courses:		9
ARC 221	History of Architecture I	
ARC 222	History of Architecture II	
ARC 321	History of Interiors	
ARC 405	Seminars	
ARC 426	Architecture and Society	
ARC 427	The American City Since 1940	

ARC 451	Contemporary Architectural Theory and Practice	
ART 276	Introduction to the Art of the Black Diaspora	
ART 309	The Arts of African Peoples	
ART 311	Chinese Painting History	
ART 314	The Renaissance in Italy	
ART 315	High Renaissance and Mannerism	
ART 316	Baroque Art in Europe	
ART 317	The Arts of Colonial Latin America	
ART 326	Modern & Contemporary East Asian Art	
ART 335	Arts of West Africa	
ART 382	Greek and Roman Sculpture	
ART 383	Greek and Roman Painting	
ART 384	Greek and Roman Decorative Arts	
ART 386	Art of the Weimar Republic	
ART 389	The History of Photography	
ART 391	Field Study in Art and Architecture History	
ART 406	Art Since 1980	
ART 420	Special Lecture Topics in Art History	
ART 486	Art of the Late 19th Century	
ART 487	Art of the Early 20th Century	
ART 488	Art in the Age of Revolution: 1789-1848	
ART 489	Postwar to Postmodern, 1945-1980	
CLS 332	Classical Mythology and the Arts	
Select one of the following seminar courses:		3
ART 480	Seminar in Art History	
ART 498	History and Methods in Art and Architectural History (Capstone Seminar)	
Total Credit Hours		18

## Arts Entrepreneurship Minor

Artists and arts organizations operate in an increasingly complex political, social, and economic environment creating a need for entrepreneurial thinking in the arts. The arts entrepreneurship interdisciplinary minor exposes students to entrepreneurial thinking skills that can be applied to creating a new arts venture, adding value to an existing arts organization, and developing opportunities for the individual artist. Students complete the minor by taking the FSB entrepreneurship core curriculum and specialized courses in arts entrepreneurship.

The arts entrepreneurship minor is open to all university students and will fulfill the Thematic Sequence requirement for most majors.

For information, contact Todd Stuart, Director of Arts Management, 228 Center for Performing Arts, 513-529-2371.

## Program Requirements

(19 credit hours)

Code	Title	Credit Hours
CCA 111	Innovation, Creativity and Design Thinking	3
ESP 101	Entrepreneurship Foundations	1
ESP 201	Introduction to Entrepreneurship and Business Models	3
ESP 251	Entrepreneurial Value Creation and Capture	3
ESP 252	Entrepreneurial Mindset: Creativity and Organization	3
CCA 306	Arts Entrepreneurship	1.5
CCA 307	Arts Venture Creation	1.5
CCA 401	Strategic Planning for the Arts	3
Total Credit Hours		19

## Arts Management Minor

For information, contact Todd Stuart, 228 Center for Performing Arts, [stuartt@miamioh.edu](mailto:stuartt@miamioh.edu), 513-529-2371. A high school diploma is required for admission to the Arts Management minor.

Given the challenges for artists and arts and cultural organizations to survive in an increasingly competitive business environment, the need for educated managers is increasing. The practice of Arts Management is a synthesis of art, creativity, innovation, management, and entrepreneurship. The minor will prepare students to balance aesthetic understanding with specialized skills in generating income, managing boards, stimulating public access, and sustaining the mission and vision of organizations whose primary purpose is the delivery, presentation, and preservation of arts and culture. These skills are applicable to arts councils, museums, community art centers, galleries, orchestras, theatres, and creative enterprises.

A minimum overall 2.00 GPA is required for courses in a minor. All courses, except the internship, must be taken for a grade (not credit/no-credit).

## Program Requirements

(18 or 19 semester hours)

Code	Title	Credit Hours
<b>Core Courses - 9 semester hours</b>		
Select the following:		
CCA 201	Introduction to Arts Management	3
CCA 401	Strategic Planning for the Arts	3
Select three hours of the following:		
CCA 256	Arts Management Practicum	
CCA 302	Arts Marketing	
CCA 303	Arts Engagement	
CCA 304	Financial Management in the Arts	
CCA 305	Development and Fundraising in the Arts	
CCA 306	Arts Entrepreneurship	
CCA 307	Arts Venture Creation	
CCA 340	Internship	
<b>Track - 9 or 10 semester hours</b>		

Choose one of four tracks. FSB Majors choose Track 4.

### Track 1 - General Business

Select at least nine hours of the following: 9

ACC 211	Accounting for the Non-Business Major
ECO 201	Principles of Microeconomics
ESP 101	Entrepreneurship Foundations
ESP 201	Introduction to Entrepreneurship and Business Models (ESP 101 is pre-/co-requisite)
MGT 111	Introduction to Business
MGT 211	Introduction to Management for Non-business Majors
or MGT 291	Introduction to Management & Leadership
MKT 211	Business Concepts in Customer Engagement
or MKT 291	Principles of Marketing

### Track 2 - Miami Prime Business Intensive

Select all three of the following: 9

BUS 301	Basics of Business I
BUS 302	Basics of Business II
BUS 303	Business Process Integration

### Track 3 - Entrepreneurship

Select all four of the following: 10

ESP 101	Entrepreneurship Foundations
ESP 201	Introduction to Entrepreneurship and Business Models
ESP 251	Entrepreneurial Value Creation and Capture
ESP 252	Entrepreneurial Mindset: Creativity and Organization

### Track 4 - Creative Arts

FSB majors must take this track. This track is not open to CCA majors.

Select nine hours from ARC, ART, MUS, THE, or CCA111, CCA222, or CCA232. Students may apply FAS or IMS courses with prior approval of the Director of Arts Management & Entrepreneurship.<sup>1</sup> 9

**Total Credit Hours** 18 or 19 hours

<sup>1</sup> No more than two of the same music ensemble (MUS100A-MUS100Z) may count toward the minor.

## Art Therapy Minor

This minor is for students interested in learning more about the field of art therapy; in some cases the minor may prepare students to apply to art therapy graduate programs. Art therapists can work in any setting that employs helping professions, for example: hospitals, schools, correctional facilities, domestic violence shelters, geriatric facilities, psychiatric facilities, residential facilities, day programs for developmental disabilities and chronic mental illness, etc. Art therapy uses the art process and the therapeutic relationship between the client and art therapist to process trauma, enhance self-esteem, improve relational abilities, decrease anxiety/depression, and increase an overall enhanced sense of well-being. Once obtaining a master's

degree in art therapy, students will be eligible for mental health licensure in their state, which grants them the ability then to have four broad career opportunities (Art Therapist, Art Educator<sup>1</sup>, Counselor, and Artist).

The art therapy minor builds on the foundation of three lateral human-centered perspectives significant to the field of art therapy: art studio, art education, and psychology. Students will explore connections between art production, methods of facilitating art experiences with people across the lifespan, and an understanding of human behaviors. Introduction to Art Therapy will tie the courses together through presenting exploratory art-making activities, foundational readings, and possible pathways to a career in the profession. The minor encourages breadth of exploration and offers separate tracks for Art majors, Psychology majors, and majors other than Art or Psychology.

<sup>1</sup> Check state licensure requirements for public school contexts.

For information, please contact Stephanie Danker, [dankers@miamiOH.edu](mailto:dankers@miamiOH.edu), 202 Art Building, 513-529-7422.

## Program Requirements

Code	Title	Credit Hours
<b>Required courses</b>		
ART 194	Introduction to Art Therapy	3
ART 195	Introduction to Art Education	3
PSY 111	Introduction to Psychology	3
PSY 112	Foundational Experiences in Psychology <sup>1</sup>	1
Complete minor requirements based on major.		9
<b>ART Majors</b>		9
Psychology		
Required courses:		
PSY 231	Developmental Psychology	
PSY 242	Abnormal Psychology	
Select one of the following:		
PSY 210	Psychology Across Cultures	
PSY 241	Personality	
PSY 251	Introduction to Biopsychology	
PSY 271	Survey of Perception, Action, and Cognition	
<b>Psychology Majors</b>		9
Art Studio		
Select one of the following:		
ART 111	Design and Composition	
ART 121	Observational Drawing	
2D Studio (200-level) - select one of the following:		
ART 231	Painting I	
ART 241	Printmaking I	
ART 255	Introduction to Digital Imaging	
ART 257	Photography	
3D Studio (200-level) - select one of the following:		
ART 261	Ceramics I	
ART 264	Jewelry Design and Metals I	

ART 271	Sculpture I	
<b>Majors outside of Art or Psychology</b>		9
Electives		
Select one of the following:		
PSY 210	Psychology Across Cultures	
PSY 231	Developmental Psychology	
PSY 241	Personality	
PSY 242	Abnormal Psychology	
PSY 251	Introduction to Biopsychology	
PSY 271	Survey of Perception, Action, and Cognition	
Select one of the following:		
ART 111	Design and Composition	
ART 121	Observational Drawing	
Art Studio		
Select one of the following:		
ART 231	Painting I	
ART 241	Printmaking I	
ART 255	Introduction to Digital Imaging	
ART 257	Photography	
ART 261	Ceramics I	
ART 264	Jewelry Design and Metals I	
ART 271	Sculpture I	
Total Credit Hours		19

<sup>1</sup> Note: If PSY 111 is taken at Miami University, PSY 112 is a co-requisite. PSY 112 is required for PSY majors.

## Communication Design Minor

The mission of the Communication Design Minor is to enable learners to gain the communication design thinking, knowledge, and skills that will enhance their core area of study. Learners grow these competencies through exercises, projects, and learning experiences designed to develop practical, analytical, creative, emotional, and social intelligence. Those who complete the program are prepared to use their skills to develop and produce visual design that communicates clearly.

For information, contact the advisor in the Department of Art, 124 Art Building, 513-529-2900.

### Program requirements

(18-20 semester hours)

Code	Title	Credit Hours
<b>Prerequisite for admission to the minor</b>		
ART 343	Fundamentals of Communication Design	3
<b>Core courses</b>		
ART 344	Visual Identity Design	3
ART 345	Communication Design Prototyping	3
ART 455	A History of Design	3
<b>Electives</b>		6-8
ART 105	Technical Drawing	

ART 111	Design and Composition	
ART 121	Observational Drawing	
ART 256	Design, Perception & Audience	
ART 320	Thematic Studio	
ART 353	The Business of Design	
ART 436	Applied Experience Design: Walt Disney World	
ART 450	Letterpress Printing	
or ART 249	Letterpress for Designers	
ART 453/ MKT 442	Highwire Brand Studio	
ART 460	Special Topics Design Studio	
CCA 111	Innovation, Creativity and Design Thinking	
IMS 440	Interactive Media Studies Practicum	
Total Credit Hours		18-20

## Dance Minor

For information, contact Lewis Magruder at magrudwl@miamiOH.edu or the Department of Theatre, 119 Center for the Performing Arts, 513-529-3053.

The Dance Minor is offered through the Department of Theatre. The minor offers students the opportunity to pursue the specialized skills necessary for dance performance. Students will complete courses in dance technique, performance, dance history, and production/design and integrate learning through involvement with dance concerts and/or musical theatre productions. The minor is intended to provide curriculum and instruction in the area of dance as well as enhance current musical theatre and theatre curricula and programming.

### Program Requirements

(18-19 credit hours)

Code	Title	Credit Hours
<b>Required courses</b>		
KNH/THE 110A	Beginning Ballet <sup>1</sup>	2
KNH/THE 110G	Beginning Modern Dance <sup>1</sup>	2
KNH 244	Functional Anatomy	3
KNH 244L	Functional Anatomy Laboratory	1
THE 351	Dance History	3
THE 261	Intermediate Ballet	2
or THE 262	Intermediate Modern Dance	
<b>Electives</b>		
Select 5-6 hours of the following:		5-6
CCA 201	Introduction to Arts Management	
CCA 231	Dance for the Musical Stage	
THE 123	Acting for the Non-Major: Text and Performance	
THE 271	Dance Theatre Practicum (maximum 2)	
THE 354	Lighting Design	
Total Credit Hours		18-19

<sup>1</sup> Courses offered credit/no-credit only.

## Digital Innovation Minor

The Digital Innovation Minor introduces the digital startup ecosystem in various cities and provides students with opportunities to develop and expand their own professional interests and skills in relevant fields such as web/app development, marketing, and design. It provides students with a foundation in essential topics that are in demand by digital startups, including introductions to entrepreneurship and digital marketing.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>On Campus</b>		
Choose two from the following:		6
ESP 201	Introduction to Entrepreneurship and Business Models	
or IMS 418	Social Media Marketing and Online Community Management	
or IMS 419	Digital Branding	
or CSE 383	Web Application Programming	
or IMS 421	Digital Product Management	
IMS 278	Digital Innovation Workshop Preparation	1
<b>On Location</b>		
IMS 340	Internship	3
IMS 396	Inside Startups	3
or IMS 397	Inside the Startup Environment (SF)	
IMS 398	Startup Networking	1
IMS 440	Interactive Media Studies Practicum	4
Total Credit Hours		18

## Fashion Minor

For information, contact Della Reams, 226 Boyd Hall, 513-529-3490 (Fashion Design) or Leslie Stoel, 3042 FSB, 513-529-3985 (Fashion Business).

The minor in Fashion emphasizes creativity and experimentation, and offers students the opportunity to develop basic skills in product making, fashion business decision-making, historical contexts, materials, and design foundations.

Admission to the minor is selective; students must have a high school diploma to be considered for admission.

### Program Requirements

(21 credit hours)

Code	Title	Credit Hours
<b>Basics</b>		
FAS 101	Introduction to the Fashion Industry	3
<b>Making</b>		
		3

ART 165	Beginning Metals	
ART 264	Jewelry Design and Metals I	
FAS 150	Fashion Sprint Special Topics	
FAS 201	Apparel Construction Techniques	
FAS 211	Draping for Fashion Design	
FAS 212	Flat Pattern Drafting for Fashion Design	
THE 450	Special Topics in Theatre Design and Technology	
<b>Fashion Business</b>		3
FAS 451	Fashion Retail Planning and Buying	
FAS 463	Fashion Trend Forecasting	
MKT 291	Principles of Marketing	
MKT 461	Principles of Retailing	
<b>History</b>		3
ART 189	History of Western Dress	
ART 233	Global Perspectives on Dress	
FAS 281	Contemporary Fashion History of 20th-21st Century	
<b>Materials</b>		
FAS 221	Textiles for the Fashion Industry	3
<b>Design Foundations</b>		
FAS 241	The Elements and Principles of Fashion Design, including Color Theory	3
<b>Fashion Electives</b>		3
ART 104	Problem Solving	
ART 106	Introduction to Figure Drawing	
ART 121	Observational Drawing	
ART/IMS 259	Art and Digital Tools I	
ART 335	Arts of West Africa	
ART 350	Illustration (maximum 6)	
FAS 332	Fashion Illustration	
FAS 340	Internship	
FAS 360	Fashion and Digital Tools	
FAS 450	Advanced Special Topics in Fashion	
IMS 319	Foundations in Digital 3-D Modeling and Animation	
JRN 101	Introduction to Journalism	
STC 259	Introduction to Strategic Communication and Public Relations	
THE 353	Costume Design	
Or any class in the minor not yet taken.		
Total Credit Hours		21

## Games + Simulation Minor

For information, contact the Interactive Media Studies Program, 203 Laws Hall, 513-529-1637 or visit <http://aims.miamioh.edu>.

The Games + Simulation Minor includes a collaborative series of courses between the Interactive Media Studies program and the Art and Computer Science departments. The minor introduces the foundations of game design and implementation, beginning with required coursework in the three developmental areas: game art,

game design, and game development. Electives within the minor allow students to explore their particular game interest in greater depth.

### Program Requirements

(19 semester hours)

Code	Title	Credit Hours
<b>Foundation</b>		7
IMS 111	Introduction to Game Careers	
IMS 211	Introduction to Game Studies	
IMS 212	Introduction to Game Design	
<b>Focus (choose four of the following courses)</b>		12
IMS 213	Introduction to Game Development	
IMS/ART 215	3D Digital Sculpting	
IMS 225	Games and Learning	
IMS 317	Writing for Games	
IMS 319	Foundations in Digital 3-D Modeling and Animation	
IMS 453	Indie Game Development I	
IMS 454	Indie Game Development II	
CSE 251	Introduction to Game Programming (not open to CSE majors)	
Total Credit Hours		19

## Interactive Media Studies Minor

The IMS minor is centered on a foundation of courses in Business, Technology, and Design. Students develop an awareness and appreciation of all three of these areas and then choose a specialization within IMS for two elective courses. The IMS minor is designed to help provide digital literacy for students who are curious about how emerging media and technology impact their major. Admission into the IMS minor is competitive. Admission details can be found at <http://miamioh.edu/cca/aims/admission>.

For information, please contact the Interactive Media Studies Program, 203 Laws Hall, 513-529-1637 or visit <http://aims.miamioh.edu>.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Foundation</b>		12
IMS 222	Introduction to Interaction Design and Development	
IMS 259	Art and Digital Tools I	
IMS 315	User Experience Research	
IMS 322	Intermediate Interaction Design and Development	
<b>IMS Electives</b>		6
Choose any two IMS courses.		
Total Credit Hours		18

## Museums and Society Minor

For information, contact the Department of Art, 124 Art Building, 513-529-2900.

Open to all majors, this minor provides a critical understanding of museums as collections-based institutions. It is especially appropriate for students planning a professional career in education, history, libraries, anthropology, art and architecture history, and associated fields.

A minimum 2.00 GPA is required for all courses in this minor. Courses must be taken for a grade (not credit/no-credit). Students planning to take this minor should consult with the minor advisor.

### Program Requirements

(18 credit hours)

Code	Title	Credit Hours
<b>Core Courses</b>		
CCA 222	Museums and Collections: Beyond the Curio Cabinet	3
CCA 232	Museums Today: Content, Practices and Audiences	3
IMS 203	Applied Digital Humanities	3
Select six additional hours in one of ten tracks/options:		6
Material Culture		
Visual Culture		
Art History		
Heritage Management		
Natural History		
Technology and Design		
Communications		
Non-profit Management		
Museum Education		
Conservation		
Select three hours of approved practicum, internship, capstone, or other experiential learning opportunity. <sup>1</sup>		3
Total Credit Hours		18

<sup>1</sup> Examples include: AMS 435, ART 391, ART 498.

## Music Composition Minor

This minor is for those who want to complement their education with creative study in music composition. Open to music majors and non-majors.

Students interested in pursuing the minor in music composition must submit a portfolio to the Composition faculty. Portfolios should contain two to four recent examples of one's best creative work. The preferred format for audio files is mp3, though AIFF and WAV will be accepted. Printed scores are welcome as well (accepted formats: pdf, Sibelius, or Finale files), though not required.

Contact the Music Composition faculty for further information: Dr. Per Bloland ([blolanpa@miamioh.edu](mailto:blolanpa@miamioh.edu), 513-529-0584) and Dr. Roger Davis ([davisgr@miamioh.edu](mailto:davisgr@miamioh.edu), 513-529-3047).

## Program Requirements

(20 semester hours)

Code	Title	Credit Hours
Select the following:		
MUS 101 & MUS 102	Theory of Music I and Theory of Music II	6
MUS 151 & MUS 152	Theory of Music: Aural Skills I and Theory of Music: Aural Skills II	2
MUS 171	Composition Seminar (take twice)	3,3
MUS 221	Music Technologies	3
MUS 306	Advanced Electronic Music	3
Total Credit Hours		20

## Music Performance Minor

Admission Procedures: An audition is required for this program. Please contact the Department of Music, 109 Presser Hall, 513-529-3014, for audition procedures and to be connected with a faculty advisor for your instrument.

At this time there is no voice performance minor. This minor is not open to music majors.

## Program Requirements

(25 semester hours)

Code	Title	Credit Hours
MUS 101 & MUS 102	Theory of Music I and Theory of Music II	6
MUS 151 & MUS 152	Theory of Music: Aural Skills I and Theory of Music: Aural Skills II	2
MUS 189	Great Ideas in Western Music	3
Applied music requirement:		
Select 10 semester hours, including one semester at 342 level <sup>1</sup>		10
Ensemble requirement:		
Four semesters in a large ensemble, in primary performance medium (Chamber Singers, Choraliers, Collegiate Chorale, Marching Band, Men's Glee Club, Symphony Band, University Symphony Orchestra, and Wind Ensemble.) <sup>2</sup>		4
Total Credit Hours		25

<sup>1</sup> Students must perform a half-recital in this semester.

<sup>2</sup> Entrance to each group is by audition. Piano performance minor may fulfill the ensemble requirement through participation in a large vocal ensemble, large instrumental ensemble, accompanying (MUS 110/MUS 120), or chamber music as a pianist.

## Music Theatre Minor

For information, contact the Department of Music, 109 Presser Hall, 513-529-3014, or the Department of Theatre, 119 Center for Performing Arts, 513-529-3053.

This minor offers students the opportunity to pursue the specialized skills necessary for performance in music theatre: acting, singing, and dancing. Students will complete courses in these three distinct disciplines as well as integrate them in an upper-level acting course and through participation in productions. The minor is designed to enhance the current music and theatre major curricula. Admission to the minor is open to all majors by audition only. All courses in the minor must be taken for a grade (except for KNH/THE110A which is offered credit/no credit only); a minimum GPA of 2.00 is required in the minor.

## Program Requirements for Music and Theatre Majors

(20 semester hours)

Code	Title	Credit Hours
<b>Core courses</b> <sup>1</sup>		
CCA 231	Dance for the Musical Stage	3
CCA 331	Acting for the Musical Stage	3
KNH/THE 110A	Beginning Ballet <sup>2</sup>	2
THE 151	Stage Makeup	1
THE 395	The Musical in American Culture	3

### Production Participation

All Music Theatre Minors must participate in one production, selected from Musical Theatre, Opera, and Grand Night for Singing		1
MUS 425	Grand Night: The Great American Songbook	
MUS 426	Opera Production	
THE 200N	Prod & Perform-Musical	

### Program Requirements for Majors

Music Majors - Voice		7
THE 131	Principles of Acting	

Select one course:

THE 253	Costume Fundamentals	
THE 257	Stagecraft and Theatre Technologies	
THE 258	Scene Painting Fundamentals	
THE 342	Stage Management	
CCA 201	Introduction to Arts Management	

Complete one credit of production practicum in a technical/non-performance area:

THE 200B	Prod & Performance:Scenery	
THE 200C	Prod & Performance-Properties	
THE 200D	Prod & Perf-Stage Management	
THE 200E	Prod & Performance-Costumes	
THE 200F	Prod & Performance-Lighting	
THE 200G	Prod & Performance-Sound	
THE 200I	Prod & Performance-Makeup	

Music Majors - Instrumentalists

THE 131	Principles of Acting	
MUS 215	Class Voice for Music Theatre	
MUS 216	Applied Voice for Music Theatre (take twice)	

Theatre Majors

MUS 119	Introduction to Music Theory	
MUS 215	Class Voice for Music Theatre	
MUS 216	Applied Voice for Music Theatre (take twice)	
Total Credit Hours		20

<sup>1</sup> Theatre majors may NOT use these courses in their major requirements.

<sup>2</sup> Offered credit/no-credit only

## Music Theatre for Non-Majors Minor

This minor offers students who are not majoring in Theatre or Music the opportunity to pursue the specialized skills necessary for performance in music theatre: acting, singing and dancing. Students will complete courses in these three distinct disciplines, as well as integrate them in an upper-level acting course and through participation in at least one production. A successful audition during fall semester is required for admission to the minor; space is limited. All courses in the minor must be taken for a grade<sup>1</sup>; a minimum GPA of 2.00 is required in a minor.

For information, contact the Department of Music, 109 Presser Hall, 513-529-3014, or the Department of Theatre, Center for Performing Arts, 513-529-3053.

## Program Requirements

(23 semester hours)

Code	Title	Credit Hours
CCA 231	Dance for the Musical Stage	3
CCA 331	Acting for the Musical Stage	3
KNH/THE 110A	Beginning Ballet <sup>1</sup>	2
MUS 119	Introduction to Music Theory	3
MUS 215	Class Voice for Music Theatre	2
MUS 216	Applied Voice for Music Theatre	1, 1
THE 131	Principles of Acting	3
or THE 123	Acting for the Non-Major: Text and Performance	
THE 151	Stage Makeup	1
THE 395	The Musical in American Culture	3
All Music Theatre Minors must participate in one production, selected from Musical Theatre, Opera, and Grand Night for Singing:		1
MUS 425	Grand Night: The Great American Songbook	
MUS 426	Opera Production	
THE200N	Prod & Perform-Musical	
Total Credit Hours		23

<sup>1</sup> KNH/THE 110A offered credit/no-credit only.

## Photography Minor

The minor in Photography allows students to have an in-depth, comprehensive education in traditional black-and-white and digital image-making processes. In this sequence of studio courses, students will learn about the technical, aesthetic, historical, and conceptual

aspects of creative photography through practice, discussion, and critiques.

For information or to add the minor, please contact Jon Yamashiro, yamashjm@miamioh.edu, 513-529-5627.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
ART 255	Introduction to Digital Imaging	3
ART 257	Photography	3
ART 357	Photography II	3
ART 358	Photography III	3
ART 457	Photography IV	3
ART 458	Photography V	3
Total Credit Hours		18

## Theatre Arts Minor

For information, contact the Department of Theatre, 119 Center for Performing Arts, 513-529-3053.

This minor offers students an opportunity to explore theatrical practice within a liberal arts tradition by providing study of performance and production in acting, directing, theatre technology, design arts, and theatre history and analysis. Register your intent to pursue the minor with the chief departmental advisor. A minimum GPA of 2.00 is required for all courses in a minor. All courses must be taken for a letter grade.

## Program Requirements

(25 semester hours)

Code	Title	Credit Hours
THE 101	Introduction to Theatre: Drama and Analysis	3
THE 142	Theatre Organization and Communication	1
THE 200	Production and Performance Practicum (three required)	1,1,1
THE 251	Visual Communication for the Theatre	3
THE 123	Acting for the Non-Major: Text and Performance	3
or THE 131	Principles of Acting	
Select one of the following:		3
THE 253	Costume Fundamentals	
THE 257	Stagecraft and Theatre Technologies	
THE 258	Scene Painting Fundamentals	
Select three semester hours of the following:		3
THE 151	Stage Makeup	
THE 210	The Theatrical Toolbox (maximum 3)	
THE 226	Acting Studio: Foundations	
THE 227	Acting Studio: Integrating Text	
THE 238	Playwriting Through Improvisation (maximum 4)	

THE 253	Costume Fundamentals
THE 257	Stagecraft and Theatre Technologies
THE 258	Scene Painting Fundamentals
THE 340	Internship
THE 342	Stage Management
THE 352	Scenic Design
THE 353	Costume Design
THE 354	Lighting Design
THE 416	Dramaturgy
THE 418	Playwriting
THE 421	Fundamentals of Directing
THE 432	Acting Shakespeare
THE 437	Auditions
THE 439	Special Techniques for the Actor (maximum 6)
THE 441	Methods and Styles of Play Directing
THE 450	Special Topics in Theatre Design and Technology
THE 455	Tutorial in Advanced Problems
Select six semester hours of the following: 6	
THE 393	Topics in Intercultural Perspectives and Global Theatre and Performance
THE 394	Topics in Dramatic Literature and Cultural Performance
THE 395	The Musical in American Culture
THE 398	London Theatre
THE 422	Politics and Ethics of Theatre and Performance: Representation, Race, Gender, Class and Sexuality
THE 423	Topics in Theatre and Performance Studies
THE 424	Topics in Applied Theatre, Practice, and Pedagogy
Total Credit Hours	25

## Urban Design Minor

Urban design is the study of human relationships and their expression in the physical landscapes that are cities. Urban environment is a physical manifestation of social values. Relations that comprise the realm of urban design involve not simply buildings and their creation, but the infrastructure, politics, economics, sociology, commerce, and history of cities. Students planning to pursue careers in government, public administration, social work, architectural design, planning, etc., find their interests served by this minor.

You should meet with the coordinator of urban design studies to work out a program of study. Minimally, your program will include 21 semester hours completed with a 2.50 GPA. Courses must be taken for a grade (not credit/no-credit).

For information, please contact the Department of Architecture + Interior Design, 101 Alumni Hall, 513-529-7210.

## Program Requirements

(21 semester hours)

Code	Title	Credit Hours
<b>Basic course work</b>		
ARC 211	Introduction to Landscape and Urban Design	3
GEO 201	Geography of Urban Diversity	3
POL 261	Public Administration	3
Select nine hours of the following: <sup>1</sup>		9
ARC 405	Seminars <sup>2</sup>	
ARC 426	Architecture and Society	
ARC 427	The American City Since 1940	
ARC 435	Theory and History of Landscape Architecture	
FWS 261	Diverse Family Systems Across the Life Cycle	
GEO 451	Urban and Regional Planning	
GEO 454	Urban Geography	
GEO 459	Advanced Urban and Regional Planning	
POL 364	Federalism and Intergovernmental Relations	
POL 467	Public Budgeting	
SOC 201	Social Problems	
Other coursework subject to approval by the coordinator.		
Select three hours of the following as approved by coordinator: <sup>3</sup>		3
ARC 477	Independent Studies	
or GEO 477	Independent Studies	
GEO 340	Internship	
GEO 493	Urban Field Experience	
Total Credit Hours		21

<sup>1</sup> Architecture or interior design majors: six of these nine hours must be from outside architecture; non-architecture majors: six of these nine hours must be architecture courses.

<sup>2</sup> Seminar must be approved by advisor.

<sup>3</sup> Regardless of the option chosen, the coursework must be approved in consultation with the advisor for the minor and will conclude with a summary paper to be presented.

# College of Education, Health and Society

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## Office of Student Services

202 McGuffey Hall  
Phone: 513-529-6317

[www.miamioh.edu/ehs](http://www.miamioh.edu/ehs)

## Degrees and Majors Offered Bachelor of Science in Education

- Chinese
- Early Childhood Education
- French
- German
- Inclusive Special Education
- Integrated English Language Arts Education
- Integrated Mathematics Education
- Integrated Science Education
- Integrated Social Studies Education
- Latin
- Middle Childhood Education
- Spanish

## Bachelor of Science in Education Studies

- Education Studies

## Bachelor of Science in Family Science

- Family Science

## Bachelor of Science in Kinesiology and Health

- Kinesiology
- Nutrition
- Public Health
- Sport Leadership and Management

## Bachelor of Science in Social Work

- Social Work

## Minors

- Child Studies and Youth Development
- Coaching
- Community-Based Leadership
- Disability Studies
- Education, Teaching, and Learning
- Family Relationships
- Nutrition
- Special Education
- Sport Management

## Endorsements

- Early Childhood Generalist 4-5 Endorsement
- Middle Childhood Generalist 4-6 Endorsement

- Reading Endorsement
- TESOL (Teaching English to Speakers of other Languages) Endorsement

## Certificates

- Autism Spectrum Disorders
- Fostering Just Communities
- Outdoor Leadership
- Teaching English Language Learners (TELLs)

## General Information

The College of Education, Health and Society is comprised of five departments: Educational Leadership, Educational Psychology, Teacher Education, Kinesiology and Health, and Family Science and Social Work.

Each undergraduate program uses the Miami Plan for Liberal Education as a base, adds the specialized content of the major, adds appropriate professional courses, and may integrate experience in field settings through observation, practicum, and internships.

Graduate programs are offered in several fields and lead to a Master of Arts, Master of Arts in Teaching, Master of Education, Master of Science, and Specialist in Education, Doctor of Education, or a Doctor of Philosophy. See the Graduate Fields of Study section for details on those programs.

## Mission Statement

The Mission of the College of Education, Health and Society at Miami University is to prepare transformative leaders. Through excellence in teaching, scholarship, and community partnerships, the school provides dynamic and innovative programs that encourage international perspectives. Our integrated human experience prepares graduates to generate knowledge, educate, serve and promote well-being in diverse and global settings through ethical, democratic practice.

## Accreditation

Accreditation, which specifies standards for faculty, curriculum, financial support, equipment, student services, and facilities, is awarded to the College of Education, Health and Society by North Central Association of Colleges and Schools, National Council for the Accreditation of Teacher Education, National Association for the Education of Young Children, ACEND of the Academy of Nutrition and Dietetics (AND), Commission on Accreditation of Athletic Training Education (CAATE), National Association for School Psychologists, and State of Ohio Department of Education. The Council on Social Work Education has accredited the social work baccalaureate program.

## Professional and Honorary Organizations

For professional development, the College of Education, Health and Society encourages participation in professional organizations where students can develop leadership skills, interact with professionals, and engage in educational activities. Organizations sponsored by the College include: Miami Council for the Social Studies, Miami University Council of Teachers of Mathematics, Miami University Science Educators, Miami University Student Athletic Trainers Association, Pre-Physical and Occupational Therapy Club, Student Council for Exceptional Children, Ohio Student Education Association (OSEA), National Council of Teachers of Education-Student Affiliate of Miami

(NCTE-SAM), Student Academy of Nutrition and Dietetics (SAND), Student National Education Association, and Family Studies and Social Work Student Organization (FSWSO).

To honor outstanding professional and academic performance, the School is recognized with chapters of the following: Delta Psi Kappa, Epsilon Phi Tau, Kappa Delta Epsilon, Kappa Delta Pi, Kappa Phi Kappa, Phi Delta Kappa, Phi Epsilon Kappa, and Pi Omega Pi.

## Art and Music Education

Art and music education programs, administered through the College of Creative Arts, are described in that chapter. Students preparing to teach art must plan their programs with an art education advisor in the Department of Art. Students interested in music education should consult an advisor in the Department of Music.

## Advising

Undergraduate academic advising for the College of Education, Health and Society (EHS) is conducted through the department of the student's major. Each student is assigned a faculty or professional staff academic advisor. Undeclared EHS students are assigned to an academic advisor in the Dean's office. A Chief Departmental Advisor (CDA) supports faculty advisors and helps with more complicated advising questions in their specific majors.

## Information for Education Majors

### Earning a Teaching License

Licensure as a classroom teacher in the state of Ohio, and most other states, requires completion of a baccalaureate licensure program, passing a licensure examination(s), and a background check. Programs in the Teacher Education and Educational Psychology departments are approved by the Ohio Department of Education. Each program, when combined with a baccalaureate degree, makes the candidate eligible for the Ohio teaching license in a selected teaching field. Teacher/Professional licensing requirements are subject to change. Please check appropriate state's board of education website for the most up-to-date licensure requirements.

Students seeking licensure in more than one teaching field must meet all requirements for each field, including student teaching. These programs will exceed the minimum credit hours for graduation.

### Supervised Teaching Policy

Supervised teaching, also called "student teaching," is a period of guided teaching when licensure program majors take increasing responsibility for learning activities of students in a classroom. It includes full-day off campus assignments for an entire semester, facilitated by a university supervisor in a school in cooperation with a licensed classroom teacher.

Student teachers are participants in all phases of the school program. They teach classes, organize and direct extracurricular activities, attend faculty meetings, and participate in other school functions.

Placements are in the Miami University designated geographic area in southwestern Ohio. Student teachers are required to make their own transportation arrangements, including costs. Students must manage their financial obligations so as to avoid outside involvement during this assignment and curtail other campus responsibilities so they do not interfere with the supervised teaching assignment. Students must have a valid Ohio BCI & I and FBI criminal background check on file

in the Student Teaching Office before beginning student teaching. Students **cannot** begin student teaching until the background checks have been received.

Student teaching application forms are e-mailed to students who are eligible to for student teaching. Applications must be filled out and returned to the student teaching office by the due date noted on the form.

### Office of Student Teaching and Field Placement

202 McGuffey Hall  
Phone: 513-529-7245

## Department of Teacher Education

For information, contact the Department of Teacher Education, 401 McGuffey Hall 513-529-6443.

This department administers undergraduate teacher licensure programs approved by the Ohio Department of Education. Each program, when combined with a baccalaureate degree, makes the candidate eligible for the Ohio teaching licensure in a selected teaching field. Teacher / Professional licensing requirements are subject to change. Please check appropriate state's board of education website for the most up-to-date licensure requirements.

Students who have earned a baccalaureate degree may complete a teacher licensure program as part of a Master of Arts in Teaching degree program in five major content areas (math, science, English, social studies and foreign language) or may complete a licensure only program in all subject areas. (See the Graduate Fields of Study section for information about the Master of Arts in Teaching degree program.)

Students enrolled in teacher licensure programs are required to participate in supervised clinical and field experience which involves travel to area schools, and are regularly assessed during the licensure program.

Students in the Department of Teacher Education must take the content area of the OAE examination before student teaching.

## Cohorts

A cohort is defined as a group of students who have been selected by the Department of Teacher Education to experience certain parts of their program together, provided they satisfy the prerequisite retention requirements for the methods courses for their licensure field and for student teaching. A cohort is identified by its general subject or licensure area and by a semester or academic year during which the members start or complete their methods courses. For example, Integrated Mathematics 2019-20, Science 2019-20, Middle Childhood Language Arts and Science Fall 2019, Middle Childhood Math and Science Spring 2020, and Early Childhood Spring 2020 are all separate cohorts.

## Selection to a Cohort

Students must apply for acceptance to their program toward the end of their first year.

Application forms may be obtained from the Department of Teacher Education, 401 McGuffey Hall 513-529-6443. Admission is based on a minimum 2.75 GPA in all Miami Plan courses. This consists of at

least 12 credit hours of Miami Plan courses taken for a grade. Cohort application deadlines vary by program. Contact the department for specific dates.

Applicants must take the Praxis CORE test and score 156 on reading, 150 on math, and 162 on writing. Applicants with an ACT composite score of 21 or higher or SAT score (math and verbal) of 980 or above are exempt from taking the Praxis CORE test.

You may apply to two cohort programs in order to become eligible for multiple teaching licenses; however, you must be selected to both cohorts. If you are selected to an Adolescent Education science or foreign language cohort, you may also pursue any of the other programs within that same cohort; you must declare additional programs as additional majors.

## Transferring from One Cohort to Another

A student in one cohort may not transfer to a different cohort, unless the student applies and is selected to the different cohort. Students who change majors or transfer into Miami may ask to be considered for an earlier cohort if space is available. Students who are selected for a cohort must take their cohort classes during that specific cohort year.

## Transfer Students

Students transferring from another university or enrolled in another program at Miami may apply for selection into a teacher education licensure cohort following the guidelines in the "Limited Admission to Programs" section of this Bulletin.

## Retention

There are retention checkpoints for each cohort at the time of registration for each instructional procedures course and at the time of application to supervised teaching. The department has established retention criteria specific (prerequisites) to each major for each retention point, which are available from the department.

## Technology Requirement

All teacher education programs will be infusing technology into their classes to assist teacher candidates in their preparation to teach in tomorrow's schools. All students seeking a degree in a teacher education program will be required to have a laptop computer when accepted into their teacher education cohort. Students should consider purchasing an Apple (Mac) laptop computer through the Miami Notebook program. Other laptop brands are acceptable, but not preferred.

### Bachelor of Science in Education in:

- Early Childhood Education
- Middle Childhood Education
- Integrated English Language Arts Education
- Integrated Mathematics Education
- Integrated Science Education
- Integrated Social Studies Education
- Foreign Language Education
  - Chinese Education
  - French Education

- German Education
- Latin Education
- Spanish Education
- Music Education - See College of Creative Arts

## Early Childhood Education- Bachelor of Science in Education Program Requirements

Code	Title	Credit Hours
<b>Required Courses</b>		
EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3
EDT 181 or EDT 182	Physical Science	4
EDT 190	Introduction to Education	3
EDT 362	Social Sciences for Teachers II	4
FSW 225	Family School and Community Connections	3
MTH 115	Mathematics for Teachers of Grades P-6	4
MTH 116	Mathematics for Elementary Teachers	4
	Select one fine arts elective in addition to the Miami Plan fine arts requirement. (any ART, MUS, THE, or ARC)	3
EDT 419E	Teaching Internship- Early Childhood	15
<b>Block One</b>		
Take the following courses concurrently:		
EDT 246E	Foundations of Language and Literacy	3
EDT 272E	Introductory Child Development: PreBirth through Age 8	3
EDT 315E	Teaching with Children's Literature Across the ECE Curriculum	3
KNH 245	Issues of Health & Wellness for the Young Child	3
<b>Block Two</b>		
Take the following courses concurrently (after successful completion of Block One):		
EDT 317E	Teaching Science: Early Childhood	3
EDT 318E	Mathematics in Early Childhood	3
EDT 417E	Teaching Social Studies in the Early Childhood	3
EDT 442E	Phonics, Word Study, and Spelling Instruction in ECE	3
EDT 474E	Classroom Management & Student Guidance in Early Childhood	3
<b>Block Three</b>		
Take the following courses concurrently (after successful completion of Block Two):		
EDL 318E	Teacher Leadership and School Organization	3

EDP 432	Assessment and Educational Planning for Children Age 3 to 8	3
EDP 495E	Inclusion and Adaptations for Mild/Moderate and Gifted Needs: Early Childhood	3
EDT 346E	Teaching Language and Literacy Across the ECE Curriculum	3
EDT 473E	Early Childhood Synthesis: Negotiating the Complexities of Teaching	3
Total Credit Hours		91

## Chinese Education- Bachelor of Science in Education

Complete at least 34 semester hours above 202 level in Chinese, a foreign language of the licensure field. Study of the selected language begins at a level appropriate to your competence, determined with a placement examination or with a sequence of study prescribed by your academic advisor. All Chinese Education students are required to participate in a study abroad program.

### Program Requirements

Code	Title	Credit Hours
<b>Foreign Language Education Core</b>		
Select the following:		
EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3
EDT 190	Introduction to Education	3
Fall field block courses - take all three concurrently:		
EDP 301A	Assessment and Evaluation in Educational Settings	3
EDT 323	Teaching English Language Learners in PK-12: Instructional Theories & Practices	3
EDT 444/544	Language Teaching and Learning I	3
Spring field block courses - take all three concurrently:		
EDT 421A	Classroom Cultures, Community, and Climate	2
EDT 445/545	Language Teaching and Learning II	3
EDT 446L	Reading in the Foreign Language	3
Supervised teaching semester:		
EDT 419A	Teaching Internship- Adolescent	15
<b>Chinese Education Courses</b>		
CHI 101 & CHI 102	Elementary Chinese and Elementary Chinese	8
CHI 201 & CHI 202	Second Year Chinese and Second Year Chinese	6
CHI 301 & CHI 302	Third Year Chinese and Third Year Chinese	6
CHI 401 & CHI 402	Fourth Year Chinese I and Fourth Year Chinese II	6
ENG/ATH/GER 219	Introduction to Linguistics	3

Select two of the following (study abroad transfer credit may be used); <sup>1</sup>		6
CHI 251	Traditional Chinese Literature in English Translation	
CHI 252	Modern Chinese Literature in English Translation	
CHI 255	Drama in China and Japan in Translation	
CHI 264	Chinese Cinema and Culture	
Total Credit Hours		79

<sup>1</sup> Native or heritage speakers will choose from a different set of courses. See advisor for details.

## French Education- Bachelor of Science in Education

Complete at least 34 semester hours above the 202 level in French, a foreign language of the licensure field. Study of the selected language begins at a level appropriate to your competence, determined with a placement examination or with a sequence of study prescribed by your academic advisor. All French Education students are required to participate in a study abroad program.

### Program Requirements

Code	Title	Credit Hours
<b>Foreign Language Education Core</b>		
Select the following:		
EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3
EDT 190	Introduction to Education	3
Fall field block courses - take all three concurrently:		
EDP 301A	Assessment and Evaluation in Educational Settings	3
EDT 323	Teaching English Language Learners in PK-12: Instructional Theories & Practices	3
EDT 444/544	Language Teaching and Learning I	3
Spring field block courses - take all three concurrently:		
EDT 421A	Classroom Cultures, Community, and Climate	3
EDT 445/545	Language Teaching and Learning II	3
EDT 446L	Reading in the Foreign Language	3
Supervised teaching semester:		
EDT 419A	Teaching Internship- Adolescent	15
<b>French Education Courses</b>		
Take all of the following:		
FRE 302	Pre-Revolutionary Literature and Life	3
FRE 303	Modern and Contemporary Literature and Life	3
FRE 310	Texts in Context	3
FRE 301	Culture & Interpretation	3

FRE 341	Conversation and Current Events in France	3
FRE 361	French Pronunciation <sup>1</sup>	3
FRE 410	Senior Seminar	3
FRE 411	French Civilization	3
Electives FRE 399-FRE 499 to complete required 34 hours <sup>2</sup>		
Total Credit Hours		69

<sup>1</sup> Minimum grade of B required.

<sup>2</sup> Recommended: FRE 399W

## German Education- Bachelor of Science in Education

Complete at least 34 semester hours above the 202 level in German, a foreign language of the licensure field. Study of the selected language begins at a level appropriate to your competence, determined with a placement examination or with a sequence of study prescribed by your academic advisor. All German Education students are required to participate in a study abroad program.

### Program Requirements

Code	Title	Credit Hours
<b>Foreign Language Education Core</b>		
Select the following:		
EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3
EDT 190	Introduction to Education	3
Fall field block courses - take all three concurrently:		
EDP 301A	Assessment and Evaluation in Educational Settings	3
EDT 323	Teaching English Language Learners in PK-12: Instructional Theories & Practices	3
EDT 444/544	Language Teaching and Learning I	3
Spring field block courses - take all three concurrently:		
EDT 421A	Classroom Cultures, Community, and Climate	3
EDT 445/545	Language Teaching and Learning II	3
EDT 446L	Reading in the Foreign Language	3
Supervised teaching semester:		
EDT 419A	Teaching Internship- Adolescent	15
<b>Foreign Language Education Core</b>		
GER 301	German Language Through the Media	3
GER 311	Passionate Friendships in German Literature from the Middle Ages to the Present	3
GER 312	Coming of Age in German Life and Thought	3
GER 471	Linguistic Perspectives on Contemporary German	3

Additional course from GER 400-499		
GER 321	Cultural Topics in German-Speaking Europe Since 1870	3
or GER 322	Comparative Study of Everyday Culture: German-Speaking Europe and the U.S.A.	
Select at least 6 credits of 400-level German courses, including at least one literature course.		
Electives to complete required 33 semester hours (not previously taken) from GER 203-GER 499		
Total Credit Hours		60

No courses in translation count in this major.

## Latin Education- Bachelor of Science in Education

Complete 34 semester hours above the 102 level; courses related to Latin in the Department of Classics may be used. Complete at least 34 semester hours above the 202 level in Latin, a foreign language of the licensure field. Study of the selected language begins at a level appropriate to your competence, determined with a placement examination or with a sequence of study prescribed by your academic advisor.

### Program Requirements

Code	Title	Credit Hours
<b>Foreign Language Education Core</b>		
Select the following:		
EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3
EDT 190	Introduction to Education	3
Fall field block courses - take all three concurrently:		
EDP 301A	Assessment and Evaluation in Educational Settings	3
EDT 323	Teaching English Language Learners in PK-12: Instructional Theories & Practices	3
EDT 444/544	Language Teaching and Learning I	3
Spring field block courses - take all three concurrently:		
EDT 421A	Classroom Cultures, Community, and Climate	3
EDT 445/545	Language Teaching and Learning II	3
EDT 446L	Reading in the Foreign Language	3
Supervised teaching semester:		
EDT 419A	Teaching Internship- Adolescent	15
<b>Latin Education Courses</b>		
CLS 102	Roman Civilization	3
CLS 121	Introduction to Classical Mythology	3
LAT 201	Intermediate Latin	3
LAT 202	Representative Latin Authors	3
Select 3 hours from CLS 200-499		3
Complete required 33 hours from the following:		18

LAT 310	Special Topics in Latin Literature <sup>1</sup>	
LAT 410	Latin Seminar <sup>1</sup>	
Total Credit Hours		78

<sup>1</sup> Maximum 12 hours.

Note: Study abroad is not required in Latin education

## Spanish Education- Bachelor of Science in Education

Complete at least 34 semester hours above 202 level in Spanish Education, a foreign language of the licensure field. Study of the selected language begins at a level appropriate to your competence, determined with a placement examination or with a sequence of study prescribed by your academic advisor. All Spanish Education students are required to participate in a study abroad program.

### Program Requirements

Code	Title	Credit Hours
<b>Foreign Language Education Core</b>		
Select the following:		
EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3
EDT 190	Introduction to Education	3
Fall field block courses - take all three concurrently:		
EDP 301A	Assessment and Evaluation in Educational Settings	3
EDT 323	Teaching English Language Learners in PK-12: Instructional Theories & Practices	3
EDT 444/544	Language Teaching and Learning I	3
Spring field block courses - take all three concurrently:		
EDT 421A	Classroom Cultures, Community, and Climate	3
EDT 445/545	Language Teaching and Learning II	3
EDT 446L	Reading in the Foreign Language	3
Supervised teaching semester:		
EDT 419A	Teaching Internship- Adolescent	15
<b>Spanish Education Courses</b>		
Required courses:		
SPN 311	Grammar Review and Introductory Composition	3
SPN 312	Introduction to Spanish Language/ Linguistics	3
SPN 315	Intro to Hispanic Literatures	3
SPN 316	Intermediate Spanish Composition	3
SPN 342	Advanced Conversational Spanish	3
SPN 351	Cultural History of Spain I	3
SPN 352	Cultural History of Spain II	3
SPN 361	Spanish American Cultural History I	3
SPN 362	Spanish American Cultural History II	3

SPN 420/430/440	Selected Topics in Literature and Culture: Spain	3
SPN 481	Spanish Phonology and Syntax <sup>1</sup>	3
Capstone		
SPN 490	Issues in Hispanic Literature, Linguistics, or Culture	3
Electives		6
Select two courses from SPN 450-SPN 499		
Total Credit Hours		87

<sup>1</sup> See advisor if SPN 481 is not offered.

## Integrated English Language Arts Education- Bachelor of Science in Education

The Integrated English Language Arts Education major leads to a Bachelor of Science in Education degree. Approved by the Ohio Department of Education, this program prepares graduates to teach students in grades 7-12 in the areas of English (writing, language, reading/literature). In addition to meeting requirements of the Global Miami Plan, students take courses in English and Education. During their study, students observe and participate in urban and suburban/ rural classrooms, culminating in a 15-week, full-time student teaching experience in which they work closely with mentor teachers in high schools or middle schools, eventually assuming instructional responsibilities for all classes.

### Program Requirements

Code	Title	Credit Hours
<b>Required Courses</b>		
EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3
EDT 190	Introduction to Education	3
EDT 246A	Foundations of Language and Literacy	3
EDT 423	Literature and Other Media for Adolescents	3
ENG 301	History of the English Language	3
ENG 302	Structure of Modern English	3
ENG 304	Backgrounds to Composition Theory and Research	3
Fall field block courses - take all three concurrently:		
EDT 346A	Reading Instruction for Adolescents	3
EDT 421A	Classroom Cultures, Community, and Climate	3
EDT 427	Adolescent Language Arts I	3
Spring field block courses - take all three concurrently:		
EDP 301A	Assessment and Evaluation in Educational Settings	3
EDT 323	Teaching English Language Learners in PK-12: Instructional Theories & Practices	3

EDT 428	Adolescent Language Arts II	3
Supervised Teacher Semester:		15
EDT 419A	Teaching Internship- Adolescent	1-16
Composition Courses		
Select two of the following:		6
EDT 284	Writing for Educators	
ENG/IMS 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds	
ENG 225	Advanced Composition	
ENG 226	Introduction to Creative Writing: Short Fiction and Poetry	
English Literature Course		
Select one of the following:		3
ENG 272	English Literature to 1660	
ENG 273	English Literature 1660-1900	
ENG 274	English Literature 1901 to Present	
ENG 328	Sixteenth-Century English Literature	
ENG 331	Seventeenth-Century English Literature	
ENG 335	English Literature of the 18th Century	
ENG 339	British Romanticism, 1789-1837	
ENG 343	Victorian Literature, 1837-1901	
ENG 345	British Modernism, 1890-1945	
ENG 347	Postwar/Postcolonial British Literature, 1945-Present	
American Literature Course		
Select one of the following:		3
ENG 275	American Literature to 1900	
ENG 276	American Literature 1900 to the Present	
ENG 293	Contemporary American Fiction	
ENG 349	Early American Literature	
ENG 352	Antebellum American Literature	
ENG 353	American Realism and Naturalism	
ENG 354	American Modernism	
ENG 355	Contemporary American Literature	
Shakespeare		
Select one of the following:		3
ENG 134	Introduction to Shakespeare	
ENG 221	Shakespeare and Film	
ENG 372	Shakespeare's Principal Plays: Early Works	
ENG 373	Shakespeare's Principal Plays: Late Works	
World Literature Course		
Select one of the following:		3
CHI 251	Traditional Chinese Literature in English Translation	
CHI 252	Modern Chinese Literature in English Translation	
CHI 253	Three Kingdoms	
CHI 254	Modern Chinese Autobiography	
CHI 257	Chinese Satire	

CHI 264	Chinese Cinema and Culture	
CLS 121	Introduction to Classical Mythology	
ENG 248	Asian American Literature	
ENG 254	Latino/a Literature and the Americas	
FRE 350	Topics in French Literature in Translation	
Diversity Literature Course		
Select one of the following:		3
ENG 169	Disability and Literature	
ENG 232	Women Writers	
ENG 237	GLBTQ Literature	
ENG 248	Asian American Literature	
ENG 254	Latino/a Literature and the Americas	
ENG 332	Early British Women Writers	
ENG/BWS 336	African American Writing, 1746-1877	
ENG/BWS 337	African American Writing, 1878-1945	
ENG/BWS 338	African American Writing, 1946- Present	
ENG 348	Ethnic American Literatures	
ENG 356	Women and Gender in Film	
ENG 390	Studies in American Regionalism	
Genre Literature		
Select one of the following:		3
ENG 123	Introduction to Poetry	
ENG 124	Introduction to Fiction	
ENG 125	Introduction to Drama	
ENG 231	The Short Story	
ENG 386	Studies in Drama and Performance	
ENG 387	Studies in Poetry	
ENG 388	Studies in Prose	
ENG 450	Studies in Genre	
THE 101	Introduction to Theatre: Drama and Analysis	

Total Credit Hours 85-100

## Integrated Mathematics Education- Bachelor of Science in Education

### Program Requirements

Code	Title	Credit Hours
<b>Required Courses</b>		
EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3
EDT 190	Introduction to Education	3
Select one of the following calculus sequences:		8-13
MTH 151 & MTH 251 & MTH 252	Calculus I and Calculus II and Calculus III	

MTH 249 & MTH 252	Calculus II and Calculus III	
MTH 251 & MTH 252	Calculus II and Calculus III	
Select the following:		
MTH 222	Introduction to Linear Algebra	3
MTH 330	Problems Seminar (optional)	1
MTH 331	Proof: Introduction to Higher Mathematics	3
MTH 408	Mathematical Problem Solving with Technology	3
MTH 409	Secondary Mathematics from an Advanced Perspective	3
MTH 411	Foundations of Geometry	3
MTH 421	Introduction to Abstract Algebra	4
MTH 482	Great Theorems of Mathematics	3
STA 301	Applied Statistics	3
STA 401	Probability	3
Fall field block courses - take all three concurrently:		
EDT 421A	Classroom Cultures, Community, and Climate	3
EDT 429A	Adolescent Mathematics I	3
EDT 446A	Integrating Literacy Across the Content Areas	3
Spring field block courses - take all three concurrently:		
EDP 301A	Assessment and Evaluation in Educational Settings	3
EDT 323	Teaching English Language Learners in PK-12: Instructional Theories & Practices	3
EDT 430	Adolescent Mathematics II	3
Supervised teaching semester:		
EDT 419A	Teaching Internship- Adolescent	15
Total Credit Hours		82-87

## Integrated Science Education - Bachelor of Science in Education

The Bachelor of Science in Education degree with an Adolescent/Young Adult (AYA) Integrated Science major provides graduates with the opportunity to teach in 7-12<sup>th</sup> grade schools in all the major science disciplines (biology, chemistry, earth science and physics) while concentrating in one science area.

Candidates are exposed to state-of-the-art teaching methods and science/math courses as well as teaching in diverse settings, taking English Language Learner (ELL) methods, experiencing elective Science, Technology, Engineering and Mathematics (STEM) Education methods and engaging in real world scientific research as part of their program.

Since National Science Teachers Association (NSTA) requires candidates to specialize in one science discipline area and have a broad understanding of the other three disciplines, this increases the total number of credit hours required for this degree. The curriculum was streamlined as much as possible in order to minimize

the number of required credit hours (124-131 credit hours for the Integrated Science degree will be required).

Part of the Miami Plan (liberal education requirements) is to engage in a 9-credit hour thematic sequence outside the student's field of study. It is an essential part of the liberal education students receive while studying at Miami University. A thematic sequence is a series of three courses that build developmentally towards a more comprehensive study of a topic.

Within this proposal, the recommended thematic sequence falls within the four science disciplines of study. In addition, there is a STEM thematic sequence of courses that could be taken as electives. It prepares Miami science education majors to infuse STEM into their future schools. Other Miami majors enroll in this thematic sequence (e.g. finance, psychology, language arts, software engineering, computer science) so these courses are not methods courses but focus on issues, history, and societal topics surrounding STEM.

Other possible thematic sequences are built into these science programs, e.g. BIO 2: Molecular Processes: From Cells to Whole Plants, and are available to the students enrolled in the Integrated Science major.

Further, the Miami plan (liberal education experiences) courses will be advised to be taken throughout the four years at Miami University and not just at the end (as seen in the plans of study). The majority of the science education majors enter Miami University with an abundant number of Advanced Placement credit hours thus enabling them more flexibility in scheduling their courses. The Advanced Writing course (a Miami plan course) can be taken later in the program and meet two requirements (science content and advanced writing) thus easing the credit hour requirements of this degree if so chosen by the students.

The current science education programs have similar required credit hours and the students have been able to graduate in four years. We don't foresee students having difficulty in managing this degree in a four-year period of time.

## Program Requirements

### Requirements for all Integrated Science Education Specialties

Code	Title	Credit Hours
<b>Required Pre/Co-requisites</b>		
BIO 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	5
GLG 111 & GLG 115L	The Dynamic Earth and Understanding the Earth	4
GLG 307	Water and Society	3
IES 275	Principles of Environmental Science	3
PHY 111	Astronomy and Space Physics	3

STA 261	Statistics	4
Science Research - BIO, CHM, GLG, or PHY 277R, 377R, or 477R		3-6

**Teacher Education Core**

EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3
EDT 190	Introduction to Education	3

**Integrated Science Education Required Courses**

Fall field block courses - take all three concurrently		
EDP 301A	Assessment and Evaluation in Educational Settings	3
EDT 323	Teaching English Language Learners in PK-12: Instructional Theories & Practices	3
EDT 431	Adolescent Science Methods I	3
Spring field block courses - take all three concurrently		
EDT 421A	Classroom Cultures, Community, and Climate	3
EDT 432	Adolescent Science Methods II	3
EDT 446A	Integrating Literacy Across the Content Areas	3
Supervised teaching semester		
EDT 419A	Teaching Internship- Adolescent	15
Total Credit Hours		83-86

**Integrated Science Education Specialties****Biology**

Code	Title	Credit Hours
<b>Required Courses</b>		
BIO 161	Principles of Human Physiology	4
BIO 203	Introduction to Cell Biology	3
BIO 206	Evolutionary Biology	3
BIO 209	Fundamentals of Ecology	3
BIO 342	Genetics	3
CHM 231	Fundamentals of Organic Chemistry	4
EDT 415	Inquiry Into Life Science	3
PHY 161	Physics for the Life Sciences with Laboratory I	4
PHY 162	Physics for the Life Sciences with Laboratory II	4
Total Credit Hours		31

**Chemistry**

Code	Title	Credit Hours
<b>Required Courses</b>		
BIO 206	Evolutionary Biology	3
CHM 241 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	5
CHM 242 & CHM 245	Organic Chemistry and Organic Chemistry Laboratory	5
CHM 375	Analytical Chemistry for Majors	3

CHM 415	Misconceptions in Chemistry	3
CHM 491	Chemistry in Societal Issues	3
EDT 415	Inquiry Into Life Science	3
PHY 161	Physics for the Life Sciences with Laboratory I	4
PHY 162	Physics for the Life Sciences with Laboratory II	4
Total Credit Hours		33

**Earth Science**

Code	Title	Credit Hours
<b>Required Courses</b>		
BIO 161	Principles of Human Physiology	4
CHM 231	Fundamentals of Organic Chemistry	4
EDT 415	Inquiry Into Life Science	3
GLG 201	Mineralogy	4
GLG 204	Survival on an Evolving Planet	4
GLG 211	Chemistry of Earth Systems	3
GLG 301	Sedimentology and Stratigraphy	4
PHY 161	Physics for the Life Sciences with Laboratory I	4
PHY 162	Physics for the Life Sciences with Laboratory II	4
GLG Elective		3
Total Credit Hours		37

**Physics**

Code	Title	Credit Hours
<b>Required Courses</b>		
BIO 206	Evolutionary Biology	3
MTH 151	Calculus I	5
MTH 251	Calculus II	4
MTH 252	Calculus III	4
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5
PHY 215	Physics by Inquiry	3
or EDT 415	Inquiry Into Life Science	
PHY 281	Contemporary Physics I: Foundations	3
Total Credit Hours		32

**Integrated Social Studies Education- Bachelor of Science in Education**

The Integrated Social Studies Education major leads to a Bachelors of Science Degree in Education. Approved by the Ohio Department of Education, this program prepares graduates to teach students in grades 7-12 in the areas of Social Studies. In addition to meeting requirements of the Global Miami Plan, students take courses in Social Studies, Teacher Education, and Educational Psychology. During their study, students observe and participate in urban and suburban/rural classrooms, culminating in a 15-week, full-time student teaching experience in which they work closely with mentor teachers in

high schools or middle schools, eventually assuming instructional responsibilities for all classes.

## Program Requirements

(55 credit hours of social studies content coursework)

Code	Title	Credit Hours
<b>Required Courses</b>		
ECO 201 & ECO 202	Principles of Microeconomics and Principles of Macroeconomics	6
GEO 101	Global Forces, Local Diversity	3
GEO 121	Earth's Physical Environment	4
HST 111 & HST 112	Survey of American History and Survey of American History	6
POL 201	Political Thinking	3
POL 241	American Political System	3
Select one of the following:		3-4
ATH 155	Introduction to Anthropology	
SOC 151	Social Relations	
SOC 153	Sociology in a Global Context	
Select one of POL 221-POL 499		3-4
Select the following sequence:		6
HST 197 & HST 198	World History to 1500 and World History Since 1500	
Select four courses in history, 200-499, one of which must be non-western, including the following:		12
HST 217	Modern Latin American History	
HST 221	African-American History	
HST 224	Africa to 1884	
HST 225	The Making of Modern Africa	
HST 241	Introduction to Islamic History	
HST 260	Latin America in the United States	
HST 319	Revolution in Latin America	
HST 324	Eurasian Nomads and History	
HST 325	Images of Africa	
HST 342	Africa Since 1945	
HST 353	History of Chinese Civilization	
HST 354	Modern Chinese History	
HST 356	Modern Japanese History	
HST 371	Native American History to 1840	
HST 372	Native American History since 1840	
HST 383	Women in Chinese History	
HST 434	China along the Silk Road before 1600	
Select one of the following Philosophy courses:		3-4
EDT 212	Applied Philosophy for Education	
PHL 301	Ancient Philosophy	
PHL 103	Society and the Individual	
PHL 104	Purpose or Chance in the Universe	
PHL 105	Theories of Human Nature	
PHL 106	Thought and Culture of India	
PHL 131	Introduction to Ethics	
PHL 205	Science and Culture	
PHL 241	Philosophy of Art	

PHL 245	Writing Philosophy	
PHL 263	Informal Logic	
PHL 302	Modern Philosophy	
PHL 311	Ethical Theory	
PHL 312	Contemporary Moral Problems	
PHL 331	Political Philosophy	
PHL 335	Philosophy of Law	
PHL 355	Feminist Theory	
Undergraduate education course requirements:		
EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3
EDT 190	Introduction to Education	3
Take the following three courses concurrently fall semester of cohort year (typically junior year).		
EDP 301A	Assessment and Evaluation in Educational Settings	3
EDT 323	Teaching English Language Learners in PK-12: Instructional Theories & Practices	3
EDT 433	Adolescent Social Studies Methods I	3
Select all of the following concurrently, spring semester of cohort year (typically junior year):		
EDT 421A	Classroom Cultures, Community, and Climate	3
EDT 434	Adolescent Social Studies Methods II	3
EDT 446A	Integrating Literacy Across the Content Areas	3
Supervised teaching semester:		
EDT 419A	Teaching Internship- Adolescent	15
Total Credit Hours		97-100

## Middle Childhood Education- Bachelor of Science in Education Program Requirements

Code	Title	Credit Hours
<b>Required for all Middle Childhood Concentrations</b>		
EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3
EDT 190	Introduction to Education	3
Select one of the following:		3
AMS 205	Introduction to American Cultures	
ATH 185	Cultural Diversity in the U.S.	
ENG 248	Asian American Literature	
ENG 254	Latino/a Literature and the Americas	
GEO 201	Geography of Urban Diversity	
FSW 481	Adolescent Development in Diverse Families: Ages 13-25	
IDS 159	Strength Through Cultural Diversity	

WGS 201	Introduction to Women's Studies	
Take the following three courses in the Early Field Block		9
EDT 246M	Foundations of Language and Literacy	
EDT 252M	Early Field Experience: Middle Childhood	
EDL 318M	Teacher Leadership and School Organization	
Methods Block: Take the following three courses plus two methods courses (one for each concentration) the fall semester following the Early Field Block		9
EDT 346M	Reading Instruction for Middle Grades	
EDP 301M	Assessment and Evaluation in Educational Settings	
EDT 421M	Classroom Management	
Select two of the following (depending on content areas chosen):		6
EDT 436	Middle Childhood Language Arts	
EDT 429M	Middle Childhood Mathematics	
EDT 439	Middle Childhood Social Studies	
EDT 441	Middle Childhood Science	
Take the following two courses together spring semester following methods block		6
EDT 442M	Phonics and Reading Improvement for Middle Childhood	
EDT 448M	Reading Practicum for Middle Childhood	
EDT 419M	Teaching Internship-Middle Childhood	15
<b>Concentrations</b>		
Select two concentrations		19-23
Total Credit Hours		79-83

## Concentrations

### Language Arts Concentration

Code	Title	Credit Hours
ENG 262	Children's Literature	3
ENG 301	History of the English Language	3
ENG 304	Backgrounds to Composition Theory and Research	3
EDT 423	Literature and Other Media for Adolescents	3
Select one of the following:		3
ENG 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds	
ENG 225	Advanced Composition	
ENG 226	Introduction to Creative Writing: Short Fiction and Poetry	
EDT 284	Writing for Educators	
Select one of the following:		3
CLS 121	Introduction to Classical Mythology	
GER 231	Folk and Literary Fairy Tales	
RUS 137	Russian Folklore	
Total Credit Hours		18

### Math Concentration

Code	Title	Credit Hours
MTH 151	Calculus I	5
MTH 217	Mathematics for Middle Childhood Teachers: Structure of Arithmetic and Algebra	4
MTH 218	Geometry for Middle Childhood Teachers	4
MTH 407	Mathematical Structures Through Inquiry	3
STA 301	Applied Statistics	3-4
or STA 261	Statistics	
EDT 265	Mathematics: History and Technology	3
Total Credit Hours		22-23

### Science Concentration

Code	Title	Credit Hours
EDT 181	Physical Science	4
EDT 182	Physical Science	4
EDT 415	Inquiry Into Life Science	3
Select a science elective course <sup>1</sup>		3
Select two of the following:		6-8
BIO 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	
BIO 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	
BIO 121	Environmental Biology	
BIO 131	Plants, Humanity, and Environment	
BIO 155	Field Botany	
BIO 161	Principles of Human Physiology	
BIO 176	Ecology of North America	
BIO 191	Plant Biology	
MBI 111	Microorganisms and Human Disease	
MBI 121	The Microbial World	
Total Credit Hours		20-22

<sup>1</sup> Choose any BIO, CHM, GLG, IES, MBI, and PHY 100-499; GEO 121, GEO 211, GEO 221.

### Social Studies Concentration

Code	Title	Credit Hours
HST 111	Survey of American History	6
& HST 112	and Survey of American History	
EDT 362	Social Sciences for Teachers II	4
GEO 101	Global Forces, Local Diversity	3
Select one of the following:		3
HST 197	World History to 1500	
HST 198	World History Since 1500	
Select one of the following:		3-4
ATH 155	Introduction to Anthropology	
ATH 175	Peoples of the World	
SOC 151	Social Relations	

SOC 153	Sociology in a Global Context
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Total Credit Hours	19-20

## Education Studies- Bachelor of Science in Education Studies

The Bachelor of Science in Education Studies will engage students in the study of social, philosophical, ethical and cultural contexts of education by providing them with holistic, multicultural and international frameworks of research and knowledge with which to understand schooling, youth and families. Students in the Education Studies major will develop the abilities to analyze complex social issues related to education, conduct community research, and become engaged in addressing community challenges and policy-making related to schools, youth, families, health, wellness and justice issues. Students must select one of five concentrations: 1). Creativity, Innovation & Learning; 2). Disability Studies & Education; 3). Sexuality, Education & Society; 4). Equity & Educational Change; and 5). Critical Youth Studies.

### Program Requirements

Code	Title	Credit Hours
<b>Core Courses</b>		
EDL 203	Introduction to Critical Youth Studies	3
EDL 204	Sociocultural Studies in Education	3
EDL 224	Introduction to Education Policy	3
EDL 312	Foundations of Education in Global Contexts	3
EDL 318A	Teacher Leadership and School Organization	3
EDL 382	Community-Based Research & Learning in Education	3
<b>Concentration</b>		
Select one of five concentrations (below)		18
Total Credit Hours		36

### Concentrations (18 credit hours)

#### Creativity, Innovation & Learning

Code	Title	Credit Hours
<b>Required Courses</b>		
CCA 111	Innovation, Creativity and Design Thinking	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDT 311	Educational Strategies for Non-Majors	3
<b>Concentration Electives</b>		
Select nine hours of the following:		9
EDT 188	Creativity and Innovation in STEM Education	
EDT 288	Ways of Thinking in STEM (Science, Technology, Engineering, and Mathematics) Education	
IMS 212	Introduction to Game Design	
IMS 225	Games and Learning	

EDT 284	Writing for Educators
THE 393	Topics in Intercultural Perspectives and Global Theatre and Performance
THE 424	Topics in Applied Theatre, Practice, and Pedagogy
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Total Credit Hours	18

#### Disability Studies & Education

Code	Title	Credit Hours
<b>Required Courses</b>		
DST 272	Introduction to Disability Studies	3
DST 375	(Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice	3
EDP 489 or DST 494	Disability in Global and Local Contexts	3
<b>Concentration Electives</b>		
Select nine hours of the following:		9
DST 278	Women and (Dis)ability: Fictions and Contaminations of Identity	
DST 378	Media Illusions: Creations of "The Disabled" Identity	
DST/SOC/SJS 470	Social/Political Activism	
EDL 315	Disability History in America	
EDT 457	Culturally Responsive Teaching	
Total Credit Hours		18

#### Sexuality, Education & Society

Code	Title	Credit Hours
<b>Required Courses</b>		
FSW 365	Family Life Sexuality Education Across Cultures	3
FSW/WGS 361	Couple Relationships: Diversity and Change	3
FSW 451	Family Violence	3
<b>Concentration Life Span Course Electives</b>		
Select six hours of the following:		6
FSW 245	Children and Families: Ages Conception - 12	
FSW 466	Interpersonal Perspectives on Adulthood and Aging	
FSW 481	Adolescent Development in Diverse Families: Ages 13-25	
<b>Concentration Elective</b>		
Select three hours of the following:		3
WGS 202	Introduction to GLBT Studies	
WGS/EDL 369	Sexuality, Youth, Education	
WGS/ENG 435	Queer Theory	
Total Credit Hours		18

**Equity & Educational Change**

Code	Title	Credit Hours
<b>Foundation Electives</b>		
Select nine hours of the following:		9
BWS 325	Identity, Race, Gender, Class	
CRE 151	Introduction to Critical Race and Ethnic Studies	
DST/EDP/SOC/ WGS 375	(Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice	
EDT 205	Race, Cultural Diversity, and Equity in Education	
WGS 201	Introduction to Women's Studies	
WGS 202	Introduction to GLBT Studies	
<b>Community Electives</b>		
Option A - Select nine hours of the following:		9
BWS 470	Social/Political Activism	
EDL 232	Introduction to Community-Based Leadership	
EDT/FSW 225	Family School and Community Connections	
EDT 457	Culturally Responsive Teaching	
SJS 165	Introduction to Social Justice Studies	
Option B - Select nine hours of the following:		
ARC 427	The American City Since 1940	
SJS 215	EMPOWER I: Educational and Economic Justice and Service-Learning	
SJS 216	EMPOWER II: The Intersections of Race, Class, and Education	
Total Credit Hours		18

**Critical Youth Studies**

Code	Title	Credit Hours
Select eighteen hours of the following:		18
DST 272	Introduction to Disability Studies	
EDL 333	Youth, Media & Pop Culture	
EDL/AAA 334	Transnational Youth Cultures	
EDL/WGS 369	Sexuality, Youth, Education	
LAS/SPN 332	Latin American Popular Culture	
SJS 323	Social Justice and Change	
WGS 437	Black Feminist Theory	
Total Credit Hours		18

## Department of Educational Psychology

For information, contact the Department of Educational Psychology, 201 McGuffey Hall, 513-529-6621.

This department administers the undergraduate program for Inclusive Special Education majors that leads to a Bachelor of Science Degree in Education, and two Ohio licenses as Intervention Specialist, mild-moderate and moderate-intensive special needs. The license allows graduates to teach in kindergarten through 12th grade.

**Teacher/Professional licensing requirements are subject to change. Please check the appropriate state's Board of Education website for up to date licensure requirements.**

Mild-moderate intervention specialists have expertise in designing and implementing educational programs and services for children and youth needing support in the general education classroom and other educational settings. Moderate-intensive intervention specialists have expertise in designing and implementing curriculum in inclusive settings and other educational settings with knowledge of inclusive instructional strategies, academic methodologies, assistive technology, and supports and opportunities for transition to adult life. Both licensure areas are grounded in a strong focus on socially just inclusive practices. Students will be introduced to disability studies theory.

**Admission and Transfer Requirements**

Admission is limited to those who are eligible for admission to teacher preparation programs and have completed 15 semester hours with a 2.75 GPA, including, EDP 201, as well as 100 hours of service with children and persons with exceptionalities. This work can include junior and senior years of high school and can be paid or volunteer.

To enter this teacher licensure program, you must complete an application from the department.

Transfer students may be admitted to a special education program only if they have completed at least 15 semester hours with at least a 2.75 GPA (4.00 scale) for all college work attempted, including courses in educational psychology and exceptional persons, and are eligible for admission to teacher education programs. Otherwise, they will be considered pre-special education majors until these requirements are met.

Candidates will be expected to complete and successfully pass the portfolio review process at established intervals within the program.

## Cohorts

A cohort is a group of students in a common year designated to take licensure preparation courses in a common group of related teaching fields as well as complete their student teaching during the same academic year. Selection is limited for each cohort group to ensure quality instruction.

## Selection to a Cohort

**Inclusive Special education majors with licensure:** Declare a pre-major in special education at the time of university admission, or soon thereafter. After declaring a pre-major, apply for admission to special education and a cohort group by **February 1** of the freshman year or **September 1** of the sophomore year. Applications are available in the department, 201 McGuffey Hall.

Applicants are selected by the special education faculty for each cohort group on the basis of potential for academic and professional success. Cohort selection procedures may be obtained from the department. Applicants are notified of admission to their cohort and major on or before **February 28** or **September 30**. Space in the cohort is limited and admission is not guaranteed.

**Note:** Admission to Miami University, the College of Education, Health and Society or to a pre-major neither implies nor guarantees selection to a cohort group.

**Inclusive Special education minors without licensure and**

**Thematic Sequence:** Minors and students seeking the Thematic Sequence in special education (EDP 1) can add any time in 201 McGuffey Hall.

The department is committed to admitting transfer students to the special education major and minor contingent upon space in the program. Transfer students may need additional time to complete the major dependent upon time of transfer.

- Inclusive Special Education- Bachelor of Science in Education with Licensure
- Disability Studies Minor
- Special Education Minor

## Inclusive Special Education- Bachelor of Science in Education with Licensure

This major leads to the Bachelor of Science in Education with Ohio residency dual licensure in Intervention Specialist - Mild-Moderate/Moderate-Intensive. Field and/or clinical experience is combined with academic coursework sophomore through senior years. In order to complete the degree requirements in four years, students are encouraged to select the major no later than spring semester of the first year.

### Program Requirements

Code	Title	Credit Hours
<b>Professional core</b>		
EDL 204	Sociocultural Studies in Education	3
EDL 318A	Teacher Leadership and School Organization	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3
EDP 279	Technology + Media Literacy and Learning	3
EDT 190	Introduction to Education	3
<b>Reading core</b>		
EDP 471	Literacy Seminar: Clinical	3
or EDP 460	Action Research/Problem-Based Seminar in Exceptional Education/Developmental Differences	
EDT 246A	Foundations of Language and Literacy	3
EDT 346M	Reading Instruction for Middle Grades	3
EDT 436	Middle Childhood Language Arts	3
EDT 442M	Phonics and Reading Improvement for Middle Childhood	3
<b>Mild-Moderate/Moderate-Intensive Intervention Specialist (K-12)</b>		
EDP 220	Field Experience in Special Education	1
EDP 310		1
EDP 405	Advanced Issues: Moderate/Intensive Special Education	3
EDP 410		1

EDP 458	Methods I: Learners with Moderate to Intensive Needs	3
EDP 459F		3
EDP 459G	Practicum in Special Education: Moderate/Intensive	3
EDP 468	Methods II for Learners with Moderate - Intensive Needs	3
EDP 478	Effective Social Skills Development, Collaboration and Transition Planning in Special Education	3
EDP 486	Methods I: Learners with Mild/Moderate Disabilities	3
EDP 491	Methods II: Learners with Mild to Moderate Disabilities	3
EDP 494	Assessment, Evaluation, and Educational Planning for Learners with Exceptionalities	3
EDP 495	Critical Inquiry in Special Education	3
EDP 496	Behavioral Interventions: Theory, Principles, and Techniques	3
MTH 115	Mathematics for Teachers of Grades P-6	4
MTH 116	Mathematics for Elementary Teachers	4
SPA 127	Introduction to Communication Disorders	3
SPA 223	Theories of Language Development	3
SPA 427	Alternative Communication Systems for the Severely Handicapped	3

#### Supervised Student Teaching

EDP 419F	Supervised Teaching in Programs for Mild/Moderate Intervention Specialist Licensure	15
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Total Credit Hours 101

## Department of Family Science and Social Work

For information, contact the Department of Family Science and Social Work, 101 McGuffey Hall or call 513-529-2323.

The identified areas of focus of this department are:

1. examining and fostering understanding about the concepts "person in the environment" or "development in context;"
2. fostering increased understanding and the development of strengths in individual development, diverse families, and communities;
3. examining families with adolescents and the particular challenges faced by diverse families during this phase of development;
4. creating knowledge and fostering understanding about how diverse families and communities face stressful circumstances and become resilient in the face of transitions and crises;
5. promoting family life education, as well as evaluation, service, and policy research that enhances the well-being and relationship strength of individuals, families, and communities; and

6. promoting knowledge about and developing prevention, intervention, and social justice strategies for individuals, families, and communities.

Two degree programs in the fields related to family life and social work are offered. Each major combines courses in the social sciences, natural sciences, and specialty areas to prepare students for professional careers in a variety of fields including family life education, child life, and social work. Opportunities for fieldwork and Service-Learning are integral to both degree programs.

The National Council on Family Relations verifies that the Family Life Education concentration in Miami's Family Science major provides the required course work to meet all standards and criteria needed for the Provisional Certified Family Life Educator designation. The Child Life Specialist concentration in the Family Science major provides the required coursework to meet the qualifications at the bachelor's level necessary to pursue the designation of Certified Child Life Specialist through the Association of Child Life Professionals. The Bachelors in Social work is accredited by the Council on Social Work Education .

## Family Life Education Certification

Upon completion of the Family Life Education concentration within the Family Science major, graduates are eligible to apply for provisional certification as a Family Life Educator from the National Council on Family Relations ([www.ncfr.org](http://www.ncfr.org)). This certification emphasizes academic preparation and experience to enable individuals to design and implement curricula, workshops, and other family life education programs. The approved courses that fulfill the requirements of the academic training to become a Family Life Educator include:

Code	Title	Credit Hours
<b>Families in Society</b>		
FSW 261	Diverse Family Systems Across the Life Cycle	3
<b>Internal Dynamics of Families</b>		
FSW 451/FSW 551	Family Violence	3
FSW 475/FSW 575	Family Theories	3
<b>Human Growth and Development</b>		
FSW 481/FSW 581	Adolescent Development in Diverse Families: Ages 13-25	3
FSW 466/FSW 566	Interpersonal Perspectives on Adulthood and Aging	3
<b>Sexualities</b>		
Select one of the following:		3
FSW 365	Family Life Sexuality Education Across Cultures	
SOC/FSW/WGS 221	Sexualities	
<b>Interpersonal Relationships</b>		
FSW/WGS 361	Couple Relationships: Diversity and Change	3
<b>Family Resource Management</b>		
FSW 362	Family Poverty	3
FSW 442/FSW 542	Family Resource Management Education and Advocacy	3
<b>Parent Education and Guidance</b>		

FSW 245	Children and Families: Ages Conception - 12	3
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### Family Law and Public Policy

FSW 206	Social Welfare: Impact on Diverse Groups	4
or FSW 462/ FSW 562	Family Policy and Law	

### Ethics

FSW 494/FSW 594	Internship with Families and Children	2-6
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### Family Life Education Methodology

FSW 418/FSW 518	The Family Life Education Process	3
Total Credit Hours		39-43

Students are required to complete an internship that involves a minimum of 120 clock hours of direct contact focusing on family life education practice (FSW 494).

- Bachelor of Science in Family Science
- Bachelor of Science in Social Work

## Family Science - Bachelor of Science in Family Science

This program prepares students for careers in the fields of Family Life Education, Child Life Specialist, and related family and human services. At its core, this program explores the diverse cultural and socioeconomic contexts of interpersonal relationships, family systems, and their members across the life span. Core courses focus on developing 1) understanding of interpersonal and familial relationships across the life span, 2) basic research skills used in applied settings (e.g. needs assessment, basic research, program evaluation), and 3) hands-on experiences through an internship and Service-Learning coursework. Students may choose between two concentrations: Family Life Education and Child Life Specialist. The Family Life Education concentration builds on the Family Science core courses in that students take additional coursework in order to be eligible to become a Certified Family Life Educator (<https://www.ncfr.org/cfle-certification>). Some of the topics addressed are diverse couple relationships throughout the life span, family and relationship violence, family policy, family life education methods, human sexuality education and human development. The Child Life Specialist concentration also builds on the Family Science core such that students take additional coursework in order to be eligible to take the Child Life Professional Certification Exam (<http://www.childlife.org>).

A graduate degree is needed to become a licensed counselor or therapist, or go into social service agency management and policy-making.

**STUDENTS PURSUING CHILD LIFE SPECIALIST CERTIFICATION:** The field of Child Life is highly competitive. Therefore, students declaring this concentration must meet with the Child Life Specialist Academic Advisor (Contact the FSW office for this information) in order to declare this concentration. Miami University does guarantee successful acceptance to the highly-competitive child life clinical experiences required for certification.

## Program Requirements

Code	Title	Credit Hours
<b>Required Core Courses</b>		
FSW 245	Children and Families: Ages Conception - 12	3
FSW 261	Diverse Family Systems Across the Life Cycle	3
FSW 295	Research and Evaluation Methods	3
FSW 475	Family Theories	3
FSW 481	Adolescent Development in Diverse Families: Ages 13-25	3
FSW 494	Internship with Families and Children	2-6
<b>Concentration Area</b>		
Select either the Family Life Education or Child Life Specialist concentration		24-26
Total Credit Hours		41-47

## Concentrations

### Family Life Education

Code	Title	Credit Hours
Take all of the following:		
FSW 361	Couple Relationships: Diversity and Change	3
FSW 365	Family Life Sexuality Education Across Cultures	3
FSW 418/518	The Family Life Education Process <sup>MPC</sup>	3
FSW 442	Family Resource Management Education and Advocacy	3
FSW 451/551	Family Violence <sup>MPC</sup>	3
FSW 466/566	Interpersonal Perspectives on Adulthood and Aging	3
FSW 490/590	Professional Issues in Family Science	3
<b>Family Policy</b>		
Select one of the following:		3-4
FSW 206	Social Welfare: Impact on Diverse Groups	
FSW 462/562	Family Policy and Law <sup>(MPC)</sup>	
Total Credit Hours		24-25

### Child Life Specialist

Code	Title	Credit Hours
Select all of the following:		
FSW 318	Child Life Theory and Practice	3
BIO 161	Principles of Human Physiology	4
STC 136	Introduction to Interpersonal Communication	3
STC 231	Small Group Communication	3
EDP 256	Psychology of the Exceptional Learner	3
KNH 209	Medical Terminology for Health Professionals	3
PHL 375	Medical Ethics	4
<b>Loss/Bereavement/Death/Dying</b>		

Select the following:	3
SOC 435      Death Studies	
Total Credit Hours	26

## Social Work- Bachelor of Science in Social Work

For information, contact Dr. Angela Curl, Director of the Undergraduate Social Work program, 101 McGuffey Hall, 513-529-2323, curla@miamioh.edu.

This Social Work major has a foundation in the liberal arts. The goal is to prepare students for generalist baccalaureate-level social work practice by integrating the knowledge, values, and skills of the social work profession. Students are provided a professional foundation in social work values and ethics, diversity, social and economic justice, populations-at-risk, human behavior and the social environment, social welfare policy and services, social work practice skills, social work research, and a field experience in an agency setting.

The curriculum prepares students to work with persons across the lifespan facing a diversity of issues and in a wide range of settings including nonprofits, governmental agencies, and non-governmental organizations. Upon completion of the degree, students are eligible to take the national license exam through the Association of Social Work Boards and to apply for licensure in their state. This program is accredited by the Council on Social Work Education.

### Special Program Admission Requirements

Students may declare the social work major at any time. However, formal acceptance into the program must occur before a student is eligible to take FSW 306 and FSW 406. In order to be accepted, students must:

1. Complete FSW 201 & FSW 206 with a grade of "C" or better.
2. Current or transfer students seeking admission to the BSW program, must have a minimum cumulative GPA of 2.50.
3. Read the Undergraduate Social Work Student Handbook and submit a signed acknowledgement form indicating acceptance of the policies.
4. Attend one of the Undergraduate Social Work student orientation sessions (typically offered at the start of Fall and Spring terms).

Students will receive written notification of formal acceptance once these steps are completed.

You are strongly encouraged to meet with your social work academic adviser (or Program Director or Chief Departmental Advisor) within one month of declaring the social work major, and each semester thereafter.

## Program Requirements

Code	Title	Credit Hours
<b>Required Core Courses</b>		
FSW 201	Introduction to Social Work	3
FSW 206	Social Welfare: Impact on Diverse Groups	4
FSW 261	Diverse Family Systems Across the Life Cycle	3

FSW 295	Research and Evaluation Methods	3
FSW 306	Social Work Practice I	4
FSW 309	Social Welfare Policy II	3
FSW 312	Human Behavior in the Social Environment	3
FSW 406	Social Work Practice II	4
FSW 411	Senior Field Experience I	6
FSW 412	Senior Seminar in Social Work I	2
FSW 413	Senior Seminar in Social Work II	2
FSW 414	Senior Field Experience II	6
<b>Required Related Hours</b>		
BIO 161	Principles of Human Physiology	4
or BIO 171	Human Anatomy and Physiology	
ECO 131	Economic Perspectives on Inequality in America	3
or ECO 201	Principles of Microeconomics	
or ECO 202	Principles of Macroeconomics	
PSY 111 & PSY 112	Introduction to Psychology and Foundational Experiences in Psychology	3-4
or EDP 101	Psychology Of The Learner	
SOC 151	Social Relations	3-4
or SOC 153	Sociology in a Global Context	
STA 261	Statistics	4
or ISA 205	Business Statistics	
or STA 301	Applied Statistics	
Select four of the following:		12
FSW 245	Children and Families: Ages Conception - 12	
or PSY 231	Developmental Psychology	
FSW 466	Interpersonal Perspectives on Adulthood and Aging	
or PSY 334	Adulthood and Aging	
FSW 475	Family Theories	
FSW 481	Adolescent Development in Diverse Families: Ages 13-25	
PSY 221	Social Psychology	
PSY 241	Personality	
PSY 242	Abnormal Psychology	
PSY 324	Advanced Social Psychology	
PSY 326	Psychology of Gender	
PSY 345	Childhood Psychopathology and Developmental Disabilities	
Total Credit Hours		72-74

Note: a grade of "C" or better must be earned for all "Required Core Courses". Students earning lower than a "C" in a class must repeat that course.

## Social Work Senior Field Experience (OPEN TO SOCIAL WORK MAJORS ONLY)

The Social Work Methods courses, FSW 306 (Fall semester only) and FSW 406 (Spring semester only), is typically completed in the junior year and must be completed prior to beginning Field Experience. The social work field experience is taken in the senior

year over two terms for a total of 450 clock hours in an agency setting (225 hours/term). Students are required to register concurrently for FSW 411 (Senior Field Experience I) and FSW 412 (Senior Field Seminar I), and FSW 413 (Senior Field Seminar II) with FSW 414 (Senior Field Experience II). The field experience provides an opportunity to apply generalist social work knowledge and skills gained in the classroom to working with clients in an agency setting.

## Department of Kinesiology and Health

For information, contact the Department of Kinesiology and Health, 106 Phillips Hall, 513-529-2700.

The mission of the Department of Kinesiology and Health is to advance the understanding of health, physical activity, and related cultural practices to improve life quality and promote healthful, active living.

The faculty is deeply invested in offering high quality educational and research programs. Phillips Hall has state-of-the-art classrooms and laboratory facilities for enriching the educational and research experience of Miami University students.

The department offers four undergraduate program majors including kinesiology, nutrition, public health and sport leadership and management. The department also offers three undergraduate program minors: coaching, nutrition, and sport management.

- Bachelor of Science in Kinesiology and Health in:
  - Kinesiology
  - Nutrition
  - Public Health
  - Sport Leadership and Management

## Kinesiology- Bachelor of Science in Kinesiology and Health

The Kinesiology major leads to a Bachelor of Science in Kinesiology and Health. This major is for students interested in the scientific aspects of human movement. Kinesiology focuses on the acquisition of knowledge and understanding of interactions of physiological, anatomical, neuropsychological, and biomechanical factors that affect human health and performance. Skills learned in the classroom, laboratory and internships include assessing and developing effective strategies for enhancing health, improving performance, preventing diseases related to sedentary behavior and promoting the recovery of health in rehabilitation settings. State-of-the-art laboratories complement the classroom and foster critical thinking, reasoning, and other basic principles of liberal education, instrumental in careers in and outside of Kinesiology.

## Program Requirements

Code	Title	Credit Hours
<b>Requirements outside the KNH Dept.</b>		
BIO 161	Principles of Human Physiology	4
CHM 141	College Chemistry	3
CHM 144	College Chemistry Laboratory	2

CHM 142	College Chemistry	3
CHM 145	College Chemistry Laboratory	2
PHY 161	Physics for the Life Sciences with Laboratory I	4
PSY 111 & PSY 112	Introduction to Psychology and Foundational Experiences in Psychology	4
STA 261	Statistics	4
<b>Requirements in KNH</b>		
KNH 184	Motor Skill Learning and Performance	3
KNH 188	Physical Activity and Health	3
KNH 244	Functional Anatomy	3
KNH 244L	Functional Anatomy Laboratory	1
KNH 381	Biodynamics of Human Performance	3
KNH 381L	Biodynamics of Human Performance Lab	1
KNH 382	Physical Activity & Fitness Assessment	3
KNH 382L	Physical Activity & Health-Related Physical Fitness Assessment Laboratory	1
KNH 468	Physiology of Exercise and Physical Activity	3
KNH 468L	Physiology of Exercise and Physical Activity Laboratory	1
KNH 482	Exercise Prescription: Healthy Individuals & Individuals with Chronic Diseases/Disorders	3
Related courses in Kinesiology Area:		
Select six hours of the following:		6
KNH 409	Nutrition for Sports and Fitness	
KNH 442	Strength Training and Conditioning	
KNH 453A	Physiology of Endurance and Resistance Training	
KNH 453K	Mechanics of Musculoskeletal Injury	
KNH 453Y	Musculoskeletal Disorders	
KNH 483	Advanced Motor Control and Learning	
KNH 484	General Medical Conditions and Pharmacology for Athletic Training <sup>1</sup>	
<b>Exploring KNH Matrix</b>		
Select at least six KNH hours outside of major/ concentration but inside of KNH. <sup>2</sup>		6
Total Credit Hours		63

<sup>1</sup> Athletic Training courses that require instructor permission.

<sup>2</sup> Not all KNH courses qualify for the KNH Matrix. See a KNH advisor for details.

## Nutrition- Bachelor of Science in Kinesiology and Health

The Nutrition major leads to a Bachelor of Science in Kinesiology and Health degree. Nutrition, an area of health science, studies human metabolism as it relates to nutrition. An interdisciplinary curriculum with courses in nutrition, food science, food systems management, lifestyle and health, with supporting courses in chemistry, social science and management is provided by this major. Students in

this major must complete one of two concentrations, Community Nutrition or Dietetics, which fulfills the Accreditation Council for Education in Nutrition and Dietetics (ACEND) the accrediting body for our Didactic Dietetics Program requirements.

The Nutrition major, with a Community Nutrition concentration, allows the student to complement a foundation of nutrition, chemistry, behavior, physiology, microbiology, and statistics with course selections based on career interest. A graduate, completing this major, may choose from career opportunities in business, industry, education, or research, including medical and pharmaceutical sales, product development and marketing, and food-related businesses. This major may also be appropriate for students planning to pursue careers in health care, corporate wellness, food systems management, government food/nutrition program administration, public policy, and other allied health professions.

The Nutrition major, with a Dietetics concentration, is accredited by ACEND of the Academy of Nutrition and Dietetics (AND). This fulfills the didactic portion of the requirements to become a registered dietitian and a professional member of AND. To become a registered dietitian one must complete an ACEND approved clinical internship following graduation<sup>1</sup> and pass the registration exam. Dietitians are professionally prepared to perform nutritional assessment, counseling, and education as components of preventive, curative, or restorative health. Students may opt to become a nutrition and dietetics technician, registered (NDTR) through ACEND. For more information see your advisor.

<sup>1</sup> Acceptance rate of clinical experiences dependent upon student academic performance and other experiences.

## Program Requirements

(54-75 semester hours)

The Nutrition Major must complete all requirements in the Nutrition Foundation PLUS choose a concentration in either Community Nutrition or Dietetics. The Dietetics Concentration is for students interested in becoming a Registered Dietitian and a professional member of the Academy of Nutrition and Dietetics (AND).

Code	Title	Credit Hours
<b>Nutrition Foundation</b>		
BIO 161	Principles of Human Physiology	4
CHM 141	College Chemistry	3
CHM 144	College Chemistry Laboratory	2
CHM 142	College Chemistry	3
CHM 145	College Chemistry Laboratory	2
CHM 231	Fundamentals of Organic Chemistry	4
CHM 332 & 332L	Outlines of Biochemistry and Outlines of Biochemistry Lab	4
KNH 102	Fundamentals of Nutrition	3
KNH 103	Introduction to the Profession of Dietetics	2
KNH 213	Global and Community Nutrition	3
KNH 304	Advanced Nutrition	3
MBI 111	Microorganisms and Human Disease	3

PSY 111 & PSY 112 or EDP 101	Introduction to Psychology and Foundational Experiences in Psychology Psychology Of The Learner	4
STA 261	Statistics	4
<b>Concentration</b>		
Select a concentration		12-32
<b>Exploring KNH Matrix</b>		
Select at least nine KNH hours outside of major/ concentration but inside of KNH. <sup>1</sup>		9
Total Credit Hours		65-85

<sup>1</sup> Not all KNH courses qualify for the KNH Matrix. See a KNH advisor for details.

## Concentrations

### Community Nutrition Concentration: (12-13 hours)

In addition to the Nutrition Foundation requirements, students interested in business, industry, education, research, health care, and corporate wellness, must select a minimum of 12 total hours from the options below. See your advisor for recommendations dependent upon your interests.

Code	Title	Credit Hours
Select two of the following: 6		
ATH 448	Developing Solutions in Global Health	
FSW 261	Diverse Family Systems Across the Life Cycle	
KNH 203	Nutrition in Disease Prevention Management	
KNH 242	Personal Health	
KNH 362	Public Health Communication	
KNH 409	Nutrition for Sports and Fitness	
KNH 432	Nutrition Across the Life Span	
KNH 462	Public Health Planning and Evaluation	
PSY 231	Developmental Psychology	
Select two of the following: 6-7		
ECO 201	Principles of Microeconomics	
ECO 202	Principles of Macroeconomics	
ECO 332	Health Economics	
ESP 201	Introduction to Entrepreneurship and Business Models	
KNH 468 & 468L	Physiology of Exercise and Physical Activity and Physiology of Exercise and Physical Activity Laboratory	
KNH 482	Exercise Prescription: Healthy Individuals & Individuals with Chronic Diseases/Disorders	
MBI 131	Community Health Perspectives	
MGT 111	Introduction to Business	
MGT 291	Introduction to Management & Leadership	
MGT 303	Human Resource Management	

STC 136	Introduction to Interpersonal Communication	
STC 231	Small Group Communication	
Total Credit Hours		12-13

### Dietetics Concentration: (30-32 hours)

In addition to the Nutrition Foundation requirements, student's planning on becoming a Registered Dietitian must also complete the following coursework. Acceptance rate of a clinical experience is dependent upon student academic performance and other experiences.

Code	Title	Credit Hours
Select the following:		
KNH 104	Introduction to Food Science and Meal Management	3
KNH 203	Nutrition in Disease Prevention Management	3
KNH 303	Food Systems Management	3
KNH 403	Professional Practices in Dietetics	3
KNH 404	Advanced Food Science	4
KNH 411	Medical Nutrition Therapy I	3
KNH 413	Medical Nutrition Therapy II	3
KNH 420G	Field Experience in Dietetics	2-4
KNH 432	Nutrition Across the Life Span	3
Select one of the following: 3		
MGT 111	Introduction to Business	
MGT 291	Introduction to Management & Leadership	
MGT 303	Human Resource Management	
Total Credit Hours		30-32

**IMPORTANT ADVISING INFORMATION:** The Nutrition - Dietetic program is a competitive program. A minimum grade expectation of a "C" or better is strongly encouraged, especially in the sciences: BIO 161, CHM 141, 144, 142, 145, 231, 332, 332L and MBI 111. Competitive dietetic internship applicants will have an overall 3.0 GPA or higher.

## Public Health- Bachelor of Science in Kinesiology and Health

The Public Health major leads to a Bachelor of Science in Kinesiology and Health. The Public Health program focuses on the science and practice of disease prevention, health promotion, and public health policymaking. Public Health focuses on health, not disease. Public Health encourages individuals and groups of people to improve and/or maintain their health status. The mission of the Public Health program is to inspire future health professionals to serve the whole person and the whole of society by educating them about the socio-cultural, behavioral, psychological and biological factors that contribute to wellness and disease.

## Program Requirements

Code	Title	Credit Hours
<b>Required for all majors</b>		
IES 441 or KNH 441	Environmental Public Health	3
KNH 125 or MBI 131	Introduction to Public Health Community Health Perspectives	3
KNH 218	Applied Health Behavior Change	3
KNH 221	Social Marketing in Public Health	3
KNH 321 or GTY 365	National and Global Health Policy Social Policy and Programs in Gerontology	3
MBI 361	Epidemiology	3
STA 261 or STA 301	Statistics Applied Statistics	3-4
<b>Exploring KNH Matrix</b>		
Select at least nine KNH hours outside of major/ concentration but inside of KNH <sup>1</sup>		9
<b>Tracks (one required):</b>		19-22
<b>PUBLIC HEALTH PROMOTION</b>		
Select the following:		
KNH 262	Public Health Education	
KNH 295	Research and Evaluation Methods	
KNH 362	Public Health Communication	
KNH 462	Public Health Planning and Evaluation	
Select two of the following:		
GHS 101	Introduction to Global Health	
GTY 456	Aging & Health	
KNH 188	Physical Activity and Health	
KNH 424	Public Health Disparities Past and Current	
KNH 432	Nutrition Across the Life Span	
Select one of the following (1-3 hrs):		
KNH 340	Internship	
KNH 377R	Independent Studies	
KNH 477R	Independent Study - Research	
<b>BEHAVIORAL PUBLIC HEALTH</b>		
Select the following:		
EDP 101 or PSY 111 & PSY 112	Psychology Of The Learner Introduction to Psychology and Foundational Experiences in Psychology	
KNH 295	Research and Evaluation Methods	
KNH 329	Psychological Perspectives on Health	
KNH 362	Public Health Communication	
KNH 462	Public Health Planning and Evaluation	
Select one of the following:		
EDP 357	Student Mental Health	
FSW 312	Human Behavior in the Social Environment	
KNH 209	Medical Terminology for Health Professionals	
KNH 214	Global Well-Being	
PSY 221	Social Psychology	

PSY 242	Abnormal Psychology
PSY 410P	Cap:Community Psychology

Select one of the following (1-3 hrs):

KNH 340	Internship
KNH 377R	Independent Studies
KNH 477R	Independent Study - Research

Total Credit Hours 49-53

<sup>1</sup> Not all KNH courses qualify for the KNH matrix. See a KNH advisor for details.

## Sport Leadership and Management- Bachelor of Science in Kinesiology and Health

The Sport Leadership and Management (SLAM) major leads to a Bachelor of Science in Kinesiology and Health. This major prepares students to succeed in leadership positions in the sport industry (recreational to professional, youth to adult) by providing them with knowledge and skills to critically analyze and innovatively engage in the business and culture of sport.

### Program Requirements

Code	Title	Credit Hours
<b>Exploring KNH Matrix</b>		
Select at least nine KNH hours outside of major/ concentration but inside of KNH.		9
<b>Sport Leadership Core Courses</b>		
KNH 225	Ethics in Sport	3
KNH 272	Contemporary Perspectives on Leadership in Sport Contexts	3
KNH 276 or KNH 448	Current Issues in Leisure and Sport Global Sport Perspectives	3
KNH 375	Psychological Perspectives in Sport and Exercise	3
KNH 378	Sport, Power and Inequality	3
KNH 471 or KNH 473	Sport, Leisure, and Aging Children and Youth in Sport	3
<b>Statistics Course</b>		
STA 261	Statistics	4
<b>Sport Leadership and Management Practicum</b>		
KNH 495	Practicum in Sport Leadership and Management	3
<b>Concentration</b>		
Select one of four concentrations:		29-43
<b>1. SPORT MANAGEMENT (33 hours)</b>		
<b>Sport Management Courses</b>		
KNH 212	Introduction to Sport Management	
KNH 313	Sport Economics and Finance	
KNH 414	Facilities and Event Management in Sport	
KNH 416	Sport Marketing	

Select one of the following:

KNH 4533	Sport Sales & Sponsorship
KNH 4530	Sport Law
KNH 472	Sport Administration

### Strategic Communication Course

Select one of the following:

ENG 202	Varieties of English: Dialect Diversity and Language Change
STC 135	Principles of Public Speaking
STC 259	Introduction to Strategic Communication and Public Relations
STC 339	Introduction to Organizational Communication
STC 436	Intercultural Communication

### Business Writing or Media Course

Select one of the following:

ENG 313	Technical Writing
ENG 315	Business Writing
IMS 201	Information Studies and Digital Citizenship
IMS 222	Introduction to Interaction Design and Development
IMS 259	Art and Digital Tools I
IMS 355	Principles and Practices of Managing Interactive Projects
IMS 390	Special Topics in Interactive Media Studies

### Business Courses

Select four of the following (MGT 111 is required):

ACC 211	Accounting for the Non-Business Major
BUS 301	Basics of Business I
BUS 302	Basics of Business II
BUS 303	Business Process Integration
ECO 201 or ECO 202	Principles of Microeconomics Principles of Macroeconomics
ESP 201	Introduction to Entrepreneurship and Business Models
MGT 111	Introduction to Business
MGT 211	Introduction to Management for Non-business Majors
MKT 211	Business Concepts in Customer Engagement

## 2. COACHING (38 hours)

### Coaching Courses

KNH 184	Motor Skill Learning and Performance
KNH 184L	Motor Skill Learning and Performance Laboratory
KNH 244	Functional Anatomy
KNH 244L	Functional Anatomy Laboratory
KNH 337	Foundations and Fitness Training for Coaches
KNH 338 or KNH 438	Psychosocial Aspects of Coaching Principles of Effective Coaching

KNH 447	Sport Pedagogy for Coaches and Practitioners
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KNH 473 or KNH 471	Children and Youth in Sport Sport, Leisure, and Aging
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Select one of the following:

KNH 414	Facilities and Event Management in Sport
KNH 416	Sport Marketing
KNH 4530	Sport Law

### Contexts of Coaching

Select one of the following:

KNH 274	Critical Perspectives on the Body
KNH 279	African Americans in Sport
KNH 472	Sport Administration
KNH 475	Women, Gender Relations, and Sport

### Strategic Communication Course

Select one of the following:

STC 135	Principles of Public Speaking
STC 259	Introduction to Strategic Communication and Public Relations
STC 339	Introduction to Organizational Communication
STC 436	Intercultural Communication

### Business Courses

Select three of the following:

ACC 211	Accounting for the Non-Business Major
MGT 111	Introduction to Business
MGT 211	Introduction to Management for Non-business Majors
MKT 211	Business Concepts in Customer Engagement

## 3. SPORT JOURNALISM (49 hours)

Students in the Sport Journalism concentration complete two Bachelor's degrees with a Bachelor of Science in Kinesiology and Health (major in SLAM) and a Bachelor of Arts in Journalism (major in Journalism). Students should contact the Department of Media, Journalism and Film for information on their specific requirements in Journalism. (Please note with a major in Journalism students must complete ALL additional College of Arts and Science Global Miami Plan requirements).

### Sport Leadership and Management Program Requirements

Select three of the following:

KNH 274	Critical Perspectives on the Body
KNH 279	African Americans in Sport
KNH 313	Sport Economics and Finance
KNH 338 or KNH 438	Psychosocial Aspects of Coaching Principles of Effective Coaching
KNH 448	Global Sport Perspectives
KNH 475	Women, Gender Relations, and Sport

### Bachelor of Arts with a major in Journalism (40 hours)

A dual degree is required

## 4. SPORT MEDIA AND COMMUNICATION (46 hours)

Students in the Sport Media concentration complete two Bachelor's degrees with a Bachelor of Science in Kinesiology and Health (major in SLAM) and a Bachelor of Arts in Media and Culture (major in Media and Culture). Students should contact the Department of Media, Journalism and Film for information on their specific requirements in Media and Culture. (Please note with a major in Media and Culture students must complete ALL additional College of Arts and Science Global Miami Plan requirements).

### Sport Leadership and Management Program Requirements

Select three of the following:

KNH 274 Critical Perspectives on the Body

KNH 279 African Americans in Sport

KNH 313 Sport Economics and Finance

KNH 338 Psychosocial Aspects of Coaching  
or KNH 438 Principles of Effective Coaching

KNH 448 Global Sport Perspectives

KNH 475 Women, Gender Relations, and Sport

### Bachelor of Arts with a major in Media and Culture or Strategic Communication (37 hours)

A dual degree is required

Total Credit Hours 63-77

## Minors

In addition to majors, The College of Education, Health and Society offers minors. A minor is a specific program to be taken along with a major to complement your skills and to increase your career opportunities. Completing a minor is optional.

More information about minors is included in the Other Requirements section.

- Child Studies and Youth Development
- Coaching
- Community-Based Leadership
- Disability Studies
- Education, Teaching and Learning
- Family Relationships
- Nutrition
- Special Education
- Sport Management

## Child Studies and Youth Development Minor

For more information, please contact the Department of Family Science and Social Work, 101 McGuffey Hall or call 513-529-2323.

This minor prepares students to work with children from birth to age 25. Courses focus on growth and development, parent-child relationships, and techniques for working with young children. This program is of special interest to those majoring in education, social sciences, speech pathology, or family studies and social work. This minor is not open to majors in Family Science and includes Thematic Sequence FSW 4 Children in Families.

A minimum 2.00 GPA is required for all courses in this minor. No courses may be taken credit/no credit.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Core Requirements</b>		
Select one of the following:		3
FSW/EDT 225	Family School and Community Connections	
FSW 261	Diverse Family Systems Across the Life Cycle	
FSW 363	Sociology of Families	
Select all of the following:		
FSW 245	Children and Families: Ages Conception - 12	3
FSW 481	Adolescent Development in Diverse Families: Ages 13-25	3
FSW 494	Internship with Families and Children	3
<b>Family Science Electives</b>		
Select two of the following:		6
FSW 312	Human Behavior in the Social Environment	
FSW 362	Family Poverty	
FSW 365	Family Life Sexuality Education Across Cultures	
FSW 418	The Family Life Education Process	
FSW 442	Family Resource Management Education and Advocacy	
FSW 451	Family Violence	
FSW 462	Family Policy and Law	
FSW 475	Family Theories	
Total Credit Hours		18

**Note:** Students whose major requires an Experiential Learning course, may petition for that course to replace FSW 494/FSW 594. Approval of this petition is not guaranteed and is subject to department review.

## Coaching Minor

The minor in coaching allows students to obtain the knowledge and skills needed to coach at the youth, interscholastic, intercollegiate, and professional levels of sport. The minor is open to all university students.

## Coaching Minor Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Select all of the following:</b>		
KNH 184	Motor Skill Learning and Performance	3
KNH 337	Foundations and Fitness Training for Coaches	3

KNH 447	Sport Pedagogy for Coaches and Practitioners	3
<b>Select two of the following:</b>		6
KNH 338	Psychosocial Aspects of Coaching	
KNH 438	Principles of Effective Coaching	
KNH 473	Children and Youth in Sport	
<b>Select one of the following:</b>		3
KNH 225	Ethics in Sport	
KNH/BWS/SOC 279	African Americans in Sport	
KNH 378	Sport, Power and Inequality	
KNH 448	Global Sport Perspectives	
KNH 471	Sport, Leisure, and Aging	
KNH 475	Women, Gender Relations, and Sport	
Total Credit Hours		18

## Community-Based Leadership Minor

Students will explore leadership as it is practiced in communities, organizations, and public institutions. Explorations of leadership as a critical activity for contemporary public life in a democratic society.

Minimum 3.00 cumulative GPA in minor classes required to receive minor degree.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Required Introductory Course</b>		
EDL 232	Introduction to Community-Based Leadership	3
<b>Required Communications Course</b>		
Select one of the following:		3
AAA/AMS/BWS/LAS/WGS 211	Writing with Purpose: Interdisciplinary Inquiry and Communication	
APC 428	Communication in Conflict Management	
JRN 101	Introduction to Journalism	
STC 135	Principles of Public Speaking	
STC 136	Introduction to Interpersonal Communication	
STC 259	Introduction to Strategic Communication and Public Relations	
STC 431	Persuasion Theory and Research	
STC 436	Intercultural Communication	
<b>Electives</b>		
Select nine hours of the following:		9
AMS 205	Introduction to American Cultures	
AMS 207	America: Global and Intercultural Perspectives	
ATH/BWS 325	Identity, Race, Gender, Class	

BWS/SJS/SOC 265	Critical Inquiry: Penny Lecture Series
BWS 348	Race and Ethnic Relations
DST/EDP/SOC/WGS 375	(Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice
EDT/FSW 225	Family School and Community Connections
EDL 195	Team Building Development - Facilitation & Group Dynamics
EDL 203	Introduction to Critical Youth Studies
EDL 204	Sociocultural Studies in Education
EDL 290	The Nature of Group Leadership
EDL 333	Youth, Media & Pop Culture
EDL 334	Transnational Youth Cultures
EDL 369	Sexuality, Youth, Education
EDL 382	Community-Based Research & Learning in Education
FSW 245	Children and Families: Ages Conception - 12
FSW 481	Adolescent Development in Diverse Families: Ages 13-25
GEO 201	Geography of Urban Diversity
GEO 271	Human Dimensions of Natural Resource Conservation
GEO/WGS 436	Women, Gender, and the Environment
GEO 451	Urban and Regional Planning
HST 216	Introduction to Public History
IDS 159	Strength Through Cultural Diversity
IMS 225	Games and Learning
KNH 243	Women's Health Care: Problems and Practices
LAS 315	Latin American Diaspora: Communities, Conditions and Issues
LAS/HST 319	Revolution in Latin America
NCS 201	Theories of Civic Leadership and Democracy
NCS 202	Introduction to Nonprofits and NGOs
PHL 131	Introduction to Ethics
PHL 312	Contemporary Moral Problems
SJS 159	Creating Global Peace
SJS 215	EMPOWER I: Educational and Economic Justice and Service-Learning
SJS 216	EMPOWER II: The Intersections of Race, Class, and Education
SOC 153	Sociology in a Global Context
SOC 203	Sociology of Gender
SOC 258	Self and Society
STC 437	Advocacy in Contemporary America
THE 439	Special Techniques for the Actor
WGS 201	Introduction to Women's Studies
The following upper level courses may also be selected as electives but require prerequisites:	
BWS 362	Family Poverty

DST 494	Disability in Global and Local Contexts	
FSW 462	Family Policy and Law	
GEO 462	Citizenship and the City	
SJS/SOC 323	Social Justice and Change	
SOC 409	Systems of Justice	
SOC/BWS/SJS 470	Social/Political Activism	
WGS 301	Women and Difference: Intersections of Race, Class, and Sexuality	
WGS 402	Engaged Learning Practicum	

The department strongly supports student participation in immersive learning opportunities. Elective credits can also be earned through participation of the following (credit cannot be granted retroactively):<sup>1</sup>

EDL 340	Internship	
	EDL Independent Study Course	
	EDL Independent Study Research Course	

**Culminating Course**

EDL 464	Community-Based Leadership and Change	3
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Total Credit Hours 18

<sup>1</sup> Email Dr. Evans at [mevans@miamioh.edu](mailto:mevans@miamioh.edu) for more details.

## Disability Studies Minor

For information, contact the Department of Educational Psychology, 201 McGuffey Hall, [edp@miamioh.edu](mailto:edp@miamioh.edu).

This minor offers a broad liberal arts approach to the study of disability. It provides students with knowledge of the historical, social, artistic, literary, legal, educational, philosophical and political framing of disability. Students develop a strong interdisciplinary foundation, with emphasis on cultural constructions of disability, and the intersections of disability, race, gender, sex, age, class and other markers of diversity and difference. Students have the opportunity to enhance this foundation by extending their learning into the community through the senior capstone internship and/or independent research requirement.

### Program requirements

(18 semester hours)

Take the required courses, no more than two additional courses at the 100-200 level, and the capstone experience.

Code	Title	Credit Hours
<b>Required courses</b>		
DST/EDP/SOC 272	Introduction to Disability Studies	3
DST/EDP/SOC/ WGS 375	(Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice	3
<b>Capstone course</b>		
EDP 489/DST 494/ ENG/STC 494	Disability in Global and Local Contexts	3
<b>Additional courses</b>		
Select no more than two courses at the 100-200 level:		3-6

ARC 107	Global Design	
DST/SPA 101	Beginning ASL I	
DST/SPA 102	Beginning ASL II	
DST/ENG 169	Disability and Literature	
DST/EDP/WGS 278	Women and (Dis)ability: Fictions and Contaminations of Identity	
Select remaining hours at the 300-400 level:		6-9
DST/SPA 312	Deaf Culture: Global, National and Local Issues	
DST/EDP/SOC/ STC 378	Media Illusions: Creations of "The Disabled" Identity	
DST/BWS/SJS/ SOC 470	Social/Political Activism	
EDT 457	Culturally Responsive Teaching	
ENG/WGS 435	Queer Theory	
FSW 245	Children and Families: Ages Conception - 12	
GTU/SOC 357	Medical Sociology	
KNH 378	Sport, Power and Inequality	

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Total Credit Hours 18-24

## Education, Teaching, and Learning Minor

For information, contact the Department of Teacher Education at 513-529-6443.

Most people will have contact with the educational systems in their communities during their lifetimes. Many will have careers that at least part of the time involve training employees. Some envision careers that involve helping people learn new tasks and ideas. Some see themselves running for political office. This minor can provide a basic understanding of ideas in the world of education.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
EDT 190	Introduction to Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDT 311	Educational Strategies for Non-Majors	3
Select 9 hours from the following:		9
EDT 188	Creativity and Innovation in STEM Education	
EDT 202	Global Childhood Education: Diversity, Education & Society	
EDT/FSW 225	Family School and Community Connections	
EDT 284	Writing for Educators	
EDT 288	Ways of Thinking in STEM (Science, Technology, Engineering, and Mathematics) Education	
EDT 415	Inquiry Into Life Science	
EDT 422	Studies in Educational Issues	

EDT 452	Teaching Social Studies in the Intermediate Grades	
EDT 455	Capstone Seminar: Comparative Education in Europe or China	
EDT 461	Grant Writing Skills and Methods	
EDT 483	Educators as Activists: Preparing Educators and Allies for Forces Impacting Classrooms and Schools	
EDT 488	Grand Challenges in STEM Education	
EDT 495	Writing Information Books for Children	
Total Credit Hours		18

## Family Relationships Minor

This minor examines the diversity and complexity of family relationships across the life course. Courses focus on family diversity, couple relationships, sexuality, parenting, and human development. Students desiring to increase their knowledge about families in order to enhance their career opportunities will find this minor of interest.

A minimum 2.00 GPA is required for all courses in this minor. No courses may be taken credit/no-credit. Students planning to take this minor should consult with the chief departmental advisor. This minor includes Thematic Sequences FSW 3 Families and Sexuality Across the Life Course and FSW 4 Children in Families. This minor is not open to students majoring in Family Science. This minor is open to Social Work majors but will not be counted toward completion of their Global Miami Plan requirements. At least 12 credit hours must be taken in the Department of Family Science and Social Work.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Core Requirements</b>		
Select one of the following:		3
FSW 225	Family School and Community Connections	
FSW 261	Diverse Family Systems Across the Life Cycle	
FSW 363	Sociology of Families	
Select the following:		
FSW/WGS 361	Couple Relationships: Diversity and Change	3
FSW 365	Family Life Sexuality Education Across Cultures	3
FSW 494	Internship with Families and Children	3
<b>Human Development Foundation</b>		
Select one of the following:		3
FSW 245	Children and Families: Ages Conception - 12	
FSW 466	Interpersonal Perspectives on Adulthood and Aging	
FSW 481	Adolescent Development in Diverse Families: Ages 13-25	
<b>Family Science Electives</b>		

Select one of the following:		3
FSW 312	Human Behavior in the Social Environment	
FSW 362	Family Poverty	
FSW 418	The Family Life Education Process	
FSW 451	Family Violence	
FSW 462	Family Policy and Law	
FSW 475	Family Theories	
Total Credit Hours		18

## Nutrition Minor

This minor provides an understanding of nutrition and includes specialized courses in child nutrition, nutrition for the aging, and community nutrition. It is open to all students and complements majors in health-related professional and pre-professional programs. A minimum 2.00 GPA is required for all courses in the minor. No courses may be taken credit/no-credit.

## Program Requirements

(20 semester hours)

Code	Title	Credit Hours
<b>Required courses</b>		
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
KNH 102	Fundamentals of Nutrition	3
KNH 104	Introduction to Food Science and Meal Management	3
KNH 432	Nutrition Across the Life Span	3
<b>Electives</b>		
Select two of the following:		6
KNH 203	Nutrition in Disease Prevention Management	
KNH 213	Global and Community Nutrition	
KNH 304	Advanced Nutrition	
KNH 409	Nutrition for Sports and Fitness	
KNH 453H	Nutrition Education	
Total Credit Hours		20

## Special Education Minor

A minor is a special program to be taken along with a major to complete your skills and increase your career opportunities. More information on minors is in the Other Requirements chapter.

## Special Education Without Licensure

Open to any major, this minor can usually be completed within a four-year program. It includes Thematic Sequence EDP 1. Applications for this minor and thematic sequence are accepted in the EDP office in 201 McGuffey Hall, each year until enrollment limits are reached. Online classes during winter and summer terms may be required.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Select this course first:		
EDP 256	Psychology of the Exceptional Learner	3
Select the following:		
EDP 486	Methods I: Learners with Mild/Moderate Disabilities	3
EDP 496	Behavioral Interventions: Theory, Principles, and Techniques	3
Select from the following to complete 18 hours:		
EDP/DST/SOC 272	Introduction to Disability Studies	9
EDP 351	Miami Connections Mentoring	
EDP 478	Effective Social Skills Development, Collaboration and Transition Planning in Special Education	
EDP 494	Assessment, Evaluation, and Educational Planning for Learners with Exceptionalities	
Total Credit Hours		18

## Sport Management Minor

This minor focuses on the knowledge and skills needed for administrative or managerial positions in sport at various levels (from youth to elite sport) and in various context (from community recreational to professional sport). The minor is open to all university students.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
KNH 212	Introduction to Sport Management	3
KNH 313	Sport Economics and Finance	3
KNH 414	Facilities and Event Management in Sport	3
KNH 416	Sport Marketing	3
Select one of the following:		
KNH 225	Ethics in Sport	3
KNH 4530	Sport Law	
KNH 472	Sport Administration	
Select one of the following:		
KNH/BWS/SOC 279	African Americans in Sport	3
KNH 378	Sport, Power and Inequality	
KNH 448	Global Sport Perspectives	
KNH 471	Sport, Leisure, and Aging	
KNH 473	Children and Youth in Sport	
KNH 475	Women, Gender Relations, and Sport	
Total Credit Hours		18

## Autism Spectrum Disorders Certificate

The Autism Spectrum Disorders (ASD) Certificate offers practical classroom applications for students interested in in-depth knowledge of Autism Spectrum Disorder. Students will develop a broad and updated knowledge base in current research & trends, methods for classroom instruction, understanding and developing approaches to social-emotional and communicative skills, and methods for behavior support & intervention. Courses are offered in an online format, and may be taken non-sequentially.

### Program Requirements

Code	Title	Credit Hours
EDP 479/579	Autism: Introduction and Current Research	3
EDP 482/582	Autism Spectrum Disorder: Best Practice in Teaching Strategies	3
EDP 484/484	Autism Spectrum Disorder: Social and Communication Development	3
EDP 485/485	Autism Spectrum Disorder: Positive Behavior Supports and Interventions	3
Total Credit Hours		12

## Fostering Just Communities Certificate

For information, contact the Department of Teacher Education, 401 McGuffey Hall 513-529-6443.

This 12-credit undergraduate certificate program is open to all majors, is inter-disciplinary, requires a place-based learning component, and focuses on social justice in urban communities. Multiple options to completion.

### Program Requirements

Code	Title	Credit Hours
<b>Complete one of the following pathways:</b>		
<b>Urban Cohort</b>		
Preparatory		
SJS 215	EMPOWER I: Educational and Economic Justice and Service-Learning	12
Experiential		
Student Teaching or 120-hour semester internship (either Immersive Residential or Not)		
Reflective		
EDT 420A	Junior Seminar	
Culminating		
EDT 419A	Teaching Internship- Adolescent	
	or EDT 419E Teaching Internship- Early Childhood	
	or EDT 419M Teaching Internship-Middle Childhood	
Or Senior Seminar in Student's Discipline		
<b>Fall Residency Program</b>		
Preparatory		

SJS 215	EMPOWER I: Educational and Economic Justice and Service-Learning (See Fostering Just Communities Advisor for a)
Experiential	
Immersive Residential Semester Internship	
Reflective	
EDL 377	Independent Studies
Culminating	
ARC 427	The American City Since 1940
<b>Flex Plan</b>	
Preparatory	
SJS 215	EMPOWER I: Educational and Economic Justice and Service-Learning (See Fostering Just Communities Advisor for additional options)
Experiential	
Cincinnati Summer Immersion Program or 120 hour Non-residential Semester Internship	
Reflective	
Culminating	
See Fostering Just Communities Advisor for Options	
Approved course (See Fostering Just Communities Advisor) and 1 credit hour independent study	
Total Credit Hours 12	

## Outdoor Leadership Certificate

Offered through a collaboration between the departments of Educational Leadership (EDL), Kinesiology & Health (KNH), and the Outdoor Pursuit Center (OPC) in Recreational Sports, this certificate program is for students interested in pursuing professional or leisure opportunities leading youth or adult learners in outdoor sport or adventure learning excursions or activities. The program will prepare its graduates to assume outdoor leadership roles through classroom and experiential coursework focused on four elements: 1) leadership theory and skills appropriate for outdoor educational contexts; 2) technical and interpersonal skills for outdoor activity/sport leadership; 3) environmental science and sustainability practices; 4) leadership capacities for working with and leading culturally diverse groups of learners.

### Program Requirements

Code	Title	Credit Hours
EDL 232	Introduction to Community-Based Leadership	3
EDL 290R	Outdoor Leadership	2
EDL 340	Internship	2
IES 274	Introduction to Environment and Sustainability	3
Select two of the following:		4
EDL 195	Team Building Development - Facilitation & Group Dynamics	
KNH 150A	Beginning Canoeing	
KNH 150B	Beginning Backpacking	

KNH 150C	Beginning Rock Climbing
KNH 150K	Intermediate Rock Climbing
KNH 150M	Mountain Biking
Total Credit Hours 14	

## Teaching English Language Learners (TELLs) Certificate

Teaching English Language Learners (TELLs) Certificate provides undergraduate teacher licensure candidates the knowledge, skills, and experiences that will prepare them to meet the challenges of English language learners in their classrooms. The TELLs Certificate consists of an optional infusion portfolio, field-based experiences with language learners, a three course focus sequence and a cultural and social justice course. Open to all teacher licensure majors.

### Program Requirements

Code	Title	Credit Hours
<b>Required courses</b>		
EDT 221	Teaching English Language Learners in PK-12: Culture & Second Language Acquisition	3
EDT 323	Teaching English Language Learners in PK-12: Instructional Theories & Practices	3
EDT 425	Teaching English Language Learners in PK-12: Active Learning & Literacy	3
<b>Electives</b>		
Select an elective course in cultural diversity or social justice		3
Total Credit Hours		12

# College of Engineering and Computing

## Advising Office

106 Benton Hall  
Phone: 513-529-0700  
www.cec.MiamiOH.edu

## General Information

The College of Engineering and Computing's mission is to serve society by providing high quality undergraduate and graduate education in the fields of computing and engineering. We are committed to creating an environment for teaching, learning, and scholarship that is intellectually stimulating, interactive, and innovative; in which our faculty, staff, and students reach their full potential. Our guiding principle is to provide professional education integrated with Miami University's traditional strength in liberal education.

Everyone in the College of Engineering and Computing values:

- Effective student learning and student success
- An intellectually stimulating and challenging environment
- Faculty growth and learning as teachers and scholars
- Diversity of staff, faculty, and student body
- Respect for the environment

We are committed to an environment that fosters:

- Innovation and creativity
- Ethical behavior
- Respect for others and teamwork
- International and global opportunities and perspectives
- Fact-based, collegial decision-making
- Safety in all our professional endeavors

## First-Year Course Selection for Undeclared Students

The College of Engineering and Computing has developed the following first-year course pattern for students who have not declared a major and who want to progress satisfactorily in engineering and computing majors while maintaining maximum flexibility in considering other science/math-based programs. Faculty advisors are available at summer orientation to help you select courses within this pattern. You will be assigned a faculty advisor to help you with course and career selection while you remain an undeclared major. Once you have selected a major, a faculty advisor in that area will be assigned to you.

If you have already chosen a major in engineering or computing, please refer to the program description for your chosen major later in this section for recommended first-year course selections.

If you are undecided about your major, but considering a major in the College of Engineering and Computing, select courses within the following pattern with the advice of a faculty advisor:

Course	Title	Credit Hours
<b>Fall</b>		
CEC 101	Computing, Engineering & Society	1
ENG 111	Composition and Rhetoric (or equivalent)	3
MTH 151 or MTH 249	Calculus I <sup>1</sup> or Calculus II	5
Select one of the following:		3-5
PHY 191	General Physics with Laboratory I	
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	
Biological Science course		
Select one of the following:		3
Global Miami Plan elective (IIA, IIB, or III)		
CSE 174	Fundamentals of Programming and Problem Solving	
Credit Hours		15-17
<b>Spring</b>		
Select one of the following:		3
CPB 102	Introduction to Chemical and Bioengineering	
CSE 102	Introduction to Computer Science and Software Engineering	
ECE 102	Introduction to Electrical and Computer Engineering	
MME 102	Introduction to Mechanical and Manufacturing Engineering	
Global Miami Plan elective		3
MTH 251 or MTH 252	Calculus II or Calculus III	4
Select one of the following:		5-6
PHY 192	General Physics with Laboratory II	
CHM 142	College Chemistry	
Global Miami Plan electives (IIA, IIB, or III not taken above)		
Credit Hours		15-16
Total Credit Hours		30-33

<sup>1</sup> Typically, students start with MTH 151. Depending on results of the math placement exam, ACT/SAT score, and high school background, however, you may start with MTH 104, MTH 123, or MTH 249. Students who take a prerequisite course to MTH 151 (MTH 104 or MTH 123) will usually not hinder their academic progress.

## Choosing Liberal Education Electives

All programs in the College have liberal education elective courses and Thematic Sequence components of the Global Miami Plan for Liberal Education. You are encouraged to seek advice from a faculty advisor in choosing electives that are consistent with your interests and educational goals.

## Study Abroad

Students are encouraged to consider spending a summer term, winter term, semester, or year studying abroad. This experience

offers a valuable opportunity to enrich students' cultural perspectives and understanding and to help understand the needs of clients in computing and engineering in our increasingly global society. Students considering study abroad need to meet with their advisor and plan their curriculum as early as possible.

## Honorary and Professional Organizations

Through honorary and professional organizations, you can further develop leadership skills, interact with professionals in your field, and engage in educational activities which have significance beyond the campus.

A partial list of organizations connected with the College of Engineering and Computing include: American Institute for Aeronautics and Astronautics, American Institute of Chemical Engineers, American Society for Mechanical Engineers, Association for Computing Machinery, Association for Women in Computing, Engineers Without Borders, Institute for Electrical and Electronics Engineers, National Society of Black Engineers, National Society of Professional Engineers, Society of Automotive Engineers, Society of Manufacturing Engineers, Society of Women Engineers, Student Energy Initiative, Tau Beta Pi, and the Technical Association of the Pulp and Paper Industry.

## Advisory Councils

The Engineering and Computing External Advisory Council is composed of outstanding leaders in business, industry, and the professions. This council meets on campus at least once a year with faculty, staff, and students, helping to ensure that the College's programs continually improve and meet society's changing needs.

The College and our departments are also advised by student advisory councils to continually improve our programs.

## Intern and Co-op Opportunities

Internships and co-ops provide an opportunity for students in engineering and computing to gain work experience in an area related to their majors.

Both programs offer employers an opportunity to preview prospective employees and for students to preview prospective employers. Most companies pay their intern and co-op students. Contact the Center for Career Exploration and Success for more information.

## Placement and Graduate Studies

Most graduates enter professions directly upon graduation. Each year many employers visit campus specifically to recruit engineering and computing seniors. Placement rates for graduates of the College have consistently remained high. Placement services are available to all Miami students through the Center for Career Exploration and Success.

Our graduates are also well prepared to pursue graduate education, including medical and law school. Assistantships are frequently available in the graduate programs at other universities in addition to Miami University. Many graduates, who enter their profession directly, pursue graduate degrees on a part-time basis with the financial support of their full-time employer.

## Divisional Requirements

DOUBLE MAJORS: Students with two majors in the College of Engineering and Computing must take a minimum of 15

different/additional credit hours in their second major beyond the requirements of their first major.

You must attain a minimum 2.00 GPA for required departmental courses in your major. Specific course requirements for each of the College's majors are listed in this chapter.

If you have any questions about these requirements, please contact your faculty academic advisor.

## Basic Requirements: Bachelor of Science Programs

Students derive their strength from a curriculum that is a unique combination of professional education in the major discipline and the Miami Plan for Liberal Education. With the help of the Engineering and Computing Advisory Council representatives from business, industry and other areas, the College has articulated broad outcome characteristics desired of our graduates.

College of Engineering and Computing graduates should be able to:

- Define and solve problems
- Make ethical choices and act responsibly
- Critically evaluate information
- Work effectively in a team
- Exercise initiative
- Function in a leadership role
- Recognize broad societal contexts and interests
- Serve clients and society with sensitivity and accountability
- Interact effectively with diverse cultures
- Adapt to change
- Recognize the value of lifelong learning
- Write effectively
- Speak and listen effectively
- Understand and apply mathematics and science
- Understand and apply the concepts of continuous quality improvement
- Pursue further formal education

## Bachelor of Science in Computer Science

- Computer Science

## Bachelor of Science in Engineering

- Bioengineering
- Chemical Engineering
- Computer Engineering
- Electrical Engineering
- Engineering Management
- General Engineering
- Manufacturing Engineering
- Mechanical Engineering

## Bachelor of Science in Software Engineering

- Software Engineering

### Minors

A minor is a specific program to be taken along with a major to complement your skills and to increase your career opportunities. Completing a minor is optional. More information about minors is included in the Other Requirements section. The required semester hours are noted with the requirements for each minor.

- Bioinformatics
- Biomedical Engineering
- Chemical Engineering
- Computer Science
- Electrical Engineering
- Environmental Engineering
- Humanitarian Engineering and Computing
- Manufacturing Engineering
- Mechanical Engineering
- Paper Engineering
- Process Control

### Certificate Program

- Leadership

## Bioengineering- Bachelor of Science in Engineering

For information, contact the Department of Chemical, Paper and Biomedical Engineering, 64 Engineering Building, 513-529-0760.

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

Bioengineering is the integration of life sciences with engineering to develop solutions for healthcare related problems as well as to create new biology-inspired methodologies for computing, design, and engineering. The program uses a multi-disciplinary approach, deriving its strength from biology, chemistry, mathematics and various engineering disciplines as well as computational sciences. Together, these enable the graduate to analyze, design, synthesize, and test products and processes in a variety of bioengineering areas, such as medical equipment and instrumentation, pharmaceuticals, biotechnology, prosthetics and artificial biomaterials.

This program provides the student with a broad bioengineering education enhanced by liberal arts courses in life sciences, economics, humanities, social sciences, and global perspectives.

Within the bioengineering curriculum, students choose among concentrations including bioinformatics and computational biology, biomedical engineering, bioprocessing and pre-medical. A partial list of organizations that employ bioengineers includes medical device, equipment, sensor, and instrument manufacturers, hospitals, clinical laboratories, pharmaceutical companies, biofuel producers, food and agriculture related companies, and biotechnology industries.

## Program Educational Objectives

The undergraduate Bioengineering program at Miami University focuses on the integration of interdisciplinary engineering sciences, biological sciences, engineering design and a global liberal education. It has premedical, bioinformatics, biomedical engineering, and bioprocessing engineering concentrations. Based on the needs of our constituents, we expect our graduates to attain the following within a few years of graduation:

- the demonstrated technical knowledge, skills and expertise of bioengineering required to provide practical and economically viable solutions in their chosen profession.
- the organizational, leadership, and general communication skills to successfully lead interdisciplinary teams.
- higher-level cognitive skills and critical thinking to analyze complex problems and develop robust solutions.
- professional development through lifelong learning, and successful adaptation to the ever changing societal environment and evolving technologies within their chosen profession.
- sound ethical judgement in decision making, leadership roles, and matters of health, safety and serving the needs of society.

## Student Outcomes

These student outcomes prepare our graduates to attain the program educational objectives listed above, and should be attained by students by the time they graduate.

1. Ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. Ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. Ability to communicate effectively with a range of audiences.
4. Ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. Ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. Ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. Ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Credit/No-credit Policy

All courses in chemistry, physics, biology, mathematics, statistics and those in the College of Engineering and Computing (CPB, CSE, ECE, EGM, MME, CEC) that are used to fulfill requirements of the major, must be taken for a grade.

## Divisional Policy

DOUBLE MAJORS: Students with two majors in the College of Engineering and Computing must take a minimum of 15

different/additional credit hours in their second major beyond the requirements of their first major.

## Grade Requirements

You must earn a grade of C or better in MTH 151, CHM 142, PHY 191 and CPB 204.

## Program requirements

Code	Title	Credit Hours
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The Bioengineering major requires the following courses; additional hours to meet the Global Miami Plan for Liberal Education are also required.

### Core Requirements (minimum 46 hours)

BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO 203	Introduction to Cell Biology	3
BIO 305	Human Physiology	4
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	5
ENG 313	Technical Writing	3
MTH 151	Calculus I	5
MTH 245 or MTH 246	Differential Equations for Engineers Linear Algebra and Differential Equations for Engineers	3-4
MTH 251 or MTH 249	Calculus II	4-5
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5
<b>Bioengineering and Engineering Science (43 hours)</b>		
CEC 101	Computing, Engineering & Society	1
CPB 102	Introduction to Chemical and Bioengineering (or equivalent)	3
CPB 219 or MME 312	Statics and Mechanics of Materials Mechanics of Materials	3
(MME 312 is recommended for the Mechanical Engineering minor)		
CPB 204	Mass and Energy Balances I	2
CPB/MME 314	Engineering Thermodynamics	3
CPB 318	Transport Phenomena I	4
Select one of the following: 3-4		
CPB 324	Chemical and Bio- Engineering Computation and Statistics	
MME 201 & MME 202	Modeling and Design in Engineering and Numerical Methods in Engineering	
(MME 201 & MME 202 are recommended for the Mechanical Engineering minor)		
CSE 271	Object-Oriented Programming	
(CSE 271 is recommended for the Bioinformatics minor)		
Select all of the following:		

CPB/MME 341	Engineering Economics	3
CPB 417	Biomedical Engineering	3
CPB 419	Biomaterials	3
CPB 421	Bioethics	1
CPB 423	Biomechanics	3
CPB 471 & CPB 472	Engineering Design I and Engineering Design II	4
CPB 482	Process Control	3
ECE 205	Electric Circuit Analysis I	4

### Related Courses

STA 301 or STA 261 or ECE 345	Applied Statistics Statistics Applied Probability and Statistics for Engineers	3-4
(ECE 345 is recommended for Electrical Engineering minor)		

### Select one of the following: 3-4

CHM 332 & 332L	Outlines of Biochemistry and Outlines of Biochemistry Lab	
BIO 342	Genetics	
CHM 432	Fundamentals of Biochemistry	
CSE 456	Bioinformatic Principles	
PHY 421	Molecular and Cellular Biophysics	
PHY 422	Physics for Medicine and Biology	
(CHM 432 is recommended for Pre-med students)		
(CSE 456 is recommended for bioinformatics minor)		
CHM 241 & CHM 244 or CHM 231	Organic Chemistry and Organic Chemistry Laboratory Fundamentals of Organic Chemistry	4-5
(CHM 241 & CHM 244 recommended for Pre-med students)		

### Select one of the following 3 options (minimum) 9

#### Option 1. Complete all requirements for a minor in Bioinformatics

(When taking a cross-listed course, you must register for the CSE version)

#### Option 2. Take the following three courses, recommended for Electrical Engineering minor

ECE 303 or ECE 314	Computer-Aided Experimentation Elements of Robotics	
ECE 306	Signals and Systems	
ECE 426	Biomedical Signal Analysis	

#### Option 3. Select 3 of the following

(CPB 326, CPB 416 & CPB 426 are recommended for the Biomedical Engineering minor)

CHM 242 & CHM 245 or CHM 471	Organic Chemistry and Organic Chemistry Laboratory Biophysical Chemistry I	
(CHM 242 & CHM 245 are recommended for Pre-med students)		
(CHM 471 is recommended for students interested in a Bioprocessing focus)		
CPB 326	Fundamentals of Medical Device Design	

CPB 415	Chemical Kinetics and Reactor Design
CPB 416	Biochemical Engineering
CPB 426	Fundamentals of Tissue Engineering

## Chemical Engineering- Bachelor of Science in Engineering

For information, contact the Department of Chemical, Paper and Biomedical Engineering, 64 Engineering Building, 513-529-0760.

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

Chemical Engineering encompasses the analysis, design, and synthesis of products and processes in a variety of areas, such as chemical and petrochemical processes, pharmaceuticals, environmental processes, biotechnology/bioengineering, and pulp and paper processes. The field of chemical engineering requires the ability to understand and apply math and science, to research concepts and apply modeling methods, and to simulate and test working conditions and their impact on the designed systems.

The chemical engineer of the 21st century must be able to think critically in broader contexts because problems in contemporary society are not only technical but also social and economic in nature. This program provides the student with a broad chemical engineering education enhanced by courses in manufacturing engineering, chemistry and biochemistry, economics, humanities, social science, global perspectives, and liberal arts.

Graduates have the opportunity to work in a diverse spectrum of professional fields. These vary from research to design, from development to manufacturing, and from technical sales to production. Chemical engineers work in manufacturing-related areas as well as in non-technical sectors of the economy such as business, law, and management. Graduates will also be prepared to continue their education at the graduate level.

A partial list of industries that employ chemical engineers includes biotechnology and biomedicine, electronics, food processing, environmental protection, paper, petroleum refining, and synthetic fibers.

Merit scholarships provided by the industry-supported Miami University Paper Science and Engineering Foundation enable those students with good academic records who choose the paper science and engineering option within chemical engineering to receive partial tuition to as much as full in-state tuition costs (tuition, fees, room and board). Out-of-state students may be eligible for an additional award of \$2,000 per year.

### Program Educational Objectives

The undergraduate Chemical Engineering program at Miami University is focused on the integration of engineering science, process design and a global liberal education, with concentrations in biochemical, environmental and paper engineering. Based on the needs of our constituents, we expect our graduates to attain the following within a few years of graduation:

- the demonstrated technical knowledge, skills and expertise of chemical engineering required to provide practical and economically viable solutions in their chosen profession.

- the organizational, leadership, and general communication skills to successfully lead interdisciplinary teams.
- higher-level cognitive skills and critical thinking to analyze complex problems and develop robust solutions.
- professional development through lifelong learning, and successful adaptation to the ever changing societal environment and evolving technologies within their chosen profession.
- sound ethical judgement in decision making, leadership roles, and matters of health, safety and serving the needs of society.

### Student Outcomes

These student outcomes prepare our graduates to attain the program educational objectives listed above, and should be attained by students by the time they graduate.

1. Ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. Ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. Ability to communicate effectively with a range of audiences.
4. Ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. Ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. Ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. Ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

### Credit/No-Credit Policy

All courses in chemistry, physics, biology, mathematics, statistics and those in the College of Engineering and Computing (CPB, CSE, ECE, EGM, MME, CEC) that are used to fulfill requirements of the major, must be taken for a grade.

### Divisional Policy

DOUBLE MAJORS: Students with two majors in the College of Engineering and Computing must take a minimum of 15 different/additional credit hours in their second major beyond the requirements of their first major.

### Grade Requirements

You must earn a grade of C or better in the following courses: MTH 151, CHM 142, CPB 204, and PHY 191.

### Transfer Credit Policy

To obtain transfer credit for any 300- or 400-level chemical, paper and biomedical engineering course, you must first receive written departmental approval **before** enrolling in that course at another college or university. Transfer credit may be obtained for **only one** engineering course in the series CPB 204, CPB 313, CPB 314,

CPB 403/CPB 503, and CPB 414/CPB 514. Contact the department if transferring into this program.

## Program Requirements

(The Chemical Engineering major requires the following courses; additional hours to meet the Global Miami Plan for Liberal Education are also required.)

Code	Title	Credit Hours
<b>Core Requirements</b>		
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	5
Select one of the following:		6
CHM 241 & CHM 242	Organic Chemistry and Organic Chemistry	
CHM 251 & CHM 252	Organic Chemistry for Chemistry Majors and Organic Chemistry for Chemistry Majors	
Select the following:		
CHM 244 or CHM 254	Organic Chemistry Laboratory for Chemistry Majors	2
CHM 332 & 332L or CHM 363 or CHM 375 or CHM 432 or CHM 471	Outlines of Biochemistry and Outlines of Biochemistry Lab and Analytical Chemistry and Analytical Chemistry for Majors and Fundamentals of Biochemistry and Biophysical Chemistry I	3-4
ENG 313	Technical Writing	3
MTH 151	Calculus I	5
MTH 245 or MTH 246	Differential Equations for Engineers and Linear Algebra and Differential Equations for Engineers	3-4
MTH 251 or MTH 249	Calculus II	4-5
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5
STA 301 or STA 261 or ECE 345	Applied Statistics and Statistics and Applied Probability and Statistics for Engineers	3-4
<b>Engineering Science</b>		
CEC 101	Computing, Engineering & Society	1
CPB 102	Introduction to Chemical and Bioengineering (or equivalent)	3
CPB/MME 314	Engineering Thermodynamics	3
CPB/MME 341	Engineering Economics	3
CPB 219 or MME 211	Statics and Mechanics of Materials and Static Modeling of Mechanical Systems	3
<b>Chemical Engineering Courses</b>		
CPB 204	Mass and Energy Balances I	2
CPB 202	Pulp and Paper Physics	3

or MME 223 or CPB 419	Engineering Materials and Biomaterials	
CPB 205	Mass and Energy Balances II	2
CPB 311	Unit Operations Laboratory I	2
CPB 318	Transport Phenomena I	4
CPB 324	Chemical and Bio- Engineering Computation and Statistics	3
or CSE 271	Object-Oriented Programming	
CPB 412	Chemical Engineering Thermodynamics	3
CPB 414	Mass Transfer	3
CPB 415	Chemical Kinetics and Reactor Design	3
CPB 451	Unit Operations Laboratory II	2
CPB 471	Engineering Design I	2
CPB 472	Engineering Design II	2
CPB 473	Chemical Process Design	3
CPB 482	Process Control	3
CPB 483	Chemical Process Safety	1
<b>Technical Electives</b>		
Select 9 or more credit hours of the following courses:		9
CPB 201	Principles of Paper Science and Engineering	
CPB 244	Introduction to Environmental Engineering	
CPB 301	Pulp and Paper Chemistry	
CPB 326	Fundamentals of Medical Device Design	
CPB 404	Papermaking	
CPB 416	Biochemical Engineering	
CPB 417	Biomedical Engineering	
CPB 423	Biomechanics	
CPB 426	Fundamentals of Tissue Engineering	
CPB 405	Industrial Environmental Control	
CPB 441	Pollution Prevention in Environmental Management	
CPB 442	Air Pollution Control	
CPB 490	Special Topics in Paper and Chemical Engineering	
ECE 205	Electric Circuit Analysis I	

## Computer Engineering- Bachelor of Science in Engineering

For information, contact the Department of Electrical and Computer Engineering, 260 Garland Hall, 513-529-0740.

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

Computer engineering combines elements of electrical engineering and computer science to design and operate devices and/or systems incorporating computers as components. It seeks to interface appropriate software to digital hardware in creating computer-centric products and services. The field of computer engineering requires the ability to understand and apply mathematics, science, and software development techniques; to research concepts and apply modeling

methods, to simulate and test working conditions and their impact on the designed systems, and to synthesize different elements in order to obtain the optimum design of a specific product.

The increasing sophistication in products and systems requires industry to hire academically qualified computer engineers who can apply modern techniques and methods of engineering. Examples include computer-aided design, computer assisted engineering, computer-vision embedded systems, intelligent control and power systems, and robotics.

The computer engineer of the 21st century must be able to think critically in broader contexts because problems in contemporary society are not only technical but also social and economic in nature. This program provides the student with a broad computer engineering education enhanced by courses in manufacturing engineering, electrical engineering, computer science, mechanical engineering, economics, humanities, social science, global perspectives, and liberal arts.

Graduates have the opportunity to work in a diverse spectrum of professional fields. These vary from research to design, development to manufacturing, and technical sales to production. Many computer engineers work in manufacturing-related areas such as in the analysis and design of varied products as well as in non-technical sectors of the economy such as business, law, and management. Graduates will also be prepared to continue their education at the graduate level.

The computer engineering curriculum provides students with a sound foundation in basic science, mathematics, humanities, communication skills and technical subjects. Design project and teamwork, as well as ethics and professional responsibilities of an engineer are emphasized throughout the curriculum.

## Program Educational Objectives

Educational objectives describe the career and professional accomplishments that the program prepares graduates to attain within a few years of graduation. The objectives of the computer engineering program are for graduates to:

- Apply technical knowledge and professional skills to develop and effect solutions to problems related to computer engineering and/or pursue advanced studies in computer engineering or related areas.
- Make professional decisions with an understanding of the impact on societal, economic, global, and environmental issues.
- Exercise effective communication, leadership and teamwork skills that contribute to the success of their organizations and careers.
- Exhibit a commitment to professional and ethical practices, continuous improvement, and lifelong learning.

## Student Outcomes

These student outcomes prepare our graduates to attain the program educational objectives listed above.

- an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.

- an ability to communicate effectively with a range of audiences.
- an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions .
- an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Credit/No Credit Policy

All courses in chemistry, physics, biology, mathematics, statistics and those in the College of Engineering and Computing (CPB, CSE, ECE, EGM, MME, CEC) that are used to fulfill requirements of the major, must be taken for a grade.

## Divisional Policy

DOUBLE MAJORS: Students with two majors in the College of Engineering and Computing must take a minimum of 15 different/additional credit hours in their second major beyond the requirements of their first major.

## Program Requirements

(128 semester hours minimum)

Code	Title	Credit Hours
<b>Core requirements</b>		
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
ECO 201	Principles of Microeconomics	3
ENG 313	Technical Writing	3
MTH 151	Calculus I	5
MTH 222	Introduction to Linear Algebra	3
MTH 251	Calculus II	4
MTH 252	Calculus III	4
MTH 347	Differential Equations	3
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5
<b>Computer Science</b>		
CSE 174	Fundamentals of Programming and Problem Solving	3
CSE 271	Object-Oriented Programming	3
CSE 274	Data Abstraction and Data Structures	3
CSE 278	Systems I: Introduction to Systems Programming	3
CSE 381	Systems 2: OS, Currency, Virtualization, and Security	3
<b>General Engineering</b>		
CEC 101	Computing, Engineering & Society	1
ECE 102	Introduction to Electrical and Computer Engineering	3

ECE/MME 448	Senior Design Project	2
ECE/MME 449	Senior Design Project	2

**Required Electrical and Computer Engineering**

ECE 205	Electric Circuit Analysis I	4
ECE 287	Digital Systems Design	4
ECE 289	Computer Organization	3
ECE/MME 303 or ECE 314	Computer-Aided Experimentation Elements of Robotics	3
ECE 304	Electronics	3
ECE 306	Signals and Systems	3
ECE 345	Applied Probability and Statistics for Engineers	3
ECE 387	Embedded Systems Design	4
ECE 425	Digital Signal Processing	3
ECE 461	Network Performance Analysis	3

**Professional Computer Engineering Electives**

Select nine hours of the following: <sup>1</sup> 9

ECE 325	Applied Electromagnetics
ECE 426	Biomedical Signal Analysis
ECE 429	Digital Image Processing
ECE/MME 436	Control of Dynamic Systems
ECE 453	Communication Systems
ECE 487	Computer Aided Design Tools for Computer Engineering
CSE 383	Web Application Programming
CSE 443	High Performance Computing & Parallel Programming
CSE 464	Algorithms
CSE 467	Computer and Network Security
CSE 471	Simulation
CSE 474	Compiler Design
CSE 486	Introduction to Artificial Intelligence

**General Technical Electives <sup>2</sup>**

Select three credits from the following: 3

Any additional course from the Professional Computer Engineering Professional Electives list	
ECE 248	Introduction to Electrical System Design Methods and Practice
ECE 291	Energy Systems Engineering
ECE 302	MATLAB and its engineering applications
ECE 353	Software Defined Radio
ECE 395	Undergraduate Research Immersion Project
Any 400-level ECE course not already taken	
CSE 201	Introduction to Software Engineering
CSE 273	Optimization Modeling
CSE 283	Data Communication and Networks
CSE 385	Database Systems
MTH 331	Proof: Introduction to Higher Mathematics
MTH 432	Optimization
MTH 438	Theory and Applications of Graphs

MTH 453 Numerical Analysis

PHY 286 Introduction to Computational Physics

Total Credit Hours 108

<sup>1</sup> At least one Professional Computer Engineering Elective course must be an ECE course.

<sup>2</sup> Courses cannot double-count as both General Technical Electives and Professional Computer Engineering Electives.

## Computer Science- Bachelor of Science in Computer Science

For information, contact the Department of Computer Science and Software Engineering 205 Benton Hall, 513-529-0340, or visit <http://cse.MiamiOH.edu>.

This program is accredited by the Computing Accreditation Commission of ABET <http://www.abet.org>.

If you want to change the world and you like to think analytically and solve problems, enjoy mathematics, and are interested in working with computers and technology, consider a major in computer science. Innovations such as the Internet, smart phone apps, websites like Facebook, and online shopping all owe their foundations to developments in computer science. The computer science major at Miami provides you with a thorough understanding of the key principles and practices of computing as well as the mathematical and scientific principles that underpin them. You will study programming languages, algorithms, computer architecture, operating systems, and applications of computer science such as computer networks, computer security, computer games, and the ethical and social implications of computer technology. The U.S. Bureau of Labor job outlook for computer science graduates is excellent. Jobs are expected to grow 24% from 2008 to 2018, much faster than average for all occupations. This employment growth is due to the demand for increasing efficiency in network technology, computing speeds, software performance, and embedded systems. The median annual earnings for computer specialists ranges from \$74,000 to \$105,000. According to the National Association of Colleges and Employers, starting offers for graduates with a bachelor's degree in computer science averaged \$61,407.

Upon entering this program, you should have an interest in analytical thinking and problem solving, an aptitude for mathematics, and an interest in working with computers and technology. A high school background in computers is not necessary to major in computer science because the program includes introductory courses needed for the major.

Graduates typically work as software engineers, consultants, programmers, network systems analysts, computer scientists, systems programmers, network administrators, or database administrators. Other graduates continue their education in graduate school or start their own businesses.

## Program Educational Objectives

The Miami Plan forms the foundation of liberal education at Miami University. This plan is guided by four principles:

- **critical thinking**
- **understanding of contexts**

- **engaging with other learners, and**
- **reflection and action.**

Our program emphasizes **critical thinking** by promoting the **scientific principles, analysis techniques, and design methodologies** that form the basis for critical thinking in computer science. We promote **understanding of the social context and broader impacts of technology**, which is necessary for leadership and for integration of computing into business. By requiring students to **engage with other learners**, we develop their abilities to **communicate clearly, and work in teams responsibly**. This pattern of deep **reflection**, broad understanding, and engagement with others is transformed into **action** through coursework that emphasizes a mixture of theoretical foundations and hands-on application.

**Depth.** Computer Science graduates will have a sufficient understanding of the field of computer science including scientific principles, analysis techniques, and design methodologies to:

- Be successfully employed, pursue a graduate degree, or continue their professional education

**Breadth.** Computer Science graduates will have a broad liberal education enabling them to:

- Demonstrate adaptability or leadership by, for example, being promoted, moving up to a better job, or by taking a leadership role in a team.
- Demonstrate an understanding of the context and broader impacts of technology in their organization by, for example, engaging stakeholders outside their immediate team, or by identifying ethical, economic, cultural, legal or environmental issues related to work projects.

**Professionalism.** Computer Science graduates will be prepared for modern work environments, where they will:

- Apply their skills in clear communication, responsible teamwork, and time management by, for example, managing a team or project, working on multidisciplinary project teams, or communicating with external stakeholders.
- Demonstrate professional attitudes and ethics by, for example, assisting colleagues in professional development (e.g. mentoring), engaging in continuing education or training, participating in professional societies, engaging in service to the community, or contributing to an employer's efforts to comply with software licensing, protect privacy, or assure quality and safety.

To help to achieve the educational objectives, all computing and engineering programs offered by the College of Engineering and Computing (CEC) have outcomes, are designed to prepare graduates to attain the program educational objectives and to connect with the student outcomes defined by the Computing Accreditation Committee of ABET, <http://www.abet.org>.

For more information, visit our website at <http://cse.MiamiOH.edu>.

## Student Outcomes

- Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.

- Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- Communicate effectively in a variety of professional contexts.
- Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- Apply computer science theory and software development fundamentals to produce computing-based solutions.
- Acquire and apply new knowledge as needed, using appropriate learning strategies.

## Departmental Honors

If you excel in your studies, you may qualify for the University Honors Program or the program for Honors in Computer Science and Software Engineering. As a senior in these programs, you will have the opportunity to work closely with the faculty on research projects of interest.

## Credit/No-Credit Policy

All courses in chemistry, physics, biology, mathematics, statistics and those in the College of Engineering and Computing (CPB, CSE, ECE, EGM, MME, CEC) that are used to fulfill requirements of the major, must be taken for a grade.

## Divisional Policy

DOUBLE MAJORS: Students with two majors in the College of Engineering and Computing must take a minimum of 15 different/additional credit hours in their second major beyond the requirements of their first major.

## Graduate Study

The department offers a combined bachelor's/master's degree program that allows students to complete bachelor's and master's degrees in computer science in an accelerated manner. Students are eligible to apply for this program in their junior year. Please contact the CSE department office for more information.

Additional information is available from the CSE department office and website <http://cse.MiamiOH.edu>.

## Program Requirements: Computer Science

Code	Title	Credit Hours
<b>Core Requirements</b>		
ECO 201 or ECO 202	Principles of Microeconomics Principles of Macroeconomics	3
ENG 313	Technical Writing	3
STC 135 or STC 231	Principles of Public Speaking Small Group Communication	3
Mathematics		
MTH 151	Calculus I	5
MTH 231	Elements of Discrete Mathematics	3
Statistics		

STA 301	Applied Statistics	3-4
or STA 261	Statistics	
or ECE 345	Applied Probability and Statistics for Engineers	

Mathematics/Statistics Electives 9-10

Take three of the following:

STA 333	Nonparametric Statistics
STA 363	Introduction to Statistical Modeling
STA 365	Statistical Monitoring and Design of Experiments
STA 401	Probability
STA 402	Statistical Programming
STA 404	Advanced Data Visualization
STA 427	Introduction to Bayesian Statistics
STA 432	Survey Sampling in Business
STA 466	Experimental Design Methods
STA 467	Statistical Learning
MTH 222	Introduction to Linear Algebra
MTH 245	Differential Equations for Engineers
MTH 251	Calculus II
or MTH 249	Calculus II
MTH 252	Calculus III
MTH 331	Proof: Introduction to Higher Mathematics
or MTH 331T	Proof: Introduction to Higher Mathematics (H)
MTH 347	Differential Equations
MTH 411	Foundations of Geometry
MTH 421	Introduction to Abstract Algebra
MTH 432	Optimization
MTH 437	Game Theory and Related Topics
MTH 438	Theory and Applications of Graphs
MTH 439	Combinatorics
MTH 441	Real Analysis
MTH 447	Topics in Mathematical Finance

Natural Science Electives 8-10

Select two of the following six options

BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory
PHY 191	General Physics with Laboratory I
PHY 192	General Physics with Laboratory II

Mathematics/Statistics/Science Elective<sup>1</sup> 3-5

Select one additional course from one of the following

Any of the above Mathematics/Statistics Electives
Any of the above Natural Science Electives
Any Global Miami Plan Natural Science (MPF IV A or IV B)

### Computer Science Core

CEC 101	Computing, Engineering & Society	1
CSE 102	Introduction to Computer Science and Software Engineering	3
CSE 174	Fundamentals of Programming and Problem Solving	3
CSE 201	Introduction to Software Engineering	3
CSE/CIT 262	Technology, Ethics, and Global Society	3
CSE 271	Object-Oriented Programming	3
CSE 274	Data Abstraction and Data Structures	3
CSE 278	Systems I: Introduction to Systems Programming	3
CSE 374	Algorithms I	3
CSE 381	Systems 2: OS, Currency, Virtualization, and Security	3
CSE 383	Web Application Programming	3
CSE 448	Senior Design Project	2
CSE 449	Senior Design Project	2
CSE 465	Comparative Programming Languages	3

**CSE Electives (a total of 21 hours are required)** 21

15 to 21 hours of computer science electives:

CSE 287	Foundations of Computer Graphics and Games
CSE 385	Database Systems
CSE 387	Advanced Graphics and Game Engine Design
CSE 443	High Performance Computing & Parallel Programming
CSE 451	Web Services and Service Oriented Architectures
CSE/BIO 466	Bioinformatics Computing Skills
CSE 467	Computer and Network Security
CSE 470	Special Topics In CSE
CSE 471	Simulation
CSE 473	Automata, Formal Languages, and Computability
CSE 474	Compiler Design
CSE 484	Algorithms II
CSE 485	Advanced Database Systems
CSE 486	Introduction to Artificial Intelligence
CSE 487	Game Design and Implementation

0 to 6 hours of affiliate electives:

CSE 211	Software Construction
CSE 212	Software Engineering for User Interface and User Experience Design
CSE 270	Special Topics
CSE 273	Optimization Modeling
CSE 311	Software Architecture and Design
CSE 321	Software Quality Assurance and Testing
CSE 322	Software Requirements
CSE 372	Stochastic Modeling
ECE 287	Digital Systems Design
ECE 387	Embedded Systems Design
ECE 461	Network Performance Analysis

IMS 440	Interactive Media Studies Practicum
ISA 401	Business Intelligence and Data Visualization
ISA 414	Managing Big Data
ISA 491	Introduction to Data Mining in Business
Select 0 to 3 hours of research electives:	
CSE 340U	Undergraduate Summer Scholars Program (requires petition)
CSE 480	Special Problems (honors Program)
CSE 491	Undergraduate Research
Total Credit Hours	99-105

<sup>1</sup> Computer Science majors are required to take at least 31 hours of mathematics, statistics, and natural science courses. Mathematics courses must be selected from courses at or beyond MTH 151.

**Note:** Additional free elective hours may need to be taken.

## Electrical Engineering- Bachelor of Science in Engineering

For information, contact the Department of Electrical and Computer Engineering, 260 Garland Hall, 513-529-0740.

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

Electrical engineering is the process of applying electric and magnetic phenomena in an innovative way to create useful products and services. Progress in electrical engineering led society from the electricity age through communication and computer ages to the current information age. The profession encompasses a broad range of concentration areas such as electronic circuits, instrumentation and control, integrated circuits, electromagnetics, power and energy, communications, computers and networks, and signal processing. Products and services like electricity, broadcasting, computers, cellular phones, navigation equipment, and the internet affect and influence every aspect of modern civilization. The widespread utilization of electrical means of measurement and control, computers, and communications has resulted in the need for electrical engineers in all types of industries. Excellent employment opportunities exist for well-prepared graduates.

Miami's electrical engineering curriculum provides students with a sound foundation in basic science, mathematics, the humanities, communication skills, and technical subjects. Design project management and teamwork as well as ethics and professionalism are emphasized throughout the curriculum.

### Program Educational Objectives

Educational objectives describe the career and professional accomplishments that the program prepares graduates to attain within a few years of graduation. The objectives of the electrical engineering program are for graduates to:

- Apply technical knowledge and professional skills to develop and effect solutions to problems related to electrical engineering and/or pursue advanced studies in electrical engineering or related areas.

- Make professional decisions with an understanding of the impact on societal, economic, global, and environmental issues.
- Exercise effective communication, leadership and teamwork skills that contribute to the success of their organizations and careers.
- Exhibit a commitment to professional and ethical practices, continuous improvement, and lifelong learning.

### Student Outcomes

These student outcomes prepare our graduates to attain the program educational objectives listed above.

- an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- an ability to communicate effectively with a range of audiences.
- an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

### Credit/No Credit Policy

All courses in chemistry, physics, biology, mathematics, statistics and those in the College of Engineering and Computing (CPB, CSE, ECE, EGM, MME, CEC) that are used to fulfill requirements of the major, must be taken for a grade.

### Divisional Policy

DOUBLE MAJORS: Students with two majors in the College of Engineering and Computing must take a minimum of 15 different/additional credit hours in their second major beyond the requirements of their first major.

### Program Requirements

(128 semester hours minimum)

Code	Title	Credit Hours
<b>Core Requirements</b>		
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
CSE 262	Technology, Ethics, and Global Society	3
ECO 201	Principles of Microeconomics	3
ENG 313	Technical Writing	3
MTH 151	Calculus I	5
MTH 251	Calculus II	4-5

or MTH 249	Calculus II	
MTH 222	Introduction to Linear Algebra	3
MTH 252	Calculus III	4
MTH 347	Differential Equations	3
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5

**Computer Science**

CSE 174	Fundamentals of Programming and Problem Solving	3
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**General Engineering**

CEC 101	Computing, Engineering & Society	1
ECE 102	Introduction to Electrical and Computer Engineering	3
ECE 448	Senior Design Project	2
ECE 449	Senior Design Project	2

**Required Electrical and Computer Engineering**

ECE 205	Electric Circuit Analysis I	4
ECE 287	Digital Systems Design	4
ECE 301	Advanced Circuits and Fundamentals of Renewable Energy	3
ECE/MME 303 or ECE 314	Computer-Aided Experimentation Elements of Robotics	3
ECE 304	Electronics	3
ECE 306	Signals and Systems	3
ECE 325	Applied Electromagnetics	3
ECE 345	Applied Probability and Statistics for Engineers	3
ECE 387	Embedded Systems Design	4
ECE 425	Digital Signal Processing	3
ECE/MME 436	Control of Dynamic Systems	3
ECE 453 or ECE 461	Communication Systems Network Performance Analysis	3

**Professional EE Electives**<sup>1</sup>

Select 9 credits of the following:		9
ECE 426	Biomedical Signal Analysis	
ECE 427	Radar Signal Processing	
ECE 429	Digital Image Processing	
ECE 430	Electromagnetics in Wireless Sensing and Communications	
ECE 453	Communication Systems	
ECE 461	Network Performance Analysis	
ECE 487	Computer Aided Design Tools for Computer Engineering	
ECE 491	Power Systems Engineering	
ECE 493	Power Electronics	
ECE 495	Electric Machinery and Drives	

**General Technical Electives**<sup>2</sup>

Select nine hours of the following:		9
Additional courses from the Professional EE Elective list		
ECE 248	Introduction to Electrical System Design Methods and Practice	
ECE 289	Computer Organization	

ECE 291	Energy Systems Engineering
ECE 302	MATLAB and its engineering applications
ECE 353	Software Defined Radio
ECE 395	Undergraduate Research Immersion Project
MTH 331	Proof: Introduction to Higher Mathematics
MTH 432	Optimization
MTH 438	Theory and Applications of Graphs
MTH 441	Real Analysis
MTH 451	Introduction to Complex Variables
MTH 453	Numerical Analysis
PHY 281	Contemporary Physics I: Foundations
PHY 282 & PHY 293	Contemporary Physics II: Frontiers and Contemporary Physics Laboratory
PHY 286	Introduction to Computational Physics
PHY 421	Molecular and Cellular Biophysics
PHY 441	Optics and Laser Physics
CSE 271	Object-Oriented Programming
CSE 274	Data Abstraction and Data Structures
CSE 283	Data Communication and Networks
MME 211 or CPB 219	Static Modeling of Mechanical Systems (not both) Statics and Mechanics of Materials
CPB/MME 314	Engineering Thermodynamics

Total Credit Hours	111-112
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<sup>1</sup> ECE 453 and ECE 461 cannot be double-counted as required ECE courses and Professional EE Electives. If both are taken, one counts as a required ECE course, and the other counts as a Professional EE Elective.

<sup>2</sup> General Technical Electives are subject to the following rules:

- At least 3 credits of General Technical Electives must be 300-level or above.
- Courses cannot be double-counted as both Professional EE Electives and General Technical Electives.

## Engineering Management- Bachelor of Science in Engineering

For information, contact the College of Engineering and Computing Dean's Office, 513-529-0700 or visit <http://miamioh.edu/cec/academics/interdisciplinary-majors/engineering-management/index.html>.

Engineering Management offers an interdisciplinary approach to address the complexities in today's workplace. Many of today's highly competitive global businesses require employees that have a solid technical background complemented with business knowledge and a foundation in liberal education. The Engineering Management program includes courses in engineering, business, science, mathematics, and the liberal arts and is designed to help you develop engineering and business expertise, social awareness,

and interpersonal communication skills. Students earn a Bachelor of Science in Engineering degree.

## Student Outcomes

The following are the student outcomes for the Engineering Management program at Miami University. These are common outcomes for each of the concentrations: Electronics and Computing, Manufacturing Engineering, Environmental Engineering, and Paper Science and Engineering. Students should attain the following outcomes by the time of graduation:

1. an ability to communicate effectively with a range of audiences
2. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
3. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
4. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Engineering Management with Electronics and Computing Concentration

This concentration provides a foundation in electrical and computer engineering while developing the skills necessary to manage the development of products, including computers and other electronics. Graduates can have an impact on the needs of a global society whose reliance on electronics and computing is ever-increasing. The additional student outcomes for this concentration are:

- an ability to solve electrical, computer, and related problems in a business or engineering environment by applying computing, business, math, science, and engineering fundamentals.
- an ability to manage the design and creation of electrical and computer systems to meet client needs in business and engineering applications.

## Engineering Management with Manufacturing Engineering Concentration

This concentration addresses product and process design. It requires the ability to plan the practices of manufacturing; to research and develop tools, manufacturing processes, machines and equipment, and control strategies; and to integrate the facilities and systems so that quality products can be produced at a competitive cost. The additional student outcomes for this concentration are:

- an ability to design manufacturing processes, products and the corresponding processing machinery and to create competitive advantage by manufacturing planning, strategy, and control
- an ability to analyze, synthesize, and control manufacturing operations using statistical methods and to make technical inferences about a manufacturing process by measuring process variables.

## Engineering Management with Environmental Engineering Concentration

This concentration provides a foundation in environmental engineering while developing the skills necessary to achieve practical and economical solutions to environmental challenges pertaining to industry and society. Graduates will have an impact on our global progress toward achieving a sustainable society. The additional student outcomes for this concentration are:

- an ability to demonstrate the ability to plan, identify, design, and assess pollution prevention alternatives and pollution control processes for industry and for society
- an ability to demonstrate the organizational, leadership and general communication skills needed by an environmental professional.

## Engineering Management with Paper Science and Engineering Concentration

This concentration provides a foundation in paper science and engineering while developing the technical knowledge, skills, and talents required to achieve practical solutions to challenges in the paper industry or for a company allied to the paper industry. Graduates will have an impact on innovation and progress toward sustainability in the pulp and paper sector. The additional student outcomes for this concentration are:

- an ability to demonstrate the ability to plan, identify, design, and assess solutions to challenges in the paper industry or for a company allied to the paper industry.
- an ability to demonstrate the organizational, leadership and general communication skills needed by professionals in the global pulp and paper industry

## Credit/No Credit Policy

All courses in chemistry, physics, biology, mathematics, statistics, those in the College of Engineering and Computing (CPB, CSE, ECE, EGM, MME, CEC) and those in the business core that are used to fulfill requirements of the major, must be taken for a grade.

## Divisional Policy

DOUBLE MAJORS: Students with two majors in the College of Engineering and Computing must take a minimum of 15 different/additional credit hours in their second major beyond the requirements of their first major.

## Program Requirements

The number of hours needed to graduate depends on your choice of concentration, Thematic Sequence, and mathematical preparation. Course requirements for the Miami Plan are listed in that chapter. Many of the courses taken to fulfill the Miami Plan can be used to fill other requirements of this program. Additional hours beyond the minimum required for a bachelor's degree at Miami may be needed based on concentration and thematic sequence.

Code	Title	Credit Hours
<b>Core Requirements</b>		
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
ECO 201	Principles of Microeconomics	3
ENG 313	Technical Writing	3
MTH 151	Calculus I	5
MTH 251 or MTH 249	Calculus II	4-5
MTH 245 or MTH 347	Differential Equations for Engineers Differential Equations	3
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5
<b>General Engineering</b>		
CEC 101	Computing, Engineering & Society	1
Select one of the following:		3
CPB 102	Introduction to Chemical and Bioengineering	
CSE/ECE 102	Introduction to Computer Science and Software Engineering	
MME 102	Introduction to Mechanical and Manufacturing Engineering	
EGM/MGT 411	Leading and Managing Projects	3
MME/CPB 341	Engineering Economics	3
<b>Remaining Business Core Courses</b>		
ACC 221	Introduction to Financial Accounting	3
ECO 202	Principles of Macroeconomics	3
MGT 291	Introduction to Management & Leadership	3
MGT 302	Introduction to Operations and Supply Chain Management	3
MKT 291	Principles of Marketing	3
<b>Management Track:</b>		
Complete courses for Entrepreneurship, Human Resources, Materials Management, or Operations Management (complete one track )		6
<b>ENTREPRENEURSHIP</b>		
ESP 341	Corporate Entrepreneurship	
ESP 401	Entrepreneurship: New Ventures	
<b>HUMAN RESOURCES</b>		
Select two of the following:		
MGT 303	Human Resource Management	
MGT 402	Employment Law	
MGT 405	Negotiations and Conflict Management	
<b>MATERIALS MANAGEMENT</b>		
Select two of the following:		
ISA 303	Enterprise Systems	
MGT 431	Logistics Management	
MGT 432	Global Strategic Sourcing	
<b>OPERATIONS MANAGEMENT</b>		
MGT 451	Operations Planning and Scheduling	
MGT 453	Quality Management Systems	

<b>Engineering Concentration</b>		
Complete one concentration		43-50
<b>MANUFACTURING</b>		
CSE 372	Stochastic Modeling	
ECE 205	Electric Circuit Analysis I	
MME 211	Static Modeling of Mechanical Systems	
MME 213	Computational Methods in Engineering	
MME 223	Engineering Materials	
MME 231	Manufacturing Processes	
MME/ECE 303	Computer-Aided Experimentation	
MME 312	Mechanics of Materials	
MME/CPB 314	Engineering Thermodynamics	
MME 334	Quality Planning and Control	
MME 335	Design of Experiments for Quality Control	
MME 434	Manufacturing Design	
MME 437	Manufacturing Automation	
MME/ECE 448	Senior Design Project	
MME/ECE 449	Senior Design Project	
STA 301 or STA 261	Applied Statistics Statistics	
<b>PAPER SCIENCE AND ENGINEERING</b>		
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	
CHM 231	Fundamentals of Organic Chemistry	
CPB 201	Principles of Paper Science and Engineering	
CPB 202	Pulp and Paper Physics	
CPB 204	Mass and Energy Balances I	
CPB 219 or MME 211	Statics and Mechanics of Materials Static Modeling of Mechanical Systems	
CPB 301	Pulp and Paper Chemistry	
CPB 311	Unit Operations Laboratory I	
CPB/MME 313	Fluid Mechanics	
CPB/MME 314	Engineering Thermodynamics	
CPB 404	Papermaking	
CPB 471	Engineering Design I	
CPB 472	Engineering Design II	
CPB 490	Special Topics in Paper and Chemical Engineering	
STA 301 or STA 261	Applied Statistics Statistics	
CPB 405 or CPB 490	Industrial Environmental Control Special Topics in Paper and Chemical Engineering	
Select one of the following:		
CPB 403	Heat Transfer	
CPB 482	Process Control	
<b>ENVIRONMENTAL ENGINEERING</b>		
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	
CHM 231	Fundamentals of Organic Chemistry	
CPB 204	Mass and Energy Balances I	

CPB 219	Statics and Mechanics of Materials
or MME 211	Static Modeling of Mechanical Systems
CPB 244	Introduction to Environmental Engineering
CPB 311	Unit Operations Laboratory I
CPB/MME 313	Fluid Mechanics
CPB/MME 314	Engineering Thermodynamics
CPB 415	Chemical Kinetics and Reactor Design
CPB 471	Engineering Design I
CPB 472	Engineering Design II
STA 301	Applied Statistics
or STA 261	Statistics
Select three of the following:	
CPB 403	Heat Transfer
CPB 405	Industrial Environmental Control
CPB 441	Pollution Prevention in Environmental Management
CPB 442	Air Pollution Control
<b>ELECTRONICS AND COMPUTING</b>	
CSE 174	Fundamentals of Programming and Problem Solving
or CSE 153	Introduction to C/C++ Programming
ECE 205	Electric Circuit Analysis I
ECE 287	Digital Systems Design
ECE/MME 303	Computer-Aided Experimentation
ECE 304	Electronics
ECE 306	Signals and Systems
ECE 345	Applied Probability and Statistics for Engineers
or STA 301	Applied Statistics
or STA 261	Statistics
ECE 387	Embedded Systems Design
ECE/MME 448	Senior Design Project
ECE/MME 449	Senior Design Project
MTH 222	Introduction to Linear Algebra
or MTH 231	Elements of Discrete Mathematics
Select at least nine hours of the following:	
Any 200-level or higher ECE course.	
CSE 271	Object-Oriented Programming
CSE 274	Data Abstraction and Data Structures
MTH 252	Calculus III
Total Credit Hours	107-115

## General Engineering - Bachelor of Science in Engineering

For information, contact the Office of the Dean, 106 Benton Hall, 513-529-0700.

The General Engineering major provides students with a rigorous introduction to the fundamentals of the engineering discipline. It strengthens student problem-solving skills and comprehension of the role of engineering in modern society. Problem solving skills include the ability to understand, apply, and integrate liberal arts,

math, science, computing, technology, and engineering science. The program of study enables students to appreciate and comprehend engineering practice in the context of fields typically outside of engineering. As such, the major is not ABET accredited, and is not intended for students wishing to practice engineering for their careers; students who intend to be practicing engineers should choose one of our traditional engineering majors.

Graduates will be prepared well for the 21st century by being able to think critically in broader contexts, because problems in contemporary society are not only technical but also social and economic in nature. This program provides the student with a broad engineering education enhanced by courses in computer science, economics, humanities, social science, global cultures, and creative arts. There is significant flexibility for the student to self-select both a CEC minor as an engineering concentration and a non-CEC minor as a complementary focus area, including but not limited to pre-med, pre-law, and public policy. A critical component to this student-driven process is the faculty advisor, who is experienced in helping students design the pathway to fulfill their goals.

This program requires a non-engineering focus area, where the student selects a minor, co-major or second major outside of engineering and computing that aligns with the student's interest. In limited cases it can also accommodate student-designed focus areas that do not currently exist in another form at Miami. In these cases, the General Engineering student works directly with their faculty advisor and appropriate personnel in other departments to design the focus area. Ultimately, a discussion with a General Engineering advisor will help clarify the possibilities available to students.

Graduates of the General Engineering major may pursue graduate education to further specialize in any field of their choice, such as business, medicine, architecture, and law. In addition, graduates will be able to work in a diverse spectrum of technical and non-technical fields such as public policy, policy analysis, technical sales, and other fields where an advanced technology background and global perspective would be a recognized asset.

### Credit/No Credit Policy

All courses in chemistry, physics, biology, mathematics, statistics, and those in the College of Engineering and Computing (CPB, CSE, ECE, EGM, MME, CEC) that are used to fulfill requirements of the major, must be taken for a grade.

### Program Requirements

(The General Engineering curriculum total credit hours can vary depending on the choice of courses for multiple requirements. Students must earn the minimum total credit hours required by Miami for a bachelor's degree.)

Code	Title	Credit Hours
<b>Core Requirements</b>		
MTH 151	Calculus I	5
MTH 251	Calculus II	4-5
or MTH 249	Calculus II	
Select at least two additional MTH or STA courses depending on your chosen CEC minor.		6
Natural and Physical Sciences:		
PHY 191	General Physics with Laboratory I	5

PHY 192	General Physics with Laboratory II	5
CHM 141	College Chemistry	3
CHM 142	College Chemistry	3
CHM 144	College Chemistry Laboratory	2
CHM 145	College Chemistry Laboratory	2
<b>Global Miami Plan Foundation Requirements:</b>		
ECO 201	Principles of Microeconomics	3
or ECO 202	Principles of Macroeconomics	
Select additional courses to complete foundation requirements in English Composition, Creative Arts, Humanities, Global Perspectives, and Biological Science		18
Global Miami Plan Intercultural Perspectives		3
<b>Global Miami Plan Advanced Writing Requirement:</b>		
ENG 313	Technical Writing	3
<b>Engineering Core</b>		
CEC 101	Computing, Engineering & Society	1
CPB 204	Mass and Energy Balances I	3
CSE 174	Fundamentals of Programming and Problem Solving	3
ECE 205	Electric Circuit Analysis I	4
MME 211	Static Modeling of Mechanical Systems	3
Select one of the following:		3
CPB 102	Introduction to Chemical and Bioengineering	
CSE/ECE 102	Introduction to Computer Science and Software Engineering	
MME 102	Introduction to Mechanical and Manufacturing Engineering	
<b>Engineering Concentration</b>		
Select a minimum of 23 hours within CEC, which must include a formally declared CEC minor. (The following courses will not fulfill this requirement: CEC 140, 205, 206, 241, 266, 291, 292, 391, 392, 491, 492; CSE 148, 151, 163, 243, 253) <sup>1</sup>		23
<b>Capstone Experience</b>		
Select one of the following two-semester capstone experiences (Note - all prerequisites must be met): <sup>2</sup>		4
CPB 471 & CPB 472	Engineering Design I and Engineering Design II	
CSE 448 & CSE 449	Senior Design Project and Senior Design Project	
ECE 448 & ECE 449	Senior Design Project and Senior Design Project	
MME 448 & MME 449	Senior Design Project and Senior Design Project	
<b>Non-Engineering Minor and Focus Area</b>		
Select a non-CEC minor, co-major, or second major as your focus area. (Note: The Humanitarian Engineering and Computing minor can be used to fulfill this requirement) <sup>3</sup>		18
<b>Total Credit Hours</b>		124-125

## Manufacturing Engineering-Bachelor of Science in Engineering

For information, contact the Department of Mechanical and Manufacturing Engineering, 56 Garland Hall, 513-529-0710.

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

Industry has a pressing need for academically qualified manufacturing engineers due to the fact that today's products and the technology to manufacture them have become increasingly sophisticated. Examples of new manufacturing technologies being applied to increase productivity, improve quality, and reduce costs include computer-aided engineering/design/manufacturing, robotics and automation, lean and agile process management, six sigma statistical process control, and additive manufacturing.

Creating appropriate engineering solutions to the current problems facing industry and society often involves complex social, political, environmental and economic issues. The department provides graduates with an in-depth education in mathematics, science, engineering, and design, with a focus on manufacturing processes, methods and materials, as well as requiring a broad education in computing, economics, and the liberal arts. The department is committed to excellence in undergraduate education: student learning, classroom effectiveness, assessment, engineering design, professional ethics, student advising and opportunities for leadership.

Graduates typically work as manufacturing engineers in areas such as product and process design, quality control, computer-aided manufacturing, plant-facilities engineering, and operations management. After gaining industrial experience, graduates often move into organizational management positions. Graduates are also prepared to continue their education at the graduate level. Graduating seniors are encouraged to take the Fundamentals of Engineering examination, which is the first of two examinations that lead to becoming a licensed professional engineer.

For information, contact the Department of Mechanical & Manufacturing Engineering, 56 Garland Hall (513-529-0710) and visit our web site: <http://www.CEC.MiamiOH.edu/MME/>

### Program Educational Objectives

Graduates of Miami's Manufacturing Engineering program are expected to attain or achieve the following Program Educational Objectives within a few years of graduation:

- Development in their chosen profession and/or progress toward an advanced degree
- The trust and respect of others as effective and ethical team members
- A reputation as a source of innovative solutions to complex problems
- Positions of leadership in an organization and/or on teams.

### Student Outcomes

The Student Outcomes, from ABET Engineering Accreditation Commission (EAC) criteria, prepare graduates of the Mechanical

and Manufacturing Engineering programs to attain the Program Educational Objectives.

- EAC (1) An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- EAC (2) An ability to apply engineering design to produce solutions that meet specified needs with consideration to public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- EAC (3) An ability to communicate effectively with a range of audiences
- EAC (4) An ability to recognize ethical and professional responsibilities
- EAC (5) An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- EAC (6) An ability to develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions
- EAC (7) An ability to acquire and apply new knowledge as needed, using appropriate learning strategies

## Manufacturing Engineering Program Criteria

The Manufacturing Engineering curriculum also provides graduates with:

MFG L: An ability to design manufacturing processes.

MFG M: An ability to design products and the corresponding processing machinery.

MFG N: An ability to create competitive advantage by manufacturing planning, strategy, and control.

MFG O: An ability to analyze, synthesize, and control manufacturing operations using statistical methods.

MFG P: An ability to make technical inferences about a manufacturing process by measuring process variables.

## Departmental Honors

If you excel in your studies, you may qualify for the University Honors Program or the program for Honors in Mechanical and Manufacturing Engineering. As a senior in these programs, you will have the opportunity to work closely with the faculty on research projects of interest.

## Credit/No Credit Policy

All courses in chemistry, physics, biology, mathematics, statistics and those in the College of Engineering and Computing (CPB, CSE, ECE, MME, CEC, EGM) that are used to fulfill requirements of the major, must be taken for a grade.

## Divisional Policy

DOUBLE MAJORS: Students with two majors in the College of Engineering and Computing must take a minimum of 15

different/additional credit hours in their second major beyond the requirements of their first major.

## Program Requirements

(128 semester hours minimum)

Note: MME 434 and 435 are offered only in the fall semester (typically) and MME 437 is offered only in the spring semester (typically).

Code	Title	Credit Hours
<b>Core Requirements</b>		
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
ECO 201	Principles of Microeconomics	3
ENG 313	Technical Writing	3
MTH 151	Calculus I	5
MTH 251 or MTH 249	Calculus II	4-5
MTH 252	Calculus III	4
MTH 246	Linear Algebra and Differential Equations for Engineers	4
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5
STA 301 or STA 261	Applied Statistics Statistics	3 - 4
<b>Engineering Science</b>		
ECE 205	Electric Circuit Analysis I	4
MME 211	Static Modeling of Mechanical Systems	3
MME 223	Engineering Materials	3
MME 311	Dynamic Modeling of Mechanical Systems	3
MME 312	Mechanics of Materials	3
MME 313	Fluid Mechanics	3
MME/CPB 314	Engineering Thermodynamics	3
<b>Manufacturing Engineering Core</b>		
CEC 101	Computing, Engineering & Society	1
MME 102	Introduction to Mechanical and Manufacturing Engineering (or equivalent)	3
MME 231	Manufacturing Processes	3
MME 201	Modeling and Design in Engineering	2
MME 301	Product Design and Development	3
MME 305	Measurements and Instrumentation	3
MME 334	Quality Planning and Control	3
MME 335	Design of Experiments for Quality Control	1
MME/CPB 341	Engineering Economics	3
MME 411	Machine and Tool Design	4
MME 435	Manufacturing Competitiveness	3
<b>Complete One Track (take 2 courses)</b>		
Track 1: Manufacturing Process Design		
MME 434	Manufacturing Design	3
MME 437	Manufacturing Automation	3

<b>Senior Capstone Engineering Design</b>		
MME 448	Senior Design Project	2
MME 449	Senior Design Project	2
<b>Technical Electives</b>		
Select two of the following courses for a minimum of 6 credit hours: <sup>1</sup>		6
CPB 244	Introduction to Environmental Engineering	
CPB 482	Process Control	
CSE 153 or CSE 174	Introduction to C/C++ Programming Fundamentals of Programming and Problem Solving	
CSE 271	Object-Oriented Programming	
CSE 273	Optimization Modeling	
CSE 372	Stochastic Modeling	
ECE 287	Digital Systems Design	
ECE 291	Energy Systems Engineering	
ECE 302	MATLAB and its engineering applications	
ECE 304	Electronics	
ECE 306	Signals and Systems	
MME 315	Mechanical Vibrations	
MME 360	Special Topics	
MME 375	Human Robot Interaction	
MME/CPB 403	Heat Transfer	
MME 412	Advanced Mechanics of Materials	
MME 414	Engineering Thermodynamics II	
MME 451	Sustainability Considerations in Design and Development	
MME 495	Introduction to Applied Nonlinear Dynamics	
Total Credit Hours		108-110

<sup>1</sup> Other courses may be approved by petition.

## Mechanical Engineering- Bachelor of Science in Engineering

For information, contact the Department of Mechanical and Manufacturing Engineering, 56 Garland Hall, 513-529-0710.

This program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

Mechanical Engineering encompasses the design, analysis and production of machines and systems. It requires the ability to use principles from mathematics, science, and engineering, perform research, create mathematical and physical models, simulate and test working conditions, and synthesize different elements in order to obtain the optimum design of a specific product or process.

The increasing sophistication of products and systems requires academically qualified mechanical engineers who can apply state-of-the-art tools and methods of engineering. Examples include computer-aided engineering/design/manufacturing, finite-element

analysis, computational fluid mechanics, robotics, heat transfer, dynamics, and advanced machine and tool design.

The mechanical engineer of the 21st century must be able to think critically in broader contexts because engineering solutions to problems in contemporary society often involve complex social, political, environmental and economic issues. Miami's mechanical engineering program provides students with a broad mechanical engineering foundation supplemented by courses in manufacturing engineering, electrical engineering, computer science, chemical/biological engineering, economics, mathematics, physics, chemistry, biology, and a strong liberal arts component that includes fine arts, humanities, social science, and global/intercultural perspectives.

Graduates have the opportunity to work in a diverse spectrum of professional fields. These include design, development, research, manufacturing, production, project management, technical sales, and field support and service. Many mechanical engineers work in manufacturing-related areas, in the analysis and design of myriad products, and in other sectors of the economy such as medicine, law and government service. Graduates are also prepared to continue their education at the graduate level. Graduating seniors are encouraged to take the Fundamentals of Engineering examination, which is the first of two examinations that lead to becoming a licensed professional engineer.

For information, contact the Department of Mechanical & Manufacturing Engineering, 56 Garland Hall (513-529-0710) and visit our web site: <http://www.CEC/MiamiOH.edu/MME/>.

## Program Educational Objectives

Graduates of the Mechanical Engineering program are expected to attain or achieve the following Program Educational Objectives within a few years of graduation:

- Development in their chosen profession and/or progress toward an advanced degree
- The trust and respect of others as effective and ethical team members
- A reputation as a source of innovative solutions to complex problems
- Positions of leadership in an organization and/or on teams.

## Student Outcomes

The Student Outcomes, from ABET Engineering Accreditation Commission (EAC) criteria, prepare graduates of the Mechanical and Manufacturing Engineering programs to attain the Program Educational Objectives.

- EAC (1) An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
- EAC (2) An ability to apply engineering design to produce solutions that meet specified needs with consideration to public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
- EAC (3) An ability to communicate effectively with a range of audiences
- EAC (4) An ability to recognize ethical and professional responsibilities

- EAC (5) An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
- EAC (6) An ability to develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions
- EAC (7) An ability to acquire and apply new knowledge as needed, using appropriate learning strategies

## Mechanical Engineering Program Criteria

The Mechanical Engineering curriculum also provides graduates with:

MCH L: An ability to apply principles of engineering, basic science and mathematics (including multivariate calculus and differential equations) to solve engineering problems.

MCH M: An ability to model, analyze, design and realize physical systems, components or processes.

MCH N: The preparation to work professionally in either thermal or mechanical systems areas.

## Departmental Honors

If you excel in your studies, you may qualify for the University Honors Program or the program for Honors in Mechanical and Manufacturing Engineering. As a senior in these programs, you will have the opportunity to work closely with the faculty on research projects of interest.

## Credit/No Credit Policy

All courses in chemistry, physics, biology, mathematics, statistics and those in the College of Engineering and Computing (CPB, CSE, ECE, MME, CEC, EGM) that are used to fulfill requirements of the major, must be taken for a grade.

## Divisional Policy

DOUBLE MAJORS: Students with two majors in the College of Engineering and Computing must take a minimum of 15 different/additional credit hours in their second major beyond the requirements of their first major.

## Program Requirements

(127 semester hours)<sup>1</sup>

Code	Title	Credit Hours
<b>Core Requirements</b>		
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
ECO 201	Principles of Microeconomics	3
ENG 313	Technical Writing	3
MTH 151	Calculus I	5
MTH 251 or MTH 249	Calculus II	4-5
MTH 252	Calculus III	4

MTH 246	Linear Algebra and Differential Equations for Engineers	4
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5
STA 301 or STA 261	Applied Statistics Statistics	3 - 4

### Engineering Science

ECE 205	Electric Circuit Analysis I	4
MME 211	Static Modeling of Mechanical Systems	3
MME 223	Engineering Materials	3
MME 311	Dynamic Modeling of Mechanical Systems	3
MME 312	Mechanics of Materials	3
MME/CPB 313	Fluid Mechanics	3
MME/CPB 314	Engineering Thermodynamics	3

### Mechanical Engineering Core

CEC 101	Computing, Engineering & Society	1
MME 102	Introduction to Mechanical and Manufacturing Engineering (or equivalent)	3
MME 231	Manufacturing Processes	3
MME 201	Modeling and Design in Engineering	2
MME 202	Numerical Methods in Engineering	3
MME 305	Measurements and Instrumentation	3
MME 321	System Modeling, Analysis, & Control	3
MME/CPB 341	Engineering Economics	3
MME/CPB 403	Heat Transfer	3
MME 411	Machine and Tool Design	4
MME 415	Thermal-Fluid Studio	2

### Senior Capstone Engineering Design

MME 448	Senior Design Project	2
MME 449	Senior Design Project	2

### Complete Any One Track (6 hours)

Track 1: Mechanics (select 2 courses)

MME 315	Mechanical Vibrations	
MME 412	Advanced Mechanics of Materials	
MME 436	Control of Dynamic Systems	
MME 495	Introduction to Applied Nonlinear Dynamics	

Track 2: Thermal Fluids (select 2 courses)

MME 413	Introduction to Compressible Flow	
MME 414	Engineering Thermodynamics II	

### Technical electives

Select one of the following courses for a minimum of three credit hours:<sup>2</sup>

CPB 244	Introduction to Environmental Engineering	3
CPB 423	Biomechanics	
CPB 482	Process Control	
CSE 153 or CSE 174	Introduction to C/C++ Programming Fundamentals of Programming and Problem Solving	
CSE 271	Object-Oriented Programming	

CSE 273	Optimization Modeling
CSE 372	Stochastic Modeling
ECE 287	Digital Systems Design
ECE 291	Energy Systems Engineering
ECE 302	MATLAB and its engineering applications
ECE 304	Electronics
ECE 306	Signals and Systems
MME 334	Quality Planning and Control
MME 360	Special Topics
MME 375	Human Robot Interaction
MME 434	Manufacturing Design
MME 435	Manufacturing Competitiveness
MME 437	Manufacturing Automation
MME 451	Sustainability Considerations in Design and Development

Total Credit Hours 106-108

<sup>1</sup> Total hours for required for graduation is 127 Credit Hours, which includes completion of the requirements for the Global Miami Plan.

<sup>2</sup> Other courses may be approved by petition.

## Software Engineering- Bachelor of Science in Software Engineering

For information, contact the Department of Computer Science and Software Engineering, 205 Benton Hall, 513-529-0340, or visit <http://cse.MiamiOH.edu>.

The software engineering major provides graduates with the foundational knowledge and practical skills necessary to develop large, complex computer software systems. The program focuses on the methodologies, techniques and tools needed to develop complex software in a multidisciplinary environment. Topics of study go beyond traditional computer science and include software design, software maintenance, and formal methods for software development. Throughout the program, students are expected to learn in a team environment and thus gain skills in effective communication. In addition to interest in analytical skills, problem solving, and an aptitude for working with technology, students are expected to develop an appreciation for teamwork.

The U.S. Bureau of Labor job outlook for software engineers is excellent. Jobs are expected to grow 32% from 2008 to 2018, much faster than average for all occupations. This US bureau reports that "expanding Internet technologies have spurred demand for computer software engineers who can develop Internet, intranet, and World Wide Web applications." (<http://www.bls.gov/ooh/>)

### Program Educational Objectives

**Depth.** Software Engineering graduates will have a sufficient understanding of the field of software engineering including scientific principles, analysis techniques, and design methodologies to:

- Be successfully employed, pursue a graduate degree, or continue their professional education.

**Breadth.** Software Engineering graduates will have a broad liberal education enabling them to:

- Demonstrate adaptability or leadership by, for example, being promoted, moving up to a better job, or by taking a leadership role in a team.
- Demonstrate an understanding of the context and broader impacts of technology in their organization by, for example, engaging stakeholders outside their immediate team, or by identifying ethical, economic, cultural, legal or environmental issues related to work projects.

**Professionalism.** Software Engineering graduates will be prepared for modern work environments, where they will:

- Apply their skills in clear communication, responsible teamwork, and time management by, for example, managing a team or project, working on multidisciplinary project teams, or communicating with external stakeholders.
- Demonstrate professional attitudes and ethics by, for example, assisting colleagues in professional development (e.g. mentoring), engaging in continuing education or training, participating in professional societies, engaging in service to the community, or contributing to an employer's efforts to comply with software licensing, protect privacy, or assure quality and safety.

### Student Outcomes

Upon graduation, software engineering majors should be able to:

1. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. Communicate effectively with a range of audiences.
4. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. Acquire and apply new knowledge as needed, using appropriate learning strategies.

For more information, visit our website at <http://cse.MiamiOH.edu>.

### Departmental Honors

If you excel in your studies, you may qualify for the University Honors Program or the program for Honors in Computer Science and Software Engineering. As a senior in these programs, you will have the

opportunity to work closely with the faculty on research projects of interest.

## Credit/No-Credit Policy

All courses in chemistry, physics, biology, mathematics, statistics and those in the College of Engineering and Computing (CPB, CSE, ECE, EGM, MME, CEC) that are used to fulfill requirements of the major, must be taken for a grade.

## Divisional Policy

DOUBLE MAJORS: Students with two majors in the College of Engineering and Computing must take a minimum of 15 different/additional credit hours in their second major beyond the requirements of their first major.

## Program Requirements

Code	Title	Credit Hours
<b>Core Requirements</b>		
ECO 201 or ECO 202	Principles of Microeconomics Principles of Macroeconomics	3
ENG 313	Technical Writing	3
STC 135 or STC 231	Principles of Public Speaking Small Group Communication	3
Mathematics:		
MTH 151	Calculus I	5
MTH 231	Elements of Discrete Mathematics	3
Statistics		
STA 301 or STA 261 or ECE 345	Applied Statistics Statistics Applied Probability and Statistics for Engineers	3-4
Mathematics/Statistics Electives		9-10
Take three of the following:		
STA 333	Nonparametric Statistics	
STA 363	Introduction to Statistical Modeling	
STA 365	Statistical Monitoring and Design of Experiments	
STA 401	Probability	
STA 402	Statistical Programming	
STA 404	Advanced Data Visualization	
STA 427	Introduction to Bayesian Statistics	
STA 432	Survey Sampling in Business	
STA 466	Experimental Design Methods	
STA 467	Statistical Learning	
MTH 222	Introduction to Linear Algebra	
MTH 245	Differential Equations for Engineers	
MTH 251 or MTH 249	Calculus II Calculus II	
MTH 252	Calculus III	
MTH 331 or MTH 331T	Proof: Introduction to Higher Mathematics Proof: Introduction to Higher Mathematics (H)	
MTH 347	Differential Equations	
MTH 411	Foundations of Geometry	

MTH 421	Introduction to Abstract Algebra	
MTH 432	Optimization	
MTH 437	Game Theory and Related Topics	
MTH 438	Theory and Applications of Graphs	
MTH 439	Combinatorics	
MTH 441	Real Analysis	
MTH 447	Topics in Mathematical Finance	
Natural Science Electives		8-10
Select two of the following six options		
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	
PHY 191	General Physics with Laboratory I	
PHY 192	General Physics with Laboratory II	
Mathematics/Statistics/Science Elective <sup>1</sup>		3-5
Select one additional course from one of the following		
Any of the above Mathematics/Statistics Electives		
Any of the above Natural Science Electives		
Any Global Miami Plan Natural Science (MPF IV A or IV B)		
<b>Software Engineering Core</b>		
CEC 101	Computing, Engineering & Society	1
CSE 102	Introduction to Computer Science and Software Engineering (or equivalent)	3
CSE 174	Fundamentals of Programming and Problem Solving	3
CSE 201	Introduction to Software Engineering	3
CSE 211	Software Construction	3
CSE 212	Software Engineering for User Interface and User Experience Design	3
CSE/CIT 262	Technology, Ethics, and Global Society	3
CSE 271	Object-Oriented Programming	3
CSE 274	Data Abstraction and Data Structures	3
CSE 278	Systems I: Introduction to Systems Programming	3
CSE 311	Software Architecture and Design	3
CSE 321	Software Quality Assurance and Testing	3
CSE 322	Software Requirements	3
CSE 383	Web Application Programming	3
ISA 406	IT Project Management	3
CSE 448	Senior Design Project	2
CSE 449	Senior Design Project	2
<b>Specialization Area</b>		12
Complete an area of specialization <sup>2</sup>		
Total Credit Hours		99-105

<sup>1</sup> Software Engineering majors are required to take at least 31 hours of mathematics, statistics, and natural science courses. Mathematics courses must be selected from courses at or beyond MTH 151.

<sup>2</sup> See the department for a list of specialization areas.

## Bioinformatics Minor

For information, contact the Department of Biology, 313 Pearson Hall, 513-529-3100.

Bioinformatics, or the application of computational techniques to molecular biology problems, is a fast-growing field of significant importance in both academia and industry. Students completing a bioinformatics minor will gain the basic knowledge of biology and programming needed to work in this area, as well as an understanding of how computational techniques can be used to advance our knowledge of biology and the life sciences.

### Program Requirements

(19-20 semester hours)

Code	Title	Credit Hours
<b>Required Courses</b>		
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO/CSE/MBI 256	Introduction to Programming for the Life Sciences	3
or CSE 271	Object-Oriented Programming	
BIO/CHM/CSE/MBI 466	Bioinformatics Computing Skills	3
Select one of the following:		3-4
STA 363	Introduction to Statistical Modeling	
STA 402	Statistical Programming	
STA 463	Regression Analysis	
STA 466	Experimental Design Methods	
BIO, CHM, CSE, or MBI at the 200-level or above (BIO 342, MBI 365, or CSE 443 are strongly recommended)		3
BIO/MBI 485/ CSE 456	Bioinformatics Principles	3
Total Credit Hours		19-20

## Biomedical Engineering Minor

For information, contact the Department of Chemical, Paper and Biomedical Engineering, 64 Engineering Building, 513-529-0760.

The minor provides an understanding of the basic biomedical engineering principles, concepts and methodologies and how they are applied to the design of biomedical devices and/or systems.

### Program Requirements

(19-20 semester hours)

Code	Title	Credit Hours
Students are responsible for meeting the prerequisites of all courses in the minor.		
<b>Required Courses</b>		
CPB 219	Statics and Mechanics of Materials	3
or MME 211	Static Modeling of Mechanical Systems	
CPB 318	Transport Phenomena I	4
or CPB 418	Biological Transport Phenomena	
CPB 417	Biomedical Engineering	3
CPB 419	Biomaterials	3
CHM 332 & 332L	Outlines of Biochemistry and Outlines of Biochemistry Lab	3-4
or CHM 432	Fundamentals of Biochemistry	
or PHY 421	Molecular and Cellular Biophysics	
or PHY 422	Physics for Medicine and Biology	
or BIO 342	Genetics	
<b>Select one from the following</b>		3
CPB 326	Fundamentals of Medical Device Design	
CPB 423	Biomechanics	
CPB 416	Biochemical Engineering	
CPB 426	Fundamentals of Tissue Engineering	
ECE 205	Electric Circuit Analysis I	
ECE 426	Biomedical Signal Analysis	
Total Credit Hours		19-20

## Chemical Engineering Minor

For information, contact the Department of Chemical, Paper and Biomedical Engineering, 64 Engineering Building, 513-529-0760.

The objective of this program is to expand the educational opportunities of Miami students into the traditional discipline of chemical engineering. The minor provides an understanding of basic chemical engineering principles, concepts, and methodologies and how they are applied to the design and performance analysis of industrial processes. This minor is for students not majoring in Paper Science and Engineering or Chemical Engineering.

A minimum cumulative GPA of 2.00 is required for all courses in the minor. Twenty semester hours beyond the prerequisite chemistry, physics, and mathematics are required. None of these courses may be taken on a credit/no credit basis.

Students must have a grade of C or better in CHM 142 and PHY 191.

### Program Requirements

(18-20 semester hours)

Code	Title	Credit Hours
Students are responsible for meeting the prerequisites of all courses in the minor.		
<b>Prerequisites</b>		
A grade of C or better in the following:		
CHM 142	College Chemistry	

PHY 191	General Physics with Laboratory I	
<b>Program Requirements</b>		
CPB 204	Mass and Energy Balances I	2
CPB 205	Mass and Energy Balances II	2
CPB 219	Statics and Mechanics of Materials	3
or MME 211	Static Modeling of Mechanical Systems	
CPB/MME 314	Engineering Thermodynamics	3
CPB 414	Mass Transfer	4
CPB 313 & CPB 403	Fluid Mechanics and Heat Transfer	4-6
or CPB 318	Transport Phenomena I	
or CPB 418	Biological Transport Phenomena	
Total Credit Hours		18-20

## Computer Science Minor

For information, contact the Department of Computer Science and Software Engineering, 205 Benton Hall, 513-529-0340.

This minor is for students in majors other than computer science or software engineering. The objective is to provide a cohesive program enabling students to learn the fundamentals of software design and development and a variety of other topics in computer science. In addition to gaining an understanding of the software design and development process, students will acquire problem solving and algorithm design skills. Electives in sub-fields of computer science including computer networks, operating systems, database, software engineering, graphics, and computer architecture permit the student to study particular areas of interest.

According to University guidelines, all minor courses must be taken for a letter grade and you must earn an overall 2.00 GPA in these courses.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Required courses</b>		
CSE 174	Fundamentals of Programming and Problem Solving	3
CSE 271	Object-Oriented Programming	3
CSE 274	Data Abstraction and Data Structures	3
<b>Electives</b>		
Select a minimum of 9 hours of the following:		9
CSE 102	Introduction to Computer Science and Software Engineering <sup>1</sup>	
CSE 201	Introduction to Software Engineering	
CSE 211	Software Construction	
CSE 212	Software Engineering for User Interface and User Experience Design	
CSE 251	Introduction to Game Programming <sup>1</sup>	
CSE 252	Web Application Programming	
CSE 262	Technology, Ethics, and Global Society <sup>1</sup>	
CSE 273	Optimization Modeling <sup>1</sup>	

CSE 278	Systems I: Introduction to Systems Programming	
CSE 287	Foundations of Computer Graphics and Games	
CSE 311	Software Architecture and Design	
CSE 321	Software Quality Assurance and Testing	
CSE 322	Software Requirements	
CSE 372	Stochastic Modeling <sup>1</sup>	
CSE 374	Algorithms I	
CSE 381	Systems 2: OS, Currency, Virtualization, and Security	
CSE 383	Web Application Programming	
CSE 385	Database Systems	
CSE 387	Advanced Graphics and Game Engine Design	
CSE 443	High Performance Computing & Parallel Programming	
CSE 451	Web Services and Service Oriented Architectures	
CSE 456	Bioinformatic Principles	
CSE 465	Comparative Programming Languages	
CSE 466	Bioinformatics Computing Skills	
CSE 467	Computer and Network Security	
CSE 471	Simulation	
CSE 473	Automata, Formal Languages, and Computability	
CSE 474	Compiler Design	
CSE 477	Independent Studies	
CSE 484	Algorithms II	
CSE 485	Advanced Database Systems	
CSE 486	Introduction to Artificial Intelligence	
CSE 487	Game Design and Implementation	
CSE 491	Undergraduate Research	
STA 483	Analysis of Forecasting Systems	
Total Credit Hours		18

<sup>1</sup> Does not have programming as a prerequisite. At most one of these courses may be counted.

## Electrical Engineering Minor

For information, contact the Department of Electrical and Computer Engineering, 260 Garland Hall, 513-529-0740.

This minor is not open to students majoring in computer engineering, electrical engineering, or engineering management with concentration in electronics and computing. This minor provides fundamentals of electrical and electronic engineering, which includes a variety of industrial applications involving electrical/electronic circuits and microprocessor systems. It combines a strong base in engineering science with project-based laboratory and design experience.

A minimum cumulative GPA of 2.00 is required for all courses in the minor. None of these courses may be taken on a credit/no-credit basis.

## Program Requirements

(20 semester hours)

Code	Title	Credit Hours
Students are responsible for meeting the prerequisites of all courses in the minor.		
<b>Required courses</b>		
ECE 205	Electric Circuit Analysis I	4
ECE 287	Digital Systems Design	4
ECE/MME 303 or ECE 314	Computer-Aided Experimentation Elements of Robotics	3
<b>Elective courses</b>		
Select at least three of the following (for a minimum of 9 hours):		9
ECE 289	Computer Organization	
ECE 291	Energy Systems Engineering	
ECE 302	MATLAB and its engineering applications	
ECE 304	Electronics	
ECE 306	Signals and Systems	
ECE 325	Applied Electromagnetics	
ECE 345	Applied Probability and Statistics for Engineers	
ECE 353	Software Defined Radio	
ECE 387	Embedded Systems Design	
ECE 395	Undergraduate Research Immersion Project	
ECE 425	Digital Signal Processing	
ECE 426	Biomedical Signal Analysis	
ECE 427	Radar Signal Processing	
ECE 429	Digital Image Processing	
ECE 430	Electromagnetics in Wireless Sensing and Communications	
ECE/MME 436	Control of Dynamic Systems	
ECE 453	Communication Systems	
ECE 461	Network Performance Analysis	
ECE 487	Computer Aided Design Tools for Computer Engineering	
ECE 491	Power Systems Engineering	
ECE 493	Power Electronics	
ECE 495	Electric Machinery and Drives	
Total Credit Hours		20

## Environmental Engineering Minor

For information, contact the Department of Chemical, Paper and Biomedical Engineering, 64 Engineering Building, 513-529-0760.

The Environmental Engineering minor provides an understanding of basic chemical and environmental engineering principles, concepts, and methodologies and how they are applied to the design and performance of unit operations and processes for energy generation and pollution treatment and control. Students studying

the Environmental Engineering minor will apply the concepts of chemistry, biochemistry, physics and mathematics to solve problems related to energy and the environment. For example, students will gain an understanding of the fate and transport of pollutants in the environment; they will identify and understand the design concepts in unit operations involved in drinking water and wastewater treatment processes; they will understand how to apply mass and energy balances to assess opportunities for pollution prevention in industrial processes; and they will gain the perspective of sustainability from three viewpoints: economic, environmental, and social. In addition, students will become familiar with many of the U.S. Environmental laws and regulations as well as global environmental issues, including greenhouse gases and climate change, ozone depletion, acid rain, and urban haze, among others.

## Program Requirements

(20 semester hours)

Code	Title	Credit Hours
Students are responsible for meeting the prerequisites of all courses in the minor.		
<b>Required courses:</b>		
CPB 314 or MME 314	Engineering Thermodynamics Engineering Thermodynamics	3
CPB 219 or MME 211	Statics and Mechanics of Materials Static Modeling of Mechanical Systems	3
CPB 311	Unit Operations Laboratory I	2
CPB 313 or MME 313 or CPB 318 or CPB 418	Fluid Mechanics Fluid Mechanics Transport Phenomena I Biological Transport Phenomena	3
Select three of the following:		9
CPB 244	Introduction to Environmental Engineering	
ECE 291	Energy Systems Engineering	
CPB 405	Industrial Environmental Control	
CPB 441	Pollution Prevention in Environmental Management	
CPB 442	Air Pollution Control	
MME 451	Sustainability Considerations in Design and Development	
Total Credit Hours		20

## Humanitarian Engineering and Computing Minor

The Humanitarian Engineering and Computing minor at Miami University is designed to graduate engineering and computing majors who are globally-aware, culturally-sensitive, and socially conscious, and who would use their knowledge to design solutions that enhance the lives of and opportunities for people on a local, national, or international level. Students will select coursework supporting their interests from four broad categories, engage in service/humanitarian focused activity or research and complete a humanitarian-focused capstone project in CPB, CSE, ECE or MME.

This minor is only open to students with a major in the College of Engineering and Computing.

## Program Requirements

(18 credit hours minimum)

Code	Title	Credit Hours
<b>Service or Humanitarian Focused Activity or Research</b>		
Select one of the following course options for a minimum of two credit hours:		2
Service Learning designated course from an elective list or use the Service Learning Extra Credit Option <sup>1</sup>		
Miami Study Abroad course with a service component		
Independent Study course with a project approved by H E&C Steering Committee such as: a project through Miami University Center for Assistive Technology; a research project with faculty; Social Entrepreneurship project; Engineers without Borders project <sup>2</sup>		
<b>Related Coursework</b>		
Select one of the following:		3
ATH 175	Peoples of the World <sup>3</sup>	
ATH/ITS 301	Intercultural Relations <sup>3</sup>	
IDS 159	Strength Through Cultural Diversity <sup>3</sup>	
Select nine hours from the courses below. There is no minimum required hours per category. <sup>4,5</sup>		9
Diversity, Social Responsibility and Cultural Awareness courses:		
AMS 205	Introduction to American Cultures	
ATH 175	Peoples of the World <sup>3</sup>	
ATH/ITS 301	Intercultural Relations <sup>3</sup>	
GEO 101	Global Forces, Local Diversity	
GEO 201	Geography of Urban Diversity	
GEO 211	Global Change	
IDS 159	Strength Through Cultural Diversity <sup>3</sup>	
ITS 201	Introduction to International Studies	
ITS 302	Problems of Non-Western Societies	
SJS/SOC 165	Introduction to Social Justice Studies	
SJS/SOC 323	Social Justice and Change	
SJS 487	Globalization, Social Justice and Human Rights	
SOC 153	Sociology in a Global Context	
SOC 201	Social Problems	
SOC/EDP/DST 272	Introduction to Disability Studies	
Energy, Environment and Sustainability courses:		
ARC 413	Environmental Systems I	
BUS/IES 494	Sustainability Perspectives in Resources and Business	
CPB 244	Introduction to Environmental Engineering	
ECE 291	Energy Systems Engineering	
ECO 406	Environmental Economics	
IES 211	Energy and Policy	

IES 274	Introduction to Environment and Sustainability
IES 275	Principles of Environmental Science
IES/ENG/JRN 429	Environmental Communication
IES 450	Environmental Law
IES 474	Sustainability in Practice
MME 451	Sustainability Considerations in Design and Development
SJS/IES 419	Environment, Society & Justice
Economic, Political and Global Issues courses:	
ARC 107	Global Design
ARC 188	Ideas in Architecture
ATH 358	Travelers, Migrants, and Refugees: Transnational Migration and Diasporic Communities
ECO 347	Economic Development
ECO 356	Poverty and Income Distribution
ESP 331	Social Entrepreneurship
GEO 475	Global Periphery's Urbanization
GEO 476	Global Poverty
ITS 333	Global Development and Inequality
POL 271	World Politics
POL 381	Global Governance
Health-related courses:	
ATH 348	Introduction to Medical Anthropology
ATH 378	Doctors, Clinics, and Epidemics
ATH 448	Developing Solutions in Global Health
BWS/HST/LAS 385	Race, Science, and Disease in the Americas
CPB 421	Bioethics
GHS 101	Introduction to Global Health
GTU/SOC 357	Medical Sociology
HST 236	Medicine and Disease in Modern Society
KNH 321	National and Global Health Policy
KNH/IES 441	Environmental Public Health
PHL 375	Medical Ethics

### Capstone project in CEC

Complete a capstone sequence in CEC (CPB 471 & CPB 472 or CSE 448 and CSE 449 or ECE 448 and ECE 449 or MME 448 and MME 449) with a humanitarian engineering and computing focus. APPROVAL OF HUMANITARIAN ENGINEERING & COMPUTING ADVISOR IS REQUIRED PRIOR TO ENROLLING IN THE CAPSTONE.

Total Credit Hours 18

- 1 Cannot count toward Related Coursework.
- 2 Credit earned for CEC 277 or similar.
- 3 Course will only count once toward Related Coursework.
- 4 Only one course can be from the College of Engineering and Computing (CPB, ECE, or MME course).

<sup>5</sup> Students may also petition (with justification) to the H E&C Steering Committee to allow other courses to meet this requirement.

## Manufacturing Engineering Minor

For information, contact the Department of Mechanical and Manufacturing Engineering, 56 Garland Hall, 513-529-0710.

This minor is for students not majoring in manufacturing engineering, or mechanical engineering. This minor provides fundamentals of manufacturing engineering, including a variety of industrial applications dealing with manufacturing processes, statistical process control, and designing for productivity. It combines a strong base in engineering science with project-based laboratory and design experience.

A minimum cumulative GPA of 2.00 is required for all courses in the minor. None of these courses may be taken on a credit/no-credit basis.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Students are responsible for meeting the prerequisites of all courses in the minor.		
<b>Required courses</b>		
MME 211	Static Modeling of Mechanical Systems	3
MME 202	Numerical Methods in Engineering (Numerical Methods for Engineers)	3
<b>Elective Courses (take any of the following for a minimum of 12 credit hours)</b>		12
MME 223	Engineering Materials	
MME 231	Manufacturing Processes	
MME 334	Quality Planning and Control	
MME 341	Engineering Economics	
MME 201	Modeling and Design in Engineering	
MME 301	Product Design and Development	
Total Credit Hours		18

## Mechanical Engineering Minor

For information, contact the Department of Mechanical and Manufacturing Engineering, 56 Garland Hall, 513-529-0710.

This minor is for students not majoring in manufacturing engineering or mechanical engineering. This minor provides fundamentals of mechanical engineering, including a variety of industrial applications involving product design, experimental analysis, and engineering modeling techniques. It combines a strong base in engineering science with project-based laboratory and design experience.

A minimum cumulative GPA of 2.00 is required for all courses in the minor. None of these courses may be taken on credit/no-credit basis.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
Students are responsible for meeting the prerequisites of all courses in the minor.		
<b>Required courses</b>		
MME 211	Static Modeling of Mechanical Systems (Numerical Methods in Engineering)	3
MME 202	Numerical Methods in Engineering	3
<b>Elective Courses (take any of the following for a total of 12 credit hours)</b>		12
MME 223	Engineering Materials	
MME 231	Manufacturing Processes	
MME 311	Dynamic Modeling of Mechanical Systems	
MME 312	Mechanics of Materials	
MME/CPB 313	Fluid Mechanics	
MME/CPB 314	Engineering Thermodynamics	
Total Credit Hours		18

## Paper Engineering Minor

For information, contact the Department of Chemical, Paper and Biomedical Engineering, 64 Engineering Building, 513-529-0760.

The minor introduces the science and engineering of papermaking. The educational experience will prepare the student for a career as a project/process engineer in the paper and allied industries.

A minimum cumulative GPA of 2.00 is required for all courses in the minor. A minimum of twenty-five semester hours beyond the prerequisite courses are required. None of these courses may be taken on a credit/no credit basis.

### Program Requirements

(26-28 semester hours)

Code	Title	Credit Hours
<b>Required Courses</b>		
CPB 201	Principles of Paper Science and Engineering	3
CPB 202	Pulp and Paper Physics	3
CPB 219	Statics and Mechanics of Materials	3
or MME 211	Static Modeling of Mechanical Systems	
CPB 301	Pulp and Paper Chemistry	3
or MME/ECE 303	Computer-Aided Experimentation	
CPB/MME 313/CPB 318/418	Fluid Mechanics	3
CPB/MME 341	Engineering Economics	3
CPB 490	Special Topics in Paper and Chemical Engineering	1-3
or MME 334	Quality Planning and Control	
or MME 436	Control of Dynamic Systems	

CPB 404	Papermaking	3
Select one of the following sequences:		4
CPB 471 & CPB 472	Engineering Design I and Engineering Design II	
MME 448 & MME 449	Senior Design Project and Senior Design Project <sup>1</sup>	

Total Credit Hours 26-28

<sup>1</sup> Students whose major is Mechanical Engineering are advised to select MME 448/MME 449; however, they must work on a paper engineering related project, supervised by a faculty member in CPB. In addition, students must have completed and participated in all the assessment elements required by MME 448/MME 449. Students must seek approval from their advisor in CPB and MME prior to registering for the course.

Note: Additional prerequisites may be required for specific courses in the minor. Please consult an advisor in the CPB department.

## Process Control Minor

The Process Control minor will allow students to gain education in the broad skill set required of a process control engineer. These skill sets include computer programming, electronics and circuits, signal analysis, instrumentation, process modeling, and logic as applied to the chemical and paper industries. The minimum cumulative gpa of 2.00 is required for all courses in the minor. Twenty semester hours are required. None of these courses may be taken on a credit/no credit basis.

## Program Requirements

(19 credit hours minimum)

Code	Title	Credit Hours
<b>Required courses</b>		
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	5
CPB 204	Mass and Energy Balances I	2
Select one of the following:		3
CSE 174	Fundamentals of Programming and Problem Solving	
CPB 324	Chemical and Bio- Engineering Computation and Statistics	
MME 201 & MME 202	Modeling and Design in Engineering and Numerical Methods in Engineering	
Select one of the following:		4-7
ECE 205 & ECE 303	Electric Circuit Analysis I and Computer-Aided Experimentation <sup>1</sup>	
PHY 292 & PHY 294	Electronic Instrumentation and Laboratory in Electronic Instrumentation	
Select one of the following:		3
CPB 422	Biological Systems and Controls	
CPB 482	Process Control	
ECE/MME 436	Control of Dynamic Systems	

## Courses for Majors/Non-majors 2-3

CPB majors select:	
CPB 451	Unit Operations Laboratory II
CPB non-majors select:	
CPB 451 & CPB 477	Unit Operations Laboratory II and Independent Studies <sup>2</sup>

Total Credit Hours 19-23

<sup>1</sup> Cross-listed with MME 303.

<sup>2</sup> Concurrent enrollment in CPB 451 & CPB 477 with approval from CPB department.

## Leadership Certificate

For more information, contact the Lockheed Martin Leadership Institute: [mosskp@MiamiOH.edu](mailto:mosskp@MiamiOH.edu) or 513-529-0342. Website: <http://MiamiOH.edu/lockheed-martin>.

The Leadership Certificate is a rigorous and cumulative three-year leadership development program for selected cohort students with a major in the College of Engineering and Computing. Students focus on personal leadership, people leadership, and strategic leadership. During this program, students are exposed to seasoned leaders from business and industry and create their own personal development plans. The program is an intensely personal and rich experience that prepares students to compete, succeed, and lead within their professions, their communities, and the world. Admission to the program is selective based on student applications and limited to students with a major in the College of Engineering and Computing. This certificate can only be earned in addition to a bachelor's degree at Miami University in the College of Engineering and Computing.

## Program Requirements

(minimum 12 semester hours)

Code	Title	Credit Hours
CEC 291	Personal Leadership I	2
CEC 292	Personal Leadership II	2
CEC 391	People Leadership I	2
CEC 392	People Leadership II	2
CEC 491	Strategic Leadership I	2
CEC 492	Strategic Leadership II	2
Total Credit Hours		12

## Additional Requirement

Students must be actively pursuing a bachelor's degree at Miami University in the College of Engineering and Computing to enroll in this certificate program.

Special Note: A student that cannot participate with their cohort in one of the courses above (other than CEC 291) for reasons such as an internship/coop experience or study abroad, should consult with the Executive Director of the Lockheed Martin Leadership Institute for an acceptable substitution, which will require the approval of the Associate Dean of the College of Engineering and Computing.

# Farmer School of Business

## Student Services Office

1022 Farmer School of Business  
Phone: 513-529-1712  
[www.fsb.MiamiOH.edu](http://www.fsb.MiamiOH.edu)

## Mission Statement

To provide a premier business educational experience that prepares responsible and innovative leaders, and advances knowledge by optimizing the synergy among teaching, scholarship, and life-long learning. The principles that define, differentiate, and drive our culture include: Strategic Innovation and Informed Risk-Taking, Knowledge Creation and Business Education for Life, Engagement, Leadership for The Greater Good - "*Prodesse Quam Conspici*", and Inclusion.

## General Information

The Farmer School of Business offers bachelor's and master's degree programs as well as one undergraduate certificate. Master's degree programs are described in the Graduate Programs of Study section. Bachelor's degree majors are offered in the following areas: accountancy, business economics, finance, interdisciplinary business management, human capital management and leadership, information systems and analytics, marketing, and supply chain and operations management. Co-majors are offered in analytics and entrepreneurship. The flexibility of each program allows a student to pursue areas of special interests and needs. Minors are available in accountancy, arts management, business analytics, economics, entrepreneurship, finance, general business, human capital management and leadership, information security, information systems, international business, management, marketing, and supply chain management.

## Accreditation

The Farmer School of Business has been accredited by the Association to Advance Collegiate Schools of Business at the undergraduate level since 1932 and at the graduate level since 1961. This association is the only agency recognized nationally to accredit in the area of professional education for business at the collegiate level. Its standards include an evaluation of faculty competence, library facilities, physical plant and equipment, financial support of the institution, and the content and breadth of both the professional and nonprofessional curricular requirements.

## Advisory Committees

The Business Advisory Council is composed of nearly fifty leading business executives, many of whom are alumni of the School. The council meets with the dean, faculty, and students twice a year to provide counsel on the School's programs. The council is very helpful to the School's continuing efforts to maintain excellence in education for future business leaders.

The School also meets regularly with several other external councils who provide feedback on our various programs: Farmer Board of Visitors, Young Professionals Advisory Council, Department of Accountancy Advisory Group, Center for Business Excellence Advisory Board, Economics Advisory Board, and ISA Advisory Board.

The Business Student Advisory Council provides an excellent means of communication between students and faculty. Members of this committee include students from all programs and class years within the school and representatives from various business student organizations.

## Divisional and Departmental Honors

The Farmer School of Business offers a divisional honors program for students who qualify and who desire more intensive work under the guidance of a faculty mentor(s). Students will have opportunity to apply to the Farmer School of Business (divisional) honors program in the spring of the first year (with entry decisions occurring that same semester). Additionally, the Department of Economics offers a separate departmental honors program.

Both divisional and departmental honors programs in the School of Business may be coordinated and integrated with the University Honors Program. A common project may serve divisional, departmental, and university honors.

For more information, contact the Student Services Office at the Farmer School of Business, 1022 FSB, 513-529-1712, or visit the website: <http://miamioh.edu/fsb/academics/honors/index.html>.

## Honorary and Professional Organizations

The School seeks to improve the quality of its programs and provide educational development opportunities for its students through its honorary and professional organizations. Student organizations provide opportunities for students to lead teams, communicate with members, and problem-solve.

There are 3 honorary societies: Beta Alpha Psi, Beta Gamma Sigma, and Mu Kappa Tau. Beta Alpha Psi is a national accounting honorary that elects its members on the basis of scholastic achievement in accountancy courses. Beta Gamma Sigma, the national scholarship society founded in 1913 to encourage and reward scholarship and accomplishment among students of business administration, has an active chapter at Miami University. Eligibility for election is restricted to the upper 7 percent of the junior class and the upper 10 percent of the senior class. Mu Kappa Tau is a marketing honorary for seniors who rank among the top 20 percent of their class.

Students also are encouraged to participate in one of the 41 student professional organizations, which include: Accounting Association, Alpha Kappa Psi, International Association of Students in Economics and Business Worldwide (AIESEC), Business Student Advisory Council (BSAC), Center for Business Leadership, China-America Business Organization (CABO), Commercial Banking Club, Delta Sigma Pi, Economics Club, Fair Trade, Farmer School of Business Ambassadors (FSBA), Finance Association, First Miami University Student & Alumni Federal Credit Union, Foreign Exchange Club (FOREX), Global Business Brigades, Igoodea Creative Solutions, Information Systems and Analytics Organization, International Student Advisory Council (ISAC), Information Systems Audit and Control Association (ISACA), Miami Advertising Club (MAD), Miami Asset Management, Miami Business Consulting (MBC), Miami Business Enterprises (MBE), Miami Management & Leadership (MML), Miami University Investment Banking Club, Miami University Private Equity Club, Miami University Real Estate Club, Miami University Women in Business (MUWIB), Miami Value Investing Club (MVIC), Multicultural Business Association (MBA), National Association of Black Accountants (NABA), Net Impact, Nourish International,

Phi Chi Theta, Pi Sigma Epsilon, Redhawk Ventures, Supply Chain Management Association, TAMID, Toastmasters International, Women in Economics, and Women in Finance.

## Advisors

Each academic department has a chief advisor who coordinates the advising procedures within a department and represents the department on the committee that hears student petitions, the Divisional Committee of Advisors. Divisional advisors advise all undergraduate business students and are also available to help business students with special problems. Advising assignments and information is available at the following website: <http://MiamiOH.edu/fsb/resources/advising>.

## Special Admission Requirements

Admission to the Farmer School of Business is limited, and the criteria for admission are subject to change as enrollment demands vary.

### Direct Admission

#### Admission to the Farmer School of Business

Admission to the Farmer School of Business generally takes place upon entry as a first-year student. The academic credentials required will vary during each admission cycle and are determined by the Office of Admission. The review process is holistic and comprehensive and considers many variables to establish the context of a student's achievements and demonstrated potential to be successful in the rigorous curriculum. Additional details are available on the Farmer School website: <http://MiamiOH.edu/fsb/admission/highschool/index.html>.

### Transfer Admission

Students who were not previously offered direct admission, did not apply to the Farmer School of Business, or who may be transferring from other institutions may seek admission through a non-competitive process. Students must meet the following admission requirements:

**Current Miami University students:** To be admitted into the Farmer School of Business, a student must earn at least 30 graded credit hours at Miami University, hold a GPA of 3.50 or higher in the Miami Plan Foundation and business courses taken at Miami University, and complete MTH 151 and ECO 201 (via AP, post-secondary or university courses). For more information, please contact the Student Services Office at 513-529-1712.

**Transfer students from another college or university:** To be admitted into the Farmer School of Business, a student must have earned at least 30 graded credit hours, have an overall GPA of 3.50 or higher, and have completed MTH 151 and ECO 201 (via AP, post-secondary, or university courses). Questions can be directed to the FSB Student Services Office at 513-529-1712.

### Credit Hour Limitations

Students may accelerate their programs by registering in excess of the average 16 hours per semester needed to complete the program in eight semesters. Registrations of up to 20 hours are permitted in a regular semester or eight hours in a five- or six-week summer term. Course loads in excess of these limitations require permission from the Student Services office. Requests are normally only considered

if the student earned a 3.50 grade point average for the preceding semester or is a senior who earned a 3.00 the previous semester.

## Division Curriculum Requirements

In addition to the Miami Plan requirements, all business programs have a core of basic courses in accounting, business analysis, business communication, business law, economics, entrepreneurship, finance, information systems, management and leadership, marketing, operations and supply chain management, statistics, and calculus. This core is described in detail later. The following requirements apply to all business majors:

### Business Capstone Experience

In addition to completing a Miami Plan Capstone Experience, all business majors must complete a business Capstone Experience. You should complete the business core first. The business Capstones are senior level experiences which are writing and speaking intensive, provide for multiple skill development, and integrate the business course work you have already completed.

All business Capstones are also Miami Plan Capstones; you may fulfill both requirements with one course. You are encouraged to consider a Capstone from any business department. A complete list is available on your DAR or in the advising office.

### Business Diversity Requirement

You must complete at least one course that provides an understanding of business diversity perspectives. This course may be selected from any division and may overlap with your Foundation courses, Thematic Sequence, major, or electives. A list of approved courses is available from the academic advisor or the advising office in 1022 FSB or at the following website: [fsb.miamioh.edu/diversity-courses](http://fsb.miamioh.edu/diversity-courses).

### Communication Requirement

All business programs require BUS 284/ ENG 284. In addition, each major incorporates communication across the curriculum so that writing and speaking skills are important characteristics of that program.

### Credit/No-Credit

All business courses, MTH 151, BUS 284/ ENG 284 and any other specifically required course (except first-year English composition) or major requirement must be taken for a grade and **not credit/no-credit**.

### Grade Point Average

A minimum 2.00 cumulative grade point average in business courses is required for graduation.

### Mathematics Requirement

All business students must complete MTH 151 or equivalent. Advanced placement credit for MTH 151 is accepted toward fulfillment of this requirement.

### Non-Business Requirement

All business majors must complete at least 52 hours outside of the Farmer School of Business. All coursework offered by FSB

departments will apply to business hours. All coursework offered by departments outside of the FSB will apply to non-business hours.

## Residency Requirement

All business majors must complete at least 50 percent of their business courses required for their business degree at Miami University. These courses include the core business classes and the courses required for a primary major. These required courses include ISA 225, ECO 201 and ECO 202, but do not include CSE 148, STA 125, MTH 151.

The Department of Accountancy requires transfer students majoring in accountancy to complete at least four required junior or senior level accountancy courses at Miami University with at least a 2.00 grade point average.

The Department of Economics requires students to complete at least nine hours of advanced economics (above 300 level) at Miami including ECO 315 and ECO 317.

The Department of Finance requires students majoring in finance to complete at least 12 elective hours of finance (FIN) courses at Miami.

## Statistics Requirement

You are expected to take ISA 125 and ISA 225. Any other introductory probability and statistics course is considered duplicate credit. Students with advanced placement or transferred hours in probability and statistics should consult with an academic advisor.

## Thematic Sequence Requirement

Business students must complete a thematic sequence from a department outside the School of Business. The ISA 2 thematic sequence, however, is permitted for business students. Alternatively, a nonbusiness minor or a second degree may be utilized to meet the requirement. Some exceptions may apply; please consult with an academic advisor.

## Transfer of Course Credit

All transferred course credits intended to apply to specific course requirements for any business program are subject to approval of the department. If credit hours earned are less than Miami's equivalent courses, they must be validated by the department. A department may require an examination or completion of a higher level course to validate transfer credit.

## Curriculum Options

You are responsible for completing the curriculum that is in effect the date of your initial Miami enrollment. However, since programs offered by the Farmer School of Business change as new courses are added and programs are modified, you may opt to complete a revised program in its entirety; please consult with an academic advisor.

## Double Majors

A student who has earned 60 or more semester hours with a 3.20 or higher GPA on the combination of Miami Plan and business core course work is eligible to apply for a second major in business. Some majors may require a higher GPA due to enrollment limits. In all cases, approval of the second major by the academic department is required.

## Basic Requirements: Bachelor of Science in Business

To graduate from Miami University with a Bachelor of Science in Business, you must:

- Earn a minimum of 124 semester hours
- Complete the Miami Plan, the business core, and electives necessary to reach overall hours
- Complete the requirements of one major field
- Earn at least a 2.00 cumulative GPA in all business courses attempted
- Complete at least 52 semester hours of course work in non-business departments

## Common Core of Business Courses

(60-61 semester hours)

Code	Title	Credit Hours
ACC 221	Introduction to Financial Accounting	3
ACC 222	Introduction to Managerial Accounting	3
BLS 342	Legal Environment of Business	3
BUS 101	Foundations of Business	2
BUS 102	Foundations of Business Communication	2
BUS 104	Introduction to Computational Thinking for Business (Computational Thinking)	2
CSE 148	Business Computing	3
BUS/ENG 284	Professional Communication for Business	3
ECO 201	Principles of Microeconomics	3
ECO 202	Principles of Macroeconomics	3
ESP 103	Creativity, Innovation and Entrepreneurial Thinking	2
FIN 301	Introduction to Business Finance	3
ISA/STA 125	Introduction to Business Statistics	3
ISA 225	Principles of Business Analytics	3
ISA 235	Information Technology and the Intelligent Enterprise	3
MGT 291	Introduction to Management & Leadership	3
MGT 302	Introduction to Operations and Supply Chain Management	3
MKT 291	Principles of Marketing	3
Select one of the following:		4-5
MTH 151	Calculus I	
MTH 249	Calculus II	
MTH 251	Calculus II	
FSB Senior Capstone Experience		3-4
Diversity requirement		3-4
Total Credit Hours		60-63

### Suggested Course Pattern

Typically, coursework at the 100- and 200-level will be scheduled during the first and second years, 300-level courses will be taken in the second and third years and 400-level courses will be taken in the senior year. You will work with your advisors to schedule your coursework appropriate with your preparation and academic goals.

### Other Electives

You are encouraged to use the remaining hours in your program to broaden your educational base with courses from other divisions of the university and/or to supplement your business programs with additional business courses beyond your major requirements. Students enrolled in a four-year bachelor's degree program in business may apply a maximum of 12 credit hours earned in business technology/commerce courses to the degree. Business technology/commerce courses, however, do not qualify as professional electives and may not apply to the 52 hours of non-business course work.

## Bachelor of Science in Business

- Accountancy
- Business Economics
- Finance
- Human Capital Management and Leadership
- Information Systems and Analytics
- Interdisciplinary Business Management
- Marketing
- Supply Chain and Operations Management

### Co-major

- Analytics
- Entrepreneurship

### Minors

The programs described below are optional minors in business areas. A minor is a domain specific program designed to complement your major, expand your skill set and potentially increase your career opportunities. More information about minors is in the Other Requirements chapter.

Admission to most Farmer School of Business minors is limited and the respective departments are responsible for managing their enrollments. **Students may enroll in a maximum of two Farmer School of Business minors.** Some minors are available to students on a first-come, first-served basis while others have entry restrictions or requirements. Therefore, to increase the likelihood of gaining entry into a FSB minor, interested students should contact the department offering the minor as early as possible in their academic careers. Completion of a FSB minor may require taking coursework during summer and winter terms and/or online.

Questions can be addressed to the Student Services Office, 1022 FSB, 513-529-1712.

The following minors are open only to non-business majors: finance, general business, and management.

Several minors are available to both business majors and non-business majors: accountancy, arts management, business analytics, economics, entrepreneurship, human capital management and

leadership, information security, information systems, international business, marketing, and supply chain management.

A notation about your completed minor will be on your final grade transcript if you indicate your minor when you apply for graduation.

- Accountancy
- Arts Management
- Business Analytics
- Economics
- Entrepreneurship
- Finance
- General Business
- Human Capital Management and Leadership
- Information Security
- Information Systems
- International Business
- Management
- Marketing
- Supply Chain Management

### Certificate Programs

- China Business Certificate
- Creativity Entrepreneurship
- Social Entrepreneurship
- Startup Entrepreneurship
- Undergraduate Certificate in Foundations of Analytics

## Accountancy- Bachelor of Science in Business

For information, contact the Department of Accountancy, 3094 FSB, 513-529-6200.

The department's mission is to prepare students to excel as high-integrity business leaders and accounting professionals and to enable faculty members to be outstanding instructors whose scholarship informs their teaching and who positively impact the professional and Miami community. The Department of Accountancy has been accredited by the Association to Advance Collegiate Schools of Business International since 1984.

Our undergraduate accountancy curriculum is designed to equip students with the knowledge, skills, and abilities needed to succeed in an increasingly dynamic business environment. Our master's curriculum provides an in-depth understanding of selected areas of accounting and business and related skills.

### Combined Degree Option

Most states require that students have 150 hours of education, with at least a bachelor's degree, to take the CPA exam. This requires additional education beyond the requirements for a bachelor's degree from Miami.

High-achieving students have the option of pursuing a combined degree program in which they can earn both a bachelor's degree and a master's degree in accountancy within four years. After completing the program, they are qualified to sit for the CPA examination in the

state of Ohio and most other states that have adopted the 150-hour education requirement.

To be eligible to apply for the combined degree program, students must have completed at least 64 credit hours with a minimum overall GPA of 3.25 and have completed ACC 221 and ACC 222 with a minimum accountancy GPA of 3.0.

Please contact the department's Academic Program Coordinator to learn more about this option.

## Special Curriculum Requirements

Students must earn at least a cumulative 2.00 GPA in all accountancy courses attempted at Miami. Students must also complete at least four required junior or senior-level accountancy courses at Miami.

## Program Requirements

Code	Title	Credit Hours
<b>Required courses</b>		
ACC 256	Accountancy Career Exploration and Planning	1
ACC 321	Intermediate Financial Accounting	3
ACC 333	Managerial Accounting	3
ACC 343	Federal Income Tax Accounting	3
ACC 361	Modeling Business Processes in Accounting Information Systems	3
ACC 422/522	Financial Accounting Research	3
ACC 453/553	Financial Statement Auditing	3
<b>Professional electives</b>		
Select at least six semester hours at the 200 level or above, including at least one course from a business department other than accountancy		6
Total Credit Hours		25

## Analytics Co-Major

For information, contact the Department of Statistics, 311 UPH, 513-529-7828, or the Department of Information Systems and Analytics, 3095 FSB, 513-529-4826.

Analytics describes the extensive use of data to guide evidence-based decision-making. This field has emerged during a time when massively large data sets are being collected throughout society. Analytics lives at the junction between numerous traditional disciplines including information systems and statistics. This program will provide a framework for thinking about the collection and use of so-called "big data" and students will develop skills for handling structured and unstructured data sets and for developing models to predict behavior in data-rich environments.

The term "co-major" is unique and indicates that students must be concurrently enrolled in and must complete another major at Miami University. The co-major complements this primary major, which provides significant depth and breadth in an academic discipline. There is no specific degree designation for the co-major; students receive the degree designation of their primary major. Students may earn either the Business Analytics Minor or the Analytics Co-Major.

## Program requirements

Complete a major in one of the divisions of the university.

Code	Title	Credit Hours
<b>CORE coursework to be satisfied by all co-majors (18-19 hours)</b>		
Data Description and Summarization:		
Select one of the following:		3-4
ISA 205	Business Statistics	
ISA 225	Principles of Business Analytics	
STA 261	Statistics	
STA 301	Applied Statistics	
STA 368	Introduction to Statistics	
Data Management - Structured:		
Select one of the following:		9-12
CSE 148 & ISA 235 & ISA 245	Business Computing and Information Technology and the Intelligent Enterprise and Database Systems and Data Warehousing	
CSE 174 & CSE 271 & CSE 274 & CSE 385	Fundamentals of Programming and Problem Solving and Object-Oriented Programming and Data Abstraction and Data Structures and Database Systems	
Regression Models:		
Select one of the following:		3-4
ECO 311	Examining Economic Data and Models	
ISA 291	Applied Regression Analysis in Business	
STA 363	Introduction to Statistical Modeling	
STA 463	Regression Analysis	
Visualizing Data and Digital Dashboards:		
STA/IMS/JRN 404	Advanced Data Visualization	3
<b>Track</b>		
Select a track of study <sup>1</sup>		15
<b>TRACK 1: BUSINESS ANALYTICS</b>		
Note: For IS majors, 18 hours must not double count in the IS major or ISA major with IS track and Analytics Co-Major or business core.		
Note: For STA majors, at least 18 hours must be courses not double counted toward the STA major.		
Note that ISA 291 must be taken as the core option for this track.		
Required Courses		
ISA 401	Business Intelligence and Data Visualization	
ISA 414	Managing Big Data	
ISA 491	Introduction to Data Mining in Business	
Select two of the following:		
ISA 281	Concepts in Business Programming	

ISA 321	Quantitative Analysis of Business Problems
ISA/STA 333	Nonparametric Statistics
ISA/STA 365	Statistical Monitoring and Design of Experiments
ISA/STA 432	Survey Sampling in Business
ISA 444	Business Forecasting
ISA 480	Topics in Decision Sciences
ISA 496	Business Analytics Practicum
STA 402	Statistical Programming
STA 427	Introduction to Bayesian Statistics

**TRACK 2: PREDICTIVE ANALYTICS**

## Required Courses

STA 402	Statistical Programming
STA 427	Introduction to Bayesian Statistics
STA 467	Statistical Learning
ISA 414	Managing Big Data

## Select one of the following:

ISA 321	Quantitative Analysis of Business Problems
MTH 432	Optimization
CSE 372	Stochastic Modeling

**TRACK 3: GEOSPATIAL ANALYTICS**

Note: Students who wish to also earn the GISci Certificate must take an additional 6 appropriate credit hours beyond the Analytics Co-Major requirements.

## Required Courses

GEO 441	Geographic Information Systems
GEO 442	Advanced Geographic Information Systems
GEO 460	Advanced Systematic Geography

## Select six hours of the following:

GEO 443	Python Programming for ArcGIS
GEO 444	GIScience Techniques in Landscape Ecology
GEO 448	Techniques and Applications of Remote Sensing
GEO 460G	Tools
IMS 461	Virtual Reality
ISA 414	Managing Big Data

Total Credit Hours 33-38

<sup>1</sup> In addition to the common core, each co-major is required to complete a particular track of study. These tracks reflect a focus on a particular area of application of analytics or advanced methods.

## Business-Economics- Bachelor of Science in Business

For information, contact the Department of Economics, 2054 FSB, 513-529-2836.

This curriculum is for students primarily interested in economics but who also desire a broad background in business. It helps you

understand objectives and functions of a private enterprise economy, fundamentals of economic analysis, and how to integrate economic principles with various areas of business administration. The program also teaches how to use economic analysis as a major tool in reaching independent, well-considered judgments.

Course work involves both required theory courses and electives. Theory courses provide common analytical background of modern economics and serve to build analytical skills. The generous number of electives allows you to pursue different fields, depending on your interests and educational background.

## Honors in Economics

For details on honors in economics please see the departmental website

## Program Requirements

Code	Title	Credit Hours
<b>Required courses</b>		
ECO 311	Examining Economic Data and Models	3
ECO 315	Intermediate Microeconomic Theory	3
ECO 317	Intermediate Macroeconomic Theory	3
<b>Electives</b>		
Select 15 hours in economics, at least six of those hours must be in courses that require ECO 315 and/or ECO 317 as prerequisite(s), which have a number of 410 or greater. <sup>1,2</sup>		15
Total Credit Hours		24

<sup>1</sup> ECO 315 and ECO 317 must be taken at Miami. At least three additional hours of economics numbered 300 must be taken at Miami. Up to three hours of Summer Scholar credit can be applied toward the 15 hours of economics. Exceptions must be approved by the director of undergraduate studies.

<sup>2</sup> Prerequisites for all 300- and 400-level courses include ECO 201 and ECO 202 unless otherwise stated.

## GPA requirement

You must achieve at least a 2.00 GPA in all economics courses taken.

## Entrepreneurship Co-Major

For information, contact the Page Center for Entrepreneurship, 2078 FSB, 513-529-1221.

Entrepreneurship and the ability to recognize opportunities to create viable, sustainable solutions are skills needed across all disciplines. The Entrepreneurship Co-Major exposes students to the mindset and behavior of successful entrepreneurs as well as the principles and concepts associated with entrepreneurship in startup, social, creative, and corporate ventures. The program complements majors in all of Miami's academic divisions and promotes the applications of entrepreneurial concepts in support of each student's passion, regardless of major. Entrepreneurship courses are for those interested in building a new business, adding value to an existing organization, or learning the skills necessary in every workforce. The Co-Major provides a framework for understanding entrepreneurship

from a variety of disciplines and application of entrepreneurial skill sets to meet societal and workplace demands.

The Entrepreneurship Co-Major does not fulfill the Thematic Sequence requirement for business majors. The Entrepreneurship Co-Major requires an application for admission; a limited number of students will be admitted each year. The term "co-major" is unique and indicates that students must complete a primary major in any academic division at Miami University.

## Program Requirements

Code	Title	Credit Hours
Select the following:		
ESP 101	Entrepreneurship Foundations	1
ESP 201	Introduction to Entrepreneurship and Business Models	3
ESP 251	Entrepreneurial Value Creation and Capture	3
ESP 252	Entrepreneurial Mindset: Creativity and Organization	3
Select two of the following content courses:		6
ESP 321	Startup Entrepreneurship	
ESP 331	Social Entrepreneurship	
ESP 341	Corporate Entrepreneurship	
ESP 351	Creativity in Entrepreneurship	
Select 9 hours from the following:		9
ESP 102	Entrepreneurial Immersion: From Idea to Opportunity <sup>1</sup>	
ESP 321	Startup Entrepreneurship	
ESP 331	Social Entrepreneurship	
ESP 341	Corporate Entrepreneurship	
ESP 351	Creativity in Entrepreneurship	
ESP 481	Technology, Products & Ventures	
ESP 477	Independent Studies (maximum 3)	
ESP 490	Special Topics in Entrepreneurship	
Capstone Experience		
ESP 401	Entrepreneurship: New Ventures	3
ESP 461	Entrepreneurial Consulting	3
Total Credit Hours		31

<sup>1</sup> Maximum 1 hour of ESP 102

## Finance- Bachelor of Science in Business

For information, contact the Department of Finance, 2053 FSB, 513-529-1560.

This major teaches theoretical and practical aspects of financial management. The general objectives are to teach the principles of finance, to explain how financial techniques can solve some of society's most important problems, and to prepare you for future responsibilities in financial management.

Course offerings prepare you to work in the finance division of a business firm; to enter the securities field in either a brokerage or

investment analysis capacity; to enter the real estate business in sales or appraisal; to enter the insurance business in the fields of financial planning, property, or casualty insurance; or to pursue a career in estate planning or trust administration. In addition, non-business students are offered service courses in personal finance and in law and the legal process.

Upon completion of the appropriate finance courses, and upon meeting specified non-academic requirements, you may qualify to sit for examinations for licensing and professional designations in the areas of insurance, investments, and real estate.

## Special Curriculum Requirements

All students majoring in finance must complete at least 12 elective hours of advanced finance courses above FIN 301, FIN 302, and FIN 401/FIN 501. FIN 485 and all Capstone courses cannot be used as electives. You must achieve at least a 2.00 GPA in all finance courses taken.

The Department of Finance requires students majoring in finance to complete at least 12 elective hours of finance (FIN) courses at Miami.

## Program Requirements

Code	Title	Credit Hours
<b>Required courses</b>		
Select one of the following:		3
ACC 321	Intermediate Financial Accounting	
ACC 333	Managerial Accounting	
ACC 343	Federal Income Tax Accounting	
ECO 301	Money and Banking	3
FIN 302	Intermediate Financial Management	3
FIN 401	Principles of Investments and Security Markets	3
<b>Electives</b>		
Select 12 semester hours of finance electives (exclusive of all Capstone Experience courses)		12
Total Credit Hours		24

## Human Capital Management and Leadership- Bachelor of Science in Business

For information, contact the Department of Management, 3056 FSB, 513-529-4215.

The major in Human Capital Management and Leadership prepares graduates to understand how organizations attract, develop and lead their talent to create sustained competitive advantage. The curriculum highlights understanding and implementing evidence-based best practices associated with human capital consulting, leading organizations, change management, employee engagement and motivation, cross cultural management, talent acquisition, employment law, compensation, executive decision making and strategy, and human resource management. The diversified course of study prepares graduates for positions in consulting, leadership rotational programs, employee development, management, human

resources, and other related fields in both domestic and global business contexts.

## Program Requirements

Code	Title	Credit Hours
<b>Required courses</b>		
MGT 303	Human Resource Management	3
MGT 304	Cross Cultural Management	3
MGT 415	Leadership and Learning	3
MGT 474	Human Capital Consulting	3
MGT 495	Executive Decision Making and Strategy	3
<b>Electives</b>		
Select three of the following:		9
MGT 402	Employment Law	
MGT 404	Compensation Management	
MGT 405	Negotiations and Conflict Management	
MGT 406	Talent Acquisition and Development	
MGT 414	Employee Engagement and Motivation	
MGT 416	Leading Organizational Change	
Total Credit Hours		24

## Information Systems and Analytics- Bachelor of Science in Business

For information, contact the Department of Information Systems and Analytics, 3095 FSB, 513-529-4826.

The Information Systems and Analytics Major provides managerial and technical skills to create, control, and leverage information and data resources of an organization. The major offers two tracks.

The Information Systems Track focuses on foundational theory and practice in content areas such as business process management, database, data communications, security, systems analysis & development, and project management. The track also addresses contemporary topics including cloud computing, mobile commerce, enterprise systems, business intelligence, data mining, and big data management. It emphasizes the application of technology and information management skills to solving business problems.

The Business Analytics Track focuses on the use of data to guide evidence-based decision-making. Analytics combines numerous traditional disciplines including information systems and statistics. This track provides a framework for thinking about the collection and use of "big data" and develops skills for handling structured and unstructured data and for developing models to predict behavior in data-rich environments.

## Program Requirements

Code	Title	Credit Hours
Required Courses		
ISA 245	Database Systems and Data Warehousing	3
ISA 281	Concepts in Business Programming	3
Select one or two tracks below.		18
INFORMATION SYSTEMS TRACK <sup>1</sup>		
Required Courses		
ISA 301	Business Data Communications and Security	
ISA 387	Designing Business Systems	
ISA 406	IT Project Management	
ISA 495	Managing the Intelligent Enterprise	
Select two of the following. At least one must be an ISA course.		
CEC 205	Agile Launchpad I	
CSE 271	Object-Oriented Programming	
ISA 303	Enterprise Systems	
ISA 305	Information Technology, Risk Management, Security and Audit	
ISA 385	Applications of Electronic Commerce Technology	
ISA 401	Business Intelligence and Data Visualization	
ISA 403	Building Web and Mobile Business Applications	
ISA 405	Information Security	
ISA 414	Managing Big Data	
ISA 481	Topics in Information Systems	
ISA 491	Introduction to Data Mining in Business	
ISA 496	Business Analytics Practicum	
BUSINESS ANALYTICS TRACK <sup>2</sup>		
Required Courses		
ISA 291	Applied Regression Analysis in Business	
ISA 401	Business Intelligence and Data Visualization	
ISA 414	Managing Big Data	
ISA 491	Introduction to Data Mining in Business	
Select two of the following. At least one must be an ISA course.		
ECO 411	Advanced Empirical Methods	
ISA 321	Quantitative Analysis of Business Problems	
ISA 365	Statistical Monitoring and Design of Experiments	
ISA 444	Business Forecasting	
ISA/STA 432	Survey Sampling in Business	
ISA 496	Business Analytics Practicum	
STA 402	Statistical Programming	

STA 404	Advanced Data Visualization	
Total Credit Hours		24

<sup>1</sup> Students in this track may not take the Information Systems Minor.

<sup>2</sup> Students in this track may not take the Business Analytics Minor nor the Business Analytics Track in the Analytics Co-Major.

## Interdisciplinary Business Management- Bachelor of Science in Business

For information on this major, contact the Student Services Office 1022 FSB, 513-529-1712.

Students interested in Interdisciplinary Business Management major will meet with an advisor to discuss the program and officially declare the major.

### Program Requirements

Code	Title	Credit Hours
<b>Required courses</b>		
BLS 442	Business Associations & Communal Law	3
MGT 303	Human Resource Management	3
MKT 325	Developing Customer Insights	3
INTERNATIONAL BUSINESS TRACK		
ECO 344	International Economic Relations	3
Select a minimum of twelve hours of the following:		12
BUS 371	International Business <sup>1</sup>	
or BUS 373	International Business in Focus	
BLS 464	International Business Law	
BUS 420	FSB International Studies Programs	
ECO 347	Economic Development	
ECO 441	International Trade and Commercial Policy	
ECO 442	International Monetary Relations	
FIN 417	International Business Finance	
ENG/IMS 416	Writing for Global Audiences	
MGT 304	Cross Cultural Management	
MKT 425	Global Marketing	
Total Credit Hours		24

<sup>1</sup> BUS 371 is typically offered abroad; BUS 373 is only offered on FSB study abroad programs.

## Marketing- Bachelor of Science in Business

For information, contact the Department of Marketing, 3057 FSB, 513-529-3270.

The modern global society is placing an increasing emphasis on marketing knowledge and related skills. Global and domestic corporations' manufacturing, distributing, buying, and selling

significantly shape the standard of living and global economy. This is true for both products and services as well as for-profit and not-for-profit institutions and supply chains.

To prepare students for a career in marketing or as part of a business decision-making team, this program provides courses that examine: branding, promotion, supply chain management, consumer behavior, marketing research, sales management and personal selling, imagination and creativity, problem solving skills, creating customer value, global marketing, interactive media studies, and sustainable marketing.

### Program Requirements

Code	Title	Credit Hours
MKT 301	Strategic Thinking and Decision-Making in Marketing	3
MKT 325	Developing Customer Insights	3
MKT 335	Analytical Research and Reasoning for Marketers	3
MKT 405	Professional Selling	3
MKT 435	Building and Managing Strong Brands	3
Select two of the following:		6
MKT 412	Sustainable Marketing Management	
MKT 415	Marketing to Organizations	
MKT/IMS 419	Digital Branding	
MKT 425	Global Marketing	
MKT 461	Principles of Retailing	
MKT 490	Emerging Topics in Marketing	
Select one of the following capstones:		4
IMS 440	Interactive Media Studies Practicum	
MKT 442	Highwire Brand Studio	
MKT 495	Strategy Works	
Total Credit Hours		25

## Supply Chain and Operations Management- Bachelor of Science in Business

For information, contact the Department of Management, 3056 FSB, 513-529-4215.

In recent years companies have worked to connect the different areas of their businesses to achieve efficient movement of goods and services to the consumer. Supply chain management fills the gap that exists between departments and connects trading partners to create a smooth flow of information, services, and products through the supply chain.

The supply chain management major combines courses in accountancy, decision sciences, operations management, marketing, logistics and purchasing. The integration of these disciplines allows supply chain management students to understand the interaction among them and how to produce and move goods and services in the most economical way. Students learn practical industry applications with the aid of field trips, guest speakers, and simulations in the classroom.

## Program Requirements

Code	Title	Credit Hours
ISA 303	Enterprise Systems	3
MGT 431	Logistics Management	3
MGT 432	Global Strategic Sourcing	3
MGT 451	Operations Planning and Scheduling	3
MGT 453	Quality Management Systems	3
MGT 498	Supply Chain Management	3
MKT 415	Marketing to Organizations	3
or MKT 412	Sustainable Marketing Management	
or ISA 321	Quantitative Analysis of Business Problems	
<b>Capstone course:</b>		
MGT 495	Executive Decision Making and Strategy	3
Total Credit Hours		24

## Accountancy Minor

For information contact the Department of Accountancy, 3094 FSB, 513-529-6200.

For details regarding admission to FSB minors and availability of coursework, please refer to the information at the beginning of this section (under Farmer School of Business "Minors").

The minor provides an opportunity to understand the development and use of financial and accounting information within organizations. The minor is intended to aid in relating business activities to financial results. The program may also serve as a thematic sequence for non-business majors and also serve as a potential entrance to the Masters of Accountancy program for non-accounting majors. The program capacity will be limited each year. Priority will be provided to students who wish to enter the Masters of Accountancy program.

## Program Requirements

Code	Title	Credit Hours
<b>Required:</b>		
ACC 221	Introduction to Financial Accounting	3
ACC 222	Introduction to Managerial Accounting	3
Select four courses from the following:		12
All ACC 300 or ACC 400 subject to completion of course prerequisites.		
Total Credit Hours		18

## Arts Management Minor

For information, contact the Director of Arts Management in the College of Creative Arts, 228 Center for Performing Arts (513-529-2371).

For details regarding admission to FSB minors and availability of coursework, please refer to the information at the beginning of this section (under Farmer School of Business "Minors").

Given the challenges for artists and arts and cultural organizations to survive in an increasingly competitive business environment,

the need for educated managers is increasing. The practice of Arts Management is a synthesis of art, creativity, innovation, management, and entrepreneurship. The minor will prepare students to balance aesthetic understanding with specialized skills in generating income, managing boards, stimulating public access, and sustaining the mission and vision of organizations whose primary purpose is the delivery, presentation, and preservation of arts and culture. These skills are applicable to arts councils, museums, community art centers, galleries, orchestras, theatres, and creative enterprises.

A minimum overall 2.00 GPA is required for courses in a minor. All courses, except the internship, must be taken for a grade (not credit/no-credit).

## Program Requirements

(18 or 19 semester hours)

Code	Title	Credit Hours
<b>Core Courses - 9 semester hours</b>		
Select the following:		
CCA 201	Introduction to Arts Management	3
CCA 401	Strategic Planning for the Arts	3
Select three hours of the following:		3
CCA 256	Arts Management Practicum	
CCA 302	Arts Marketing	
CCA 303	Arts Engagement	
CCA 304	Financial Management in the Arts	
CCA 305	Development and Fundraising in the Arts	
CCA 306	Arts Entrepreneurship	
CCA 307	Arts Venture Creation	
CCA 340	Internship	

### Track - 9 or 10 semester hours

Choose one of four tracks. FSB Majors choose Track 4.

#### Track 1 - General Business

Select at least nine hours of the following:		9
ACC 211	Accounting for the Non-Business Major	
ECO 201	Principles of Microeconomics	
ESP 101	Entrepreneurship Foundations	
ESP 201	Introduction to Entrepreneurship and Business Models ( (ESP 101 is pre-/co-requisite))	
MGT 111	Introduction to Business	
MGT 211	Introduction to Management for Non-business Majors	
or MGT 291	Introduction to Management & Leadership	
MKT 211	Business Concepts in Customer Engagement	
or MKT 291	Principles of Marketing	

#### Track 2 - Miami Prime Business Intensive

Select all three of the following:		9
BUS 301	Basics of Business I	
BUS 302	Basics of Business II	
BUS 303	Business Process Integration	

**Track 3 - Entrepreneurship**

Select all four of the following:		10
ESP 101	Entrepreneurship Foundations	
ESP 201	Introduction to Entrepreneurship and Business Models	
ESP 251	Entrepreneurial Value Creation and Capture	
ESP 252	Entrepreneurial Mindset: Creativity and Organization	

**Track 4 - Creative Arts**

FSB majors must take this track. This track is not open to CCA majors.		
Select nine hours from ARC, ART, MUS, THE, or CCA111, CCA222, or CCA232. Students may apply FAS or IMS courses with prior approval of the Director of Arts Management & Entrepreneurship. <sup>1</sup>		9
<b>Total Credit Hours</b>		18 or 19 hours

<sup>1</sup> No more than two of the same music ensemble (MUS100A-MUS100Z) may count toward the minor.

## Business Analytics Minor

For information, contact the Department of Information Systems and Analytics, 3095 FSB, 513-529-4826.

The business analytics minor complements many majors (including all business majors) by providing the managerial, analytical, and technical skills needed to gather data in real-time, store and organize the data, analyze the data using quantitative methods, and use the resulting information to make decisions that will allow an organization to gain competitive advantage. Coursework includes fundamental information technology and statistical concepts, database management and data warehouses, regression analysis in business, optimization of business systems using management science models, analysis of large data sets using data mining and business intelligence techniques.

For details regarding admission to FSB minors and availability of coursework, please refer to the information at the beginning of this section (under Farmer School of Business "Minors"). Students may earn either the Business Analytics Minor or the Analytics Co-Major.

**Note: For information systems majors or ISA majors in the information systems track at least 9 credit hours beyond the business core must be courses not double counted toward the major.**

**Note: For statistics majors at least 12 credit hours must be courses taught by Farmer School Faculty.**

## Program Requirements for the Business Analytics Minor

(21 semester hours)

Code	Title	Credit Hours
<b>Analytics Core Courses</b>		
ISA 225	Principles of Business Analytics	3

or ISA 205	Business Statistics	
ISA 235	Information Technology and the Intelligent Enterprise	3
ISA 245	Database Systems and Data Warehousing	3
ISA 291	Applied Regression Analysis in Business <sup>1</sup>	3
or ECO 311	Examining Economic Data and Models	
or STA 463	Regression Analysis	
ISA 401	Business Intelligence and Data Visualization	3
Choose one:		3
IMS/JRN/STA 404	Advanced Data Visualization	
ISA 321	Quantitative Analysis of Business Problems	
ISA 365	Statistical Monitoring and Design of Experiments	
ISA 444	Business Forecasting	
ISA 480	Topics in Decision Sciences	
ISA 491	Introduction to Data Mining in Business	
ISA 496	Business Analytics Practicum	
STA 402	Statistical Programming	
STA 483	Analysis of Forecasting Systems	
Choose one: (must differ from first choice)		3
ECO 411	Advanced Empirical Methods	
IMS/JRN/STA 404	Advanced Data Visualization	
ISA 281	Concepts in Business Programming	
ISA 321	Quantitative Analysis of Business Problems	
ISA 365	Statistical Monitoring and Design of Experiments	
ISA 414	Managing Big Data	
ISA 444	Business Forecasting	
ISA 480	Topics in Decision Sciences	
ISA 491	Introduction to Data Mining in Business	
ISA 496	Business Analytics Practicum	
STA 402	Statistical Programming	
STA 483	Analysis of Forecasting Systems	

Total Credit Hours 21

## Economics Minor

For information, contact the Department of Economics, 2054 FSB, 513-529-2836. The economics minor is open to all university students.

This minor is designed for students who are interested in exploring how their major area of specialization connects to the wider world of the workplace and the economy. Students who are preparing for law school or a master's degree in business administration (M.B.A.) program will find this minor valuable.

The 18 hours of economics must be completed with at least a 2.00 GPA. Either ECO 315 or ECO 317 must be taken at Miami.

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
<b>Required Courses</b>		
ECO 201	Principles of Microeconomics	3
ECO 202	Principles of Macroeconomics	3
ECO 315 or ECO 317	Intermediate Microeconomic Theory Intermediate Macroeconomic Theory	3
<b>Electives</b>		
Select nine hours of advanced economics at the 300 level or above, which may include the other intermediate theory course. <sup>1</sup>		9
Total Credit Hours		18

<sup>1</sup> Prerequisites for all 300- and 400-level courses include ECO 201 and ECO 202 unless otherwise stated.

## Entrepreneurship Minor

For information, contact the Page Center for Entrepreneurship, 2078 FSB, 513-529-1221.

Entrepreneurship and the ability to recognize opportunities to create viable, sustainable solutions are skills needed across all disciplines. The interdisciplinary minor exposes students to the mindset and behavior of successful entrepreneurs as well as the principles and concepts associated with entrepreneurship in startup, social, creative, and corporate ventures. The program complements majors in all of Miami's academic divisions and promotes the applications of entrepreneurial concepts in support of each student's passion, regardless of major. Entrepreneurship courses are for those interested in building a new business, adding value to an existing organization, or learning the skills necessary in the entrepreneurial workforce. Students complete the minor by taking courses as a core curriculum followed by one of four specific tracks: startup, social, corporate and creativity. The minor will provide a framework for understanding entrepreneurship from a variety of disciplines and application of entrepreneurial skill sets to meet societal and workplace demands.

The entrepreneurship minor is open to all university students and can be used to satisfy a Thematic Sequence by non-business majors.

For details regarding admission to FSB minors and availability of coursework, please refer to the information at the beginning of this section (under Farmer School of Business "Minors").

## Program Requirements

(19 semester hours)

Code	Title	Credit Hours
Select the following:		
ESP 101	Entrepreneurship Foundations	1

ESP 201	Introduction to Entrepreneurship and Business Models	3
ESP 251	Entrepreneurial Value Creation and Capture	3
ESP 252	Entrepreneurial Mindset: Creativity and Organization	3
Select one of the following:		3
ESP 321	Startup Entrepreneurship	
ESP 331	Social Entrepreneurship	
ESP 341	Corporate Entrepreneurship	
ESP 351	Creativity in Entrepreneurship	
Select the following:		
ESP 401	Entrepreneurship: New Ventures	3
ESP 461	Entrepreneurial Consulting	3
Total Credit Hours		19

## Finance Minor

For information, contact the Department of Finance, 2053 FSB, 513-529-1560.

This minor, open to non-business majors only, provides in-depth study of financial management and introduces financial topics of current importance. **Enrollment is limited; seats in this minor are allocated on a first-come, first-served basis by class year.** The courses provide financial management tools and techniques relevant both to corporate finance and investments. This minor allows you to develop and integrate numerous skills and techniques relevant to modern finance.

All 18 semester hours must be taken at Miami University. A minimum 2.00 GPA is required for all courses in the minor.

For details regarding admission to FSB minors and availability of coursework, please refer to the information at the beginning of this section (under Farmer School of Business "Minors").

## Program Requirements

(18 semester hours)

Code	Title	Credit Hours
ACC 221	Introduction to Financial Accounting	3
ECO 301	Money and Banking	3
FIN 301	Introduction to Business Finance	3
FIN 401	Principles of Investments and Security Markets	3
Select six hours of the following:		6
FIN 302	Intermediate Financial Management	
FIN 402	Fixed-Income Portfolio Management	
FIN 403	Portfolio Management	
FIN 408	Commercial Bank Management	
FIN 417	International Business Finance	
FIN 475	Case Problems in Finance	
Total Credit Hours		18

Note: Additional prerequisites may be required for specific courses in the minor.

## General Business Minor

For information contact the undergraduate advising office, 1022 FSB, 513-529-1712.

The minor in General Business, which is open to non-business majors only, offers students a broad introduction to the decision making process across the functional areas of business and also extends the stakeholder framework with an emphasis on the integrated nature of business processes. The minor provides students with the foundational knowledge necessary for understanding how businesses function; it also helps to develop a set of skills that will prepare students to function effectively within businesses.

For details regarding admission to FSB minors and availability of coursework, please refer to the information at the beginning of this section (under Farmer School of Business "Minors").

### Program Requirements

(18 hours)

Code	Title	Credit Hours
Select the following:		
MGT 111	Introduction to Business	3
Select five of the following:		
ACC 211	Accounting for the Non-Business Major	3
BLS 342	Legal Environment of Business	3
ECO 201	Principles of Microeconomics	3
FIN 211	Financial Capital	3
ISA 211	Information Technology and Data Driven Decision Making in Business	3
MGT 211	Introduction to Management for Non-business Majors	3
MKT 211	Business Concepts in Customer Engagement	3
<b>OR</b>		
Miami PRIME		
Select the following (9 hours):		
BUS 301	Basics of Business I	3
BUS 302	Basics of Business II	3
BUS 303	Business Process Integration	3
Select three of the following:		
ACC 211	Accounting for the Non-Business Major	3
BLS 342	Legal Environment of Business	3
ECO 201	Principles of Microeconomics	3
FIN 211	Financial Capital	3
ISA 211	Information Technology and Data Driven Decision Making in Business	3
MGT 211	Introduction to Management for Non-business Majors	3

MKT 211	Business Concepts in Customer Engagement	Credit Hours
		18

Note: General Business Minor not open to students in the B.S. in Commerce.

## Human Capital Management and Leadership Minor

For information, contact the Department of Management, 3056 FSB, 513-529-4215.

For details regarding admission to FSB minors and availability of coursework, please refer to the information at the beginning of this section (under Farmer School of Business "Minors").

Management of people and organizations is a broadly transferable skill which will help any major supervise others, integrate diverse individuals and diverse functions, and develop successful individuals and teams to meet organizational goals.

To be assured of enrollment into the required courses for this minor, students should formally declare the minor by obtaining the appropriate signature from the Department of Management. In order to guarantee that all declared minors have access to the courses, the minor has an enrollment limit; therefore **early declaration** is advised.

### Program Requirements

(18 semester hours)

Code	Title	Credit Hours
MGT 111	Introduction to Business	3-4
or BUS 101 & BUS 102	Foundations of Business and Foundations of Business Communication	
MGT 291	Introduction to Management & Leadership	3
or MGT 211	Introduction to Management for Non-business Majors	3
MGT 303	Human Resource Management	3
Select three of the following:		
MGT 304	Cross Cultural Management	3
MGT 402	Employment Law	3
MGT 404	Compensation Management	3
MGT 405	Negotiations and Conflict Management	3
MGT 406	Talent Acquisition and Development	3
MGT 414	Employee Engagement and Motivation	3
MGT 415	Leadership and Learning	3
MGT 416	Leading Organizational Change	3
Total Credit Hours		18-19

## Information Security Minor

For information, contact the Department of Information Systems and Analytics, 3095 FSB, 513-529-4826.

For details regarding admission to FSB minors and availability of coursework, please refer to the information at the beginning of this section (under Farmer School of Business "Minors").

Companies in virtually every industry are spending increasing amounts of resources addressing Information security in the new networked world in which they now do business. There is a rapidly growing need for both managerial and technical expertise in the information security realm. The Information Security Minor, open to all university students, offers students from any major the managerial and basic technical skills critical for understanding, and addressing information security concerns within organizations.

The minor provides students with an applied/managerial perspective on the information security issues faced by organizations, an understanding of how organizations address those issues both culturally and administratively, as well as insight and experience with some of the leading as well as emerging technologies applied in the information security realm.

## Program Requirements

Code	Title	Credit Hours
Note: For Information Systems and Analytics Majors in the Information Systems Track or Information Systems majors, at least 9 credit hours beyond the business core must be courses not double counted toward the major.		
<b>Required</b>		
ISA 235	Information Technology and the Intelligent Enterprise	3
CSE 262	Technology, Ethics, and Global Society	3
ISA 301	Business Data Communications and Security	3
ISA 305	Information Technology, Risk Management, Security and Audit	3
ISA 405	Information Security	3
<b>Electives - Take 3 hours</b>		3
CSE 174	Fundamentals of Programming and Problem Solving	
ISA 281	Concepts in Business Programming	
ISA 481	Topics in Information Systems (Only approved 3 credit hour security courses apply)	
POL 437	Cyberlaw	
Total Credit Hours		18

## Information Systems Minor

For information, contact the Department of Information Systems and Analytics, 3095 FSB, 513-529-4826.

The information systems minor, open to all university students, provides students with other majors the managerial and technical skills critical to understanding, using, and applying information technology within organizations. The IS minor gives students a strong background in information and communications technologies, database theory and application, and enterprise systems. Additional coursework may focus on programming and development skills, project management, E-commerce and web development, or other current topics such as data and wireless communications. Emphasis

is on structuring and solving business problems by appropriately applying technological resources.

A minimum 2.00 GPA is required for all courses in the minor. You must contact an information systems advisor in the department to have the minor noted on your grade transcript when applying for graduation.

Neither CMR nor IMS courses can be substituted for courses listed below.

For details regarding admission to FSB minors and availability of coursework, please refer to the information at the beginning of this section (under Farmer School of Business "Minors").

## Program Requirements

(18 semester hours)

**Note: For ISA majors in the business analytics track, at least 9 credit hours beyond the business core must be courses not double counted toward the major.**

Code	Title	Credit Hours
<b>Required courses</b>		
ISA 235	Information Technology and the Intelligent Enterprise	3
ISA 245	Database Systems and Data Warehousing	3
ISA 303 or ISA 401	Enterprise Systems Business Intelligence and Data Visualization	3
Select two courses of the following: <sup>1</sup>		6
ISA 281	Concepts in Business Programming	
ISA 301	Business Data Communications and Security	
ISA 303	Enterprise Systems	
ISA 305	Information Technology, Risk Management, Security and Audit	
ISA 385	Applications of Electronic Commerce Technology	
ISA 387	Designing Business Systems	
ISA 401	Business Intelligence and Data Visualization	
ISA 403	Building Web and Mobile Business Applications	
ISA 405	Information Security	
ISA 406	IT Project Management	
ISA 414	Managing Big Data	
ISA 481	Topics in Information Systems (Must be 3 Hrs)	
ISA 495	Managing the Intelligent Enterprise	
Select one of the following: <sup>1</sup>		3
ACC 361	Modeling Business Processes in Accounting Information Systems	
CSE 174	Fundamentals of Programming and Problem Solving	
ENG 313	Technical Writing	
GEO 441	Geographic Information Systems	

IMS 440	Interactive Media Studies Practicum
ISA 281	Concepts in Business Programming
ISA 301	Business Data Communications and Security
ISA 303	Enterprise Systems
ISA 305	Information Technology, Risk Management, Security and Audit
ISA 385	Applications of Electronic Commerce Technology
ISA 387	Designing Business Systems
ISA 401	Business Intelligence and Data Visualization
ISA 403	Building Web and Mobile Business Applications
ISA 405	Information Security
ISA 406	IT Project Management
ISA 414	Managing Big Data
ISA 481	Topics in Information Systems (Must be 3 Hrs)
ISA 495	Managing the Intelligent Enterprise
MGT 416	Leading Organizational Change
MGT 474	Human Capital Consulting
MKT/IMS 419	Digital Branding
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Total Credit Hours	18

<sup>1</sup> The courses chosen from this list must be different from those taken to fulfill any of the requirements above.

## International Business Minor

For information, contact the Student Services Office, 1022 FSB, 513-529-1712.

This minor offers a concentration of courses that create a foundation for a career in the global business environment. A core and electives from the Farmer School of Business focus on international topics. This minor does not fulfill the thematic sequence requirement for business majors. However, courses that have been identified on the list of "Approved General Electives" for the International Business minor may either fully or partially satisfy a thematic sequence for business students. The minor would fulfill the thematic sequence requirement for non-business majors. A minimum of 21 hours, with at least a 2.00 average, is required.

## Approved General Electives

You are required to take a minimum of six hours of approved general electives; electives must be non-business courses. The six hours cannot be used to fulfill both the Miami Plan Foundation requirement and the international business minor requirements. The suggested electives are recommended, but by no means comprise the extent of courses that would satisfy this requirement. Non-business courses offered on approved study abroad programs may be used as electives with the approval of the FSB International Business Minor advisor.

## Language Preparation

This minor requires foreign language skills through the 202 level or above. The College of Arts and Science provides courses for preparation in a variety of foreign languages. American Sign Language

courses offered through the College of Arts and Science may not be used to fulfill this requirement.

## Study Abroad

Students are encouraged to study abroad. Courses taken while abroad may apply. The Farmer School of Business offers international programs for short terms and semester-long opportunities.

For details regarding admission to FSB minors and availability of coursework, please refer to the information at the beginning of this section (under Farmer School of Business "Minors").

## Program Requirements

(21 semester hours)

Code	Title	Credit Hours
<b>Required courses</b>		
ECO 344	International Economic Relations	3
Foreign language through 202 level		3
Select six hours of approved general electives		6
Select three of the following:		9
BLS 464	International Business Law	
BUS 371	International Business	
or BUS 373	International Business in Focus	
ECO 347	Economic Development	
ECO 441	International Trade and Commercial Policy	
ECO 442	International Monetary Relations	
FIN 417	International Business Finance	
MGT 304	Cross Cultural Management	
MKT 425	Global Marketing	
IMS/ENG 416	Writing for Global Audiences	
And/or any business courses taken abroad and approved in advance by the FSB International Business Minor Advisor		
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Total Credit Hours		21

<sup>1</sup> BUS 371 is typically offered abroad; BUS 373 is only offered on FSB study abroad programs.

## Management Minor

For information, contact the Department of Management, 3056 FSB, 513-529-4215.

This minor is available to any non-business major, with the exception of Engineering Management, and focuses on the management of human and non-human resources. It is designed for majors in the College of Arts and Science, the College of Education, Health, and Society, and the College of Engineering and Computing. Students are required to take MGT 291 and MGT 302 during the summer or winter terms.

For details regarding admission to FSB minors and availability of coursework, please refer to the information at the beginning of this section (under Farmer School of Business "Minors").

## Program Requirements

(18 or 19 semester hours)

Code	Title	Credit Hours
Select one of the following:		3-4
ISA 205	Business Statistics	
ISA 225	Principles of Business Analytics	
PSY 293	Introduction to Psychological Statistics	
STA 261	Statistics	
STA 301	Applied Statistics	
STA 368	Introduction to Statistics	
Select all of the following:		
MGT 111	Introduction to Business	3
MGT 291	Introduction to Management & Leadership	3
or MGT 211	Introduction to Management for Non-business Majors	
MGT 302	Introduction to Operations and Supply Chain Management	3
Select two of the following:		6
ECO 201	Principles of Microeconomics	
MGT 303	Human Resource Management	
MGT 304	Cross Cultural Management	
MGT 402	Employment Law	
MGT 404	Compensation Management	
MGT 405	Negotiations and Conflict Management	
MGT 406	Talent Acquisition and Development	
MGT 414	Employee Engagement and Motivation	
MGT 415	Leadership and Learning	
MGT 416	Leading Organizational Change	
MGT 432	Global Strategic Sourcing	
MGT 451	Operations Planning and Scheduling	
MGT 453	Quality Management Systems	
Total Credit Hours		18-19

## Marketing Minor

For information, contact the Department of Marketing, 3057 FSB, 513-529-3270.

This minor, open to all university students, prepares students for a career in marketing or as part of a business decision-making team. The modern global society is placing an increasing emphasis on marketing knowledge and related skills. The minor provides students with an understanding of marketing that goes beyond basic principles to developing specific marketing skills.

The Marketing Minor requires an application for admission. Students must apply fall semester of the sophomore year or within one year for transfer students. Contact the Department of Marketing for more information. For details regarding admission to FSB minors and availability of coursework, please refer to the information at the beginning of this section (under Farmer School of Business "Minors").

## Program Requirements

(22 semester hours)

Code	Title	Credit Hours
<b>Prerequisites</b>		
ECO 201	Principles of Microeconomics	3
Select ONE of the following:		3-4
ISA 225	Principles of Business Analytics	
STA 261	Statistics	
<b>Required courses</b>		
MKT 291	Principles of Marketing	3
<b>EITHER</b>		
ALL of the following courses:		12
MKT 325	Developing Customer Insights	
MKT 335	Analytical Research and Reasoning for Marketers	
MKT 405	Professional Selling	
MKT 435	Building and Managing Strong Brands	
<b>OR</b>		
Select THREE of the following:		
MKT 325	Developing Customer Insights	
MKT 335	Analytical Research and Reasoning for Marketers	
MKT 405	Professional Selling	
MKT 435	Building and Managing Strong Brands	
<b>AND</b>		
Select ONE of the following:		
MKT 412	Sustainable Marketing Management	
MKT 415	Marketing to Organizations	
MKT 419	Digital Branding	
or IMS 419	Digital Branding	
MKT 425	Global Marketing	
MKT 461	Principles of Retailing	
MKT 490	Emerging Topics in Marketing	
Total Credit Hours		21-22

## Supply Chain Management Minor

For information, contact the Department of Management, 3056 FSB, 513-529-4215.

A recent study cited supply chain management (SCM) as one of the three most important management practices for determining world class performance. This minor, open to all university students, provides an understanding of SCM as a key business strategy, and it develops tools for integrating key functions of procurement, production, marketing, logistics, accounting, and IS, leading to successful operation of the entire SCM process. You will be exposed to career opportunities in this field.

For details regarding admission to FSB minors and availability of coursework, please refer to the information at the beginning of this section (under Farmer School of Business "Minors").

## Program Requirements

(21-22 semester hours)

Code	Title	Credit Hours
<b>Required courses</b>		
Select one of the following:		3-4
ISA 205	Business Statistics	
ISA 225	Principles of Business Analytics	
STA 261	Statistics	
STA 301	Applied Statistics	
STA 368	Introduction to Statistics	
Select all of the following:		
MGT 302	Introduction to Operations and Supply Chain Management	3
MGT 432	Global Strategic Sourcing	3
MGT 498	Supply Chain Management	3
MKT 291	Principles of Marketing	3
MGT 431	Logistics Management	3
<b>Focus elective</b>		
Select one of the following:		3
ISA 303	Enterprise Systems	
ISA 321	Quantitative Analysis of Business Problems	
MGT 451	Operations Planning and Scheduling	
MGT 453	Quality Management Systems	
MKT 412	Sustainable Marketing Management	
MKT 415	Marketing to Organizations	
Total Credit Hours		21-22

## China Business Program

The China Business Program is designed to better prepare students for entry into an increasingly globalized workplace by developing an understanding of the culture and customs of China through language study, overseas experience and associated coursework. The program will help develop students' critical thinking and contextual skills by allowing students to study and personally experience the rapid pace of economic development and social change in China and Asia. The program is designed for students who wish to pursue a career in business and who have a strong interest in China and Asia.

A 2.0 GPA is required in all China Business Certificate coursework.

## Program Requirements

Code	Title	Credit Hours
<b>Chinese Language</b>		
Complete two years or more of Chinese <sup>1</sup>		3
<b>Cultural Experience</b>		
Completion of an approved thematic sequence, minor, or major related to China: <sup>2</sup>		6
CHI 1 Thematic Sequence		
SDT 1 Self Designed Thematic Sequence		
Asian/Asian American Studies Minor		

<b>Chinese Minor</b>		
East Asian Studies Minor		
International Business Minor with approved electives related to China		
East Asian Language and Cultures Major		
<b>Overseas Experience</b>		1
Select one of the following options:		
Option A:		
Semester of study abroad in China		
Option B:		
Pre-Approved Internship in China		
Option C:		
Select two of the following:		
Pre-approved FSB International Faculty-Led Program		
Tianjin Summer Intensive Chinese Language Program		
Completion of pre-approved business related internship in China		
<b>Business coursework</b>		
Completion of a B.S. in Business and completion of two China Business Seminars:		
BUS 241	China Business Seminar I (fall, second year)	2
BUS 341	China Business Seminar II (spring, third or fourth year)	2
Total Credit Hours		14

<sup>1</sup> Students must complete CHI 202 and may choose to take higher levels.

<sup>2</sup> Consult with Advisor for alternative options.

## Creativity Entrepreneurship Certificate

For information, contact the Page Center for Entrepreneurship, 2078 FSB, 513-529-1221.

The Creativity Entrepreneurship Certificate is a multidisciplinary educational initiative that brings together students from all schools on campus to develop expertise on how Entrepreneurial practices can relate to developing the creative person and using creativity in everyday life. It is a suite of tools, teachings, mindsets and experiences for understanding how Creativity & Innovation impact our world and what resources and business principles are needed to foster successful creativity & innovation practices. The Creativity Entrepreneurship Certificate is applied to problems and organizational models in every field. This certificate program builds qualifications for intrapreneurial or entrepreneurial employment and/or further study in Applied Creativity. It is for students interested in gaining knowledge and a level of expertise in entrepreneurial mindsets, creative problem solving and innovative solutions.

## Program Requirements

Code	Title	Credit Hours
<b>Complete the following class twice</b>		
ESP 102	Entrepreneurial Immersion: From Idea to Opportunity	2

(Includes Spring ESP 102 Social Entrepreneurship Innovation Weekend)

<b>Complete the following 3 classes</b>		<b>9</b>
ESP 201	Introduction to Entrepreneurship and Business Models	
ESP 252	Entrepreneurial Mindset: Creativity and Organization	
ESP 351	Creativity in Entrepreneurship	
<b>Complete the following class</b>		<b>3</b>
ESP 461	Entrepreneurial Consulting <sup>1</sup>	
Total Credit Hours		14

<sup>1</sup> Recommended that students complete the ESP 461 Entrepreneurial Consulting in San Francisco in winter term.

## Social Entrepreneurship Certificate

For information, contact the Page Center for Entrepreneurship, 2078 FSB, 513-529-1221.

Social Entrepreneurship and the ability to recognize opportunities to create viable, sustainable social solutions are skills needed in our volatile, uncertain, complex, ambiguous world. The Social Entrepreneurship Certificate is a multidisciplinary educational initiative bringing students together from all schools on campus to develop expertise on how Entrepreneurial practices can help build and sustain societal matters. It is a suite of tools, mindsets and experiences for understanding how social ventures impact our world and what resources and entrepreneurial principles are needed to foster successful social ventures. The Social Entrepreneurship Certificate is applied to problems in fields ranging from economic development, sustainable resources, crime, poverty and healthcare. This certificate program builds qualifications for employment and/or further study in Social Enterprise. The Certificate provides a framework for understanding entrepreneurship from a variety of disciplines and application of entrepreneurial skill sets to meet societal and workplace demands. It is for all students interested in gaining knowledge and a level of expertise in entrepreneurial mindsets, cultural awareness and collaborative problem-solving.

## Program Requirements

Code	Title	Credit Hours
<b>Complete the following class twice:</b>		<b>2</b>
ESP 102	Entrepreneurial Immersion: From Idea to Opportunity	
(Global innovation Weekend Edition is also an option)		
<b>Complete the following courses:</b>		
ESP 201	Introduction to Entrepreneurship and Business Models	3
ESP 252	Entrepreneurial Mindset: Creativity and Organization	3
ESP 331	Social Entrepreneurship	3
<b>Complete one of the following courses:</b>		<b>3</b>
ESP 401	Entrepreneurship: New Ventures	

ESP 461	Entrepreneurial Consulting	
Total Credit Hours		14

## StartUp Entrepreneurship Certificate

For information, contact the Page Center for Entrepreneurship, 2078 FSB, 513-529-1221.

Startup entrepreneurship is all about overcoming challenges and solving problems. Startup businesses operate with limited resources and capacity. At the Institute for Entrepreneurship, we teach students by immersing them in experiences like this to better understand how to add value and make a difference in those communities. Whether you start a new venture, you constantly seek opportunities, or you want to add value in a fast-paced high impact environment, the StartUp Entrepreneurship Certificate is designed to build and train the growing entrepreneurial workforce.

Entrepreneurship and the ability to recognize opportunities to create viable, sustainable solutions are skills needed in our volatile, uncertain, complex, ambiguous world. The StartUp Entrepreneurship Certificate is a multidisciplinary educational initiative bringing students together from across campus to develop expertise on how Entrepreneurial practices can help build and sustain StartUp and rapidly growing organizations. The StartUp Certification Program provides a suite of tools, mindsets and experiences for understanding how to excel in the growing startup workforce. This certificate program builds qualifications for employment and/or further study in Entrepreneurship. The Certificate provides a framework for understanding entrepreneurship from a variety of disciplines and application of entrepreneurial skill sets to meet workplace demands.

Code	Title	Credit Hours
<b>Complete the following course twice:</b>		<b>2</b>
ESP 102	Entrepreneurial Immersion: From Idea to Opportunity	
<b>Complete the following courses:</b>		
ESP 201	Introduction to Entrepreneurship and Business Models	3
ESP 251	Entrepreneurial Value Creation and Capture	3
ESP 321	Startup Entrepreneurship	3
<b>Complete one of the following courses:</b>		<b>3</b>
ESP 401	Entrepreneurship: New Ventures	
ESP 461	Entrepreneurial Consulting	
Total Credit Hours		14

## Undergraduate Certificate in Foundations of Analytics

For information contact

The Foundation of Analytics certificate supplements any major to provide students with a fundamental skill set to use data to drive decision making in their undergraduate discipline. It also provides the

base skills and knowledge for entry into Miami's Graduate Certificate in Analytics and Masters of Science in Analytics programs.

## Program Requirements

Code	Title	Credit Hours
Required courses:		
ISA/STA 250	Basic Math for Analytics	3
ISA 225	Principles of Business Analytics	3
ISA 243	Database and Programming for Analytics	3
ISA 291	Applied Regression Analysis in Business	3
Total Credit Hours		12

# College of Liberal Arts and Applied Science

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## Hamilton Campus

1601 University Blvd., OH 45011  
Phone: 513-785-3000  
[www.regionals.MiamiOH.edu](http://www.regionals.MiamiOH.edu)

## Middletown Campus

4200 N. University Blvd., OH 45042  
Phones: 513-727-3200, 1-866-426-4643  
[www.regionals.MiamiOH.edu](http://www.regionals.MiamiOH.edu)

## Voice of America Learning Center

7847 VOA Park Dr.  
West Chester, OH 45069  
Phone: 513-895-8862  
[www.regionals.MiamiOH.edu/voalc](http://www.regionals.MiamiOH.edu/voalc)

## General Information

Miami University Regionals are commuter campuses of Miami University, a highly-regarded public university with a national reputation. Regional locations include: the Hamilton campus, the Middletown campus, and the Voice of America Learning Center (VOALC) in West Chester.

The College of Liberal Arts & Applied Science (CLAAS) is home to twelve academic departments offering bachelor and associate degrees, as well as select graduate degrees.

Students may take coursework at Miami Regional Locations to begin a bachelor degree in most majors. Bachelor degrees can be completed in CLAAS on the regional campuses or in other colleges at the Oxford campus. In addition, students are able to complete many Miami Regional courses and programs without traveling to a physical campus. As a pioneer in online learning, Miami Regionals have significant experience in cultivating rich learning experiences to meet the diverse needs of students. Online programs include the following: Health Communication, Commerce, RN-BSN Completion Program, and Prekindergarten Education.

The Hamilton and Middletown campuses are full-service campuses, with a range of student facilities and services. Hamilton serves about 3,000 students and Middletown serves about 2,000 students.

Miami University Hamilton occupies about 75 acres on the east bank of the Great Miami River between Neilan and University boulevards in Hamilton. Classes began in 1968. Miami University Hamilton offers courses for both CLASS majors and majors in Oxford.

Miami University Middletown opened in 1966 on 142 wooded acres between University and Breiel boulevards in Middletown. Miami University offers a part-time graduate social work program there, as well as courses for both CLAAS majors and majors in Oxford.

In 2009 Miami opened the Voice of America Learning Center in West Chester, midway between Cincinnati and Dayton and adjacent to I-75. VOALC serves as the hub for the Department of Commerce. Miami's nationally ranked Professional MBA program is based at the Learning Center. In addition to the MBA program, area educators can take advantage of professional development, graduate courses, and

degree programs through Miami's College of Education, Health and Society.

## Registration

Registration for new students takes place during the Student Orientation, Advising, and Registration program (SOAR) which occurs in June, July, and August for Fall Semester, and in December and January for Spring Semester. Continuing students may select coursework once registration opens, October for Spring Semester, April for Fall semester, February for Summer term, and May for Winter term. Registration dates and times for new and continuing students may vary; consult the regional campus Calendar of Events and Advising & Registration Sessions (SOAR) schedule for specific information.

## For More Information

Office of Admission  
Miami University Hamilton  
1601 University Blvd.  
Hamilton, OH 45011  
513-785-3111(Admission)  
513-785-3123 (Financial Aid)  
[www.regionals.MiamiOH.edu](http://www.regionals.MiamiOH.edu)

Office of Admission  
Miami University Middletown  
4200 N. University Blvd.  
Middletown, OH 45042  
513-727-3216 (Admission)  
513-727-3299 (Financial Aid)  
866-426-4643 (toll-free)  
[www.regionals.MiamiOH.edu](http://www.regionals.MiamiOH.edu)

## Relocation

Regional campus students may take coursework at any of the Miami University Regionals locations (Hamilton, Middletown, and Voice of America Learning Center) to begin a baccalaureate degree in most majors. Bachelor degrees can be completed in the College of Liberal Arts and Applied Science on the regional campuses, in other divisions at the Oxford campus, or at other four-year institutions. Students seeking to complete Miami baccalaureate degrees on the Oxford campus must apply to relocate when they need to take Oxford courses. Regional campus students may relocate to Oxford (full or partial) after earning at least 16 hours of graded Miami University college-level coursework (not including credit/no credit, developmental 00\_classes, CLEP, AP, and College Credit Plus credit), a 2.00 minimum cumulative grade point average, and an acceptable conduct record. At least one fall or spring semester must be completed on a regional campus. Regional campus students must submit the relocation form, submit appropriate health forms, and meet with an appropriate Oxford divisional advisor prior to being allowed to register for Oxford courses. Relocation requirements will be verified as of the start of the approved relocation term by Regional Enrollment Operations and the Regional Advising Office. Students wishing to relocate to Oxford with exceptions to these requirements must submit their rationale within the relocation form.

## Bachelor of Arts

- Community Arts
- English Studies
- Psychological Science

## Bachelor of Science

- Applied Biology

## Bachelor of Arts/Bachelor of Science

- Liberal Studies

## Bachelor of Integrative Studies

- Integrative Studies

## Bachelor of Arts in Applied Communication

- Communication Studies

## Bachelor of Science in Applied Communication

- Health Communication

## Bachelor of Science in Applied Science

- Engineering Technology with concentrations available in
  - Electrical & Computer Engineering Technology
  - Electro-Mechanical
  - Mechanical Engineering Technology

## Bachelor of Science in Applied Social Science

- Applied Social Research

## Bachelor of Science in Commerce

- Small Business Management

## Bachelor of Science in Criminal Justice

- Criminal Justice

## Bachelor of Science in Forensic Science and Investigation

- Forensic Investigation
- Forensic Science

## Bachelor of Science in Information Technology

- Health Information Technology
- Information Technology

## Bachelor of Science in Nonprofit and Community Studies

- Nonprofit and Community Studies

## Bachelor of Science in Nursing

- BSN 4-Year and RN-BSN completion

## Minors

- Commerce
- Criminal Justice
- Data Intelligence through Information Technology
- English Studies
- Forensic Investigation
- Psychological Science

## Associate in Applied Science

- Computer and Information Technology
- Computer Technology
- Criminal Justice
- Electrical and Computer Engineering Technology
- Engineering Technology
- Mechanical Engineering Technology
- Prekindergarten Education

## Associate in Arts

- General Studies

## Associate of Applied Business

- Business Management Technology
- Digital Business Systems
- Marketing Management Technology

## Associate of Technical Study

- Technical Study

## Certificates

- Customer Service

## Fees and Expenses: Regional Locations

**Note:** All fees and charges are subject to change. For current information on tuition and fees, visit <https://miamioh.edu/onestop/your-money/tuition-fees/regional-campuses/index.html>

## Refund of Charges

Questions about refunds should be directed to the One Stop for Student Success in Mosler (Hamilton) and Johnston (Middletown) Halls. The date when you withdraw or drop your last course is the date that you formally withdraw.

# Applied Biology - Bachelor of Science

Biology is the study of all living organisms, from the microscopic to macroscopic. The biology faculty at the Regionals offer a wide range of courses that provide a solid background in two primary concentrations for the BS in Applied Biology: 1) Environmental Biology and 2) Human Biology & Health Sciences. Each concentration trains students in critical thinking, scientific inquiry, and the application of science to societal issues. The course of study for either concentration within Applied Biology will prepare students to formulate questions, make meaningful observations, analyze and interpret data, and arrive at conclusions. Development of these skills will enable students to recognize, address, and solve problems while gaining scientific literacy and a broad knowledge of biology. During their training as biologists students will learn how living organisms function, evolve, and interact with one another and their environment. Students majoring in Applied Biology may not major in Biology or Zoology.

## Program Requirements

### Environmental Biology Concentration

Code	Title	Credit Hours
<b>Required Courses</b>		
BIO 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO 206	Evolutionary Biology	3
BIO 209	Fundamentals of Ecology	3
BIO 342	Genetics	3
BSC 292	Applied Biology Sophomore Seminar: Planning Your Future in Applied Biology (Seminar I)	1
BSC 492	Applied Biology Senior Seminar: Becoming a Professional Biologist (Seminar II)	1
Select three of the following:		12
BIO 311	Vertebrate Zoology	
BIO 312	Invertebrate Zoology	
BIO 314	Plant and Fungal Diversity	
BSC 313	Microbial Diversity	
<b>Professional Courses</b>		
Select two of the following: (1 required at the 400-level)		6-7
BIO 351	Environmental Education: Focus on Natural History	
BIO 467	Conservation Biology	
BSC 321	Research in Applied Biology (Research in Applied Biology)	
or BSC 340	Internship	
BSC 415	Approaches to Problem Solving and Research in Applied Biology Capstone (Approaches to problem solving and research in applied biology)	

BSC 475	Capstone in Environmental Biology (Capstone in Environmental Biology)	
<b>Related Hours</b>		
CHM 141	College Chemistry	3-4
or CHM 141R	College Chemistry	
CHM 142	College Chemistry	3
CHM 144	College Chemistry Laboratory	2
CHM 145	College Chemistry Laboratory	2
ECO 201	Principles of Microeconomics	3
or POL 241	American Political System	
GLG 115L	Understanding the Earth	1
GLG 121	Environmental Geology	3
GLG 244	Oceanography	3
or GLG 307	Water and Society	
STA 261	Statistics	4-5
or MTH 151	Calculus I	
<b>Earn 1 Tool</b>		18-21
GIS Certificate		
Commerce Minor		
Data Intelligence Minor		
Forensic Investigation Minor		
<b>52 hours at the 200-level or above</b>		
Total Credit Hours		79-85

### Human Biology and Health Sciences Concentration

Code	Title	Credit Hours
<b>Required Courses</b>		
BIO 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO 201	Human Anatomy	4
BIO 203	Introduction to Cell Biology	3
BIO 206	Evolutionary Biology	3
or BIO 209	Fundamentals of Ecology	
BIO 305	Human Physiology	4
BIO 342	Genetics	3
BSC 292	Applied Biology Sophomore Seminar: Planning Your Future in Applied Biology (Seminar I)	1
BSC 492	Applied Biology Senior Seminar: Becoming a Professional Biologist (Seminar II)	1
<b>Professional Courses</b>		
Select three of the following: (1 required at the 400-level)		6-7
BIO 464	Laboratory in Cell and Molecular Biology	
BSC 313	Microbial Diversity (Microbial Diversity)	
BSC 321	Research in Applied Biology	
or BSC 340	Internship	

BSC 416	Applications of Biotechnology to Human Health: Concepts and Issues (Applications of Biotechnology to Human Health: Concepts and Issues)	
MBI 361	Epidemiology	
<b>Related Hours</b>		
CHM 141 or CHM 141R	College Chemistry (Related Hours: College Chemistry)	4
CHM 142	College Chemistry	3
CHM 144	College Chemistry Laboratory	2
CHM 145	College Chemistry Laboratory	2
CHM 241 & CHM 242 & CHM 244 & CHM 245 or CHM 231	Organic Chemistry and Organic Chemistry and Organic Chemistry Laboratory and Organic Chemistry Laboratory Fundamentals of Organic Chemistry	4-10
CHM 332 & 332L	Outlines of Biochemistry and Outlines of Biochemistry Lab	4
MTH 151 or STA 261	Calculus I Statistics	4-5
PHY 161	Physics for the Life Sciences with Laboratory I	4
<b>Earn 1 Tool</b>		18-21
GIS Certificate		
Commerce Minor		
Data Intelligence Minor		
Forensic Investigation Minor		
<b>52 hours at the 200-level or above</b>		
Total Credit Hours		78-89

## Applied Social Research- Bachelor of Science in Applied Social Science

For information contact the Department of Social and Behavioral Sciences, 532 Mosler Hall, 513-785-3207.

Applied Social Research (ASO) involves the analysis, implementation, and communication of quantitative and qualitative social research addressing complex social phenomena. ASO majors gain a broad comparative foundation in the social sciences while learning to design, conduct, interpret, evaluate and present quantitative and qualitative research integral to everyday operations in both public and private sectors. Graduates will be qualified to work as researchers and data analysts in a range of careers including business, marketing, and finance; education; healthcare; local and state government; project evaluation and consulting; and social services. Co-ops, internships, civic engagement, and participation in multiple research projects play a central role in the curriculum. Students develop widely applicable, hands-on research skills that will enhance professional growth and promote the ability to secure sustainable employment.

## Program Requirements

Code	Title	Credit Hours
<b>Core Requirements</b>		26-28
Select all of the following:		
ASO 201	Introduction to Applied Social Research	
STA 261	Statistics	
SOC 262	Research Methods	
ASO 301	Applied Social Research Methods	
GEO 441	Geographic Information Systems	
ASO 401	Applied Social Research Capstone	
Select two of the following:		
ATH 175	Peoples of the World	
CRE 151	Introduction to Critical Race and Ethnic Studies	
GEO 101	Global Forces, Local Diversity	
POL 142	American Politics and Diversity	
PSY 111 & PSY 112	Introduction to Psychology and Foundational Experiences in Psychology	
SOC 153	Sociology in a Global Context	
<b>Electives</b>		15
Select 15 credit hours with at least 9 at the 300/400 level:		
ATH 411	Applied Anthropology	
ATH 425	Ethnographic Field Methods	
BWS 348	Race and Ethnic Relations	
CIT 214	Database Design and Development	
CIT 348	Information Management and Retrieval	
ENG 313	Technical Writing	
ENG 413	Grant and Proposal Writing	
GEO 242	Mapping a Changing World	
GEO 442	Advanced Geographic Information Systems	
GEO 443	Python Programming for ArcGIS	
GEO 448	Techniques and Applications of Remote Sensing	
PSY 210	Psychology Across Cultures	
PSY 293	Introduction to Psychological Statistics	
PSY 294	Writing and Research Methods in Psychology	
POL 241	American Political System	
SOC 357	Medical Sociology	
<b>Experiential Learning Requirement</b>		4-6
Internship/Independent Study		
Total Credit Hours		45-49

## Integrative Studies- Bachelor of Integrative Studies

For information, contact the Department of Interdisciplinary and Communication Studies at ICS@MiamiOH.edu or 513-785-3055.

Integrative learning is a process by which students connect knowledge and skills from multiple sources and experiences, apply knowledge and skills in varied settings, analyze diverse points of view, and understand issues contextually. Students in Integrative Studies build a Bachelor's degree that works best for them, by making connections among fields of study that fit their educational, career, and personal goals. Unlike a general studies degree, the BIS incorporates a set of three seminars designed to help students reflect upon their educational options and purposefully design a degree that can work for them now and in the future. The Bachelor of Integrative Studies (BIS) degree program is offered exclusively through Miami University's regional system in Hamilton, Middletown and the Voice of America Learning Center in West Chester.

## Special Curriculum Requirements

- Students must complete the entire Miami Plan for Liberal Education or Ohio Transfer Module.
- Students must complete at least 56 hours at the 200-level and above, including at least 21 hours at the 300-level and above.

## Program Requirements

- Students must attain a cumulative GPA of 2.00 in courses in the major. Courses in the major include: The BIS core seminars (BIS 201, BIS 301, BIS 401: 9 credits in total).
- Must earn at least a C- in BIS 201 and BIS 301.
- Courses in the student's chosen concentrations (minimum 15 credits for Concentration I & 15 credits for Concentration II).

Code	Title	Credit Hours
<b>Integrative seminars</b>		
BIS 201	Introduction to Integrative Studies	3
BIS 301	Integrative Studies Seminar II	3
BIS 401	Senior Integrative Seminar	3
<b>21st-century literacies</b>		
Select two of the following:		6-8
ART 256	Design, Perception & Audience	
CMR 282	Computer-Based Business Analysis	
CMR 441	Social Media and Career Development	
CIT/CSE 262	Technology, Ethics, and Global Society	
EGS 215	Workplace Writing	
ENG 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds	
GEO 242	Mapping a Changing World	
IMS 201	Information Studies and Digital Citizenship	
STA 261	Statistics	
or ISA 205	Business Statistics	
or STA 301	Applied Statistics	

### Concentrations

Select and complete fifteen hours in one concentration and fifteen hours in another. 30

No more than 5 courses from 1 discipline.

No departmental overlap allowed with Thematic Sequence and concentrations.

A minor may be used in place of concentration 2.

Total Credit Hours 45-47

## Concentrations

### Applied Kinesiology

Code	Title	Credit Hours
Select one of the following: 4		
APC 336	Advanced Interpersonal Communication	
BIO 161	Principles of Human Physiology	
KNH 184 & 184L	Motor Skill Learning and Performance and Motor Skill Learning and Performance Laboratory	

Select one of the following: 3

KNH 242	Personal Health	
KNH 244	Functional Anatomy	
KNH 293	Fitness and Conditioning	
KNH 294	Games and Sport	

Select one of the following: 3-4

FSW 245	Children and Families: Ages Conception - 12	
STC 339	Introduction to Organizational Communication	
FSW/SOC 363	Sociology of Families	
PSY 231	Developmental Psychology	

Select all of the following: 6

KNH 392	Lifetime and Adventure Activities	
KNH 473	Children and Youth in Sport	

Total Credit Hours 16-17

### Applied Sociology

Code	Title	Credit Hours
Select one of the following: 3-4		
SOC 151	Social Relations	
SOC 153	Sociology in a Global Context	
Select one of the following: 3-4		
SOC 201	Social Problems	
SOC 202	Social Deviance	
Select one of the following: 3		
APC 363	Advanced Methods in Applied Communication	
APC 336	Advanced Interpersonal Communication	
ATH 411	Applied Anthropology	
PSY 221	Social Psychology	
Take the following: 3		
SOC 262	Research Methods	
Select one of the following: 3-4		
APC 428	Communication in Conflict Management	
STC 436	Intercultural Communication	

SOC/WGS 451	Family Violence	
Total Credit Hours		15-18

### Child Development

Code	Title	Credit Hours
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Select one of the following: 3-4

EDT 272E	Introductory Child Development: PreBirth through Age 8	
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FSW 245	Children and Families: Ages Conception - 12	
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PSY 332	Child Development	
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Select one of the following: 3-5

EDT 246E	Foundations of Language and Literacy	
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FSW/KNH 208	Serving and Supporting Children, Youth, and Families II	
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FSW 261	Diverse Family Systems Across the Life Cycle	
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FSW 283	Introduction to Child Care Administration	
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KNH 245	Issues of Health & Wellness for the Young Child	
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Select two of the following: 6

BWS/FSW/SOC 362	Family Poverty	
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EDT 315E	Teaching with Children's Literature Across the ECE Curriculum	
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FSW/SOC 363	Sociology of Families	
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PSY 331	Infant Development	
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Select one of the following: 3

EDT 422	Studies in Educational Issues	
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KNH 473	Children and Youth in Sport	
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WGS 451	Family Violence	
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Total Credit Hours 15-18

### Contemporary American Experience

Code	Title	Credit Hours
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Select one of the following: 3

AMS 205	Introduction to American Cultures	
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AMS 207	America: Global and Intercultural Perspectives	
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ENG 276	American Literature 1900 to the Present	
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FST/IDS 206	Diversity and Culture in American Film	
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POL 142	American Politics and Diversity	
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Select three of the following: 9

AAA/ENG 248	Asian American Literature	
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AAA 249	Asian & Asian American Cinema	
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AMS 310	Special Topics in American Studies	
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APC 332	Argumentation & Debate	
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ART 283	Modern America	
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ATH 304	Native North America: Anthropological Perspectives	
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BWS/SOC 348	Race and Ethnic Relations	
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BWS/HST 386	Race in U.S. Society	
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ENG/WGS 232	Women Writers	
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ENG/AMS 246	Native American Literature	
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ENG/LAS 254	Latino/a Literature and the Americas	
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ENG 293	Contemporary American Fiction	
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ENG/BWS 338	African American Writing, 1946-Present	
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HST/AMS 367	The United States in the 1960s	
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HST/WGS/AMS 382	Women in American History	
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Select one of the following: 3-6

APC 438	Political Communication	
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EGS 390	Special Topics in English Studies	
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EGS 410	Readings in Multicultural Perspectives	
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EGS 460	Issues in Literary and Cultural Studies	
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Total Credit Hours 15-18

### Cross Cultural Leadership

Code	Title	Credit Hours
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Select one of the following: 3

AAA 207	Asia and Globalization	
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ATH 175	Peoples of the World	
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CMR 244	Introduction to Global Business	
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HST 296	World History Since 1945	
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ITS 201	Introduction to International Studies	
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Select two of the following: 6

AAA 248	Asian American Literature	
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ATH 206/ LAS 208	Introduction to Latin America	
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ATH 305	Latin America: Anthropological Perspectives	
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ATH 307	The Middle East: Anthropological Perspectives	
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ATH 358	Travelers, Migrants, and Refugees: Transnational Migration and Diasporic Communities	
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BWS 348	Race and Ethnic Relations	
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BWS/HST 386	Race in U.S. Society	
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ENG 336	African American Writing, 1746-1877	
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or ENG 337 African American Writing, 1878-1945

or ENG 338 African American Writing, 1946-Present

HST 354	Modern Chinese History	
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SOC 348	Race and Ethnic Relations	
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Select two of the following: 6

APC 428	Communication in Conflict Management	
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ATH 431	Archaeology of Power	
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EGS 410	Readings in Multicultural Perspectives	
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STC 436	Intercultural Communication	
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Total Credit Hours 15

**Environmental Studies**

Code	Title	Credit Hours
Select one of the following:		3
BIO 121	Environmental Biology	
BIO 131	Plants, Humanity, and Environment	
BIO 171	Human Anatomy and Physiology	
GLG 111	The Dynamic Earth	
GLG 121	Environmental Geology	
Select one of the following:		3
BIO 204	Evolution of Plant Biodiversity: Genes to Biosphere	
BIO 206	Evolutionary Biology	
BIO 209	Fundamentals of Ecology	
Select one of the following:		3
GEO 271	Human Dimensions of Natural Resource Conservation	
GLG 307	Water and Society	
GLG 311	Geoenvironmental Field Methods	
IES 274	Introduction to Environment and Sustainability	
IES 275	Principles of Environmental Science	
Select two of the following:		6-7
ATH 471	Ecological Anthropology	
BIO 351	Environmental Education: Focus on Natural History	
BIO 467	Conservation Biology	
IES 431	Principles and Applications of Environmental Science	
Total Credit Hours		15-16

**Families, Gender and Society**

Code	Title	Credit Hours
Select three of the following:		9-11
ENG 262	Children's Literature	
FSW/KNH 207	Serving and Supporting Children, Youth, and Families I	
FSW 261	Diverse Family Systems Across the Life Cycle	
FSW 245	Children and Families: Ages Conception - 12	
PSY 231	Developmental Psychology	
SOC/WGS 203	Sociology of Gender	
WGS 201	Introduction to Women's Studies	
WGS 202	Introduction to GLBT Studies	
WGS/SOC 221	Sexualities	
Select one of the following:		3-4
AMS/HST/WGS 382	Women in American History	
FSW 363	Sociology of Families	
PHL 312	Contemporary Moral Problems	
WGS 301	Women and Difference: Intersections of Race, Class, and Sexuality	
Select one of the following:		3

EDT 422	Studies in Educational Issues	
FSW 481	Adolescent Development in Diverse Families: Ages 13-25	
FSW/SOC/WGS 451	Family Violence	
KNH 473	Children and Youth in Sport	
SOC/WGS 463	Gender and Aging	
Total Credit Hours		15-18

**Geographic Information Science**

Code	Title	Credit Hours
Select one of the following:		3
CIT 214	Database Design and Development	
ISA 245	Database Systems and Data Warehousing	
Select all of the following:		12
GEO 441	Geographic Information Systems	
GEO 442	Advanced Geographic Information Systems	
GEO 443	Python Programming for ArcGIS	
GEO 448	Techniques and Applications of Remote Sensing	
In order to complete the GISci certificate program, students must also take one of the following:		1-20
GEO 340	Internship	
GEO 444	GIScience Techniques in Landscape Ecology	
GEO 447	Aerial Photo Interpretation	

**Health Care Administration**

Code	Title	Credit Hours
Select two of the following:		6
ACC 222	Introduction to Managerial Accounting	
CMR 224	Medical Terminology	
CMR 301	Personal Organizational Skills	
CMR 302	Financial Information for Managers	
ECO 201	Principles of Microeconomics	
ISA 235	Information Technology and the Intelligent Enterprise	
Select two of the following:		6-7
APC 201	Introduction to Health and Risk Communication	
MBI 361	Epidemiology	
NSG 321	U. S. Health Care System and Culture	
PHL 375	Medical Ethics	
Select one of the following:		3
CMR 401	Leadership Decision Skills	
CIT 448	Global and Strategic Issues in Information Technology	
NSG 435	Challenges in Health Care Delivery	
Total Credit Hours		15-16

**Information Technology Strategy for Organizations**

Code	Title	Credit Hours
Select two of the following:		6
CIT 214	Database Design and Development	
CIT 276	IT Systems Design and Lifecycle Management	
CIT 348	Information Management and Retrieval	
CIT 458	IT Project Lifecycle II: Implementation and Deployment	
Select one of the following:		3
ENG 313	Technical Writing	
ENG 413	Grant and Proposal Writing	
ENT 316	Project Management	
Take the following:		
CIT 358	Information Technology Assurance and Security	
CIT 448	Global and Strategic Issues in Information Technology	
Total Credit Hours		9

**Organizational Leadership**

Code	Title	Credit Hours
Select two of the following including at least one STC course:		6
APC 336	Advanced Interpersonal Communication	
CMR 282	Computer-Based Business Analysis	
CMR 441	Social Media and Career Development	
PSY 221	Social Psychology	
STC 239	Theories of Communication	
STC 339	Introduction to Organizational Communication	
Take the following:		9
CMR 301	Personal Organizational Skills	
CMR 302	Financial Information for Managers	
or ACC 222	Introduction to Managerial Accounting	
CMR 401	Leadership Decision Skills	
Total Credit Hours		15

**Personal Community Health Perspectives**

Code	Title	Credit Hours
Select one of the following:		3
BIO 181	Medicinal and Therapeutic Plants	
DST/ENG 169	Disability and Literature	
KNH 102	Fundamentals of Nutrition	
KNH 188	Physical Activity and Health	
MBI 111	Microorganisms and Human Disease	
MBI 131	Community Health Perspectives	
& MBI 123	and Experimenting with Microbes	
Select three of the following:		9-10
CMR 224	Medical Terminology	

FSW 245	Children and Families: Ages Conception - 12	
KNH 242	Personal Health	
MBI 361	Epidemiology	
NSG 317	Teaching Strategies in Health Care	
NSG 321	U. S. Health Care System and Culture	
PHL 375	Medical Ethics	
PSY/AAA 210	Psychology Across Cultures	
STC 231	Small Group Communication	
Select one of the following:		3
NSG 435	Challenges in Health Care Delivery	
NSG 441	Health and Aging: Current Perspectives and Issues	
STC 436	Intercultural Communication	
Total Credit Hours		15-16

**Staffing and Recruitment**

Code	Title	Credit Hours
CMR 112	Introduction to Human Resources Management	3
Select two of the following:		6
CMR 202	Payroll Records and Accounting	
CMR 241	Management of Business Operations	
CMR 243	Management of Worker Relations	
CMR 244	Introduction to Global Business	
CMR 261	Customer Service & Satisfaction	
NCS 202	Introduction to Nonprofits and NGOs	
PSY 210	Psychology Across Cultures	
Select one of the following:		3
ENG 313	Technical Writing	
SOC 348	Race and Ethnic Relations	
SOC 363	Sociology of Families	
Select one of the following:		3
APC 428	Communication in Conflict Management	
CMR 401	Leadership Decision Skills	
CMR 441	Social Media and Career Development	
STC 436	Intercultural Communication	
STC 439	Advanced Organizational Communication	
Total Credit Hours		15

**Understanding Media and Visual Culture**

Code	Title	Credit Hours
Select one of the following:		3
ART 183	Images of America	
ART 256	Design, Perception & Audience	
MAC 143	Introduction to Media	
Select two of the following:		6
AAA 249	Asian & Asian American Cinema	
ENG/FST 220	Literature and Film (maximum 6)	
ENG/FST 221	Shakespeare and Film	

ENG/IMS 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds	
FST 201	Film History and Analysis	
FST 206	Diversity and Culture in American Film	
FST/ENG 235	Classical Hollywood Cinema	
FST/ENG 236	Experimental Film	
MAC 212	Media, Representation, and Society	
STC/FST 205	American Film as Communication	
Select one of the following:		3
ART 389	The History of Photography	
ENG/FST 356	Women and Gender in Film	
FST/ENG 350	Topics in Film	
HST/AMS 379	U.S. Consumerism, 1890-Present	
MAC 325	Social Media Cultures	
Select one of the following:		3
APC 438	Political Communication	
MAC 447	Mass Media Criticism	
STC 437	Advocacy in Contemporary America	
Total Credit Hours		15

## Criminal Justice- Bachelor of Science in Criminal Justice

For more information about criminal justice, email [JCS@MiamiOH.edu](mailto:JCS@MiamiOH.edu) ([criminaljustice@MiamiOH.edu](mailto:criminaljustice@MiamiOH.edu)) or call 513-785-7702.

The Bachelor of Science in criminal justice at Miami's Regional locations offers students a comprehensive and dynamic understanding of crime, justice, punishment and corrections, policing, and the legal system within the context of a liberal arts education. Advancing analytical and critical thinking, problem solving, oral and written communication, technology, quantitative literacy, ethics, application of learning in the field, civic learning, and an appreciation of diversity and of the increasingly global world are core objectives of the program. The idea is to graduate students who possess the knowledge, experiences, and skills needed to lead a meaningful, reflective life, who will be productive and contributing citizens, who will be successful in their criminal justice careers, and who will be life-long learners.

Students majoring in criminal justice are not permitted to double major in forensic investigation.

### Program Requirements

(124 semester hours)

Code	Title	Credit Hours
<b>Core Requirements</b>		
CJS 101	Introduction to the Criminal Justice Studies	3
CJS 125	Law and the Courts	3
CJS 211	Policing in America	3
CJS 220	Criminal Justice Field Experience	3
CJS 231	Law and Individual Rights	3
CJS 271	Criminal Behavior	3

CJS 281	Corrections	3
CJS 282	Writing in Criminal Justice	3
CJS 451	Comparative Justice Systems	3
CJS 461	Applied Research Methods in Criminal Justice	3
CJS 485	Capstone: Seminar in Criminal Justice	3
STA 261	Statistics	4
<b>Additional Courses</b>		
Complete 15 hours or more criminal justice courses beyond the core requirements		15
Total Credit Hours		52

## Bachelor of Science in Forensic Science and Investigation

For more information about forensic science and investigation, email [JCS@MiamiOH.edu](mailto:JCS@MiamiOH.edu) ([forensicscience@MiamiOH.edu](mailto:forensicscience@MiamiOH.edu)) or call 513-785-7702.

Forensics is the application of science in law. More specifically, forensics is the methodical gathering and analysis of evidence to be used in legal proceedings. The Bachelor of Science in Forensic Science and Investigation has two majors, Forensic Science and Forensic Investigation. The Forensic Science major is interdisciplinary with courses drawn from the natural sciences, criminal justice, and other disciplines. The Forensic Science major is designed to prepare students to work as criminalists, as crime scene technicians and as forensic scientists in various laboratory settings. The Forensic Investigation major is also interdisciplinary with courses in criminal justice, computer information technology, global information systems, the social sciences and other disciplines. The Forensic Investigation major is intended to prepare students for policing and investigative occupations.

Advancing analytical and critical thinking, problem-solving, oral and written communication, technology, quantitative literacy, ethics, application of learning in the field, civic learning, and an appreciation of diversity and of the increasingly global world are core objectives of the degree. The goal is to graduate students who possess the knowledge, experiences, and skills needed to lead a meaningful, reflective life, who will be productive and contributing citizens, who will be successful in their forensic and criminal justice careers, and who will be life-long learners.

### Forensic Science- Bachelor of Science in Forensic Science and Investigation Program Requirements

In addition to the general education requirements, the Miami Plan for Liberal Education, students in the forensic science major will complete 46 hours of natural science courses, 16 hours of criminal justice courses, 15 hours of other required courses, and three additional courses of the student's choice. The courses required to reach the 124 hours minimum are electives of the student's choice. Students majoring in forensic investigation are not permitted to double major in criminal justice.

Code	Title	Credit Hours
<b>Criminal Justice Core courses</b>		
CJS 101	Introduction to the Criminal Justice Studies	3
CJS 231	Law and Individual Rights	3
CJS 235	Forensic Science Survey	3
CJS 272	Forensic and Crime Scene Evidence	3
CJS 411	Evidence Law and Expert Testimony	3
<b>Natural Science Core courses</b>		
BIO 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
BIO 342	Genetics	3
BIO 364	Molecular Techniques	2
CHM 141 & CHM 144 or CHM 141R	College Chemistry and College Chemistry Laboratory	5
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	5
CHM 241 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	5
CHM 242 & CHM 245	Organic Chemistry and Organic Chemistry Laboratory	5
CHM 363 & CHM 364	Analytical Chemistry and Analytical Chemistry Laboratory	5
MBI 201	General Microbiology	4
PHY 161	Physics for the Life Sciences with Laboratory I	4
PHY 162	Physics for the Life Sciences with Laboratory II	4
<b>Additional Required Courses</b>		
CJS 282 or EGS 215 or ENG 313	Writing in Criminal Justice Workplace Writing Technical Writing	3
MTH 125 or MTH 151	Precalculus Calculus I	5
STA 261	Statistics	4
STC 135	Principles of Public Speaking	3
<b>Specialized Electives</b>		
Select three of the following:		8-14
ATH 212	Introduction to Archaeological Theory and Methods	
ATH 255	Foundations of Biological Anthropology	
ATH 415	Field Methods in Archaeology	
BIO 171	Human Anatomy and Physiology	
BIO 172	Human Anatomy and Physiology	
BIO 203	Introduction to Cell Biology	
CHM 332	Outlines of Biochemistry	
CHM 454	Instrumental Analysis	
CHM 460	Topics in Analytical Chemistry (maximum 12)	
CHM 421	Forensic Trace Analysis	

CHM 421L	Forensic Trace Analysis Laboratory	
CIT 286	Designing and Deploying Secure Enterprise Networks	
MBI 365	Molecular and Cell Biology	
Total Credit Hours		84-90

## Forensic Investigation- Bachelor of Science in Forensic Science and Investigation

### Program Requirements

In addition to the general education requirements, the Miami Plan for Liberal Education, students in the forensic investigation major will complete 63 hours in the major and two additional courses of the student's choice. The courses required to reach the 124 hours minimum are electives of the student's choice.

Code	Title	Credit Hours
<b>Criminal Justice Core courses</b>		
CJS 101	Introduction to the Criminal Justice Studies	3
CJS 125	Law and the Courts	3
CJS 211	Policing in America	3
CJS 231	Law and Individual Rights	3
CJS 232	Criminal Defense and Adjudication	3
CJS 235	Forensic Science Survey	3
CJS 271 or SOC 352	Criminal Behavior Criminology	3
CJS 272	Forensic and Crime Scene Evidence	3
CJS 411	Evidence Law and Expert Testimony	3
CJS 461	Applied Research Methods in Criminal Justice	3
<b>Additional Required Courses</b>		
ATH 212	Introduction to Archaeological Theory and Methods	4
CHM 121	Introduction to Forensic Chemistry	4
CIT 154 or CMR 181	Personal Computer Concepts and Applications Computers and Business	3
CIT 262	Technology, Ethics, and Global Society	3
CIT 358	Information Technology Assurance and Security	3
GEO 441	Geographic Information Systems	3
GEO 442	Advanced Geographic Information Systems	3
GEO 445	Geographic Information Systems for Criminal Justice	3
STA 261	Statistics	4
<b>Forensic Investigation Electives</b>		
Select at least two of the following:		6-8
ART 389	The History of Photography	
ATH 415	Field Methods in Archaeology	
BIO 342	Genetics	
CJS 220	Criminal Justice Field Experience	

CJS 256	Police Organization, Administration, and Management
CJS 276	Homeland Security and Critical Incident Management
CJS 321	Criminal Justice Administration
CJS 401	Race and Criminal Justice
CJS 451	Comparative Justice Systems
GEO 242	Mapping a Changing World
GEO 447	Aerial Photo Interpretation
POL 376	U.S. National Security Policy
SOC 201	Social Problems
SOC 202	Social Deviance
Total Credit Hours	

66-68

## Communication Studies- Bachelor of Arts in Applied Communication

For information contact the Department of Interdisciplinary and Communication Studies at ICS@MiamiOH.edu or 513-785-3055.

Communication is broadly defined as the process people use to generate meaning through messages across a variety of different contexts, channels, and cultures. The Communication Studies major provides students with a strong core foundation in the study of communication, while also providing students advanced studies in particular communication contexts. As a communication studies graduate, students could pursue a wide variety of careers ranging from Training and Development Manager, Meeting and Event Planning, Advertising and Promotions Managers, or Sales Manager. The Communication Studies program emphasizes human identity and diversity, quantitative research competency, and 21st century communication skills.

### Program Requirements

Code	Title	Credit Hours
<b>Core Requirements</b>		25
APC 363	Advanced Methods in Applied Communication	
STA 261	Statistics	
STC 135	Principles of Public Speaking	
STC 136	Introduction to Interpersonal Communication	
STC 239	Theories of Communication	
STC 262	Empirical Research Methods	
STC 339	Introduction to Organizational Communication	
STC 436	Intercultural Communication (OR any 202-level language)	
Communication Contexts (select five classes for 15 credit hours):		15
APC 201	Introduction to Health and Risk Communication	
APC 341	Methods of Rhetorical Criticism	

APC 336	Advanced Interpersonal Communication	
APC 428	Communication in Conflict Management	
APC 438	Political Communication	
MAC 325	Social Media Cultures	
MAC 447	Mass Media Criticism	
Advanced Electives (select two classes for 6 credit hours)		6
APC 311	Science and Medicine in Public Communication	
APC 312	Computer-mediated Communication and Social Media	
APC 332	Argumentation & Debate	
APC 340	Internship	
APC 377	Independent Studies	
APC 450	Topics in Applied Communication (maximum 9, if content changes)	
CMR 301	Personal Organizational Skills	
CMR 401	Leadership Decision Skills	
CMR 402	Cross Cultural Leadership Skills	
ENG 413	Grant and Proposal Writing	
STC 431	Persuasion Theory and Research	
STC 437	Advocacy in Contemporary America	
STC 439	Advanced Organizational Communication	
Capstone		
APC 401	Applied Communication Capstone	
Total Credit Hours		46

## Community Arts- Bachelor of Arts

For information contact the Department of Humanities and Creative Arts, Second Floor Rentschler Hall, Hamilton Campus, 513-785-1840.

The Bachelor of Arts in Community Arts degree prepares students for a variety of careers by providing broad exposure to the arts, a specialization in at least one area of creativity, and focus on community engagement. The major is interdisciplinary, combining courses in the creative arts with courses in Art History, English, Film Studies, Commerce, and more. This degree will develop skills vital to creating, organizing, implementing, and funding arts projects for individuals, community groups, and other organizations.

### Program Requirements

Code	Title	Credit Hours
<b>Community Arts Core</b>		
CMA 101	Introduction to Community Arts	1
CMA 301	Community Arts Practicum (prerequisite NCS 202 Intro to non-profits and NGOs)	3
CMA 401	Capstone in Community Arts	3
NCS 202	Introduction to Nonprofits and NGOs (required, prerequisite for CMA 301)	3
<b>Foundations</b>		

Select six credit hours from the following: 6

ART 102	Color Theory and Practice
ART 103	Creative Practices in New Technology
ART 104	Problem Solving
ART 105	Technical Drawing
ART 106	Introduction to Figure Drawing
ART 111	Design and Composition
ART 121	Observational Drawing
ENG 226	Introduction to Creative Writing: Short Fiction and Poetry
THE 101	Introduction to Theatre: Drama and Analysis
THE 123	Acting for the Non-Major: Text and Performance

Select three credit hours from the following: 3

ART 187	History of Western Art: Prehistoric-Gothic
ART 188	History of Western Art: Renaissance - Modern
MUS 135	Understanding Jazz, Its History and Context
MUS 185	The Diverse Worlds of Music
MUS 189	Great Ideas in Western Music
THE 191	Experiencing Theatre

**Creative Practice (at least 3 credit hours at 300 or 400 level)** 12

Select one area of emphasis

Drawing

ART 221	Intermediate Drawing 1
ART 222	Intermediate Drawing 2
ART 241	Printmaking I
ART 320	Thematic Studio
ART 341	Printmaking II

Visual Culture

ART/AMS 183	Images of America
ART 283	Modern America
ART 389	The History of Photography
FST 201	Film History and Analysis
FST 206	Diversity and Culture in American Film
FST/ENG 220	Literature and Film
FST/ENG 221	Shakespeare and Film
FST 235	Classical Hollywood Cinema
FST 236	Experimental Film
FST 350	Topics in Film

**Writing, Communication and Media (3 credit hours at the 300 or 400 level)** 6

ART 256	Design, Perception & Audience
EGS 215	Workplace Writing
ENG 223	Rhetorical Strategies for Writers
ENG/IMS 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds
ENG 238	Narrative and Digital Technology
ENG 313	Technical Writing

ENG 323 Intermediate Creative Writing: Creative Nonfiction

ENG 413 Grant and Proposal Writing

MAC 212 Media, Representation, and Society

MAC 325 Social Media Cultures

MAC 447 Mass Media Criticism

STC 259 Introduction to Strategic Communication and Public Relations

STC 339 Introduction to Organizational Communication

STC 436 Intercultural Communication

**Organizations (3 credits)** 3

CMR 301 Personal Organizational Skills

CMR 302 Financial Information for Managers

CMR 401 Leadership Decision Skills

CMR 441 Social Media and Career Development

Total Credit Hours 40

## Engineering Technology-Bachelor of Science in Applied Science

For more information please contact the Department of Engineering Technology in room 207 Phelps Hall, Hamilton campus, or by phone 513-785-1804.

This department offers Associate Degree programs in Electrical and Computer Engineering Technology and Mechanical Engineering Technology and baccalaureate completion degree programs. All programs are offered on the regional campuses in Hamilton and Middletown. The baccalaureate programs are only for students who have earned an associate degree. The associate degree programs are described in the Hamilton and Middletown chapter.

### Educational Objectives

We consider program educational objectives as the general characteristics our graduates demonstrate to the workplace, graduate school, the military, or their endeavors after they leave Miami. We typically measure these characteristics initially at graduation by asking graduates if they feel that they have achieved these characteristics and then periodically thereafter through employer surveys, letters from graduates, advisory council, graduate school accomplishments, and surveys of graduates who have been out for a while. These characteristics should become most evident within the first few years after graduation.

The Engineering Technology Department's graduates are able to:

- apply math and physics principles to the solution of engineering technical problems.
- use applied skills to identify, evaluate, and solve complex technical problems.
- use engineering computer software to facilitate engineering problem solving.
- function effectively in team-oriented activities.
- demonstrate the knowledge of expected standards of ethical and professional conduct.

- verbally communicate ideas.
- prepare well-written technical reports.

In addition, our graduates will have the necessary fundamentals to pursue life-long learning.

## Program-Specific Educational Objectives

### Electrical and Computer Engineering Technology (B.S.)

The ECET BS concentration produces graduates who:

- Are able to analyze and design complex electrical and computer components and systems.
- Are able to effectively and efficiently manage electrical and computer engineering projects.
- Are able to set-up experimental testing procedures and selectively utilize data to reinforce electrical and computer engineering concepts.

### Electro-Mechanical Engineering Technology (B.S. Completion Program)

The EMET program produces graduates who:

- possess the ability to apply theoretical knowledge to solve engineering technology problems associated with instrumentation and control systems.
- are knowledgeable of modern applications in process control systems.

### Mechanical Engineering Technology (B.S.)

The MET program produces graduates who:

- are able to analyze and design complex mechanical components and systems.
- are able to set up experimental testing procedures and selectively utilize data to reinforce engineering concepts.
- have a basic understanding of modern manufacturing methods used to facilitate the production of consumer products.
- are able to effectively and efficiently manage engineering projects (B.S. only).

### Credit/No Credit Policy

All required engineering technology courses and prerequisite mathematics and statistics courses should be taken for a grade.

## Program Requirements

(124 semester hours)

### Electrical and Computer Concentration

The Engineering Technology baccalaureate degree (Electrical and Computer concentration) is a completion program for graduates of associate degree programs in electrical/electronics, electrical and computer, or similar engineering technology programs and for computer information technology or similar programs. The objective of this program is to allow students who possess an associate degree

in these areas to complete the bachelor's degree in approximately the equivalent of two years of full-time work.

Graduates are engineering technologists prepared to fill industrial positions in areas directly related to product design, process control, testing, manufacturing, sales, and service. Typical Electrical and Computer Engineering Technologist's jobs include Communications Engineering, Electronics Engineering, Biomedical Engineering, Sales Engineering, Service Engineering, Controls Engineering, Software Engineering, System Design Engineering, Applications Engineering and R&D Technologist.

This program requires the completion of an Associate Degree from an accredited college or university in Electrical/Electronic, Electrical and Computer, or similar engineering technology program; or computer information technology or similar program.

- The following General Education and Technical courses are expected to have been taken within the Associate Degree's with a minimum of 60 semester hours.
- If an equivalent to any of these courses has not been completed already, they must be taken at Miami University to bridge the Associate Degree and Bachelor completion.

Code	Title	Credit Hours
<b>Foundation Requirements (60 semester hours minimum)</b>		60
General Education Courses from Associate Degree or as a Bridge to a Bachelor's Completion.		
ECO 201	Principles of Microeconomics	
or ECO 202	Principles of Macroeconomics	
ENG 111	Composition and Rhetoric	
EGS 215	Workplace Writing	
or ENG 313	Technical Writing	
MTH 151	Calculus I	
PHY 161	Physics for the Life Sciences with Laboratory I	
or PHY 191	General Physics with Laboratory I	
PHY 162	Physics for the Life Sciences with Laboratory II	
or PHY 192	General Physics with Laboratory II	
STC 135	Principles of Public Speaking	
or STC 136	Introduction to Interpersonal Communication	
Technical Courses from Associate Degree or as a Bridge to a Bachelor's Completion		
CSE 153	Introduction to C/C++ Programming	
ENT 192	Circuit Analysis I	
ENT 193	Circuit Analysis II	
ENT 196	Electronics	
ENT 293	Digital Systems	
ENT 294	Local Area Networks	
ENT 295	Microprocessor Technology I	
<b>Program Course Requirements (64 semester hours)</b>		
General Education Requirements		
If Associate Degree is from Miami:		
Biological Science elective		3
Fine arts elective		3

Global Perspectives elective		3
If Associate Degree is not from Miami:		
Ohio Transfer Module		
OR		
Global Miami Plan Completion		
Engineering Technology Requirements		
CHM 141	College Chemistry	3
CHM 144	College Chemistry Laboratory	2
ENT 271	Mechanics I: Statics	3
ENT 298	Data Communications	3
ENT 301	Dynamics	3
ENT 303	Digital Signal Processing Technology	3
ENT 311	Process Control Interface Design	3
ENT 316	Project Management	3
ENT 387	Embedded Systems Technology	3
ENT 401	Computerized Instrumentation	3
ENT 402	Industrial Automation Lab	3
ENT 403	Wireless Communication and Networks	3
ENT 418	Electro-Mechanical Control Systems	3
ENT 497	Senior Design Project	2
ENT 498	Senior Design Project	2
MTH 231	Elements of Discrete Mathematics	3
or MTH 222	Introduction to Linear Algebra	
MTH 251	Calculus II	4
STA 301	Applied Statistics	3
Intercultural Perspectives elective		3
General Education Courses from Associate Degree or as a Bridge to a Bachelor's Completion.		
Total Credit Hours		124

## Electro-Mechanical Engineering Technology (B.S. Completion Program)

The EMET program produces graduates who:

- possess the ability to apply theoretical knowledge to solve engineering technology problems associated with instrumentation and control systems.
- are knowledgeable of modern applications in process control systems.

**The Electro-Mechanical Concentration is an** Engineering Technology baccalaureate degree completion program for graduates of associate degree programs in electrical/electronics, mechanical, electro-mechanical or similar engineering technology programs. The objective of this program is to allow students who possess an associate degree in these areas to complete the bachelor degree in approximately the equivalent of two years of full-time work (64-70 semester hours). This program is accredited by the Engineering Technology Accreditation Commission of ABET (111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone, 410-347-7700, <http://www.abet.org/>).

Graduates are engineering technologists prepared to fill industrial positions in areas directly related to industrial automation, scientific programming, product design, process control, testing, manufacturing, sales, and service. Typical engineering technologist's

duties may include working in teams involved with product analysis/design, instrumentation and control, CAD/CAM product design, laboratory testing services, product sales and service, product application, and the design of systems that require a hardware/software interface.

This program requires the completion of an Associate Degree from an accredited college or university in Electrical, Mechanical, Electro-Mechanical or similar engineering technology program.

Code	Title	Credit Hours
<b>Foundation Requirements (60 semester hours minimum)</b>		60
General Education Courses from Associate Degree or as a Bridge to a Bachelor's Completion.		
ECO 201	Principles of Microeconomics	
ENG 111	Composition and Rhetoric	
EGS 215	Workplace Writing	
or ENG 313	Technical Writing	
MTH 151	Calculus I	
STC 135	Principles of Public Speaking	
or STC 136	Introduction to Interpersonal Communication	
Select one of the following:		
PHY 161	Physics for the Life Sciences with Laboratory I	
or PHY 191	General Physics with Laboratory I	
PHY 162	Physics for the Life Sciences with Laboratory II	
or PHY 192	General Physics with Laboratory II	
Technical Courses from Associate Degree or as a Bridge to a Bachelor's Completion.		
CSE 153	Introduction to C/C++ Programming	
or CSE 163	Introduction to Computer Concepts and Programming	
ENT 135	Computer-Aided Drafting	
ENT 151	Engineering Materials	
ENT 192	Circuit Analysis I	
ENT 193	Circuit Analysis II	
ENT 196	Electronics	
ENT 271	Mechanics I: Statics	
ENT 272	Mechanics II: Strength of Materials	
ENT 293	Digital Systems	

### Program Course Requirements (64 semester hours)

General Education Requirements	
If Associate Degree is from Miami:	
Fine Arts elective	3
Biological Science elective	3
Global Perspectives elective	3
If Associate Degree is not from Miami:	
Ohio Transfer Module	
OR	
Global Miami Plan Completion	
Engineering Technology Requirements <sup>1</sup>	
CHM 141	College Chemistry 3

CHM 144	College Chemistry Laboratory	2
ENT 301	Dynamics	3
ENT 310	Fluid Mechanics	3
ENT 311	Process Control Interface Design	3
ENT 316	Project Management	3
ENT 401	Computerized Instrumentation	3
ENT 402	Industrial Automation Lab	3
ENT 407	Modern Manufacturing Systems	3
ENT 418	Electro-Mechanical Control Systems	3
ENT 497	Senior Design Project	2
ENT 498	Senior Design Project	2
MTH 231	Elements of Discrete Mathematics	3
or MTH 222	Introduction to Linear Algebra	
MTH 251	Calculus II	4
STA 301	Applied Statistics	3
Additional Bridge Courses <sup>2</sup>		9
Intercultural Perspectives elective		3
Total Credit Hours		124

<sup>1</sup> This electro-mechanical concentration of courses provides depth in mechanical, electrical, and software integration necessary for automation.

<sup>2</sup> Students with an Associate Degree in Electrical and Computer Engineering Technology, or similar program, must take ENT 151, ENT 271, and ENT 272. Students with an Associate Degree in Mechanical Engineering Technology, or similar program, must take ENT 193, ENT 196, and ENT 293.

## Mechanical Engineering Technology Concentration

The Engineering Technology baccalaureate degree (Mechanical Engineering Technology concentration) is a completion program for graduates of associate degree programs in mechanical engineering technology. The objective of this program is to allow students who possess an associate degree in this area to complete the bachelor degree in approximately the equivalent of two years of full-time work (64-70 semester hours). This program is accredited by the Engineering Technology Accreditation Commission of ABET (111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone, 410-347-7700, <http://www.abet.org/>).

Mechanical Engineering Technology focuses on the applied aspects of mechanical and thermal-fluid analysis of the components in mechanisms, machines, products, and systems. The program requires a thorough understanding of applied mathematics and the engineering sciences. Students will develop the essential skills needed to apply experimental and empirical techniques to the study of systems and the solution of problems. This knowledge is used to research concepts, apply modeling methods, simulate and test operating conditions and their impact on the designed systems, and synthesize different elements to obtain an optimum design of a specific product.

Industry is in need of qualified mechanical engineering technologists who are familiar with measurement and test techniques in mechanical engineering, Computer Aided Engineering (CAE) including finite element analysis (FEA), computer-aided design (CAD), and

analysis and the concepts of advanced mechanical design to the creation of sophisticated machines and systems.

The mechanical engineering technology concentration provides depth of study in mechanical and manufacturing engineering technology built on a solid foundation of mathematics, physics, and computer science. The program also provides breadth through required studies in economics, humanities, social science, global perspectives, and liberal arts.

Graduates will find employment opportunities in a diverse spectrum of professional fields. Many mechanical engineering technologists work on team projects within manufacturing-related areas such as testing, analysis, design, and the development of products. Graduates may also continue their education at graduate engineering technology/engineering levels.

This program requires the completion of an Associate Degree from an accredited college or university in Mechanical Engineering Technology, or similar engineering technology program.

- The following General Education and Technical courses are expected to have been taken within the Associate Degree's minimum 60 semester hours.
- If an equivalent to any of these courses has not been completed already, they must be taken at Miami University to bridge the Associate Degree and Bachelor completion.

Code	Title	Credit Hours
<b>Foundation Requirements (60 semester hours minimum)</b>		60
ECO 201	Principles of Microeconomics	
ENG 111	Composition and Rhetoric	
EGS 215	Workplace Writing	
or ENG 313	Technical Writing	
MTH 151	Calculus I	
PHY 161	Physics for the Life Sciences with Laboratory I	
or PHY 191	General Physics with Laboratory I	
STC 135	Principles of Public Speaking	
or STC 136	Introduction to Interpersonal Communication	
<b>Technical Courses from Associate Degree</b>		
CSE 163	Introduction to Computer Concepts and Programming	
ENT 135	Computer-Aided Drafting	
ENT 137	Introduction to Engineering Technology	
ENT 151	Engineering Materials	
ENT 152	Computer-Aided Manufacturing I	
ENT 192	Circuit Analysis I	
ENT 235	Computer-Aided Design	
ENT 252	Computer-Aided Manufacturing II	
ENT 271	Mechanics I: Statics	
ENT 272	Mechanics II: Strength of Materials	
ENT 278	Mechanics III: Analysis of Machine Components	
<b>Program Course Requirements (63 semester hours)</b>		

## General Education Requirements

If Associate Degree is from Miami:		
Fine Arts elective		3
Biological Science elective		3
Global Perspectives elective		3
If Associate Degree is not from Miami:		
Ohio Transfer Module		
OR		
Global Miami Plan Completion		
Engineering Technology Required Courses		
CHM 141	College Chemistry	3
CHM 144	College Chemistry Laboratory	2
ENT 301	Dynamics	3
ENT 310	Fluid Mechanics	3
ENT 312	Thermodynamics and Heat Power	3
ENT 314	Mechanisms for Machine Design	3
ENT 316	Project Management	3
ENT 333	Computational Methods for Engineering Technology	4
ENT 355	Introduction to Finite Element Analysis	3
ENT 404	Experimentation Techniques	3
ENT 415	Heat Transfer with Applications	3
ENT 416	Topics in Mechanical Vibrations	3
ENT 497	Senior Design Project	2
ENT 498	Senior Design Project	2
MTH 231	Elements of Discrete Mathematics	3
or MTH 222	Introduction to Linear Algebra	
MTH 251	Calculus II	4
PHY 162	Physics for the Life Sciences with Laboratory II	4-5
or PHY 192	General Physics with Laboratory II	
STA 301	Applied Statistics	3
Intercultural Perspectives elective		3
Total Credit Hours		126-127

## English Studies - Bachelor of Arts

For more information contact the department of Languages, Literatures, and Writing at LLW@MiamiOH.edu or 513-785-3232.

A Bachelor of Arts with a major in English Studies prepares students to be critical and creative readers, thinkers, and writers. The major will develop students' ability to acquire, analyze, evaluate, and communicate knowledge in multiple mediums. Students develop these powers of argument and analysis by working with diverse texts and examining the impact of gender, sexuality, race, ethnicity, nationality, class, and ability on the production and reception of texts. Graduates will possess the analytical and communication skills that are critical to long-term professional success in many career fields and to contribute to their communities as responsible, informed citizens. The BA in English Studies will reflect the rich and varied nature of the discipline, allowing students to draw on courses in literature, creative writing, professional writing and rhetoric, cultural studies, and linguistics.

## Program Requirements

Code	Title	Credit Hours
<b>Core Courses</b>		
ENG 298	Introduction to Literary and Cultural Studies	3
EGS 301	Writing and the Professions	3
EGS 495	Capstone in English Studies	3
<b>Distribution Requirements</b>		
Readings in Literary History		
Select nine hours of the following: <sup>1</sup>		9
Survey Courses:		
ENG 134	Introduction to Shakespeare	
ENG 272	English Literature to 1660	
ENG 273	English Literature 1660-1900	
ENG 274	English Literature 1901 to Present	
ENG 275	American Literature to 1900	
ENG 276	American Literature 1900 to the Present	
ENG 163	Literature and Travel	
ENG 251	Introduction to European Literature	
ENG 255	Russian Literature in English Translation From Pushkin to Dostoevsky	
ENG 256	Russian Literature in English Translation: From Tolstoy to Nabokov	
Genre Courses:		
EGS 460	Issues in Literary and Cultural Studies	
EGS 320	Readings in Literatures and Cultures	
ENG 122	Popular Literature	
ENG 123	Introduction to Poetry	
ENG 124	Introduction to Fiction	
ENG 125	Introduction to Drama	
ENG 220	Literature and Film	
ENG 221	Shakespeare and Film	
ENG 231	The Short Story	
ENG 235	Classical Hollywood Cinema	
ENG 236	Experimental Film	
ENG 262	Children's Literature	
ENG 293	Contemporary American Fiction	
ENG 327	Medieval Literature	
ENG 350	Topics in Film	
ENG 372	Shakespeare's Principal Plays: Early Works	
ENG 373	Shakespeare's Principal Plays: Late Works	
ENG 386	Studies in Drama and Performance	
ENG 387	Studies in Poetry	
ENG 440	Major English and American Writers	
Studies in Writing		
Select six hours of the following: <sup>2</sup>		6
EGS 215	Workplace Writing	
EGS 319	Medical Writing	

EGS 420	Topics in Writing
ENG 171	Humanities and Technology
ENG 213	Writing for Media
ENG 222	The Rhetoric of Information and Data Visualization
ENG 223	Rhetorical Strategies for Writers
ENG 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds
ENG 225	Advanced Composition
ENG 226	Introduction to Creative Writing: Short Fiction and Poetry
ENG 238	Narrative and Digital Technology
ENG 301	History of the English Language
ENG 310	Special Topics in Rhetoric and Persuasion
ENG 320	Intermediate Creative Writing: Fiction
ENG 323	Intermediate Creative Writing: Creative Nonfiction
ENG 330	Intermediate Creative Writing: Poetry
ENG 411	Visual Rhetoric
ENG 413	Grant and Proposal Writing
ENG 420	Advanced Creative Writing: Fiction Workshop
ENG 422	Advanced Creative Writing: Screenwriting Workshop
ENG 430	Advanced Creative Writing: Poetry Workshop
Multicultural Perspectives	
Select six hours of the following: 6	
EGS 320	Readings in Literatures and Cultures
EGS 410	Readings in Multicultural Perspectives
EGS 460	Issues in Literary and Cultural Studies
ENG 169	Disability and Literature
ENG 202	Varieties of English: Dialect Diversity and Language Change
ENG 232	Women Writers
ENG 237	GLBTQ Literature
ENG 246	Native American Literature
ENG 248	Asian American Literature
ENG 254	Latino/a Literature and the Americas
ENG 269	Colonial & Postcolonial Literature
ENG 332	Early British Women Writers
ENG 336	African American Writing, 1746-1877
ENG 337	African American Writing, 1878-1945
ENG 338	African American Writing, 1946-Present
ENG 347	Postwar/Postcolonial British Literature, 1945-Present
ENG 348	Ethnic American Literatures
ENG 437	Black Feminist Theory

## Advanced English Studies

Take at least two additional 300 or 400 level EGS courses not used above.	6
Total Credit Hours	36

- 1 At least one course must be a survey course and at least one course must focus on genre.
- 2 At least one course must be at the 300 or 400 level.

## Health Communication- Bachelor of Science in Applied Communication

For information contact the Department of Interdisciplinary and Communication Studies at ICS@MiamiOH.edu or 513-785-3055.

Health communication is the study and practice of using “communication strategies to inform and influence individual health related decisions that enhance health” (CDC). Ultimately, the goal of health communication is to improve quality of life and public health. Understanding the role of communication in influencing individual health decisions and overall health outcomes is a crucial skill that prepares you for a variety of careers. As a health communication graduate, you could pursue a career as a community health campaign worker, patient advocate, peer health promoter, public relations and health communication specialist within hospitals and other medical organizations, or you could pursue graduate study in communication, public health, or related disciplines. Grounded in an integrative understanding of the relationship between theory and praxis, the program emphasizes human identity and diversity, quantitative and qualitative research competency, 21st century communication skills, and public advocacy. In addition to core courses in Applied Communication, students will take courses in English, Statistics, and Nursing with the option to customize curricular options.

### Program Requirements

Code	Title	Credit Hours
<b>Core Requirements</b>		
APC 201	Introduction to Health and Risk Communication	3
APC 363	Advanced Methods in Applied Communication	3
APC 401	Applied Communication Capstone	3
ENG 313	Technical Writing	3
NSG 321	U. S. Health Care System and Culture	3
PHL 131	Introduction to Ethics	3
STA 261	Statistics	4
STC 262	Empirical Research Methods	3
<b>Introductory Communication Course</b>		
Select one of the following: 3		
STC 136	Introduction to Interpersonal Communication	
STC 239	Theories of Communication	
STC 259	Introduction to Strategic Communication and Public Relations	
<b>Additional Writing or Technological Course</b>		
Select one of the following: 3		

CIT 273	Web Application Development
CIT 431	Health Information Technology I
CMR 284	Emerging Digital Technologies for Business
CMR 441	Social Media and Career Development
ENG 223	Rhetorical Strategies for Writers
ENG/IMS 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds
ENG 413	Grant and Proposal Writing
JRN 201	Reporting and News Writing I

**Intercultural Competence Course**

Select one of the following:	3
ATH 175	Peoples of the World
ATH 185	Cultural Diversity in the U.S.
CIT 448	Global and Strategic Issues in Information Technology
CRE 151	Introduction to Critical Race and Ethnic Studies
IDS 159	Strength Through Cultural Diversity
STC 436	Intercultural Communication

**Health Electives**

Select one of the following:	3
CMR 224	Medical Terminology
FSW/SOC/WGS 221	Sexualities
PHL 375	Medical Ethics
SOC 357	Medical Sociology
SOC 358	The Sociology of Mental Disorders
WGS/KNH 243	Women's Health Care: Problems and Practices

**Advanced Electives**

Select one of the following:	3
APC 340	Internship
APC 428	Communication in Conflict Management
APC 438	Political Communication
MAC 447	Mass Media Criticism
APC 336	Advanced Interpersonal Communication
STC 339	Introduction to Organizational Communication

Total Credit Hours	40
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## Health Information Technology- Bachelor of Science in Information Technology

For information, contact the CIT Department Office on the Hamilton campus at 301 Mosler Hall, 513-785-3132.

The Bachelor of Science in Information Technology with a major in Health Information Technology addresses the technology and processes used by health care providers and related organizations. The program includes instruction in the technology used to

acquire and direct the flow of information between the clinical, administrative, and financial systems in the healthcare industry as well as general principles of information technology. Students who complete the program will obtain a strong background in technology including database, problem-solving, systems analysis, and project management skills as well as a foundation in the culture of the healthcare system. This program prepares students for graduate studies and/or jobs that integrate healthcare and technology in the evolving U.S. healthcare system.

**Curriculum Requirements**

Students must earn a minimum cumulative GPA of 2.00 for all program requirements.

## Program Requirements

(124 Semester hours)

Code	Title	Credit Hours
<b>Foundation Requirements</b>		
Select the following:		
BIO 232	Human Heredity	3
BIO 325	Pathophysiology	3-4
or BIO 342	Genetics	
CIT 168	Information Technology Tools and Techniques for Organizations	4
CIT 201	Advanced Spreadsheets and Analytics	3
CIT 214	Database Design and Development	3
CIT 268	Introduction to Human-Computer Interaction	3
CIT 276	IT Systems Design and Lifecycle Management	3
CIT 338	Business Intelligence Tools	3
CIT 348	Information Management and Retrieval	3
CIT 357	Current Practices in Information Technology	3
CIT 358	Information Technology Assurance and Security	3
CIT 376	IT for Organizations	3
CIT 431	Health Information Technology I	3
CIT 432	Health Information Technology II	3
CMR 224	Medical Terminology	3
ENG 112	Composition and Literature	3
or EGS 215	Workplace Writing	
MTH 125	Precalculus	5
NSG 321	U. S. Health Care System and Culture	3
STA 261	Statistics	3-4
or STA 301	Applied Statistics	
or ISA 205	Business Statistics	
STC 135	Principles of Public Speaking	3
or STC 136	Introduction to Interpersonal Communication	
<b>Technical Electives</b>		
Select 6 hours of the following: <sup>1</sup>		
CIT 205	Agile Launchpad I	6

CIT 253	Contemporary Programming Languages
CIT 263	Advanced Topics in Visual BASIC
CIT 270	Special Topics in Computer and Information Technology
CIT 273	Web Application Development
CIT 281	Enterprise Network Infrastructure
CIT 284	Enterprise Server Installation and Configuration
CIT 286	Designing and Deploying Secure Enterprise Networks
CSE 153	Introduction to C/C++ Programming
CSE 174	Fundamentals of Programming and Problem Solving
CSE 271	Object-Oriented Programming
CSE 283	Data Communication and Networks

### Global Miami Plan Requirements

Select the following:

Global Miami Plan English Composition (MPF I):

ENG 111	Composition and Rhetoric	3
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Global Miami Plan Fine Arts (MPF IIA) Elective	3
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Global Miami Plan Humanities (MPF IIB) Elective	3
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Global Miami Plan Social Science (MPF IIC):

CIT 262	Technology, Ethics, and Global Society	3
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Global Miami Plan Global Perspectives (MPF III) Elective <sup>2</sup>	3
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Global Miami Plan Global Perspective (MPF III):

CIT 448	Global and Strategic Issues in Information Technology	3
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Global Miami Plan Biology (MPF IVA):

BIO 161	Principles of Human Physiology	4
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Global Miami Plan Natural Sciences (MPF IVB) Elective	3
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Global Miami Plan Math, Formal Reasoning, Technology (MPF V):

CSE 163	Introduction to Computer Concepts and Programming	3
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Global Miami Plan Intercultural Perspectives Elective	3
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Global Miami Plan Experiential Learning

Global Miami Plan Advanced Writing:

ENG 313	Technical Writing	3
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Global Miami Plan Thematic Sequence Elective	9
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Global Miami Plan Capstone:

CIT 468	Health Information Technology Project Lifecycle	4
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Select 6-8 hours of free electives to complete 124 hours	8
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Total Credit Hours	124-126
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<sup>1</sup> May not select courses used to meet other program requirements. Other technical electives must be pre-approved.

<sup>2</sup> Or complete the Study Abroad option.

## Information Technology- Bachelor of Science in Information Technology

For information, contact the CIT Department Office on the Hamilton campus at 301 Mosler Hall, 513-785-3132.

The Bachelor of Science in Information Technology with a major in Information Technology (BSIT) is a broad program of study that prepares students to support the computing infrastructures and needs of individuals and organizations across a variety of domains. Information Technology professionals apply their skills and knowledge to provide technological solutions for those using systems to produce, store, retrieve, analyze and send information. The BSIT program provides a broad foundation of knowledge in IT problem solving, web applications, ethics, databases, human computer interaction, and either networking or software development. Following completion of foundation courses, students select an area of specialization of their choice. The program culminates with a two-course capstone sequence where students will design and complete a significant IT project in their area of specialization.

### Curriculum Requirements

Students must earn a minimum cumulative GPA of 2.00 for all program requirements.

## Program Requirements

(124 semester hours)

Code	Title	Credit Hours
<b>Foundation Requirements</b>		
Select the following:		
CIT 167	Information Technology People and Practices	2
CIT 168	Information Technology Tools and Techniques for Organizations	4
CIT 214	Database Design and Development	3
CIT 268	Introduction to Human-Computer Interaction	3
CIT 273	Web Application Development	3
CIT 276	IT Systems Design and Lifecycle Management	3
CIT 348	Information Management and Retrieval	3
CIT 357	Current Practices in Information Technology	3
CIT 358	Information Technology Assurance and Security	3
CIT 376	IT for Organizations	3
ENG 112	Composition and Literature	3
or EGS 215	Workplace Writing	
MTH 125	Precalculus	5
STA 261	Statistics	3-4
or STA 301	Applied Statistics	
or ISA 205	Business Statistics	

STC 135	Principles of Public Speaking	3
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**Foundation Concentration**

Select one group:		9
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## Group A

CIT 281	Enterprise Network Infrastructure	
CIT 284	Enterprise Server Installation and Configuration	
CIT 286	Designing and Deploying Secure Enterprise Networks	

## Group B

CIT 263	Advanced Topics in Visual BASIC	
or CIT 253	Contemporary Programming Languages	
CSE 174	Fundamentals of Programming and Problem Solving	
CSE 271	Object-Oriented Programming	

## Group C

CIT 205	Agile Launchpad I	
CIT 306	Agile: Business Value Analysis	
CIT 307	Agile: ICP-Project Management	

## Group D

Self-Design, petition required		
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**Technical Electives**

Select 6 hours of the following: <sup>1</sup>		6
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CIT 201	Advanced Spreadsheets and Analytics	
CIT 205	Agile Launchpad I	
CIT 253	Contemporary Programming Languages	
CIT 263	Advanced Topics in Visual BASIC	
CIT 270	Special Topics in Computer and Information Technology	
CIT 281	Enterprise Network Infrastructure	
CIT 284	Enterprise Server Installation and Configuration	
CIT 286	Designing and Deploying Secure Enterprise Networks	
CIT 306	Agile: Business Value Analysis	
CIT 307	Agile: ICP-Project Management	
CIT 338	Business Intelligence Tools	
CSE 153	Introduction to C/C++ Programming	
CSE 174	Fundamentals of Programming and Problem Solving	
CSE 253	Programming Languages	
CSE 271	Object-Oriented Programming	
CSE 283	Data Communication and Networks	

**Global Miami Plan Requirements**

Select the following:		
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Global Miami Plan English Composition (MPF I)		
ENG 111	Composition and Rhetoric	3
Global Miami Plan Fine Arts (MPF IIA) Elective		3
Global Miami Plan Humanities (MPF IIB) Elective		3
Global Miami Plan Social Science (MPF IIC)		
CIT 262	Technology, Ethics, and Global Society	3
Global Miami Plan Global Perspectives (MPF III) Elective <sup>2</sup>		3

Global Miami Plan Global Perspectives (MPF III)		
CIT 448	Global and Strategic Issues in Information Technology	3
Global Miami Plan Biological Science (MPF IVA) Elective		3
Global Miami Plan Physical Science (MPF IVB) Elective		3
Global Miami Plan Natural Science Lab (MPF IV) - if needed		1
Global Miami Plan Math, Formal Reasoning, Technology (MPF V)		
CSE 163	Introduction to Computer Concepts and Programming	3
Global Miami Plan Intercultural Perspectives Elective		3
Global Miami Plan Experiential Learning		
CIT 457	IT Project Lifecycle I: Requirements and Design	3
Global Miami Plan Advanced Writing		
ENG 313	Technical Writing	3
Global Miami Plan Thematic Sequence Elective		9
Global Miami Plan Capstone		
CIT 458	IT Project Lifecycle II: Implementation and Deployment	4
Select 14-15 hours of free electives to complete 124 hours		15
<b>Total Credit Hours</b>		<b>124-125</b>

<sup>1</sup> May not select courses used to meet other program requirements. Other technical electives must be pre-approved.

<sup>2</sup> Or complete the Study Abroad option.

## Liberal Studies- Bachelor of Arts/Bachelor of Science

For information, contact the Department of Interdisciplinary and Communication Studies at ICS@MiamiOH.edu or 513-785-3055.

The Bachelor of Arts/Bachelor of Science in Liberal Studies program extends students' breadth of learning across multiple disciplines and develops their competencies in critical thinking, written and oral communication, problem solving, and collaboration. Through the selection of two cognate areas and the completion of two advanced Liberal Studies courses, students marshal their breadth of learning and competencies to address real-world challenges.

### Program Requirements

(42 semester hours)

Liberal Studies majors will choose two Cognate areas. The Cognate that the student chooses for Cognate 1, which has a greater number of hours than Cognate 2, will determine whether the student pursues a Bachelor of Arts or Bachelor of Science degree.

#### Cognate 1

(21 credit hours)

Take a minimum of 21 credit hours in at least two separate disciplines (with different subject codes) within the cognate.

At least 12 credit hours must be at the 300-level or above.

Courses cannot double count in Cognate 1 and 2.

Course cannot double count in Cognates and the Miami Plan.

Some service courses and physical education courses do not count toward Cognates.

## Cognate 2

(15 credit hours)

Take a minimum of 15 credit hours in at least two separate disciplines (with different subject codes) within the cognate.

At least 6 credit hours must be at the 300-level or above.

Courses cannot double count in Cognate 1 and 2.

Course cannot double count in Cognates and the Miami Plan.

Some service courses and physical education courses do not count toward Cognates.

## Bachelor of Arts

Students completing one of the following primary cognates will earn a Bachelor of Arts:

- **Creative Arts**
- **Humanities**
- **Natural Sciences and Mathematics**
- **Social sciences**

Code	Title	Credit Hours
<b>Required Courses</b>		
LST 302	Principles of Liberal Studies	3
LST 402	Capstone in Liberal Studies	3
Total Credit Hours		6

## Bachelor of Science

Students completing one of the following primary cognates will earn a Bachelor of Science:

- **Business**
- **Engineering and Computing**
- **Education, Health and Society**
- **Professional Studies and Applied Sciences**

Code	Title	Credit Hours
<b>Required Courses</b>		
LST 302	Principles of Liberal Studies	3
LST 402	Capstone in Liberal Studies	3
Total Credit Hours		6

# Nonprofit and Community Studies- Bachelor of Science in Nonprofit and Community Studies

For more information about Nonprofit and Community Studies, email JCS@MiamiOH.edu (communitystudies@MiamiOH.edu) or call 513-785-7702.

The program in Nonprofit and Community Studies offers professional administrative, analytical, communication, and leadership training to prepare students to work in nonprofit organizations, service agencies, philanthropic and development organizations, and local government. During their practicum placements with local organizations, students practice their skills and learn new ones in multiple learning environments.

## Program Requirements

Code	Title	Credit Hours
<b>Core Courses</b>		
NCS 201	Theories of Civic Leadership and Democracy	3
NCS 202	Introduction to Nonprofits and NGOs	3
NCS 301	Community-Based Practicum I	3
NCS 302	Community-Based Practicum II	3
NCS 401	Capstone in Nonprofit and Community Studies	3
ENG 413	Grant and Proposal Writing	3
POL 268	State and Local Government and Politics	3
<b>Organizational Leadership</b>		
Select six hours of the following: <sup>1</sup>		6
CMR 105	Introduction to Marketing	
CMR 111	Introduction to Management I	
CMR 112	Introduction to Human Resources Management	
CMR 301	Personal Organizational Skills	
CMR 302	Financial Information for Managers	
CMR 401	Leadership Decision Skills	
<b>Issues of Communities, Families, Societies, and Inequalities</b>		
Select two courses from at least two departments: <sup>2</sup>		6-7
ATH 301	Intercultural Relations	
ATH 325	Identity, Race, Gender, Class	
ATH 331	Social Anthropology	
ATH 411	Applied Anthropology	
CJS/BWS 401	Race and Criminal Justice	
ECO 131	Economic Perspectives on Inequality in America	
EDL 204	Sociocultural Studies in Education	
FSW/KNH 207	Serving and Supporting Children, Youth, and Families I	
GEO 201	Geography of Urban Diversity	

SOC/FSW 362	Family Poverty
SOC/FSW 363	Sociology of Families
SOC/BWS 348	Race and Ethnic Relations
SOC 372	Social Stratification
WGS 201	Introduction to Women's Studies

### Community and Community-Based Advocacy and Development

Select two courses from two departments: <sup>3</sup>	6
CJS 312	Community Corrections
CJS 313	Alternatives to Corrections
GEO 441	Geographic Information Systems
SOC 258	Self and Society
POL 363	Administrative Law
STC 336	
STC 339	Introduction to Organizational Communication
STC 359	Strategic Communication Planning

Total Credit Hours 39-40

- 1 Only one course can be taken at the 100 level.
- 2 The second course cannot be taken in either of the departments from a cross-listed course.
- 3 At least one of the two courses must be a Communications course.

## Nursing- Bachelor of Science in Nursing

There are two options for completing a Bachelor of Science in Nursing at Miami University: the 4-year, traditional Bachelor of Science or the RN-BSN completion program. Both baccalaureate degree programs in nursing at Miami University are accredited by the Commission on Collegiate Nursing Education (CCNE), 655 K Street, NW, Suite 750, Washington, DC 20001, 202-887-6791.

For more information, contact the Department of Nursing at 513-785-7752 or email [nsginfo@miamioh.edu](mailto:nsginfo@miamioh.edu).

## Nursing- Bachelor of Science in Nursing (4 year)

This program provides a balance of liberal arts and professional nursing courses. Emphasis is on the nursing process as it pertains to health promotion and health restoration for clients, families, and populations in communities and in acute care settings. Students receive an introduction to clinicals at the end of the sophomore year and participate in clinicals two days per week during the junior and senior years. Once admitted, BSN students are expected to progress through the nursing curriculum in an uninterrupted schedule.

### Special Admission Requirements for Miami Oxford Nursing

Miami University offers a competitive, selective direct admit program for Nursing on the Oxford campus to qualified high school applicants who seek a residential college experience. Applicants must have a composite ACT of 23 or an SAT of 1060 and a cumulative G.P.A. of 3.00 to be eligible for consideration. Students must apply to Miami University using the CommonApp and must select "Nursing" as the

intended major by the established priority consideration deadline. Meeting minimum qualifications does not guarantee acceptance to the nursing program. It is not possible for current Miami students to change their major to nursing on the Oxford campus. Students must provide their own transportation to clinicals during the junior and senior years.

### Program Progression

In order to progress to sophomore year, students must earn a cumulative G.P.A. of 2.70 and must earn a grade of "C" or higher in all of the following courses: ENG 111; BIO 171, BIO 172; CHM 131; and MBI 111/123.

One grade below "C" in any program requirement could delay graduation by a full year.

Two grades below "C" in program requirements, even if courses are taken before admission and even if courses are repeated for a higher grade, will result in ineligibility or dismissal.

Progression to junior year requires completion of all sophomore level program requirements including nursing courses, PSY 111, BIO 325, and MBI 361 with a "C" or higher and a 2.0 cumulative G.P.A.

Progression to senior year requires completion of all junior level program requirements with a "C" or higher and a 2.0 G.P.A.

### Special Admission Requirements for Miami Regionals Nursing

The nursing program at Miami Regionals offers a competitive, selective program to qualified high school applicants and to qualified college-level students. Pre-requisites may be taken at any Miami location. However, the nursing curriculum is offered only on the Hamilton campus. To be considered for admission, students must meet the following minimum criteria:

#### High School Students

High school applicants must have a composite ACT of 23 or an SAT of 1060 and a cumulative GPA of 3.00. Applications are accepted online via the Regionals BSN Application through December 1 each year. Meeting minimum qualifications does not guarantee acceptance to the nursing program.

### Program Progression

In order to progress to sophomore year, students must earn a cumulative G.P.A. of 2.70 and must earn a grade of "C" or higher in all of the following courses: ENG 111; BIO 171, BIO 172; CHM 131; and MBI 161.

One grade below "C" in any program requirement could delay graduation by a full year.

Two grades below "C" in program requirements, even if courses are taken before admission and even if courses are repeated for a higher grade, will result in ineligibility or dismissal.

Progression to junior year requires completion of all sophomore level program requirements including nursing courses, PSY 111, BIO 325, and MBI 361 with a "C" or higher and a 2.0 cumulative G.P.A.

Progression to senior year requires completion of all junior level program requirements with a "C" or higher and a 2.0 G.P.A.

### Current Miami Students

Current Miami students must submit a separate nursing application online via the Regionals BSN Application. To apply, students must have completed 12 semester hours (100 level or higher) with a cumulative GPA of 2.70 and a grade of "C" or higher in two of the following courses: BIO 171, BIO 172; CHM 131; or MBI 161.

### Program Progression

If accepted, students must earn a cumulative G.P.A. of 2.70 and must have completed all four sciences: BIO 171, BIO 172; CHM 131; and MBI 161 as well as ENG 111 with a "C" or higher to progress to the sophomore year.

One grade below "C" in any program requirement could delay graduation by a full year.

Two grades below "C" in program requirements, even if courses are taken before admission and even if courses are repeated for a higher grade, will result in ineligibility or dismissal.

Progression to junior year requires completion of all sophomore level program requirements including nursing courses, PSY 111, BIO 325, and MBI 361 with a "C" or higher and a 2.0 cumulative G.P.A.

Progression to senior year requires completion of all junior level program requirements with a "C" or higher and a 2.0 G.P.A.

### Transfer Students

In addition to applying to Miami Regionals, a separate nursing application must be submitted online via the Regionals BSN Application by December 1. Students must have a grade of "C" or higher in two of the following courses: BIO 171, BIO 172; CHM 131; or MBI 161 to be eligible to apply. Students must have a grade of "C" or higher from an accredited baccalaureate nursing program in comparable content for transfer of nursing credit to be considered. Decisions about transfer credit for nursing courses and military credits are made on a case by case basis. Transcripts must be received by January 1 to complete the application. Meeting minimum qualifications does not guarantee acceptance into the nursing program. If accepted, transfer students must meet with a nursing adviser to have potential transfer credits evaluated.

### Program Progression

If accepted, students must earn a cumulative G.P.A. of 2.70 and must have completed all four sciences: BIO 171, BIO 172; CHM 131; and MBI 161 as well as ENG 111 with a "C" or higher to progress to the sophomore year.

One grade below "C" in any program requirement could delay graduation by a full year.

Two grades below "C" in program requirements, even if courses are taken before admission and even if courses are repeated for a higher grade, will result in ineligibility or dismissal.

Progression to junior year requires completion of all sophomore level program requirements including nursing courses, PSY 111, BIO 325, and MBI 361 with a "C" or higher and a 2.0 cumulative G.P.A.

Progression to senior year requires completion of all junior level program requirements with a "C" or higher and a 2.0 G.P.A.

**Note:** A felony conviction may prohibit participation in required clinicals, may impact a student's ability to progress through required courses, and may therefore lead to dismissal from the nursing

program. Students with a felony conviction may not be permitted to take the National Council Licensure Examination.

## Program Requirements

(124 semester hours)

Code	Title	Credit Hours
<b>Core Requirements</b>		
BIO 171	Human Anatomy and Physiology	4
BIO 172	Human Anatomy and Physiology	4
BIO 325	Pathophysiology	4
ENG 111	Composition and Rhetoric	3
MBI 361	Epidemiology	3
PSY 111	Introduction to Psychology	3
Select one of the following:		4-5
CHM 131	Chemistry of Life Processes	
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	
Select one of the following:		4
MBI 161	Elementary Medical Microbiology	
MBI 121 & MBI 123	The Microbial World and Experimenting with Microbes	
MBI 111 & MBI 123	Microorganisms and Human Disease and Experimenting with Microbes	
<b>Required Major Courses</b>		
NSG 251	Therapeutic Communication in Nursing	3
NSG 252	Foundations of Professional Nursing	3
NSG 261	Health and Physical Assessment	3
NSG 262	Fundamentals of Professional Nursing Practice	4
NSG 263	Community Health Nursing	3
NSG 349	Introduction to Principles of Pharmacology in Nursing Practice	3
NSG 351	Nursing of Childbearing Family	3
NSG 352	Childbearing Family Clinical	2
NSG 353	Nursing Care of Adult Clients with Health Alterations I	3
NSG 354	Nursing Care of Adult Clients with Health Alterations I-Clinical	3
NSG 361	Nursing Care of Adult Clients with Health Alterations II	3
NSG 362	Nursing Care of Adult Clients with Health Alterations II-Clinical	3
NSG 363	Nursing Care of Children	3
NSG 364	Nursing Care of Children-Clinical	2
NSG 365	Nursing Research	2-3
NSG 402	The Professional Nurse Leader	3
NSG 432	Population Focused Nursing Care-Clinical	2
NSG 435	Challenges in Health Care Delivery	3
NSG 451	Nursing Care of Clients Experiencing Mental Health Disorders and Their Families	3

NSG 452	Nursing Care of Clients Experiencing Mental Health Disorders and Their Families-Clinical	3
NSG 461	Nursing Care of Older Adults	3
NSG 463	Nursing Care of Clients Experiencing Multi-System Health Alterations	3
NSG 464	Nursing Care of Clients Experiencing Multi-System Health Alterations-Clinical	5
NSG 465	Nursing Senior Seminar	2
NSG Elective		3
Total Credit Hours		102-104

## Nursing- Bachelor of Science in Nursing (RN-BSN)

This program is designed for registered nurses with either a diploma or an associate's degree in nursing. The program emphasizes community health, leadership, and complex health problems. Graduates are prepared for leadership and management roles and graduate study. The program is available full-time or part-time. Nursing courses for this program are all online.

### Special Admission Requirements for the RN-BSN Program

Admission to this program is selective. After admission to the university, applicants need to submit a separate online Regionals RN-BSN Application. To be considered for admission to the program, the following minimum criteria must be met:

1. be a registered nurse with an unencumbered license;
2. have at least a 2.00 G.P.A.
3. Associate Degree Nursing Courses (28 hours)

\*28 credit hours must be from an NLN accredited AD nursing program. Graduates of non-accredited AD programs, proprietary programs and diploma programs may meet this requirement by earning a grade of "C" or higher in NSG 301, NSG 311, and NSG 313.

### Transfer Credit

Transfer credit from other colleges and potential military credit require departmental evaluation. Decisions regarding transfer credits are made on a case by case basis.

### Program Progression

Once admitted to the RN-BSN program, two grades below "C" in a program requirement, even if courses are repeated, will result in dismissal.

## Program Requirements

(124 semester hours)

### Prerequisites for Admission to the program

Code	Title	Credit Hours
Associate Degree Nursing Courses		28
Total Credit Hours		28

## RN-BSN Curriculum

Code	Title	Credit Hours
<b>Core Requirements</b>		
BIO 232	Human Heredity	3-4
or BIO 325	Pathophysiology	
MBI 361	Epidemiology	3
<b>Required Major Courses</b>		
NSG 301	Theory-Based Nursing Practice	3
NSG 311	Health Promotion Across the Lifespan	3
NSG 313	Assessment of the Well Individual	2
NSG 317	Teaching Strategies in Health Care	3
NSG 331	Introduction to Nursing Research	3
NSG 402	The Professional Nurse Leader	3
NSG 418	Perspectives of Chronic Disease	3
NSG 430	Community Health Nursing	4
NSG 435	Challenges in Health Care Delivery	3
NSG elective		3
Total Credit Hours		36-37

## Psychological Science- Bachelor of Arts

Psychological Science uses empirical evidence to understand how and why people act, think, feel, and behave. As humans are complex beings, psychological science evaluates behavior and mental function across multiple domains to include biological, behavioral, cognitive, cultural, social, individual, and developmental influences. Psychological Science majors can expect to gain an in-depth understanding of how to design, conduct, and interpret empirical research as they are developing a broad understanding of current knowledge regarding the contributions of each of these areas of human functioning. Upper-division courses allow majors to gain applied knowledge across multiple subfields of interest. This broad training prepares graduates well for employment opportunities in human resources, public relations, consulting, career counseling, marketing, management, mental health, substance abuse, child development, gerontology, and more, as well as for advanced study in fields of psychology, sociology, education, medicine, law, and more.

## Program Requirements

Code	Title	Credit Hours
Select the following:		
PSY 111	Introduction to Psychology	3
or EDP 101	Psychology Of The Learner	
PSY 112	Foundational Experiences in Psychology	1
STA 261	Statistics	4
PSY 293	Introduction to Psychological Statistics	4
PSY 294	Writing and Research Methods in Psychology	4
At least one course from each of the following groups:		15
<b>Biopsychology:</b>		
PSY 251	Introduction to Biopsychology	
PSS 312	Drugs and Behavior	

## Cognitive:

PSY 271	Survey of Perception, Action, and Cognition
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PSS 315	Learning, Memory, and Behavior
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## Developmental:

PSY 231	Developmental Psychology
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PSY 331	Infant Development
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PSY 332	Child Development
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## Individual:

PSY 241	Personality
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PSY 242	Abnormal Psychology
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PSY 345	Childhood Psychopathology and Developmental Disabilities
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## Social:

PSY 210	Psychology Across Cultures
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PSY 221	Social Psychology
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Select at least two psychology courses 300-level or above: 6

PSS 301	Introduction to Industrial and Organizational Psychology
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PSS 312	Drugs and Behavior
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PSS 315	Learning, Memory, and Behavior
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PSS 350	Introduction to Counseling Methods
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PSY 331	Infant Development
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PSY 332	Child Development
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PSY 345	Childhood Psychopathology and Developmental Disabilities
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## Capstone

PSS 401	Capstone in Psychological Science (required)	3
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Select one psychology course 400-level or above: 3

PSS 420	Advanced Topics in Psychological Science
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PSY 485	History and Systems of Psychology
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Total Credit Hours 43

**Note:** Additional requirements for the Psychological Science degree include - Foreign language proficiency through the 102 level and an additional Global course beyond the Miami Plan requirements. At least 9 upper-division credit hours must be taken in PSS.

## Small Business Management- Bachelor of Science in Commerce

For information, contact the Department of Commerce at 106 University Hall, Hamilton Campus, 513-785-7706.

Commerce is the broad system of organizations producing goods and services for their markets to satisfy their stakeholders. The Bachelor of Science in Commerce and the Small Business Management major draws courses from a variety of disciplines to prepare students to work in small businesses and other organizations in managerial and staff capacities.

## Program Requirements

(53 semester hours)

Code	Title	Credit Hours
<b>Core Courses</b>		
CMR 101	Introduction to Accounting I	3
CMR 105	Introduction to Marketing	3
CMR 108	Introduction to Business Law	3
CMR 111	Introduction to Management I	3
CMR 207	Management Planning and Control	3
CMR 211	Economics for Commerce	3
CMR 244	Introduction to Global Business	3
CMR 282	Computer-Based Business Analysis	3
CMR 302	Financial Information for Managers	3
CMR 495	Strategic Management for Commerce	3
STA 261	Statistics	4
<b>Small Business Management Courses</b>		
CMR 242	Management of Small Business Operations	3
CMR 263	Sales and Promotions	3
CMR 301	Personal Organizational Skills	3
CMR 361	Marketing for the Small Business	3
CMR 401	Leadership Decision Skills	4
CMR 442	Current Issues and Innovation in Small Business	3
Total Credit Hours		53

## Commerce Minor

For information, contact the Department of Commerce, 106 University Hall, Hamilton Campus, Commerce@MiamiOH.edu, 513-785-7706.

The Commerce minor provides students a broad overview of the operations of businesses and organizations with courses providing foundational content in finance, management and marketing as well as the opportunity to select additional content.

## Program Requirements

Code	Title	Credit Hours
Required courses:		
CMR 105	Introduction to Marketing	3
CMR 111	Introduction to Management I	3
CMR 302	Financial Information for Managers	3
Select three of the following:		
CMR 101	Introduction to Accounting I	3
CMR 108	Introduction to Business Law	3
CMR 207	Management Planning and Control	3
CMR 211	Economics for Commerce	3
CMR 244	Introduction to Global Business	3
CMR 282	Computer-Based Business Analysis	3

CMR 495	Strategic Management for Commerce
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Total Credit Hours	18
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## Criminal Justice Minor

For more information, email [JCS@MiamiOH.edu](mailto:JCS@MiamiOH.edu) ([criminaljustice@MiamiOH.edu](mailto:criminaljustice@MiamiOH.edu)) or call 513-785-7702.

The minor in criminal justice provides students with an introduction to the major systems and institutions that are involved in the investigation, prosecution, adjudication, and punishment of crimes and delinquency, as well as an introduction to the fundamental rights that apply in constitutional law.

A minimum of 2.00 GPA must be earned in all the courses completed for the minor. Open to all majors except criminal justice and forensic investigation.

### Program Requirements

Code	Title	Credit Hours
CJS 101	Introduction to the Criminal Justice Studies	3
CJS 125	Law and the Courts	3
CJS 211	Policing in America	3
CJS 231	Law and Individual Rights	3
Elective criminal justice coursework		6
Total Credit Hours		18

## Data Intelligence through Information Technology Minor

For information, contact the CIT Department Office on the Hamilton campus at 301 Mosler Hall, 513-785-3132.

How to store, manage, and use data is a crucial component in almost any current domain or industry. In addition, understanding how data is transformed into information enriches the skills that a student can provide to any organization. This minor will provide students with the opportunity to use tools and techniques across all parts of the data lifecycle, including storage, management, analysis, use, and presentation.

### Program Requirements

Code	Title	Credit Hours
CIT 168	Information Technology Tools and Techniques for Organizations	4
CIT 201	Advanced Spreadsheets and Analytics	3
CIT 214	Database Design and Development	3
CIT 338	Business Intelligence Tools	3
CIT 348	Information Management and Retrieval	3
STA 261	Statistics	4
Total Credit Hours		20

## English Studies Minor

For more information contact the department of Languages, Literatures, and Writing at [LLW@MiamiOH.edu](mailto:LLW@MiamiOH.edu) or 513-785-3232.

The English Studies minor prepares students to be critical and creative readers, thinkers, and writers. The minor can help students strengthen their degree and enhance their career opportunities.

*Note:* The EGS minor is open to all majors except English Studies, English: Creative Writing, Professional Writing, English: Literature, and Linguistics.

### Program Requirements

Code	Title	Credit Hours
Core course		3
EGS 301	Writing and the Professions	3
Choose two of the following:		6
EGS 215	Workplace Writing	
EGS 319	Medical Writing	
EGS 320	Readings in Literatures and Cultures	
EGS 390	Special Topics in English Studies	
EGS 410	Readings in Multicultural Perspectives	
EGS 420	Topics in Writing	
EGS 460	Issues in Literary and Cultural Studies	
EGS 495	Capstone in English Studies	
Choose three additional ENG or EGS classes (beyond ENG 111):		9
Total Credit Hours		21

## Forensic Investigation Minor

For more information, email [JCS@MiamiOH.edu](mailto:JCS@MiamiOH.edu) ([forensicinvestigation@MiamiOH.edu](mailto:forensicinvestigation@MiamiOH.edu)) or call 513-785-7702.

The minor in forensic investigation provides students with an introduction to the field of forensics, including forensic chemistry, science, evidence, law and investigation. Students will focus on the integration and relationship between crime, forensic analysis, constitutional rights, and law enforcement investigation and expert testimony.

A minimum of a 2.00 GPA must be earned in all the courses completed for the minor. Open to all majors except criminal justice, forensic science and forensic investigation.

### Program Requirements

Code	Title	Credit Hours
CJS 101	Introduction to the Criminal Justice Studies	3
or CJS 211	Policing in America	
CHM 121	Introduction to Forensic Chemistry	4
CJS 231	Law and Individual Rights	3
CJS 235	Forensic Science Survey	3
CJS 272	Forensic and Crime Scene Evidence	3

CJS 411	Evidence Law and Expert Testimony	3
Total Credit Hours		19

## Psychological Science Minor

Psychological Science minors can expect to use empirical evidence to understand how and why people act, think, feel, and behave. The PSS minor will gain an in-depth understanding of how to design, conduct, and interpret empirical research as they are developing a broad understanding of current knowledge regarding the contributions of each of these areas of human functioning.

*Note:* The PSS minor is open to all majors except Psychological Science and Psychology.

### Program Requirements

Code	Title	Credit Hours
<b>Required courses:</b>		
PSY 111 or EDP 101	Introduction to Psychology Psychology Of The Learner	3
PSY 112	Foundational Experiences in Psychology	1
PSS 211	Career Development in Psychology & Related Social Sciences	2
STA 261	Statistics	4
ASO 301	Applied Social Research Methods	4
<b>Select TWO courses from the following:</b>		6
PSY 210	Psychology Across Cultures	
PSY 221	Social Psychology	
PSY 231	Developmental Psychology	
PSY 241	Personality	
PSY 242	Abnormal Psychology	
PSY 251	Introduction to Biopsychology	
PSY 271	Survey of Perception, Action, and Cognition	
<b>Select ONE course from the following:</b>		3
PSS 301	Introduction to Industrial and Organizational Psychology	
PSS 312	Drugs and Behavior	
PSS 315	Learning, Memory, and Behavior	
PSS 350	Introduction to Counseling Methods	
Total Credit Hours		23

## Computer and Information Technology- Associate in Applied Science

For more information, contact the CIT Department Office on the Hamilton campus at 301 Mosler Hall, 513-785-3132.

Computer and Information Technology focuses on the development and support of computing and networked systems. Computing knowledge and skills are vital for professional success in any field and there will always be a need for technically skilled professionals. The Computer and Information Technology Associate Degree program

provides two concentrations essential to contemporary computing, both leading to an Associate Degree in Applied Science with a major in Computer and Information Technology.

The Networking concentration prepares students to design, install, troubleshoot, and support secure computer networks. The Software Development and Support concentration prepares students to design and create software in a variety of current programming languages and to support application programs and systems. Both concentrations provide a foundation of critical analysis, problem solving, and technical and interpersonal communication skills, all of which are critical for success in any technical position.

### Curriculum Requirement

Students must earn a minimum cumulative GPA of 2.00 for all program requirements and pass MTH 125.

### Program Requirements

(62 Semester hours)

Code	Title	Credit Hours
<b>Foundation Requirements</b>		
Select the following:		
CIT 167	Information Technology People and Practices	2
CIT 168	Information Technology Tools and Techniques for Organizations	4
CIT 214	Database Design and Development	3
CIT 262	Technology, Ethics, and Global Society	3
CIT 268	Introduction to Human-Computer Interaction	3
CIT 273	Web Application Development	3
CIT 276	IT Systems Design and Lifecycle Management	3
CSE 163	Introduction to Computer Concepts and Programming	3
ENG 111 or ENG 109	Composition and Rhetoric Composition and Rhetoric for Second-Language Writers	3
ENG 112 or EGS 215	Composition and Literature Workplace Writing	3
MTH 125	Precalculus	5
STA 261 or STA 301	Statistics Applied Statistics	4
STC 135	Principles of Public Speaking	3
	Miami Plan Global Perspectives elective	3
	Miami Plan IIA or Miami Plan IV elective	3
<b>Foundation Concentration</b>		9
Select one group:		
Networking		
CIT 281	Enterprise Network Infrastructure	
CIT 284	Enterprise Server Installation and Configuration	
CIT 286	Designing and Deploying Secure Enterprise Networks	

Software Development and Support	
CSE 174	Fundamentals of Programming and Problem Solving
CSE 271	Object-Oriented Programming
CIT 263	Advanced Topics in Visual BASIC
or CIT 253	Contemporary Programming Languages
Self design - see advisor	
<b>Technical Electives</b>	
Select three hours of the following: <sup>1</sup>	
CIT 201	Advanced Spreadsheets and Analytics
CIT 205	Agile Launchpad I
CIT 281	Enterprise Network Infrastructure
CIT 284	Enterprise Server Installation and Configuration
CIT 286	Designing and Deploying Secure Enterprise Networks
CSE 174	Fundamentals of Programming and Problem Solving
CSE 271	Object-Oriented Programming
CIT 253	Contemporary Programming Languages
CIT 263	Advanced Topics in Visual BASIC
CIT 270	Special Topics in Computer and Information Technology
CSE 153	Introduction to C/C++ Programming
CSE 283	Data Communication and Networks
Free Electives	2
<b>Total Credit Hours</b>	<b>62</b>

<sup>1</sup> May not select courses used to meet other program requirements. Other technical electives must be pre-approved.

## Computer Technology- Associate in Applied Science

For more information contact the regional campus coordinator for computing programs: on the Hamilton campus at 301 Mosler Hall, 513-785-3132.

The computer technology major continuation option is designed for students who wish to earn an associate degree at the regional campuses and ultimately obtain a bachelor's degree in one of three computing programs that can be completed at the Oxford campus. It allows students to complete an Associate Degree in Applied Science by taking approximately half of the courses for a bachelor's degree in one of the following majors: Computer Science, Software Engineering, or Computer Engineering. After completing the associate degree, students may relocate to the Oxford campus and continue with junior standing. Students who wish to find employment after completing this associate degree are prepared for positions such as computer programmers, system support personnel and other technical computing positions.

## Program Requirements

(62 Semester hours)

Code	Title	Credit Hours
<b>Foundation Requirements</b>		
Select the following:		
CEC 101	Computing, Engineering & Society	1
CSE 174	Fundamentals of Programming and Problem Solving	3
CSE 262	Technology, Ethics, and Global Society	3
CSE 271	Object-Oriented Programming	3
ECO 201	Principles of Microeconomics	3
ENG 111	Composition and Rhetoric	3
MTH 151	Calculus I	5
MTH 251	Calculus II	4
STC 135	Principles of Public Speaking	3
or STC 231	Small Group Communication	
Miami Plan Physical Science:		
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5
Remaining Miami Plan electives <sup>1</sup>		12
<b>Major Courses</b>		
Select one set of the following courses (depending on major)		12
<b>Computer Science</b>		
MTH 231	Elements of Discrete Mathematics	
Select three of the following:		
CSE 201	Introduction to Software Engineering <sup>2</sup>	
CSE 274	Data Abstraction and Data Structures	
CSE 278	Systems I: Introduction to Systems Programming <sup>2</sup>	
CSE 283	Data Communication and Networks	
<b>Software Engineering</b>		
CEC 102	Problem Solving and Design	
CSE 274	Data Abstraction and Data Structures	
MTH 231	Elements of Discrete Mathematics	
Select one of the following:		
CSE 201	Introduction to Software Engineering <sup>2</sup>	
CSE 211	Software Construction	
CSE 278	Systems I: Introduction to Systems Programming <sup>2</sup>	
<b>Computer Engineering</b>		
CEC 102	Problem Solving and Design	
CSE 278	Systems I: Introduction to Systems Programming <sup>2</sup>	
Select 6 hours for the Computer Engineering major (with advisor approval)		
<b>Total Credit Hours</b>		<b>62</b>

<sup>1</sup> Global Miami Plan elective courses are intended to represent any other course requirements as needed to fulfill Miami's Liberal Education requirements and graduation requirements and should be selected consistent with current requirements, as indicated in each student's DAR.

<sup>2</sup> Course may be offered only at the Oxford campus.

Restriction on courses that can be taken Credit/No Credit: All computer science and software engineering courses (CSE), all required mathematics, and the courses that comprise the student's year of science (for this major, all physics courses) must be taken for a grade.

## Criminal Justice- Associate in Applied Science

For more information about criminal justice, email JCS@MiamiOH.edu or call 513-785-7702.

Criminal Justice is the study of law enforcement, courts, and corrections. Graduates are employed as law enforcement officers; probation and parole officers; corrections officers; and may work within private security agencies. Courses required within this program may be applied to bachelor degree programs in Criminal Justice and related fields.

### Program Requirements

(minimum of 62 semester hours)

Code	Title	Credit Hours
<b>Criminal Justice Courses</b>		
CJS 101	Introduction to the Criminal Justice Studies	3
CJS 125	Law and the Courts	3
CJS 211	Policing in America	3
CJS 220	Criminal Justice Field Experience	3
CJS 231	Law and Individual Rights	3
CJS 271	Criminal Behavior	3
CJS 281	Corrections	3
CJS 282	Writing in Criminal Justice	3
6 additional hours of CJS courses (chosen in consultation with advisor)		6
<b>Non-Criminal Justice Courses</b>		
ENG 111	Composition and Rhetoric (Non-Criminal Justice Courses)	3
POL 142	American Politics and Diversity	3
or CRE 151	Introduction to Critical Race and Ethnic Studies	
STA 261	Statistics	4
Any Global Miami Plan Creative Arts (IIA) course		3
Any Global Miami Plan Humanities (IIB) course		3
Any Global Miami Plan Global Perspectives (IIIB) course		3
Any Global Miami Plan Biological Science (IVA) course		3
Any Global Miami Plan Physical Science (IVB) course		3
Any Global Miami Plan science lab		1
Additional electives as needed to reach 62 credit hours		6
Total Credit Hours		62

## Electrical and Computer Engineering Technology- Associate in Applied Science

This program includes course work in both electrical and electronic and computer fields. It provides depth and breadth in the fundamentals as well as in the advanced technology found in modern electrical/electronic and computing systems. Hands-on labs are used to reinforce concepts taught in the classroom. Students develop the ability to analyze, synthesize, and solve technical problems. Topics of study include AC and DC circuit analysis, analog and digital electronics, programmable logic controllers, microprocessors, local area networks (LAN), and C++ and assembly language programming. This program is accredited by the Engineering Technology Accreditation Commission of ABET (111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone 410-347-7700, <http://www.abet.org/>.)

Graduates work as electronic technicians, electrical maintenance technicians, computer maintenance and network technicians, engineering assistants, computer and PLC programmers, and many other related paraprofessional positions. Graduates may also choose to continue their education toward a Bachelor of Applied Science degree.

### Program Requirements

(Minimum of 62 semester hours required to qualify for graduation)

Code	Title	Credit Hours
CSE 153	Introduction to C/C++ Programming	3
ECO 201	Principles of Microeconomics	3
or ECO 202	Principles of Macroeconomics	
ENG 111	Composition and Rhetoric	3
EGS 215	Workplace Writing	3
ENT 135	Computer-Aided Drafting	3
ENT 137	Introduction to Engineering Technology	1
ENT 192	Circuit Analysis I	6
& ENT 193	and Circuit Analysis II	
ENT 196	Electronics	3
ENT 291	Industrial Electronics	3
ENT 293	Digital Systems	3
ENT 294	Local Area Networks	3
ENT 295	Microprocessor Technology I	3
ENT 296	Programmable Logic Controllers	3
MTH 125	Precalculus	5
MTH 151	Calculus I	5
PHY 161	Physics for the Life Sciences with Laboratory I	4-5
or PHY 191	General Physics with Laboratory I	
PHY 162	Physics for the Life Sciences with Laboratory II	4-5
or PHY 192	General Physics with Laboratory II	

STC 135	Principles of Public Speaking	3
Total Credit Hours		61-63

## Engineering Technology-Associate in Applied Science

For information contact the Department of Engineering Technology at 513-758-1804. Offices are located in Hamilton - 207 Phelps Hall, Middletown - 205M Thesken Hall

This department offers associate degree programs in electrical and computer engineering technology and mechanical engineering technology. They also offer bachelor completion programs with concentrations in electrical and computer engineering technology, electro-mechanical technology, and mechanical engineering technology.

Students are strongly encouraged to participate in engineering technology internships. Internship information is available through the Regional Office of Career Services and Professional Development: Hamilton Campus 513-785-3113, Middletown Campus 513-217-4030, [miamiregionalscareer@MiamiOH.edu](mailto:miamiregionalscareer@MiamiOH.edu)

### Department Educational Objectives

We consider program educational objectives as the general characteristics our graduates demonstrate to the workplace, graduate school, the military, or their endeavors after they leave Miami. We typically measure these characteristics initially at graduation by asking graduates if they feel that they have achieved these characteristics and then periodically thereafter through employer surveys, letters from graduates, advisory council, graduate school accomplishments, and surveys of graduates who have been out for a while. These characteristics should become most evident within the first few years after graduation.

The Engineering Technology Department's graduates are able to:

- apply math and physics principles to the solution of engineering technical problems.
- use applied skills to identify, evaluate, and solve complex technical problems.
- use engineering computer software to facilitate engineering problem solving.
- function effectively in team-oriented activities.
- demonstrate the knowledge of expected standards of ethical and professional conduct.
- verbally communicate ideas.
- prepare well-written technical reports.

In addition, our graduates will have the necessary fundamentals to pursue life-long learning.

### Program-Specific Educational Objectives

#### Electrical and Computer Engineering Technology (A.A.S.)

The ECET program produces graduates who:

- analyze digital and analog electrical and electronic circuits, identify problem areas, and maintain these systems.
- function effectively as electrical and computer engineering technicians in state and regional industries.

#### Mechanical Engineering Technology (A.A.S.)

The MET program produces graduates who:

- are able to analyze and design complex mechanical components and systems
- are able to set up experimental testing procedures and selectively utilize data to reinforce engineering concepts.
- have a basic understanding of modern manufacturing methods used to facilitate the production of consumer products
- are able to effectively and efficiently manage engineering projects (B.S. only).

### Mechanical Engineering Technology- Associate in Applied Science

This program emphasizes courses in computer-aided drafting (CAD), computer-aided engineering analysis and design, computer-aided manufacturing (CAM), computer numerical control programming (CNC), and engineering mechanics. Courses include laboratory experiences working with modern materials-testing equipment; microcomputer-based engineering analysis software; CAD/CAM hardware and software; microprocessor-controlled robots; and a variety of engineering support software. Students develop the ability to analyze, synthesize, and solve technical problems. This program is accredited by the Engineering Technology Accreditation Commission of ABET (111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone, 410-347-7700, <http://www.abet.org/>).

#### Program Requirements

(62 semester hours)

Code	Title	Credit Hours
CSE 163	Introduction to Computer Concepts and Programming	3
ECO 201	Principles of Microeconomics	3
ENG 111	Composition and Rhetoric	3
EGS 215	Workplace Writing	3
ENT 135	Computer-Aided Drafting	3
ENT 137	Introduction to Engineering Technology	1
ENT 151	Engineering Materials	3
ENT 152	Computer-Aided Manufacturing I	3
ENT 192	Circuit Analysis I	3
ENT 235	Computer-Aided Design	3
ENT 252	Computer-Aided Manufacturing II	3
ENT 271	Mechanics I: Statics	3
ENT 272	Mechanics II: Strength of Materials	3
ENT 278	Mechanics III: Analysis of Machine Components	3
MTH 125	Precalculus	5

MTH 151	Calculus I	5
PHY 161	Physics for the Life Sciences with Laboratory I	4
STC 135	Principles of Public Speaking	3
PHY 162	Physics for the Life Sciences with Laboratory II	4
Electives as needed		1
Total Credit Hours		62

## Prekindergarten Education- Associate in Applied Science

For information, contact the Coordinator for Prekindergarten at 513-727-3289.

This program prepares students to provide education and caring for children up to five years of age who are not yet in kindergarten. Graduates may be employed in public, corporate, or private care centers, preschools, or Head Start facilities, either as teachers or in administration.

Successful completion of the Prekindergarten Program meets the Ohio Department of Education academic requirements for the Initial Five-Year Professional Licensure in Prekindergarten Education. The degree can be applied to the Bachelor of Integrative Studies and a majority of the required hours may be applied to the Bachelor of Science degree in Early Childhood Education, if program admission requirements are met.

### Program Requirements

(62 semester hours)

First Year		Credit Hours
EDP 201	Human Development and Learning in Social and Educational Contexts <sup>1,2</sup>	3
EDP 256	Psychology of the Exceptional Learner	3
EDT 190	Introduction to Education <sup>1,2</sup>	3
EDT 273	Prekindergarten Integrated Curriculum I	3
EDT 274	Prekindergarten Integrated Curriculum II	3
ENG 111	Composition and Rhetoric <sup>1</sup>	3
FSW 207 or KNH 207	Serving and Supporting Children, Youth, and Families I or Serving and Supporting Children, Youth, and Families I	4
FSW 283	Introduction to Child Care Administration	3
FSW 382	Infant and Toddler Caregiving and Supervision	3
KNH 245	Issues of Health & Wellness for the Young Child	3
Credit Hours		31
Second Year		
EDL 204	Sociocultural Studies in Education	3

EDT 246E	Foundations of Language and Literacy <sup>1</sup>	3
EDT 315E	Teaching with Children's Literature Across the ECE Curriculum <sup>1</sup>	3
EDT 272E	Introductory Child Development: PreBirth through Age 8 <sup>1,2</sup>	3
FSW 225 or EDT 225	Family School and Community Connections <sup>2</sup> or Family School and Community Connections	3
FSW 293	Field Placement: Infant/Toddler Setting	3
FSW 294	Field Placement - Preschool Setting	3
MTH 115	Mathematics for Teachers of Grades P-6	4
Science: Physical or Biological Science (MPF IVA or IVB) <sup>1</sup>		3-4
Elective		3
Credit Hours		31-32
Total Credit Hours		62-63

<sup>1</sup> Course can apply (40-41 total credit hours) to Bachelor of Science Degree in Early Childhood Education

<sup>2</sup> TAG course required by the state of Ohio Department of Education.

## General Studies- Associate in Arts

This program is available to students enrolled at any campus of Miami University who has not completed the requirements for a Bachelor's degree.

Students select a 12 semester hour concentration area, as described below, to complete within the required 62 semester hours of the degree.

### Program Requirements

(62 semester hours)

Code	Title	Credit Hours
Miami Plan Foundation requirements		27
Select 12 semester hours in addition to those above in one of these areas of emphasis:		12
Humanities		
Natural science and Mathematics <sup>1</sup>		
Social science		
Business		
Education, Health and Society		
Engineering and Computing		
Creative Arts		
Liberal Arts and Applied Science		
Electives <sup>2</sup>		23
Total Credit Hours		62

<sup>1</sup> Students with natural science and mathematics emphasis cannot apply MTH 101 and MTH 102 to this degree.

<sup>2</sup> Select 30 semester hours taken at Miami University and the final 9 credit hours must be from Miami University. No more than five semester hours of KNH 110-KNH 170B

Minimum 2.00 cumulative GPA

## Commerce- Associate of Applied Business

For information, contact the Department of Commerce at 106 University Hall, 513-785-7706, on Hamilton Campus.

Programs are available in business management technology, digital business systems, and marketing management technology. These programs are for those who want to enter business fields and those who want to improve their career opportunities. The Associate of Applied Business degree requires 62 semester hours.

Associate's degree programs emphasize the development of practical business skills. As a part of the programs, although not required, paying co-op positions are available to provide valuable work experience. Graduates without extensive work experience typically start in entry-level, management-support positions and advance to more responsible positions with experience, motivation, and ability.

### Associate Degree Program Requirements

Each degree consists of:

1. A set of core courses that is common to all programs (total of 43 credit hours).
2. A set of four courses that is specifically required for the particular degree program (a total of 12 credit hours).
3. A set of electives that is structured similarly for each program (a total of 7- 8 credit hours).

Specific information on each of these three requirements follows.

Code	Title	Credit Hours
<b>Core Requirements for All Associate Degree Programs</b>		
CMR 101	Introduction to Accounting I	3
CMR 105	Introduction to Marketing	3
CMR 106	Introduction to Business and the Economy	3
CMR 108	Introduction to Business Law	3
CMR 111	Introduction to Management I	3
CMR 181	Computers and Business	3
CMR 207	Management Planning and Control	3
CMR 282	Computer-Based Business Analysis	3
ENG 111	Composition and Rhetoric	3
EGS 215	Workplace Writing	3
MTH 119 or STA 261	Quantitative Reasoning Statistics	4
STC 136	Introduction to Interpersonal Communication	3

Global Miami Plan Foundation III, IV, or V courses	6
<b>Major</b>	
Complete the four specific courses required for completion of each CMR program	12
<b>Approved Electives for All Programs</b> <sup>1</sup>	
Select any CMR or Global Miami Plan courses not required for your program	7
Total Credit Hours	62

<sup>1</sup> Students intending to pursue the Miami Bachelor of Science in Commerce degree should take Miami Plan Foundation (MPF) courses; Miami Plan Thematic Sequence (TS) courses; or other courses required for the Bachelor of Science in Commerce degree. Other substitutions are possible. Consult your CMR faculty advisor to ensure correct selection and approval.

### Associate Degree Programs

#### Business Management Technology: Associate of Applied Business

Code	Title	Credit Hours
CMR 241	Management of Business Operations	3
CMR 242	Management of Small Business Operations	3
CMR 244	Introduction to Global Business	3
CMR 301	Personal Organizational Skills	3
Total Credit Hours		12

#### Marketing Management Technology: Associate of Applied Business

Code	Title	Credit Hours
CMR 261	Customer Service & Satisfaction	3
CMR 263	Sales and Promotions	3
CMR 266	Consumer Behavior	3
CMR 284	Emerging Digital Technologies for Business	3
Total Credit Hours		12

#### Digital Business Systems: Associate of Applied Business

Code	Title	Credit Hours
CMR 281	Business Communication Software	3
CMR 284	Emerging Digital Technologies for Business	3
CMR 285	Business Information Management	3
CMR 286	Digital Commerce	3
Total Credit Hours		12

### Technical Study- Associate of Technical Study

For information, contact the department of Engineering Technology, or general advising. Departmental contact information is as follows: Engineering Technology in 301 Mosler Hall - Hamilton

Campus, 513-785-1808. Regional Academic Advising: Hamilton campus - 513-785-3129; Middletown campus - 513-727-3440 .

This technically-oriented program is offered through the combined disciplines of commerce, computer information technology, health technology, services technology, and engineering technology. Students work with a university advisor to develop an interdisciplinary plan of study with an area of concentration and a well-rounded program. Through this program, you have the flexibility to tailor an associate degree to your specific needs. Students can choose a concentration out of the following: Building and Industrial Technology; Business Technology; Health and Allied Health Technology; Information Technology; and Services Technology.

## Program Requirements

(62 semester hours)

Code	Title	Credit Hours
<b>Nontechnical Courses</b>		
ENG 111	Composition and Rhetoric	3
EGS 215	Workplace Writing	3
Select one of the following:		3
STC 135	Principles of Public Speaking	
STC 136	Introduction to Interpersonal Communication	
STC 231	Small Group Communication	
<b>Basic program support courses</b>		
Select at least 3 hours in each category: Math, science, and computing courses		9
Other MPF courses (Note:Nontechnical and basic program support courses must include at least 12 semester hours of the Miami Plan Foundation (MPF) in four of the five MPF areas)		8
<b>Technical Subject Areas</b>		30
Approved course work in building and industrial technology or information technology, or business technology,or health and allied health technology, or services technology approved by the Associate of Technical Studies Review Committee as constituting a well-defined, coherent program leading to marketable, technical job skills.		
<b>Remaining Miami Plan Foundation or Electives</b>		6
Total Credit Hours		62

## Customer Service Certificate

For information, contact the Department of Commerce at 106 University Hall, Hamilton Campus, 513-785-7706.

The customer service certificate provides fundamental skills in customer service, personal interactions and computer applications for customer service representatives.

## Program Requirements

Code	Title	Credit Hours
Select the following:		
CMR 105	Introduction to Marketing	3

CMR 181	Computers and Business	3
CMR 261	Customer Service & Satisfaction	3
CMR 282	Computer-Based Business Analysis	3
CMR 301	Personal Organizational Skills	3
Total Credit Hours		15

# The Graduate School

## Graduate School

102 Roudebush Hall

Phone: 513-529-3734

<http://www.miami.MiamiOH.edu/graduate-school/>

[gradschool@MiamiOH.edu](mailto:gradschool@MiamiOH.edu) ([gradschool@miamioh.edu](mailto:gradschool@miamioh.edu))

## General Information

Miami offers graduate study leading to master's, Specialist in Education, and doctoral degrees. Certificate programs are also available.

Information on admission, graduate assistantships, courses, and requirements is online (<http://www.MiamiOH.edu/graduate-school/>).

## Departments Offering Graduate Study

Graduate degrees and certificates offered by each division are listed below. The master's in Environmental Science; Cell, Molecular and Structural Biology; and Ecology, Evolution; Transformative Education; and Environmental Biology are interdisciplinary programs.

Ph.D. program applicants may apply for a special interdisciplinary degree, subject to the approval of the admitting Ph.D. department and the Graduate School. Please contact the Director of Graduate Study in the appropriate department for more information.

All departments offering graduate study have information available about requirements and courses.

## College of Arts and Science

**Biology:** Master of Arts (Biology & Botany); Master of Science (Biology & Botany); Master of Arts in Teaching (biological sciences); Doctor of Philosophy

**Cell, Molecular and Structural Biology:** Master of Science; Doctor of Philosophy

**Chemistry and Biochemistry:** Master of Science; Doctor of Philosophy

**Ecology, Evolution and Environmental Biology:** Doctor of Philosophy

**Economics:** See Farmer School of Business.

**English:** Master of Arts, Master of Arts in Teaching; Master of Fine Arts; Doctor of Philosophy

**Environmental Science:** Master of Environmental Science

**French:** Master of Arts

**Geography:** Master of Arts

**Geology & Environmental Earth Science:** Master of Arts; Master of Science; Doctor of Philosophy

**History:** Master of Arts

**Mathematics:** Master of Arts; Master of Science; Master of Arts in Teaching (for licensed teachers)

**Microbiology:** Master of Science; Doctor of Philosophy

**Philosophy:** Master of Arts

**Physics:** Master of Science

**Political Science:** Master of Arts

**Psychology:** Master of Arts (as required step in the doctoral program only); Doctor of Philosophy. For school psychology, see the College of Education, Health, and Society.

**Sociology and Gerontology:** Master of Gerontological Studies; Doctor of Philosophy in Social Gerontology

**Spanish and Portuguese:** Master of Arts

**Speech-Language Pathology:** Master of Arts; Master of Science

**Statistics:** Master of Science in Statistics

## The Farmer School of Business

**Accountancy:** Master of Accountancy

**Economics:** Master of Arts

**Business Administration:** Master of Business Administration

**Business Analytics:** Master of Science in Business Analytics

## College of Education, Health, and Society

**Educational Leadership:** Master of Education; Master of Science; Doctor of Philosophy, Doctor in Education

**Educational Psychology:** Master of Science; Master of Education; Master of Arts; Specialist in Education

**Family Sciences & Social Work:** Master of Arts in Social Work

**Kinesiology and Health:** Master of Science in Kinesiology and Health

**Teacher Education:** Master of Education; Master of Arts in Teaching

## College of Engineering and Computing

**Computer Science and Software Engineering:** Master of Computer Science

**Chemical, Paper and Biomedical Engineering:** Master of Science

**Computational Electrical and Computer Engineering:** Master of Science

**Mechanical Engineering:** Master of Science

## College of Creative Arts

**Architecture + Interior Design:** Master of Architecture

**Art:** Master of Fine Arts

**Music:** Master of Music (Performance & Education)

**Performance, Theatre and Practice:** Master of Arts

## **College of Liberal Studies and Applied Science**

**Justice and Community Studies:** Master of Science

### **Graduate Certificate Programs**

These specializations, which enhance a graduate degree, are available to students who have been admitted to the Graduate School and have met program prerequisites.

- Adult TESOL
- Advanced Studio Art
- Analytics for Professionals
- Applied Statistics
- Assessment and Evaluation
- Autism Spectrum Disorders
- College Teaching
- Conservation Biology
- Ecology
- Geographic Information Science
- Human Brain and Learning
- Instructional Design and Educational Technology
- Interactive Media Studies
- Quantitative Data Analysis in Education and Social Sciences
- Russian, Eastern European and Eurasian Studies
- Social Entrepreneurship and Aging
- Sport Management
- Sport Psychology
- Women's, Gender, and Sexuality Studies

# Admission for Graduate Students

## Graduate School

102 Roudebush Hall  
Phone: 513-529-3734  
[www.MiamiOH.edu/graduate-studies/](http://www.MiamiOH.edu/graduate-studies/)

## About Admission

To be admitted to a graduate program at Miami, you must have earned a baccalaureate degree from an accredited institution. You must be fully admitted to the Graduate School to be eligible to receive graduate credit.

Graduate School admission standards are the minimum standards for all graduate programs. Individual departments may have higher standards and additional requirements. You are expected to be fully cognizant of your department's requirements.

You may apply for admission online at: [www.miamiOH.edu/graduate-school/admission/index.html](http://www.miamiOH.edu/graduate-school/admission/index.html)

The Graduate School's contact information is:

Graduate School  
102 Roudebush Hall  
Miami University  
Oxford, Ohio 45056  
Phone: 513-529-3734  
Fax: 513-529-3762  
E-mail: [applygrad@MiamiOH.edu](mailto:applygrad@MiamiOH.edu)  
Web: [www.MiamiOH.edu/graduate](http://www.MiamiOH.edu/graduate)

**Admission information for international students appears lower on this page.**

## To Apply for Admission

### Submit to the Graduate School

- Your completed application with the required nonrefundable application fee. Your application will not be processed until the application fee is received.
- Applicants for graduate study must have earned at least a US equivalent Baccalaureate degree. Applicants must submit 1 copy of their academic record/transcript at the time of application. Unofficial documents are accepted at the time of application.
- Admitted students must have an *official final* transcript from their Baccalaureate institution and all schools attended after receiving your Baccalaureate *sent directly* to the Graduate School in order to register for classes. Photocopies and notarized copies of academic records are not accepted as official. Documents can be certified as true copies by a U.S. Consular official or by a recognized educational authority in the applicant's home country. Records issued in a language other than English must be accompanied by a literal (not interpretive) certified English translation.
- Official final transcripts are not required from Miami University graduates.
- All international students must provide proof of English proficiency by meeting ONE of the following requirements:

- You have earned a Bachelor's degree or higher from an accredited university in the US
- You have earned a Bachelor's degree from or are a citizen of one of these countries.
- You have earned a minimum passing score on one of the English language tests accepted by Miami University.

### Submit to Your Major Department

- Additional materials required by your department. These may include letters of recommendation, personal statement, test scores, or a portfolio. Contact your major department for information.

### Submit to the Student Health Service:

- Your completed Miami University Graduate Student Medical History form. You will not be allowed to register until your completed form is returned to the Student Health Service.
- Students under 30 years of age are required to provide proof of immunizations.

## Admission Tests

Each department offering a graduate program determines the tests required for admission, if any. The following tests may be required by specific departments.

### Graduate Management Admission Test (GMAT)

This is required for applicants for graduate study in the Farmer School of Business. Information can be obtained from:

Graduate Management Admission Council  
P.O. Box 2969  
Reston, VA 20195  
[customer-care@gmac.com](mailto:customer-care@gmac.com)  
888-505-6559

[www.gmac.com/gmat](http://www.gmac.com/gmat)

### Graduate Record Examination (GRE)

Information and online registration is available at [www.gre.org](http://www.gre.org). An information booklet can be obtained from:

Graduate Record Examination  
Educational Testing Service  
P.O. Box 6000  
Princeton, NJ 08541-6000  
Phone: 866-473-4373  
[www.ets.org/gre](http://www.ets.org/gre)

### Miller Analogies Test (MAT)

Most college and university counseling centers have MAT information. Information concerning times and places for the MAT can be obtained from:

Pearson  
MAT Customer Relations  
19500 Bulverde Road  
San Antonio, TX 78259  
[MATscoring.services@Pearson.com](mailto:MATscoring.services@Pearson.com)

800-622-3231

[www.PearsonAssessments.com/postsecondaryeducation/graduate\\_admissions/mat.html](http://www.PearsonAssessments.com/postsecondaryeducation/graduate_admissions/mat.html)

## Grade Point Average

For admission purposes, the computation of grade point averages is determined by the institution that awarded the baccalaureate or graduate degree. An exception to this applies to incomplete and failing grades—Miami University will count these as zero points. Plus and minus grades that are clearly explained on transcripts will be counted in the grade point average.

## Regular Standing

For admission to the Graduate School as a degree candidate with regular standing, you must have earned a grade point average (GPA) of at least 3.00 (4.00 scale) at the institution awarding your bachelor's degree. You must have at least a 3.00 GPA for all graduate work attempted. Undergraduate course work taken after the completion of your bachelor's degree will not be considered in determining your grade point average.

## GPA Conditional Standing

Admission to the Graduate School with conditional standing (master's degree programs only) is possible if you do not meet requirements for regular standing but you can provide evidence of promise for success in graduate study. If you must satisfy departmental prerequisites, have academic deficiencies, or have earned a bachelor's degree from a non-accredited institution, you may be admitted with conditional standing, even if you have met minimum requirements for admission to regular standing.

Requests for admission with conditional standing are considered by the dean of the Graduate School. Such requests must have the support of the academic department in which you seek admission. Evidence in support supplied by the applicant and the department may include graduate admission test scores, reference to successful professional experience, statements of academic prowess, etc. A student admitted with conditional standing cannot hold an assistantship.

If you are admitted with conditional standing, you must achieve a cumulative grade point average of at least 3.00 in the first 12 hours of graduate courses taken for grades. Grades earned in undergraduate courses do not apply to this required grade point average. The probationary period begins on the date of admission with conditional standing. Students who do not satisfy the requirements of conditional standing are denied further registration in the Graduate School. Students who meet these requirements continue with regular standing.

## International Student Admission

Non-immigrant students from other countries are encouraged to apply for admission to graduate study. International students may be admitted with regular standing or English proficiency conditional admission.

### English Proficiency Conditional Admission

Conditional admission to the Graduate School is possible if you meet the graduate department's academic requirements, but do not meet

the Graduate School's English language requirement. Students with TOELF iBT scores between 65-79, IELTS scores between 5.5-6.0, or ELS 112 Certificate can be considered for conditional admission to the ACE-G program. Students with TOEFL iBT score below 65 or IELTS score below 5.5 can be considered for conditional admission to the ELC program.

Applicants can request conditional admission when completing the application or the Graduate School may admit students conditionally based on their English proficiency scores.

If you are conditionally admitted, you must begin your English language studies prior to your academic study. You must achieve a cumulative grade point average of at least 3.00 in ELC and/or ACE-G in order to progress to the academic program. Failure to complete the English program successfully will result in a cancellation of your conditional offer of admission. For more information about our conditional admission, please go to [www.MiamiOH.edu/graduate-school/admission/international-application.html](http://www.MiamiOH.edu/graduate-school/admission/international-application.html)

After you are admitted and on campus (prior to class registration), you must take an examination in the use of English administered by Miami's English department. If this test indicates that you need additional instruction in English, you must register for ENG 119 (specially designated for graduate students) in your first term of study, which may require that you reduce your academic course load until it is determined that your English proficiency is adequate to pursue a full course of study.

In addition, if you are assigned instructional responsibilities (including laboratory supervision) as a teaching associate or graduate assistant, you are required by Ohio state law to demonstrate English-speaking proficiency. After arrival on campus, you may be required to take a test that assesses your proficiency in spoken English.

## Continuing Graduate (Non-Degree) Status

If you would like to take graduate-level courses, but do not intend to pursue a graduate degree, you can apply for admission with continuing non-degree graduate status (CGS). After you are admitted, you can earn an unlimited number of graduate hours within an indefinite period of time; however only twelve hours may be applied to a degree program.

To apply for admission, submit to the Graduate School:

- Completed admission application form;
- Nonrefundable application fee.

If you are admitted as a CGS student, you will not be able to enroll in certain courses if the department or program has limited enrollment; students who have been admitted to a degree-granting program have first priority. Check with the department about enrollment restrictions. If you have been denied regular or conditional admission to a degree program, you can enroll in courses in that department as a CGS student only if the department grants permission. If you take courses as a CGS student after you have been denied admission as a degree student, these courses cannot be applied to a future degree program.

If you are a CGS student (and have not previously applied for degree admission) and desire admission to a degree program, you must

apply for admission and meet Graduate School and departmental standards for admission. No more than twelve of the most recent graduate hours earned with CGS status can be applied toward a graduate degree and then only with the approval of the department. All twelve hours are subject to normal time limitations for credit toward a degree.

For more information, contact the Assistant Dean for Graduate Admission in the Graduate School, 513-529-3734.

## Visiting (Transient) Status

If you are pursuing a graduate degree at another institution and intend to complete your program there, you can apply for admission with "transient status."

To apply for admission:

1. obtain a transient status application from the Graduate School, and
2. complete your part, then forward the entire form to the dean of your graduate school with a request for the dean to complete it and send it directly to the Graduate School of Miami University.

After you are admitted with transient status, you can enroll in courses if you have fulfilled departmental and divisional requirements for the program and prerequisites for the courses. Admission does not make you a candidate for a graduate degree at Miami University.

## Diverse Student Assistance

The Diversity Enhancement Pathway (DEP) is intended to attract diverse domestic students to Miami's graduate programs, with the goal to increase the number of diverse domestic students completing master's and doctoral study at Miami University.

The DEP provides a Graduate School funded stipend and tuition waiver for one academic semester per year for either two years for master's students or four years for doctoral students. This will result in either two semesters or four semesters of Graduate School funded support for master's or doctoral students, respectively. Departments will provide the remaining stipend and tuition waiver for the duration of the student's graduate program and will assign assistantship duties for the awardee.

The Ronald E. McNair Graduate Assistantship Program is intended to attract current undergraduate McNair Scholars and McNair Alums to Miami's graduate programs, with the goal to increase the number of diverse domestic students completing graduate study at Miami University.

The Program provides a Graduate School funded stipend and tuition waiver for one academic semester per year for either two years for master's students or three years for doctoral students. During the student's program they will also be provided an additional Graduate School funded Research Assistantship for either one semester for master's students or two semesters for doctoral students. The student will choose which semester(s) they wish to be appointed on the Research Assistantship. This will result in either three semesters or five semesters of Graduate School funded support for master's or doctoral students, respectively. Departments will provide the remaining stipend and tuition waiver for the duration of the student's graduate program. When not on the Research Assistantship, the nominating department will assign assistantship duties for the awardee.

# Degree and Certificate Requirements

## Graduate School

102 Roudebush Hall  
Phone: 513-529-3734  
[www.MiamiOH.edu/graduate-studies/](http://www.MiamiOH.edu/graduate-studies/)

## Master's Programs: General Requirements

Since each department or division may have special requirements for any program it offers, you must be aware of those requirements as well as the requirements of the Graduate School. Specific program requirements are listed in the Fields of Study chapter.

A minimum of 30 semester hours is required for all master's degrees, but several programs require more. Many departments offer both thesis-type and non-thesis master's programs, with the student's objectives and abilities determining which type of program they may pursue. Both types allow between six to 12 hours of research or research-and-thesis credit. Some departments or divisions may require candidates to perform research, teaching, or equivalent services as a part of their degree requirement.

## Examinations

**Note:** To be eligible to take the final examination for a master's degree, a graduate student must have a 3.00 grade point average or better and may not have grades of incomplete.

A preliminary examination is optional, but a final degree examination is required in all graduate programs except for the Master of Accountancy and the Master of Business Administration. The final examination, written, oral, or both, must be given in the semester in which the candidate completes the work for the degree, but they must pass the examination no later than five years after completing their first course toward the degree.

The typical examination committee for either a thesis is comprised of at least three members of the graduate faculty; two represent the student's major department and the third member represents the minor department (if applicable), the major department, or the Graduate School. The director of the thesis for a thesis-type program must have Level A standing of the graduate faculty. The non-thesis committee now only requires two committee members.

If the committee is larger than three, there can be no more than one dissenting vote to pass the examination.

If a student fails the examination on the first attempt, his or her department may allow him or her to take the examination a second time after a minimum of fourteen (14) calendar days from the first attempt. A student may only take the examination two (2) times; after that, he or she is ineligible to receive the master's degree.

## Thesis

The department determines whether students will follow a thesis-type or non-thesis program. Thesis credit ranges between six to 12 hours for a 30-hour program. For each required hour over thirty (30), the department may increase the thesis credit by one.

Format and style used by leading professional journals or style sheets in each discipline or professional field and must meet the Graduate School and OhioLink format requirements.

All students submitting a thesis or dissertation must deposit it electronically at OhioLINK. Before beginning to write, you should email the Graduate School at [gradschool@miamioh.edu](mailto:gradschool@miamioh.edu) for a template and instructions for mechanics and procedures from the Graduate School. Your thesis must be electronically deposited at OhioLINK at least 14 working days before commencement, or as determined by the Graduate School. The only paper submitted to the Graduate School by the student will be the original signature/title page on plain white copy paper.

## Transfer Credit

Up to one-third of the semester hours required for the degree may be transferred toward the master's degree. Courses cannot be older than five years at the time the master's degree is awarded. Contact the Graduate School for details regarding transfer of graduate credit.

## Course Level Requirement

A master's degree student must present at least 6 semester hours earned at 600-level or above.

## Time Limit

Work for a master's degree must be completed within five calendar years (e.g., students beginning master's programs in 2017 must complete their programs by December 2022). Partial credit may be given for graduate courses completed at Miami University that are between five and 10 years old, but such credit must be gained by way of petition to the appropriate petitions committee.

## Second Master's Degree

With the approval of the department, a student who has been admitted to a second master's degree program may apply a maximum of 10 semester credits from a first master's degree earned at an accredited graduate school toward the second master's degree, provided the work is not more than five years old at the time the second master's degree is awarded.

If a thesis was presented for the first degree, it may not be used for the second degree. The same degree title may be earned in two different areas of study.

## Combined Bachelor's and Master's Degree Program

Departments and programs that offer the master's degree have the option of offering a combined bachelor's and master's degree option. See the specific department/program of interest for program and admission details.

**Admission Requirements:** Students can be admitted on a provisional basis to the combined program anytime during their academic career at Miami, from the time they apply for undergraduate admission. Upon earning a minimum of 64 hours and having a GPA of 3.25 or greater, students may apply to a combined program by completing the Graduate School application and submitting materials as required by the program to which they are applying. Standard application and admission procedures shall be used. Both full- and part-time students may participate in the combined program at a department's

discretion. Regular time-limits for completing the master's degree apply to students in a combined program.

**Double Counting Graduate Hours:** Departments or programs with a combined degree may allow students to double-count up to twelve hours of graduate course work toward their undergraduate degree. With permission of the appropriate advisor(s) and dean(s) or their designee(s), these students may count the graduate courses toward their major, minor, electives, and university requirements. A minimum of 150 hours is required for the combined program; 120 semester hour minimum for a bachelor's degree and 30 graduate semester hours minimum for a master's degree.

**Student Classification and Graduation:** Students in a combined program will remain undergraduates until they apply for graduation or submit a request to the Graduate School to have their classification changed from undergraduate to graduate. Students must have completed a minimum of 128 hours (undergraduate and graduate) to be classified as a graduate student. Students may receive their bachelor's degree prior to completing their master's degree. Upon receiving the bachelor's degree, students will automatically be classified as graduate students. Students receiving the bachelor's degree prior to completing the master's degree can count up to twelve hours of graduate course work toward their bachelor's degree. Those hours can also count toward the completion of their master's degree as indicated above.

Students may withdraw from the combined program by completing a withdrawal form available at the Graduate School's website. The student must note on the withdrawal form that he/she is withdrawing only from the combined program and wishes to retain their status in the undergraduate program. The student must also notify their department of their decision to withdraw from the combined program.

## Doctoral Programs: General Requirements

The Doctor of Philosophy (Ph.D.) is awarded in the departments of Biology, Chemistry and Biochemistry, Education, Educational Leadership, English, Geology & Environmental Earth Science, Gerontology, Microbiology and Psychology. The Doctor of Education (Ed.D.) is awarded in the Department of Educational Leadership. Students entering these doctoral programs must fulfill the following requirements, as well as those established by the department(s) involved.

Students with a 3.00 grade point average for their baccalaureate degree may be admitted directly to a doctoral program if recommended by the department.

The degree Doctor of Philosophy or Doctor of Education will not be granted to a member of the Miami University faculty or staff who holds rank above instructor.

Effective July 1, 1970, a recipient of a Miami doctorate is ineligible for employment as a faculty member at Miami, unless that person has been employed elsewhere for at least three years and has gained significant achievement since receiving the Miami degree. Those who received a doctorate or were already enrolled in a doctoral program before this date are exempt from this regulation.

## Ph.D. Requirements

A doctoral program normally requires three to five years post-baccalaureate work and generally includes three stages.

**First** stage ends when you receive a master's degree or earn the equivalent credit (30 semester hours) with a minimum grade point average of 3.00.

**Second** stage includes fulfillment of departmental requirements and successful completion of your preliminary comprehensive examination.

**Third** stage comprises research and seminars, preparation of your dissertation, and your final examination.

## Program Requirements

Each program has unique characteristics and may have standards higher than the minimum established by the Graduate Council. It is your responsibility to be informed of the standards and requirements by consulting with the graduate advisor or department chair.

## Credit Hour Requirements

Admission to the third stage requires a minimum of 30 hours of post-master's credit. A minimum of 16 semester hours and a maximum of 60 hours may be given for the dissertation at the discretion of the department.

A minimum 3.00 grade point average is required for work on the doctorate.

A minimum of 60 semester hours beyond the master's degree (or its equivalent) is required. Forty-eight hours must be earned at Miami University.

## Time Limit

Students must complete coursework, pass the comprehensive examination, complete their dissertation and pass the final examination within ten (10) years of completing their first course in the doctoral program.

## Transfer Credit

Up to 12 hours of graduate credit may be transferred toward the doctoral degree. Courses may not be more than seven years old at the time the comprehensive examination is taken. Contact the Graduate School for details regarding transfer of graduate credit.

## Preliminary (Comprehensive) Examination

**Note:** To be eligible to take the preliminary (comprehensive) examination, a graduate student must have a 3.00 grade point average or better and may not have grades of incomplete.

To be admitted formally to candidacy for the doctorate degree, you must pass a preliminary examination that qualifies you for further work and research.

You must pass this examination within seven years after completing your first doctoral-level course. It is a two-part examination: written and oral. You must take the oral part within four weeks after taking the written part.

Your examination committee is made up of at least four members of the Graduate Faculty including your dissertation advisor. The advisor must be in the same department as the doctoral student. A

fifth graduate faculty member also votes and participates in the oral part of your comprehensive examination. At least one member of the committee must be from outside your major department. The committee must be approved by the Graduate School dean. Four of the five committee members must approve in order for you to pass the examination. If your committee is larger than five, there can be no more than one dissenting vote in order for you to pass the examination.

If the student does not pass the comprehensive examination after the first attempt, the committee may grant the student permission to take a second examination, which will be given under the conditions stipulated by the committee. Students can take a second examination no earlier than 14 calendar days following the conclusion of the first exam.

## Dissertation

The Doctor of Philosophy is primarily a research degree. You must demonstrate your capacity for independent research by writing an original dissertation on a topic within your major field of study. The subject of your dissertation must be reported to the doctoral committee at the time of your preliminary examination.

A minimum of 16 hours is required for dissertation research, and a maximum of 60 hours may be applied toward the semester hour requirement for the degree.

Before beginning to write, you should obtain a template and instructions for mechanics and procedures from the Graduate School. Generally, format and style used by leading professional journals in your field or *A Manual for Writers* by Kate L. Turabian serves as a guide. Check your writing format early with the Graduate School to avoid any delay. A final format check and approval by the Graduate School are required before your dissertation is accepted and electronically deposited.

All students submitting a dissertation must deposit it electronically. Your dissertation must be electronically deposited at OhioLINK at least 21 working days before commencement or as determined by the Graduate School. The only paper submitted to the Graduate School by the student will be the original Certificate page (with original committee signatures) which is the first page of the dissertation.

## Final Examination

**Note:** To be eligible to take the final examination for the doctoral degree, a graduate student must have a 3.00 grade point average or better and may not have grades of incomplete.

A final examination to evaluate your dissertation work and competence in your field is conducted by an examining committee consisting of at least four members of the Graduate Faculty (your dissertation director, two readers, and a member from outside your department). Three of the four members must approve your dissertation and final examination for you to be awarded the degree. If your committee is larger than four, there can be no more than one dissenting vote on your examination. All members have responsibility for the conduct of the examination and must also certify the fairness of the examination. All Graduate Faculty are eligible to participate in the examination.

The final examination must be passed and the dissertation must be uploaded to OhioLINK no later than ten calendar years after taking the first course toward the degree. The deadline to deposit the

dissertation is at least 21 working days before the commencement when your degree is awarded, or as determined by the Graduate School. Any exception may involve further examinations or course requirements.

**Note:** Students must submit their thesis or dissertation electronically. More information is available from the Graduate School, 513-529-3734, or online at [www.MiamiOH.edu/graduate-school/](http://www.MiamiOH.edu/graduate-school/).

## Interdisciplinary Doctoral Degree

The Graduate School can authorize a special committee to supervise an interdisciplinary doctoral program for students whose needs cannot be met within an established program. Special Committee Degrees are "interdisciplinary degrees" that have unique requirements for each student. Special Committee Degrees are "one of a kind" degrees built around the unique needs of individual students that cannot be satisfied by approved, existing programs and may permit degrees in new and emerging fields or combinations of disciplines. A higher degree of independence is required on the part of the student, since easily-provided guidance from departments is more difficult to obtain, and there is not the usual collegial group of students in closely-related research and course work. The Special Committee Doctoral Degree is reserved for those departments granted the authority to offer the doctoral degree by Miami University and the Ohio Board of Regents.

Prospective students who may have an interest in a Special Committee Doctoral Degree should apply to the department of the degree program that is most central to their major area of interest. The student must meet the admission requirements of the department to which the application is submitted.

Students may be admitted directly to a Special Committee Degree program or enter the interdisciplinary program later. At least 12 credit hours must be remaining in the students' program when their special committee degree proposal is submitted. The prospective student's application must be endorsed by the home department and three potential committee members drawn from Level A faculty from within the home department or from across the University. Special Committee members can be drawn from non-doctoral departments. The Special Committee must consist of not less than five members, with no more than half (higher whole number) being drawn from any one department.

The chairperson (or in the case of co-chairs, one of the co-chairs) must be a member of the department to which the student had originally been admitted. The admitting department should remain the keeper of the student's records, and should make all appropriate nominations for financial support.

The Special committee is responsible for helping the student develop a plan of study to be submitted to the home department for its approval. That plan of study may be at significant variance with normal departmental requirements so long as it is approved following the established procedures of the home department.

Students must be accepted into a doctoral-degree-granting department, establish at least one semester of full-time graduate work, and then submit a proposal for a special committee degree. The one-page proposal should include (in the following order):

1. Names of two faculty members, in addition to the students' major professor(s), who will supervise their course of study.

2. Explanation of why their needs cannot be met within existing programs and why the special committee degree program is needed.
3. Proposed course of study.
4. Their committee's recommendation for an examination procedure that assures adequate in-depth coverage.

Students should check with the Graduate School and the faculty with whom you are interested in working for guidance in requesting a special committee for your program of study. Special committee members can be from non-doctoral departments and must have Level A standing on the Graduate Faculty. Students' course of study may vary from normal departmental requirements, as long as it is approved within the established procedures of the department. After their three committee members and department endorse the proposal, it is submitted to the Graduate School.

The Special Committee is governed by the expectations and regulations of the Graduate School.

## Ed.D. Requirements

The Ed.D. is available in the Department of Educational Leadership.

Although the general requirements listed for the Doctor of Philosophy apply to the Doctor of Education, the latter is specifically designed for students professionally oriented to a career in the field of education. Advanced research courses, therefore, may vary from those pursued in other fields, and the program may be considered more appropriate to those especially interested in public education.

## Certificate Programs: General Requirements

The Graduate School offers certificate programs in adult TESOL, autism spectrum disorders, advanced studio art, analytics for professionals, applied statistics, assessment and evaluation, college teaching, conservation biology, ecology, geographic information sciences, human brain and learning, interactive media studies, quantitative data analysis in education and social sciences, Russian, East European & Eurasian studies, social entrepreneurship and aging, sport management, sport psychology and women's, gender and sexuality studies. These programs, described in the Fields of Study chapter, are available to students who have been admitted to the Graduate School and have met program prerequisites.

## Specialist in Education: General Requirements

The Specialist in Education (Ed.S.) degree is designed for those with bachelor's degrees who want to prepare for a career in school psychology and for those who are certified school psychologists who wish to upgrade their training. Information about the Ed.S. in School Psychology is found in the Education Psychology field of study section.

# Graduate Fields of Study

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- Accountancy
- Architecture
- Art Education
- Art, Studio
- Biological Sciences
- Biology
- Botany
- Business Administration
- Business Analytics
- Cell, Molecular and Structural Biology
- Chemical and Paper Engineering
- Chemistry and Biochemistry
- Computational Electrical and Computer Engineering
- Computer Science
- Criminal Justice
- Ecology, Evolution and Environmental Biology
- Economics
- Education
- Education, Teacher Education
- Educational Leadership
- Student Affairs in Higher Education
- Educational Psychology
- Educational Technology
- Experience Design
- Instructional Design and Technology
- Special Education
- School Psychology
- English
- Creative Writing
- Environmental Sciences
- Experience Design
- French
- Geography
- Geology
- Gerontology
- History
- Kinesiology and Health
- Mathematics
- Mechanical Engineering
- Microbiology
- Music
- Philosophy
- Physics
- Political Science
- Psychology
- Social Work
- Spanish
- Speech-Language Pathology

- Statistics
- Theatre and Practice

## Certificates

- Adult TESOL
- Advanced Studio Art
- Analytics for Professionals
- Applied Statistics
- Assessment and Evaluation
- Autism Spectrum Disorders
- College Teaching
- Conservation Biology
- Criminal Justice Administration
- Ecology
- Geographic Information Sciences
- Instructional Design and Educational Technology
- Interactive Media Studies
- Quantitative Data Analysis in Education and Social Sciences
- Russian, East European and Eurasian Studies
- Social Entrepreneurship and Aging Certificate
- Sport Management
- Sport Psychology
- Women's, Gender, and Sexuality Studies

## Accountancy- Master of Accountancy

Academic Program Coordinator  
 Department of Accountancy, MSC 1002  
 3094 Farmer School of Business, 513-529-3372  
[www.fsb.MiamiOH.edu/macc](http://www.fsb.MiamiOH.edu/macc)

The department's mission is to prepare students to excel as high-integrity business leaders and accounting professionals and to enable faculty members to be outstanding instructors whose scholarship informs their teaching and who positively impact the professional and Miami community. The Department of Accountancy has been accredited by the Association to Advance Collegiate Schools of Business International since 1984.

This program provides an in-depth understanding of selected areas of accounting and business and the knowledge and skills to prepare graduates for long-term success in an accounting-related career. This program qualifies graduates to sit for the CPA examination in Ohio and most states that require 150 semester hours.

Master's programs in business administration (MBA) and in economics (M.A.) are also offered in the Farmer School of Business. These two programs are listed alphabetically.

## Admission Requirements

Applicants are admitted on the basis of proven intellectual capability, maturity, and promise of success demonstrated by the undergraduate academic record, results of the Graduate Management Admission Test (GMAT) (optional for Miami University undergraduates), letters of recommendation, personal statement, and professional, community, and extracurricular activities.

The GMAT and TOEFL score reports (if required) should be sent directly to Miami University. All candidates apply online, uploading an unofficial transcript, resume, and personal statement. Letters of recommendation may be completed electronically or manually; paper copies should be sent directly to the academic program coordinator. Complete details of the admission process can be found on the MAcc website.

## Financial Assistance

In addition to graduate assistantships described elsewhere in this Bulletin, the department awards one fellowship and several scholarships on the basis of merit and/or demonstrated financial need. For information, contact the academic program coordinator.

## Program Requirements

(30 semester hours)

Prerequisite courses for this program are equivalent to the requirements for a Bachelor of Science in Business with a major in accountancy, including financial accounting research and financial statement auditing.

The Master of Accountancy Program consists of 30 semester hours of coursework in accountancy and other business disciplines.

## Combined Degree Option

Students planning to take the CPA exam in Ohio and in most other states are required to have 150 hours of education with at least a bachelor's degree. This requires additional education beyond the requirements for a bachelor's degree from Miami.

High-achieving students have the option of pursuing a combined-degree program, in which you can earn both your bachelor's and master's degrees in accountancy within four years. After completing the program, you are qualified to sit for the CPA examination in the state of Ohio and most other states that have adopted the 150-hour education requirement.

To be eligible to apply for the combined degree program, students must have completed at least 64 credit hours with a minimum GPA of 3.25. Certain elements of the graduate program may be used to satisfy undergraduate requirements. Please contact the department's academic program coordinator to learn more about this option.

## Adult TESOL Certificate

For information, contact:  
 Director of Graduate Studies  
 Department of English  
 356 Bachelor Hall, 513-529-7530  
[www.MiamiOH.edu/english/graduate](http://www.MiamiOH.edu/english/graduate)

This graduate certificate provides students with a comprehensive set of marketable skills leading to employment as instructors of Adult ESL/EFL around the world. Drawing upon the interdisciplinary knowledge base of Linguistics, and faculty expertise in teaching academic writing, this onsite-online hybrid certificate can be completed within one academic year. It may be earned as an add-on to any undergraduate or graduate program offered at MU, although undergraduates require special permission to complete it.

## Program Requirements

Code	Title	Credit Hours
ENG 508	Second Language Acquisition	3
ENG 517	Second Language Writing and Reading: Teaching & Theory	3
ENG 615	TESOL Methods, Materials & Assessment	3
ENG 616	TESOL Practicum	3
Total Credit Hours		12

## Architecture- Master of Architecture

For information, please contact the Director of Graduate Studies, Department of Architecture + Interior Design, 100 Alumni Hall, 513-529-7026, <http://arts.MiamiOH.edu/architecture-interior-design/programs/graduate-studies>.

## Research and Support Facilities

### Alumni Hall

The Department of Architecture + Interior Design is located in Alumni Hall, which for many years served as the University's main library. The central portion, which dates from 1909, was conceived as the most lavish building on campus when it was commissioned and remains an impressive space today. The rotunda is a focus for departmental ceremonies, receptions, and graduate program dinners. Since its restoration and 30,000 square foot addition designed by the renowned architectural firm Hammond, Beeby + Babka of Chicago was completed in 1997, Alumni Hall has served as a focal point for campus-wide activities. Almost all of the department's activities are housed within Alumni Hall, including individual studio space for each student in the program as well as classrooms, seminar spaces, faculty and administrative offices, the department woodshop, digital fabrication lab, the Alumni Hall Cage Gallery, and the W.W. Wertz Art and Architecture Library. All department classes, except the larger lecture sessions, are taught in Alumni Hall.

The Department of Architecture + Interior Design supports a mobile computing environment with wireless internet access provided to studio, lecture, seminar spaces, and the library. Students purchase/provide their own equipment that can support the software recommended by the digital media faculty. The department supports laser cutting, 3D printing, and CNC/Rapid Prototyping equipment.

### Visual Resources Center: Art Building

The Miami University College of Creative Arts maintains a divisional collection of visual resources located in the Art Building. The collection contains approximately 30,000 digital images. There are also 200,000 slides available, including approximately 80,000 architectural images, as well as a DVD collection with architecture department lectures and other architecture subjects. Services include slide digitizing, scanning, circulating photographic and video equipment, and a student work documentation studio.

### Exhibit Galleries

The College of Creative Arts maintains several divisional art galleries. The exhibit gallery in Hiestand Hall supports faculty and student

exhibits, traveling exhibitions, and other exhibits and events sponsored by the Departments of Art, Architecture + Interior Design, Theatre, and Music. The Cage Gallery, located in the lower level of Alumni Hall, provides ongoing exhibits of professional as well as student work within the Department of Architecture + Interior Design.

## Admission Requirements

### Application Process

Applications are considered from any student with an accredited bachelor's degree, regardless of his/her major. Applicants must first satisfy the entrance requirements of the Graduate School of Miami University to be accepted into the Master of Architecture Program.

#### Application Deadline: January 15

#### Submit the Online Application to the Graduate School

This includes:

**Three letters of recommendation**, written by individuals who are able to assess academic or professional potential. At least one letter should be from an academic source. Specify recommenders in the online application.

**A personal statement** that describes how Miami University's Master of Architecture degree will help the applicant attain educational goals, enable the applicant to explore interests, and also how the applicant could contribute to the academic and creative community of the graduate program.

**A curriculum vitae or resume** that describes academic and professional accomplishments, scholarship, research, and creative activity.

**A writing sample**, either academic or creative.

#### Submit Required GRE Scores

Miami University's code is 1463 and Graduate Architecture Studies code is 4401.

#### Submit a portfolio of creative work to:

Graduate Admissions Committee  
c/o Architecture Graduate Studies  
100 Alumni Hall  
Miami University  
Oxford, OH 45056  
USA

For applicants to the M. Arch. II program, the portfolio should include examples of undergraduate and/or professional architectural design projects. All M. Arch. applicants are encouraged to include non-architectural work within their portfolio as well.

For applicants to the M. Arch. III program, the portfolio can include examples from architectural projects, if applicable. The portfolio should include work that demonstrates creative accomplishments.

Portfolio contents can be from any creative field, including design, photography, studio arts, film, writing, music, and performance. Candidates from technical disciplines, such as science or engineering, should contact the program to determine suitable application materials. The portfolio should contain only printed reproductions; please do not send originals. There is no required format, but the portfolio should be less than 12"x18" for our filing system.

If the portfolio contains group work, this must be noted and the applicant's role in the project must be described.

To have portfolios returned, please include a pre-addressed mailer with postage. The department assumes no responsibility for the loss of any portfolio.

## Program Requirements

Programs vary according to undergraduate preparation. The M. Arch. II is a two-year program entailing 60 credit hours of graduate-level courses. (Additional credit hours required if all prerequisites have not been met.) This program is designed for students with the equivalent of Miami's Bachelor of Arts in Architecture.

Students who do not have an architectural degree or equivalent can expect to complete a Master of Architecture degree in three and one-half years. The M. Arch. III program includes 42 credit hours of preparatory courses in addition to the final 63 credit hours for a total of 105 credit hours. After the preparatory courses in both semesters of the first year, the student must undergo review from the graduate faculty to continue in the program.

## National Architectural Accrediting Board (NAAB) Statement

In the United States, most registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit professional degree programs in architecture offered by institutions with U.S. regional accreditation, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted an eight-year, three-year, or two-year term of accreditation, depending on the extent of its conformance with established educational standards.

Doctor of Architecture and Master of Architecture degree programs may require a preprofessional undergraduate degree in architecture for admission. However, the preprofessional degree is not, by itself, recognized as an accredited degree.

The Department of Architecture + Interior Design at Miami University offers the following NAAB-accredited degree programs: Master of Architecture II (pre-professional degree + 60 graduate credits) and Master of Architecture III (non-pre-professional degree + 105 graduate credits). Next accreditation visit for all programs: 2023.

## Transfer Credits

Students who have completed graduate course work in other architectural graduate programs may petition to receive credit for that work toward a Master of Architecture degree. Decisions about transfer credit, based on the applicant's previous record, are made by the graduate committee after consultation with the appropriate instructor. Transfer credit is granted for work equivalent in content and rigor to Miami University's offerings and may not, by Graduate School stipulation, exceed one-third of the credit hours of graduate course work required by the Department of Architecture + Interior Design.

## Length of Program

The program outlines below represent the minimum length of each curriculum track. Typically, course waivers granted by the director

of graduate studies (in consultation with graduate faculty) do not reduce total credit hour requirements of a program. Under certain circumstances, students entering the M. Arch. III program with strong backgrounds in some design disciplines may petition to have their initial studio (ARC 581) waived. The nature of the studio sequence, however, normally prevents any reduction of semesters in residence in the M. Arch. II and M. Arch. III programs.

These program tracks can be extended only upon consultation with the graduate director and the Graduate School. Candidates with insufficient backgrounds in core curricular areas, as determined by the director and graduate committee, will be required to take additional course work to attain the requisite curricular background.

## Thesis

The student must produce a written research thesis document and a design thesis project with guidance and approval of a committee of graduate faculty from the department and the University. The thesis must meet standards, format, and procedures established by the Department of Architecture + Interior Design.

## Program Outlines

The Master of Architecture (M. Arch.) is accredited by the National Architectural Accrediting Board (NAAB). Miami's graduate program in architecture accepts students from two different preparation backgrounds. Students from pre-professional undergraduate architecture programs who wish to complete their professional education and hold a Bachelor of Arts in Architecture or a Bachelor of Science in Architecture apply to the M. Arch. II Program. Those who have earned an undergraduate degree in fields other than architecture apply to the M. Arch. III Program.

### Two-Year Professional Program in Architecture (M. Arch. II)

**(60 credit hours with pre-professional design degree. Additional credit hours will be required if all prerequisites have not been met)**

The two-year professional program is designed for students with a pre-professional degree that is the equivalent of a Bachelor of Arts in Architecture. Normally, a Bachelor of Arts or a Bachelor of Science in Architecture is considered an equivalent pre-professional degree. Other undergraduate degree programs, in which the students have completed four years of architectural design studio and requisite coursework in architectural history and architectural technology, may also satisfy partial requirements for admission to the M. Arch. II Program.

Students admitted to the two-year program must complete 60 graduate credit hours, normally completed in two academic years. Additional credit hours are required if all prerequisites have not been met. All students in the M. Arch. II Program are expected to produce a written thesis document and a design thesis project. Timely completion of the program largely depends on the effort devoted to thesis research and site investigation during the summer prior to the thesis year. Holders of graduate assistantships may receive a tuition waiver, a stipend, and academic credit for summer independent study. Students who have previously completed coursework that is the equivalent of required courses in the M. Arch. II sequence may be given credit for that work toward completion of the Master of Architecture degree from Miami. While students may petition to have

these course requirements waived, the total credit hours required for graduation will not be reduced. Miami credit and waivers are approved only by the department's graduate faculty in consultation with the graduate director. The following proposal outlines the typical sequence of required courses and electives for the two-year term.

#### First Year

Fall		Credit Hours
	A 500-level departmental graduate seminar <sup>1</sup>	3
ARC 513	Environmental Control Systems I <sup>2</sup>	3
ARC 601	Architecture Studio <sup>3</sup>	6
ARC 634	Architectural Theory	3
	Credit Hours	15

#### Spring

ARC 511	Structural Design <sup>2</sup>	3
ARC 514	Environmental Systems II	3
ARC 602	Architecture Studio <sup>3,4</sup>	6
ARC 636	Design & Research Methods	3
	Credit Hours	15

#### Summer

ARC 700	Thesis Coursework	3
	Credit Hours	3

#### Second Year

##### Fall

	A 500-level departmental graduate seminar <sup>1</sup>	3
ARC 512	Structural Design <sup>2</sup>	3
ARC 541	Professional Practice <sup>2</sup>	3
ARC 701	Pre-Thesis Design Studio	6
	Credit Hours	15

##### Spring

ARC 551	Contemporary Architectural Theory and Practice <sup>2</sup>	3
ARC 702	Thesis Design Studio	6
	A graduate-level elective	3
	Credit Hours	12
	Total Credit Hours	60

<sup>1</sup> See advisor to determine eligible course options.

<sup>2</sup> ARC 511, ARC 512, ARC 513, ARC 514, ARC 541, and ARC 551 can be waived and elective coursework substituted if the student demonstrates that course requirements have been met in his/her previous curriculum.

<sup>3</sup> ARC 517, ARC 518, and ARC 621-ARC 622 (or their equivalent) are the normal prerequisites for ARC 601-ARC 602. A pre-semester review will be held to determine if these prerequisites are met.

<sup>4</sup> ARC 513 (or the equivalent) is a prerequisite for ARC 602.

### Three-and-One-Half Year Professional Program in Architecture (M. Arch. III)

**(105 credit hour track for students with degrees in other disciplines)**

The three-and-one-half-year (M. Arch. III) professional program is designed for students whose undergraduate degrees are outside the field of architecture. The program was established for two reasons.

First, M. Arch. III students are generally a diverse group of individuals who bring perspective and an intellectual maturity that can benefit the program. Second, these students often return to school after significant work experience and, when combined with their prior education, can significantly enrich the teaching and learning culture of the graduate program and the department at large.

Students admitted to the M. Arch. III graduate program must complete 105 graduate credit hours that are normally completed in three academic years and three summer terms. All students in the M. Arch. III program are expected to produce a written thesis document and a thesis design project. Timely completion of the program depends on the effort devoted to thesis research and site investigation during the summer prior to the thesis year. Holders of graduate assistantships may receive a tuition waiver, stipend, and academic credit for summer independent study. Students who have previously completed coursework that is the equivalent of that required in the M. Arch. III sequence may be given credit for that work toward completion of the Master of Architecture degree. While students may petition to have these course requirements waived, the credit hours required to fulfill degree requirements will not be reduced. Miami credit and waivers are approved only by the department's graduate faculty in consultation with the graduate director.

The first year of the 105 credit-hour track is a preparatory year during which students receive intensive education in the fundamental principles of architectural design, graphic communication and visual analysis, architectural history and theory, and architectural technology. For M. Arch. III graduate students to continue in the program, design work from the preparatory year must be reviewed and approved by a committee of graduate faculty in the latter part of the spring semester.

The following curriculum outlines the typical sequence of required courses and electives for the three-and-one-half-year program.

### First Year

		Credit Hours
<b>Summer I</b>		
ARC 581	Architectural Design Studio	6
ARC 612		2
	Credit Hours	8
<b>Fall</b>		
ARC 517	Architectural Materials	3
ARC 582	Architectural Design Studio	6
ARC 613	Graphic Media II	2
ARC 621	History of Architecture I	3
	Credit Hours	14
<b>Spring</b>		
ARC 518	Construction Methods	3
ARC 583	Architectural Design Studio	6
ARC 614	Graphic Media III	2
ARC 622	History of Architecture II	3
	Credit Hours	14
<b>Summer</b>		
ARC 599	Off-Campus Studio	6
	Credit Hours	6

### Second Year

<b>Fall</b>		
ARC 510	Statics & Strengths of Materials	3
ARC 513	Environmental Control Systems I	3
ARC 601	Architecture Studio	6
ARC 634	Architectural Theory	3
	Credit Hours	15
<b>Spring</b>		
ARC 511	Structural Design	3
ARC 514	Environmental Systems II	3
ARC 602	Architecture Studio	6
ARC 636	Design & Research Methods	3
	Credit Hours	15
<b>Summer</b>		
ARC 700	Thesis Coursework	3
	Credit Hours	3

### Third Year

<b>Fall</b>		
A 500-level departmental graduate seminar <sup>1</sup>		3
ARC 512	Structural Design	3
ARC 541	Professional Practice	3
ARC 701	Pre-Thesis Design Studio	6
	Credit Hours	15
<b>Spring</b>		
A 500-level departmental graduate seminar <sup>1</sup>		3
ARC 551	Contemporary Architectural Theory and Practice	3
ARC 702	Thesis Design Studio	6
A graduate-level elective		3
	Credit Hours	15
	Total Credit Hours	105

<sup>1</sup> See advisor to determine eligible course options.

## Art Education- Master of Arts

For information, contact:  
Graduate Director for Art Education  
Department of Art  
124 Art Building, 513-529-2900

<http://arts.MiamiOH.edu/art/programs/graduate-art-education>

## Admission Requirements

In addition to the Graduate School requirements, you must meet departmental requirements. Requirements include an undergraduate major or minor in art or art education with preference for certification/licensure to teach art. Multi-age Visual Arts Licensure through the State of Ohio is not a graduate requirement. Those wishing to earn licensure may do so concurrently at the undergraduate level.

Submit the following to the graduate director for art education at the time you apply to the Graduate School: 12 slides of studio work or evidence of comparable work, a written statement of intent to pursue graduate work, and three letters of recommendation. Instructional

and other resources of the department determine the number of applicants accepted.

The deadline for a graduate assistantship award application is **Feb. 1**. For part-time work on the M.A., an application may be submitted throughout the academic year.

## Program Requirements

Note: The art education program is under review at this time and students may not declare the program. For questions, contact the Department of Art, 124 Art Building, 513-529-2900.

## Art, Studio- Master of Fine Arts

For information, contact:  
Studio Art Graduate Director  
Department of Art  
124 Art Building  
513-529-2900  
<http://arts.MiamiOH.edu/art/programs/graduate-studio-art>

## Admission Requirements

In addition to requirements of the Graduate School, you must meet departmental requirements.

You must have earned a minimum of 74 semester hours (110 quarter hours), of which 12 must be in art history and 12 must be in drawing, studio, and related art courses. At least 12 semester hours (18 quarter hours) must be advanced hours in the area of proposed concentration. Total general academic studies shall not be less than 30 semester hours (45 quarter hours). **Note:** Life experiences, strong portfolio contents, and other factors may substitute for some of these requirements. Only the Department of Art graduate faculty may approve substitutions.

Departmental acceptance into the M.F.A. program is determined by graduate faculty evaluation of transcripts, three letters of recommendation, a one-page statement of goals for study, experience, and examples of creative work indicating competence in the area of proposed study. Portfolios representing your studio performance should be submitted to the Department of Art via SlideRoom, an online web portal, at the time of application to the Graduate School. An on-campus interview with an instructor in the area of proposed study prior to or during the application process is also strongly recommended. Instructional and other resources of the department determine the number of applicants accepted.

Priority application deadline is **Feb. 1**. Applications are accepted until **June 1** for enrollment in fall semester.

## Program Requirements

(60 semester hours)

This program requires a minimum of two years of full-time graduate study with areas for studio concentration available in painting, printmaking, ceramics, metals, photography, and sculpture.

Code	Title	Credit Hours
	600-level studio courses with no fewer than 18 hours in either painting, printmaking, ceramics, metals, photography, and sculpture	24

ART 601	Teaching Assistant Seminar <sup>1</sup>	3
Graduate-level art history, including:		9
ART 589	Postwar to Postmodern, 1945-1980	
ART 680	Graduate Seminar in Art History	
Graduate-level course options		12
ART 620	Graduate Study in Drawing	3
ART 700	Thesis	9
Total Credit Hours		60

<sup>1</sup> Required of graduate teaching assistants.

## Advanced Studio Art Certificate Graduate Certificate for Professional Development: Post-Baccalaureate in Advanced Studio Art

The Post-Baccalaureate in Advanced Studio Art certificate provides focused, advanced professional studio experience and portfolio development for the experienced visual artist. The certificate offers a 5th-year opportunity for portfolio development in preparation for Graduate School applications for advanced studio training for art educators and professional artists in one of the following six media tracks: Ceramics, Metals, Painting, Printmaking, Photography, or Sculpture.

The Advanced Studio Art certificate program further develops concepts, techniques, materials, methods and critical aesthetic thinking as applied to process of creating two-dimensional or three-dimensional works of art.

## Program Requirements

(15 graduate level credit hours)

Code	Title	Credit Hours
Select one track		9-12
Select one of the following:		3-6
ART 620	Graduate Study in Drawing	
Any 600-level Art History		
Total Credit Hours		12-18

### Tracks

Track 1: Ceramics

Code	Title	Credit Hours
ART 561	Ceramics IV	3
ART 562	Ceramics V	3
ART 600	Advanced Research Problems	3-6
Total Credit Hours		9-12

**Track 2: Metals**

Code	Title	Credit Hours
ART 564	Jewelry Design and Metals IV	3-6
ART 600	Advanced Research Problems	3-6
Total Credit Hours		6-12

**Track 3: Painting**

Code	Title	Credit Hours
ART 531	Painting IV	3
ART 532	Painting V	3
ART 600	Advanced Research Problems	3-6
Total Credit Hours		9-12

**Track 4: Photography**

For additional information contact the Studio Art Graduate Director.

Code	Title	Credit Hours
ART 600	Advanced Research Problems	3-6
Total Credit Hours		3-6

**Track 5: Printmaking**

Code	Title	Credit Hours
ART 541	Printmaking IV	3
ART 600	Advanced Research Problems	3-6
Total Credit Hours		6-9

**Track 6: Sculpture**

Code	Title	Credit Hours
ART 571	Sculpture IV	3
ART 572	Sculpture V	3
ART 600	Advanced Research Problems	3-6
Total Credit Hours		9-12

Portfolio submission required. February 1 deadline for Summer or Fall admission. September 1 for Spring admission; any alternate portfolio reviews are by arrangement through the studio faculty and the Graduate Director, Department of Art. All courses are subject to Permission of Instructor. A 3.00 GPA is required for all course work in the certificate.

## Autism Spectrum Disorders Certificate

The Autism Spectrum Disorders (ASD) Certificate offers practical classroom applications for students interested in in-depth knowledge of Autism Spectrum Disorder. Students will develop a broad and updated knowledge base in current research & trends, methods for classroom instruction, understanding and developing approaches to social-emotional and communicative skills, and methods for behavior support & intervention. Courses are offered in an online format, and may be taken non-sequentially.

## Program Requirements

Code	Title	Credit Hours
EDP 479/579	Autism: Introduction and Current Research	3
EDP 482/582	Autism Spectrum Disorder: Best Practice in Teaching Strategies	3
EDP 484/484	Autism Spectrum Disorder: Social and Communication Development	3
EDP 485/485	Autism Spectrum Disorder: Positive Behavior Supports and Interventions	3
Total Credit Hours		12

## Biological Sciences- Master of Arts in Teaching

For information, contact:

513-529-8576

<http://masters.df.MiamiOH.edu>

The Master of Arts in Teaching (MAT) in the Biological Sciences is a part-time, non-thesis master's program designed for formal and informal educators who already hold teaching licensure. The program is cooperatively offered by Project *Dragonfly* and the Department of Biology. The MAT has two main programs: the Advanced Inquiry Program (AIP) and the Global Field Program (GFP). The master's is designed to be completed in 2.5 years.

This program is not intended to lead to teacher certification. Teachers are advised to contact their individual school districts as to whether this program may qualify for salary advancement.

## Program Requirements

(35 semester hours)

Code	Title	Credit Hours
AIP Master Institution W+ courses or Earth Expeditions international field courses		21
Core web-based courses, including:		14
The Leadership in Science Inquiry course and associated Leadership Challenge (2 credits)		
The Professional Media Workshop course and associated Leadership Challenge (2 credits)		
The MAT's Master's Capstone course, including development of a teaching/work portfolio (2 credits)		
Total Credit Hours		35

The MAT program graduate committee must approve the academic program for students.

MAT students are required to complete a teaching portfolio adaptable for National Board Certification requirements. Degree candidates can focus portfolio work in a region (e.g., Africa, Pacific Northwest, etc.) or on a theme (e.g., environmental education).

For more information about requirements, admission, and program description go to <http://masters.df.MiamiOH.edu>.

Miami University is authorized by the Washington Student Achievement Council and meets the requirements and minimum educational standards established for degree-granting institutions under the Degree-Granting Institutions Act. This authorization is subject to periodic review and authorizes Miami University to offer specific degree programs. The Council may be contacted for a list of currently authorized programs. Authorization by the Council does not carry with it an endorsement by the Council. Any person desiring information about the requirements of the act or the applicability of those requirements to the institution may contact the Council at P.O. Box 43430, Olympia, WA 98504-3430.

The transferability of credits earned at Miami University is at the discretion of the receiving college, university, or other educational institution. Students considering transferring to any institution should not assume that credits earned in any program of study at Miami University will be accepted by the receiving institution. Similarly, the ability of a degree, certificate, diploma, or other academic credential earned at Miami University to satisfy an admission requirement of another institution is at the discretion of the receiving institution. Accreditation does not guarantee credentials or credits earned at Miami University will be accepted by or transferred to another institution. To minimize the risk of having to repeat coursework, student should contact the receiving institution in advance for evaluation and determination of transferability of credits and/or acceptability of degrees, diplomas, or certificates earned.

## Biology- Master of Arts, Master of Arts in Teaching, Master of Science, Doctor of Philosophy, Certificate

For information, contact:  
 Chair of Graduate Advisory Committee  
 Department of Biology  
 212 Pearson Hall, 513-529-3100  
<http://MiamiOH.edu/cas/academics/departments/biology/academics/graduate-studies/index.html>

## Research and Support Facilities

The department has outstanding laboratory facilities that are supported by the university, as well as grants from a variety of agencies and foundations including the National Institutes of Health, National Science Foundation, U.S. Department of Agriculture, and the U.S. Environmental Protection Agency. Facilities include DNA sequencing, synthesizing, and analytical equipment and specialized equipment for cellular, developmental and neurophysiological research, including electron microscopy and confocal laser facilities.

Miami University is located near excellent sites for field studies in terrestrial and aquatic ecosystems. The university's Ecology Research Center located two miles from campus has more than 200 acres devoted to a wide range of research projects in behavior, ecology, and environmental biology. In addition, Hueston Woods State Park and other nearby field sites are readily available to faculty and students.

## Admission Requirements

Admission is based on evaluations submitted by the departmental, the Graduate School, and (where applicable) the International

Programs Office. Applicants for the Master of Science and Doctoral programs are required to make contact with and identify a prospective major advisor.

Miami University is authorized by the Washington Student Achievement Council and meets the requirements and minimum educational standards established for degree-granting institutions under the Degree-Granting Institutions Act. This authorization is subject to periodic review and authorizes Miami University to offer specific degree programs. The Council may be contacted for a list of currently authorized programs. Authorization by the Council does not carry with it an endorsement by the Council. Any person desiring information about the requirements of the act or the applicability of those requirements to the institution may contact the Council at P.O. Box 43430, Olympia, WA 98504-3430.

The transferability of credits earned at Miami University is at the discretion of the receiving college, university, or other educational institution. Students considering transferring to any institution should not assume that credits earned in any program of study at Miami University will be accepted by the receiving institution. Similarly, the ability of a degree, certificate, diploma, or other academic credential earned at Miami University to satisfy an admission requirement of another institution is at the discretion of the receiving institution. Accreditation does not guarantee credentials or credits earned at Miami University will be accepted by or transferred to another institution. To minimize the risk of having to repeat coursework, student should contact the receiving institution in advance for evaluation and determination of transferability of credits and/or acceptability of degrees, diplomas, or certificates earned.

## For the Master of Science and Doctoral Programs

All application instructions can be accessed through the Miami University Graduate Studies website (<http://www.miamiOH.edu/graduate-studies/admission/>)

### A complete application must include the following:

1. Submit your application, pay the application fee, and submit all supplemental materials (numbers 2-7 below) electronically: (<https://www.applyweb.com/muohiog/index.ftl>).
2. Official copies of transcripts for all undergraduate and graduate work. Unofficial transcripts should be submitted with your application (with your name and institution clearly indicated). If admitted, you will be required to submit an official transcript for each degree earned.
3. An official copy of the Graduate Record Examination (GRE) general test. You may apply before completing the GRE, but your application will not be reviewed until an official score report is received.
4. For most international applicants, an official copy of scores on the Test of English as a Foreign Language (TOEFL) is also required.
5. Resume.
6. Three letters of recommendation.
7. Personal Statement - a letter outlining professional goals, research interests, and potential faculty advisor(s). We encourage you to contact individual faculty members with whom you share a research interest (email links available on our web site: (<http://biology.MiamiOH.edu>) prior to submitting your application. To be

admitted, you must identify at least one faculty member that is willing to serve as your advisor.

For more information about requirements, admission, and program description go to Biology Department Graduate Programs.

## General Requirement: Master of Science, Doctor of Philosophy

As a part of their professional training, all M.S. and Ph.D. candidates must perform departmental teaching and/or research.

### Requirements: Master's Degree Programs

#### Biology- Master of Science

1. Incoming students are expected to have completed a bachelor's degree and should have a broad course background in biology, chemistry, physics, and mathematics or statistics. A student may be required to complete undergraduate courses as part of his/her program of study.
2. Complete a pedagogy workshop upon entry to the graduate program, prior to assistantship duties, and complete an introductory seminar (BIO 601) during the first fall semester in residence.
3. Complete at least 30 semester hours of graduate work including:
  - a. at least 9 hours of formal course credit,
  - b. at least three seminars, and
  - c. six to 12 hours of thesis credit in biology. Not more than 10 semester hours of transfer credit can be applied to the degree. A course of study must be approved by a committee of graduate faculty during the first year in residence.
4. Pass an oral defense of your thesis proposal, approved by a committee of graduate faculty.
5. Conduct a research project approved by a committee of graduate faculty and present the project as a written thesis and in a public seminar.
6. Pass an oral examination in defense of your thesis, approved by a committee of graduate faculty.

In addition to the general requirements described above, M.S. students may be eligible for a certificate in Ecology by taking additional specific formal coursework. See the field of study listings in this Graduate Bulletin titled Ecology-Certificate for more details regarding requirements.

### Admission Requirements for the Master of Arts in Biology Program

Incoming students are expected to be over the age of 18 and have completed a bachelor's degree. Students admitted to the program who have not completed at least one university-level life science course or its equivalent will need to complete one of several options (determined by the MA graduate committee) for basic biology content as part of the Master's degree program. Applicants should submit application materials and two letters of recommendation at the following websites:

- Global Field Program: <http://gfp.MiamiOH.edu/>;
- Advanced Inquiry Program: <http://aip.MiamiOH.edu/>.

Applicants should send to the Graduate School:

1. the Graduate School application form and application fee and
2. official transcripts of all previous academic work.

For more information about requirements, admission, and program descriptions go to <http://masters.df.MiamiOH.edu>.

#### Biology- Master of Arts

The Master of Arts (MA) in Biology is a part-time, non-thesis master's program designed for working professionals from diverse backgrounds, including formal and informal educators. The program is cooperatively offered by Project *Dragonfly* and the Department of Biology. The MA has two main programs: the Advanced Inquiry Program (AIP) and the Global Field Program (GFP). The master's is designed to be completed in 2.5 years.

### Program Requirements

#### (35 Semester hours)

1. Complete at least 35 credits of graduate work, normally including 21 hours through an AIP Master Institution or Earth Expeditions field courses and 14 hours of web-based courses which include:
  - Completion of the Leadership in Science Inquiry course and associated Leadership Challenge (2 credits).
  - Completion of the Professional Media Workshop course and associated Leadership Challenge (2 credits).
  - Completion of the MA's Master's Capstone course and Master's Portfolio (2 credits).
2. The MA program graduate committee must approve the academic program for students.

MA students create a Master Plan and Master's Portfolio that advance their learning and professional goals. Master Plans are theme-based (e.g., community engagement in environmental stewardship) and may focus on a region (e.g., Africa, Pacific Northwest, etc.).

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evaluation and determination of transferability of credits and/or acceptability of degrees, diplomas, or certificates earned.

For more information about requirements, admission, and program descriptions go to <http://masters.df.MiamiOH.edu>.

### **Biological Sciences- Master of Arts in Teaching** (35 semester hours)

For more information about requirements, admission, and program description go to <http://bulletin.miamioh.edu/graduate-fields-study/biological-sciences/>.

## **Requirements: Doctoral Programs**

### **Biology- Doctor of Philosophy**

In addition to the general requirements specified by the Graduate School, you must:

1. Fulfill all requirements specified for the Master of Science in Biology and any further courses specified by your graduate advisory committee. Doctoral students are expected to participate in graduate seminars throughout their program, are expected to participate in departmental teaching as part of their professional development, and are required to complete at least 30 semester hours of dissertation credit (BIO 850). A course of study must be approved by a committee of graduate faculty during the first year in residence;
2. Demonstrate adequate knowledge of biology and related areas by successfully passing a written and oral comprehensive examination administered by a committee of graduate faculty;
3. Pass an oral defense of your dissertation proposal, approved by a committee of graduate faculty;
4. Conduct a research project approved by a committee of graduate faculty and present the project as a written dissertation and in a public seminar;
5. Pass an oral examination in defense of your dissertation, approved by a committee of graduate faculty.

## **Botany- M.A., M.S., Ph.D.**

For information, contact:  
Botany Program Graduate Advisor  
Department of Biology  
212 Pearson Hall, 513-529-3100  
[www.miamioh.edu/cas/academics/departments/biology/](http://www.miamioh.edu/cas/academics/departments/biology/)

## **Research and Support Facilities**

The Department of Biology in Pearson Hall is well-equipped with research laboratories in plant anatomy and morphology, cell biology, plant ecology, plant evolutionary genetics, plant molecular biology, mycology, plant physiology, plant systematics, and bioinformatics. Special facilities include: Center for Advanced Microscopy and Imaging, Willard Sherman Turrell Herbarium, Center for Bioinformatics and Functional Genomics, plant growth chamber facility, and the Ecology Research Center (184 acres). Special departmental funds are available on a competitive basis to support student research projects.

## **Admission Requirements**

Admission is based on evaluations by departmental faculty, the Graduate School, and (where applicable) the International Programs

Office. All application instructions can be accessed through the Miami University Graduate School website. You should submit a departmental application, transcripts, Graduate Record Examination (GRE) scores, three letters of recommendation, a copy of your resume/CV, and a statement that describes your training and experience and defines your area of research interest and long-range goals.

## **Combined Bachelor/Master's Program**

The combined BA(BS)/MA program in Botany allows students to pursue a Masters of Arts degree in an accelerated manner while pursuing their bachelor's degree. It is designed for students who wish to acquire knowledge in plant sciences in order to prepare for a career in industry, governmental agencies, biological consulting, the non-profit sector, or related areas. Please contact the Botany Program Graduate Advisor for more information about the combined program.

## **Botany- Master of Arts**

(30 semester hours)

1. Minimum background preparation at the undergraduate level in:
  - general biology or botany
  - organic chemistry or biochemistry
  - genetics or evolution
2. Complete BIO 601 (Graduate Colloquium) during your first fall semester in residence.
3. Complete at least 36 hours of graduate work including:
  - a. one of BIO 650, BIO 710, BIO 720, or equivalent;
  - b. three courses from the following: BIO 501, BIO 502, BIO 503, BIO 525, BIO 532, BIO 566, BIO 581, BIO 582, BIO 583, BIO 605, BIO 621, BIO 671, BIO 672;
  - c. up to 12 hours of BIO 700.
4. Complete an internship experience (or approved substitute), write a report in accordance with current Graduate School guidelines, and pass an oral defense of the internship report.

## **Botany- Master of Science**

(30 semester hours)

1. Minimum background preparation at the undergraduate level in:
  - a. general biology or botany
  - b. organic chemistry or biochemistry
  - c. genetics or evolution
2. Complete BIO 689 and BIO 601 during your first fall semester in residence.
3. Complete at least 30 hours of graduate work including at least:
  - a. one of BIO 650, BIO 720, or equivalent;
  - b. one botany graduate (500 or above) course of three credit hours or more (with a "B" or higher) from three of the four core areas in botany;
  - c. one additional pedagogical botany graduate course exclusive of BIO 601, BIO 720, and BIO 750;
  - d. completing six to 12 hours of BIO 700.
4. Demonstrate adequate knowledge of botany and related areas by passing an oral comprehensive examination.
5. Pass an oral defense of the thesis.

In addition to the general requirements described above, M.S. students may be eligible for the certificate in Ecology by taking additional specific formal coursework. See the field of study listings in this Graduate Bulletin titled Ecology-Certificate for more details regarding requirements.

## Botany- Doctor of Philosophy

(60 semester hours)

In addition to the general requirements specified by the Graduate School, you must meet minimum requirements for the master's degree or equivalent and fulfill the following requirements:

1. Complete BIO 689 and BIO 601 during your first fall semester in residence.
2. Complete at least 60 hours of graduate work including at least
  - a. two of BIO 650, BIO 720, or equivalent;
  - b. one biology graduate (500 or above) course of three credit hours or more (with a "B" or higher) from each of the four core areas in biology;
  - c. two additional pedagogical biology graduate courses exclusive of BIO 601, BIO 720, and BIO 750;
  - d. 16 to 60 hours of BIO 850.
3. Demonstrate adequate knowledge of botany and related areas by passing a written and oral comprehensive examination.
4. Pass an oral defense of the doctoral dissertation.

In addition to the general requirements described above, Ph.D. students may be eligible for the certificate in Ecology by taking additional specific formal coursework. See the field of study listings in this Graduate Bulletin titled Ecology-Certificate for more details regarding requirements.

## Conservation Biology Certificate

This certificate integrates specialized graduate coursework with the culminating experience the student completes as part of a Master's degree, to prepare students for careers in conservation biology with federal, state, tribal, and local agencies and non-profit organizations. This Certificate provides a value-added component to a graduate degree at Miami University, specifically an M.A. or M.S. in Biology or Botany; Ph.D. in Biology, Botany or Ecology, Evolution, & Environmental Biology; or M.En. in environmental science. By choosing the appropriate coursework, a student can earn the Conservation Certificate simultaneously with earning a graduate degree.

### Program Requirements

Code	Title	Credit Hours
Select the following:		
BIO 567	Conservation Biology	3
BIO/MBI 671	Population and Community Ecology	4
Select one:		
GEO 541	Geographic Information Systems	3
GEO 542	Advanced Geographic Information Systems	
GEO 543	Python Programming for ArcGIS	

GEO 544	GIScience Techniques in Landscape Ecology	
Select one:		3
ATH 571	Ecological Anthropology	
BIO 551	Conservation Education and Community Engagement	
ECO 506	Environmental Economics	
EGM/MGT 511	Leading and Managing Projects	
ENG/IES 529	Environmental Communication	
IES 550	Environmental Law	
Graduate Seminar:		
BIO 710	Advanced Seminar	1-4
Total Credit Hours		14-17

## Business Administration- Master of Business Administration

For information, contact:

MBA Program Office, Voice of America Learning Center  
Farmer School of Business, 513-895-8876  
[www.fsb.MiamiOH.edu/mba](http://www.fsb.MiamiOH.edu/mba)

The Farmer School of Business offers a Professional MBA degree with evening classes held at Miami's Voice of America Learning Center in West Chester, Ohio. The program is completed on a part time basis and designed to allow completion in 2 years, assuming year round participation by the student, and will allow the student to gain the degree with a concentration in marketing, finance, or general business. Admission requirements are posted on the MBA program website.

The Farmer School of Business is accredited by the AACSB, the international association for management education. In addition to the MBA program, there are also the Master of Accountancy and Master of Arts in Economics programs which are described under their alphabetical listings.

### Admission Requirements

The Graduate Management Admission Test (GMAT) or the GRE score report should be sent directly to Miami University. The application and fee (via credit card) can be submitted online; official transcripts should be submitted online with application. A resume, letter of recommendation, and the essay should be sent directly to the MBA Office in the School of Business. Complete details of the admission process can be found on the MBA admission website.

### Requirements: Professional (Part-Time) Program

(36 semester hours)

There are three pre-requisite courses required prior to beginning the Professional MBA Program: Financial Accounting, Statistics, and Micro-Economics. Students must also display familiarity with standard desktop software, particularly spreadsheets. There will be an assessment process to ensure that the admitted student has both completed the pre-requisite courses and is competent in the prerequisite subject matter.

Students admitted to the Professional MBA program may choose a concentration in Marketing or Finance or students may earn a general MBA by taking a combination of three concentration courses.

Code	Title	Credit Hours
<b>Core Courses</b>		
ACC 611	Accounting for Managers	3
ECO 616	Microeconomic Analysis for Managerial Decisions	3
ISA 621	Enabling Technology Topics I	3
FIN 625	Managerial Finance	3
MKT 618	Marketing Management	3
MGT 627	Supply Chain and Operations Management	3
MGT 644	Leadership, Change & Cross-Cultural Management	3
MGT 654	Strategic Human Resource Management	3
BUS 637	Managing Competition	3
Concentration: select one elective per term your second year for a total of 9 credit hours for your concentration		9
<b>Marketing Concentration Courses</b>		
MKT 622	Creativity, Innovation & Problem Solving in Marketing	
MKT 632	Information Network Marketing	
MKT 635	Branding and Brand Equity Management	
MKT 645	Marketing Analytics for the Executive	
<b>Finance Concentration Courses</b>		
FIN 635	Investment Management	
FIN 645	Futures and Options	
FIN 675	Applied Advanced Corporate Finance	
Total Credit Hours		36

## Business Analytics- Master of Science in Business Analytics

For information, contact

The MS an Business Analytics provides students with the skills and knowledge to excel at data driven decision making in organizations. It include base level skills and knowledge required for data and analytics necessary across domains and an advanced set of skills and knowledge for decision making in a business context. This advanced knowledge includes machine learning applications in organizational settings, the forefronts of prescriptive methodologies, and applications of artificial intelligence. Students will also engage with practitioners about how analytics solutions are deployed and put to practice in organizations and be immersed in an experiential project to deliver a client based data-driven solution.

## Program Requirements

Code	Title	Credit Hours
<b>Required courses:</b>		
ISA 512	Data Warehousing and Business Intelligence	3
ISA 514	Managing Big Data	3
ISA 591	Introduction to Data Mining in Business	3
ISA 616	Communicating with Data	3
ISA 630	Machine Learning Applications in Business	3
ISA 632	Big Data Analytics and Modern AI	3
ISA 633	Prescriptive Analytics in Business	3
ISA 634	Analytics Solution Deployment and Lifecycle Management	3
Six hour Experiential Component (course is three hours and repeated once)		6
ISA 650	Business Analytics Practicum	
Total Credit Hours		30

## Cell, Molecular and Structural Biology (CMSB)- M.S., Ph.D.

For information, contact:  
Chair of CMSB Admission Committee  
Department of Biology  
212 Pearson Hall, 513-529-3100  
<http://www.cas.MiamiOH.edu/cmsb/>

Cell, Molecular and Structural Biology is a multi-disciplinary program that seeks to identify and understand the molecules that collectively form the basis of all life.

## Program Requirements: Master of Science

Code	Title	Credit Hours
<b>Areas of Study</b>		
Select one course from two of the three following areas: <sup>1</sup>		6-7
Biochemistry:		
CHM 532	Fundamentals of Biochemistry	
Cell Biology:		
BIO 571	Molecular Physiology	
BIO/MBI 606	Advanced Cell Biology	
MBI 515	Immunology Principles and Practice	
Molecular Biology:		
BIO 544	Molecular Biology	
BIO/MBI 605	Advanced Molecular Biology	
<b>Structural Biology</b>		
Select one of the following:		2-4
BIO 581	Theory of Electron Microscopy	
BIO 582	Scanning Electron Microscopy Laboratory	

BIO 583	Transmission Electron Microscopy Laboratory
BIO 566	Bioinformatics Computing Skills
BIO/MBI 524	Advanced Experimental Techniques in Structural and Functional Genomics
BIO/MBI 585	Bioinformatics Principles
CHM 740	Topics in Organic and Biochemistry
CHM 760	Selected Topics in Inorganic and Analytical Chemistry
CHM 770	Topics in Physical Chemistry

**Seminar Requirements**

BIO/CHM/MBI 650 Seminar in Molecular Biology <sup>2</sup>	1
BIO 601 Seminar for Graduate Students	1

<sup>1</sup> One course must be at the 600 level.

<sup>2</sup> One semester for M.S., three semesters for Ph.D.

Additional course work appropriate to student's area of interest will be determined by student's dissertation/thesis committee in accordance with Graduate School requirements.

## Program Requirements: Doctor of Philosophy

Code	Title	Credit Hours
<b>Areas of Study</b>		
Select one course from two of the three following areas: <sup>1</sup>		6-7
Biochemistry:		
CHM 532	Fundamentals of Biochemistry	
Cell Biology:		
BIO 571	Molecular Physiology	
BIO/MBI 606	Advanced Cell Biology	
MBI 515	Immunology Principles and Practice	
Molecular Biology:		
BIO 544	Molecular Biology	
BIO/MBI 605	Advanced Molecular Biology	
<b>Structural Biology</b>		
Select one of the following:		2-4
BIO 581	Theory of Electron Microscopy	
BIO 582	Scanning Electron Microscopy Laboratory	
BIO 583	Transmission Electron Microscopy Laboratory	
BIO 566	Bioinformatics Computing Skills	
BIO/MBI 524	Advanced Experimental Techniques in Structural and Functional Genomics	
BIO/MBI 585	Bioinformatics Principles	
CHM 740	Topics in Organic and Biochemistry	
CHM 760	Selected Topics in Inorganic and Analytical Chemistry	
CHM 770	Topics in Physical Chemistry	
<b>Seminar Requirements</b>		
BIO/CHM/MBI 650 Seminar in Molecular Biology <sup>2</sup>		1,1,1
BIO 601 Seminar for Graduate Students		1

<sup>1</sup> One course must be at the 600 level.

<sup>2</sup> One semester for M.S., three semesters for Ph.D.

## Dissertation/Thesis Committee

The student, in consultation with his/her advisor, will set up a thesis committee (M.S.) by the end of the spring semester in the program or a dissertation committee (Ph.D.) by the end of the third semester in the program. These committees must be approved by the CMSB Director and the Graduate School.

M.S. Thesis Committee: Advisor and two other faculty members participating in the CMSB Program (total = 3).

Ph.D. Dissertation Committee: Advisor, at least three other faculty members from the CMSB Program, plus one additional faculty member who is not from the student's host department to serve as the Graduate School representative (total = 5).

## Comprehensive Examination

M.S. - none

Ph.D. - written grant proposal on topic not related to dissertation work followed by oral defense of the proposal. Both written and oral components of the exam must be passed. The comprehensive examination should be completed by the end of the fifth semester in residence.

## Thesis or Dissertation Proposal

Each student will present and defend a thesis or dissertation proposal to his/her thesis or dissertation committee. This should be done by the end of the third semester (M.S. students) or the end of the sixth semester (Ph.D. students) in residence.

## Other Requirements

CMSB students will be expected to participate in pedagogy training prior to assuming their teaching duties. Students teaching Chemistry laboratories will attend training offered by the Department of Chemistry and Biochemistry. Students teaching BIO 115/BIO 116 MBI 115/MBI 116 laboratories will attend pedagogy training offered by one of the biological sciences departments. The CMSB Director, in consultation with participating departmental Graduate Advisory Committees, will assign CMSB students to appropriate departmental pedagogy training. CMSB students will also be expected to serve on CMSB and host department committees and otherwise participate in activities required of graduate students from the host department.

This structure will provide the necessary flexibility for an interdisciplinary program. The dissertation committee will be responsible for helping the student select courses that will appropriately train the student in the broad area of Cell, Molecular, and Structural Biology, with the specialization required for their particular research area. The committee will also administer the comprehensive examination for Ph.D. students, give guidance for thesis or dissertation research, and will be responsible for conducting the thesis or dissertation defense.

## Chemical and Paper Engineering- Master of Science in Chemical Engineering

For information, contact:

Director of Graduate Studies  
 Department of Chemical, Paper and Biomedical Engineering  
 064 Engineering Building, 513-529-0760  
<http://MiamiOH.edu/cec/academics/departments/cpb/academics/graduate-studies/>

## Introduction

The Master of Science in Chemical Engineering offers research (thesis) and course intensive (non-thesis) options. The mission of the program is to prepare students who wish to either pursue doctoral work in chemical or biomedical engineering or to seek research-related careers in industry. The departmental faculty have active research projects in the areas of solar cells, environmental, paper physics and chemistry, tissue engineering, biomaterials, molecular simulation, biomechanics, enzyme treatment, separation and electrochemistry.

## Research and Support Facilities

The department's equipment includes a highly instrumented papermaking machine, stock preparation equipment, complete paper testing laboratories, pulping digesters, process control laboratory, biochemical engineering laboratory, environmental laboratory, chemical engineering laboratory, molecular simulation, biomechanics, electrochemical laboratory, solar cell research laboratory and tissue engineering/biomaterials laboratory. Students also have access to equipment at the university's Electron Microscopy Facility and Nanotechnology Center.

## Admission Requirements

You must have an undergraduate education in a science or engineering field, and must provide:

1. academic record of undergraduate performance;
2. scores on the Graduate Record Examination (GRE);
3. three letters of recommendation; and
4. written statement of purpose for seeking a master's degree in chemical engineering from Miami University.
5. personal essay.

## Combined Bachelor/Master's Program

Undergraduate students may apply to participate in the combined bachelors/master's program. This program allows you to pursue a master's degree in an accelerated manner while pursuing your bachelor's degree. It is a great opportunity to deepen your knowledge and research skills. Please contact the department for more information about the combined program.

## Program Requirements

### Option I - Research Intensive (thesis)

Students are required to complete a minimum of 34 semester hours, which is comprised of the following:

Code	Title	Credit Hours
CPB 551	Unit Operations Laboratory II	2
CPB 600	Graduate Seminar <sup>1</sup>	4
CPB 611	Transport Phenomena in Engineering	3
CPB/MME 612	Engineering Analysis	3

CPB 700 or CPB 710	Research for Master's Thesis Industrial Practicum	0-12
Electives <sup>3</sup>		16
Total Credit Hours		28-40

1. Maximum 4; take each semester of residence.
2. CPB 710 May be used with department approval.
3. The remaining 16 credits of graduate course work are freely chosen by the student and advisor, but the chosen program should show some coherence toward a particular area of concentration, namely Bioengineering, Environmental or Paper. Students planning a general program in the department can design their course selection with their advisor.

The student must:

1. complete a total of 34 semester hours with at least 24 semester hours of graduate credit in chemical, paper and biomedical engineering or related courses approved by the department. At least 12 credits must be earned at 600-level or above;
2. complete a research thesis (six to 16 hours credit) or the analysis and solution of an industrial problem (six to 12 hours credit); and
3. pass a final examination.

### Option II - Course Intensive (non-thesis)

Students are required to take a total of 34 credit hours, of which at least 30 semester hours must comprise of the following:

Code	Title	Credit Hours
CPB 600	Graduate Seminar <sup>1</sup>	4
CPB 551	Unit Operations Laboratory II	2
CPB 611	Transport Phenomena in Engineering	3
CPB/MME 612	Engineering Analysis	3
CPB 704 or CPB 710	Non-Thesis Project Industrial Practicum	0-12
Electives <sup>2</sup>		18-19
Total Credit Hours		30-43

1. Maximum 4; take each semester of residence.
2. 18 credits if 4 credits of CPB 690 or CPB 710 taken, otherwise 19 credits.

The student must:

1. complete a total of 34 semester hours with at least 30 semester hours of graduate credit in chemical, paper and biomedical engineering or related courses approved by the department. At least 12 credits must be earned at 600-level or above;
2. register for 3-4 credit hours of CPB 690 or CPB 710 and complete a research project under the supervision of a faculty member. The student will write a comprehensive report and make a formal presentation, which will be evaluated by a team of three faculty. This will constitute the final exam for the student.

## Chemistry- Master of Science, Doctor of Philosophy

For information, contact:

Chair, Graduate Admission Committee  
 Department of Chemistry and Biochemistry  
 160 Hughes Laboratories, 513-529-2813  
 chemgrad@MiamiOH.edu

<http://chemistry.MiamiOH.edu/>

## Research Areas and Facilities

The department has B.S./M.S., M.S., and Ph.D. programs in analytical chemistry, biochemistry, chemistry education research, inorganic chemistry, organic chemistry, and physical chemistry, as well as in interdisciplinary areas such as biophysical chemistry, molecular biology, structural biology, materials chemistry, and nanotechnology. These programs are well supported by an active staff, excellent teaching and research facilities, and a full range of instrumentation.

The Department of Chemistry & Biochemistry houses a collection of magnetic resonance instrumentation not found at most universities. Among these instruments are 6 NMR spectrometers and 4 EPR spectrometers, and they include an 850 MHz solution NMR spectrometer and a multi-frequency pulsed EPR. Additional information regarding our NMR, EPR, and Mass Spec facilities can be found at <http://miamioh.edu/cas/academics/departments/chemistry-biochemistry/research/instrumentation/index.html>.

## Admission Requirements & Application Procedures

### B.S./M.S. Program

This program is only for undergraduates in good standing at Miami University. Students may declare their interest in enrolling in the combined program at any time during their academic career at Miami, but ideally by spring semester of their junior year. Upon earning a minimum of 64 credit hours and having a cumulative GPA of 3.25 or greater, students may apply for admission to the combined program. Students must have passed one semester of Physical Chemistry (CHM 451/CHM 551 or Biophysical Chemistry CHM 471/CHM 571) and be enrolled in the spring semester (CHM 452/CHM 552 or CHM 472/CHM 572). If the student intends to complete a thesis, the student must have initiated undergraduate research and have support of undergraduate research mentor.

To apply, students must: complete the Graduate School online application and pay the application fee. Be sure to check "combined program." Three letters of recommendation from faculty members must be submitted, including one from the research mentor if the student intends to complete a thesis. The student must also submit a plan of study that details how they will complete the requirements for the degree.

### M.S. and Ph.D. Programs

New students are generally admitted only in the fall semester of the year. Entry into the program requires completion of a bachelor's degree in chemistry or biochemistry or a closely related field from an accredited college or university. Typical coursework includes:

1. Two semesters of general chemistry plus laboratory
2. Two semesters of organic chemistry plus laboratory
3. Two semesters of physical chemistry plus laboratory
4. Two of the following three courses: analytical chemistry, biochemistry, and inorganic chemistry

While a student need not have taken a curriculum approved by the American Chemical Society, the coursework in chemistry, physics, and mathematics should be similar to those of approved programs (e.g., two or more semesters of calculus and calculus-based physics).

The admissions process involves two steps:

1. the Graduate School accepts students into the graduate program and
2. the Department of Chemistry & Biochemistry awards teaching assistantships to students who have been accepted by the Graduate School.

To apply to the graduate school, students must:

1. Apply online to the Miami University Graduate School
2. Pay the online application fee
3. Provide names and contact information for three people to write letters of recommendation.
4. Provide transcripts. Applicants may be given provisional acceptance on the basis of unofficial transcripts if they have not yet completed the final year of their current program.
5. Request that ETS send an official report of your general GRE scores (required). The subject GRE Chemistry or Biochemistry score is optional.
6. Request that ETS send an official report of your TOEFL scores if your native language is not English.

## Program Requirements

### Chemistry- Master of Science

The M.S. degree requires a minimum of 30 semester hours and normally can be completed in two years. Students are required to demonstrate competence (through examination or additional coursework) in at least three disciplines of chemistry.

**Thesis Option:** The minimum graded coursework is five (5) graduate courses comprising at least 13 credit hours, with at least two (2) of these hours in courses numbered 600 and above. Students must select an advising committee during year 1 to approve their plan of study, and must hold a conference with that committee at the end of year 1 to discuss their proposed research. Students must write and defend a thesis based on original research conducted during the course of the degree.

**Non-thesis Option:** The degree requires a minimum of 30 semester hours. The minimum graded coursework is eight (8) graduate courses comprising at least 19 credit hours, with at least ten (10) of these hours in courses numbered 600 and above. Students must select an advising committee during year 1 to approve their plan of study, and their proposed topic for advanced study. Students must write and defend a report based on the advanced study conducted during the course of the degree.

### Chemistry- Doctor of Philosophy

The Ph.D. degree requires a minimum of 60 semester hours beyond the master's degree (or its equivalent). Well-prepared students can skip the M.S. and proceed directly toward the Ph.D. degree, which typically requires four to five years to complete. Requirements include:

1. Coursework. The minimum graded coursework is seven (7) graduate courses comprising at least 17 credit hours, with at least four (4) of those hours in courses numbered 600 and above. In addition, students must demonstrate proficiency in at least three disciplines of chemistry (analytical, biochemistry, chemistry education research, inorganic, organic, or physical) either by successfully passing the ACS Exam in that discipline or by completing a course in that discipline during the first three semesters of the program. Additional courses in the student's designated area of research are required as determined by the student's faculty committee.
2. Seminars. Students are required to enroll in discipline-specific and departmental seminars each semester.
3. Written and Oral Exams. Students must hold a conference at the end of year 1 to discuss their proposed research. Students must pass written, monthly cumulative exams during their second year, and successfully defend an original research proposal by the end of their third year.
4. Original Research. Students must write and defend a dissertation regarding the findings of their research.

## College Teaching- Certificate

This certificate program is available to master and doctoral candidates in any field of study across the university. Its purpose is to provide graduate students with the opportunity to develop their pedagogical knowledge and skill in an interdisciplinary manner that facilitates the development of teacher-scholars. The Certificate in College Teaching consists of a variety of course work and experiences guided by a student's mentor. Students will select a mentor and develop a plan of study that addresses three major components: discipline specific teaching experience/study, interdisciplinary pedagogy, and theory. The plan of study is submitted to the College Teaching Certificate Committee for approval. Upon the completion of the program plan, the student and mentor will submit a statement indicating that the program plan was completed, including a self-assessment by the student and an assessment by the mentor, to the College Teaching Certificate Committee, who determines if the student has completed all program requirements. Only students enrolled in a masters or doctoral program that are in good academic standing will be admitted into the Certificate in College Teaching program. Courses taken to complete one's degree can count toward the Theory program component and/or the Discipline program component. Students must have a 3.00 GPA in the Certificate courses to be awarded the Certificate in College Teaching. The Certificate in College Teaching will be awarded upon the completion of all certificate requirements and completion of a graduate degree (masters or doctoral). Students will NOT receive a State of Ohio certificate in teaching.

## Certificate Program Requirements

(12 hours)

Code	Title	Credit Hours
<b>Interdisciplinary Pedagogy</b>		
GSC 601	College Teaching Enhancement Program <sup>1</sup>	1
GSC 602	College Teaching	1
GSC 603	Academic Cultures	1
<b>Theory</b>		

Select 1-2 of the following: <sup>2</sup>		6-8
CHM 511	Learning Theories in Chemistry	
CHM 515	Misconceptions in Chemistry	
EDL/EDT 606	Curriculum Innovation and Transformation through Understanding and Design	
EDL 621	Foundations of Multi-Cultural Education	
EDL 624	Ethics and Values in Education	
EDL 629	History of Education in America	
EDL 667	Diversity, Equity, and Dialogue in Student Affairs	
EDL 675	Student Development Theory I	
EDP 601	Advanced Educational Psychology	
EDP 603	Theories of Human Learning	
EDP 607	Educational Measurement and Evaluation	
EDP 635	Theories of Human Development	
ENG 730	Studies in Composition Research and Pedagogy <sup>3</sup>	
FSW 581	Adolescent Development in Diverse Families: Ages 13-25	
PSY 551	Cognitive Neuroscience	
PSY 574	Advanced Cognitive Processes	

### Discipline Specific Teaching Experience

Contact the Graduate School for guidelines on completing this component. 3-6

### Final Assessment

Submitted to the College Teaching Certificate Committee

Total Credit Hours 12-17

<sup>1</sup> Maximum 2.

<sup>2</sup> Or substitute courses that have been approved by the College Teaching Certificate Committee.

<sup>3</sup> Maximum 12 toward any one degree.

## Computational Electrical and Computer Engineering- Master of Science

For information, contact:

Director of Graduate Programs  
 Department of Electrical and Computer Engineering  
 260 Garland Hall, 513-529-0740  
 ECEdept@MiamiOH.edu  
<http://MiamiOH.edu/cec/academics/departments/ece/academics/graduate-studies/index.html>

## Introduction

The Master of Science in Computational Electrical and Computer Engineering is designed to develop electrical and computer engineers who are well trained in the use of computational tools. This unique training prepares students for future engineering practice that requires engineers to master both electrical/computer engineering and computational methods. The degree includes courses in

computer programming, computer-based modeling, and electrical/computer engineering. Students will conduct a research project with an electrical/computer engineering professor.

You may select either the research (thesis) or course intensive (non-thesis) option. Requirements include the computational core, courses in electrical/computer engineering, and a research-based thesis (research option) or a research project (course intensive option). For the thesis and the research project, students work with a faculty advisor on a research problem.

## Admission and Application Requirements

New students are generally admitted to begin in the fall semester. Entry into the program requires completion of a bachelor's degree in electrical or computer engineering, or a closely related field.

Prospective students will be ranked and considered for admission based on the following information:

1. Requirements of the Graduate School, including: undergraduate transcripts, and TOEFL scores (if required)
2. GRE scores
3. Three letters of recommendation
4. The applicant's essay describing the purpose of his/her study.

## Combined Bachelor/Master's Program

Undergraduate Miami University students may apply to participate in the combined bachelors/master's program. This program allows you to pursue a master's degree in an accelerated manner while pursuing your bachelor's degree. It is a great opportunity to deepen your knowledge and research skills. Please contact the Department of Electrical and Computer Engineering for more information.

## Program Requirements

The degree requires computational core courses, electrical and computer engineering courses, and a thesis or research project. Students select one of the following two options:

### Option 1- Research Option (Thesis)

The research option requires completion of a minimum of 32 credit hours of graduate study and any additional hours needed to satisfy prerequisites. The distribution of hours is summarized as follows:

Code	Title	Credit Hours
Computational Core courses		9-12
Electrical and Computer Engineering courses		12-15
ECE 610	Graduate Seminars	2
ECE 700	Research for Master's Thesis	6
Total Credit Hours		32

### Option 2 - Course Intensive Option (Non-Thesis)

The course intensive option requires the completion of a minimum of 34 credit hours and any additional hours needed to satisfy prerequisites. The distribution of hours is summarized as follows:

Code	Title	Credit Hours
Computational Core courses		12-15
Electrical and Computer Engineering courses		15-18
ECE 704	Non-Thesis Project	3
ECE 610	Graduate Seminars	1
Total Credit Hours		34

### Computational Core Prerequisite

Students must demonstrate proficiency in computer programming in one of the following ways: Completed an introductory programming course or pass a proficiency exam in computer programming administered at Miami. Students lacking this background may be required to complete an undergraduate course in computer programming.

### Computational Core Courses

Students may enter the program with courses that cover some of the material in the computational core; however, they must complete at least 9-15 credit hours of computational courses selected in consultation with their faculty advisor.

Code	Title	Credit Hours
CSE 609	Programming for Engineers and Scientists	3
CSE 615	Mathematical Modeling	3
CSE 616	Simulation of Physical Systems	3
CSE 541	Applications of Technical Computing Environments	1
CSE 543	High Performance Computing & Parallel Programming	3
CPB/MME 612	Engineering Analysis	3

### Electrical and Computer Engineering Courses

Students design a program of study in consultation with their faculty advisor. Courses are selected from the following:

Code	Title	Credit Hours
ECE 525	Digital Signal Processing	3
ECE 526	Biomedical Signal Analysis	3
ECE 527	Radar Signal Processing	3
ECE 529	Digital Image Processing	3
ECE 530	Electromagnetics in Sireless Sensing and Communications	3
ECE 536	Control of Dynamic Systems	3
ECE 553	Communication Systems	3
ECE 561	Network Performance Analysis	3
ECE 565		3
ECE 570	Special Topics	3
ECE 575		3
ECE 587	Computer Aided Design Tools for Computer Engineering	3
ECE 591	Power Systems Engineering	3
ECE 593	Power Electronics	3
ECE 595	Electric Machinery and Drives	3
ECE 601	State Variables for Engineers	3

ECE 625	Advanced Digital Signal Processing	3
ECE 661	Advanced Optical Network Architectures	3
ECE 670	Advanced Topics in Electrical and Computer Engineering <sup>1</sup>	1-3

<sup>1</sup> Maximum 6

#### Graduate Seminar Course

Code	Title	Credit Hours
ECE 610	Graduate Seminars	1-3

#### Thesis and Project Research Courses

Code	Title	Credit Hours
ECE 704	Non-Thesis Project	0-12
ECE 700	Research for Master's Thesis	0-10

## Creative Writing- Master of Fine Arts

For information, contact:  
 Director of Graduate Studies  
 Department of English  
 356 Bachelor Hall, 513-529-7530  
[www.MiamiOH.edu/english/graduate](http://www.MiamiOH.edu/english/graduate)

The MFA in Creative Writing prepares students to launch a career in fiction writing, screenwriting, poetry, or creative nonfiction. Students produce a high-quality, publishable portfolio of creative writing, receive practical advice about the literary marketplace, and develop a sophisticated understanding of the literary field. Students may choose between two tracks, a low-residency MFA in Creative Writing: Guided Individual Study and a residential MFA in Creative Writing: Creative Writing & Pedagogy. Students in the Guided Individual Study track work individually with mentors in an online setting during fall and spring semesters, gathering on campus for intensive writing residencies during winter and summer terms. Students in the Creative Writing and Pedagogy track enroll in creative writing and literature classes on campus while learning and practicing the craft of teaching creative writing.

### Program Requirements

Code	Title	Credit Hours
ENG 631	Writing in the Genres: Residential Workshop <sup>1</sup>	16
ENG 635	Reading for Writing: Literary Forms	4
ENG 637	Low-Residency MFA Final Residency Research for Creative Project or Master's Thesis	0
		2
Total Credit Hours		22

<sup>1</sup> Repeated 4 times.

## Creative Writing and Pedagogy Track

Code	Title	Credit Hours
ENG 605	Issues in the Profession	2
ENG 700	Research for Master's Thesis	6
3 English Literature Seminars at the 600 level or above <sup>1</sup>		12
Total Credit Hours		20

<sup>1</sup> May include up to 4 credit hours of ENG 751 or ENG 780 with department approval.

### Guided Individual Study

Code	Title	Credit Hours
ENG 632	First Non-Residential Semester Low-Residency MFA in Creative Writing	5
ENG 633	Second Non-Residential Semester in Low-Residency MFA in Creative Writing	5
ENG 634	Third Non-Residential Semester Low-Residency MFA in Creative Writing	5
ENG 636	Fourth Non-Residential Semester in Low-Residency MFA in Creative Writing	5
Total Credit Hours		20

## Criminal Justice- Master of Science

For more information about Criminal Justice, email [criminaljustice@miamiOH.edu](mailto:criminaljustice@miamiOH.edu) or contact any member of the Justice and Community Studies faculty.

A fully online program, the Master of Science in Criminal Justice at Miami University's regional campuses is intended for students who are working in, or who intend to work in, a criminal justice or related field. The MS is designed to equip students with the analytical skills, substantive knowledge, and applied learning needed to be a successful leader in the field. Students in the MS program complete a set of core classes through which criminal justice theory and law is analyzed and applied. Additionally, the MS student elects to study either administration or crime analysis in greater depth. As a culminating experience, all students must complete a hands-on project that addresses a real problem in the field. Contemporary problems, ethics, law, and the professionalization of criminal justice occupations are emphasized in the MS program.

### Admission

A cumulative undergraduate grade point average of 2.75 or higher on a 4.0 scale, a statement of interest, and two positive letters of recommendation will be required to apply for admission to the program. In cases in which students do not meet these admission criteria, interviews may be conducted with the JCS graduate committee for entrance consideration. In rare instances, an applicant who does not meet the GPA minimum, but who has substantial work experience in a criminal justice occupation and who can otherwise demonstrate the ability to successfully complete the program may be conditionally admitted and fully admitted after completing the first six hours of coursework with a 3.00 GPA or higher. The GRE will not be required because test scores are not the best predictors of success,

especially for non-traditional, working applicants and the department values diversity in its students.

To ensure that applicants have the technical skills needed to be successful, applicants will be required to demonstrate technical competence using an assessment tool created by Miami University's E-Learning Office.

## Program Requirements

(30 semester hours)

Code	Title	Credit Hours
Select all of the following:		
CJS 611	Criminal Justice Theory	3
CJS 612	Criminal Justice Systems: Practice	3
CJS/STA 615	Statistics for Criminal Justice	3
CJS 631	Law, Liberty, and Criminal Justice	3
CJS 641	Crime and Place	3
CJS 685	Advanced Research Methods	3
<b>Concentrations</b>		9
One concentration must be completed:		
Administration		
Crime Analytics		
Culminating Experience		
CJS 691	Project (Capstone)	3
Total Credit Hours		30

### Administration

Code	Title	Credit Hours
POL 567	Public Budgeting	3
POL 568	Public Personnel Administration	3
CJS 632	Legal Aspects of Justice Administration	3

### Crime Analytics

Code	Title	Credit Hours
GEO 541	Geographic Information Systems	3
CJS/GEO 545	Geographic Information Systems for Criminal Justice	3
STA/ISA 635	Introduction to Predictive Analytics	3

### Capstone Project

A research or intensive service project is required. The student will work closely with a JCS faculty advisor to develop the project, e.g. expectations, learning objectives, timelines, project scope, methodology, necessary Institutional Review Board approvals, and scope/format of the final report. When necessary a volunteer on-site facilitator - most likely a professional or administrator in the location or setting of the student's field project - will be recruited to assist both the student and faculty advisor. Upon completion of the project, the student will be required to complete an oral defense before a committee of three faculty members, via distance technology or in person.

## Criminal Justice Administration Certificate

For more information about Criminal Justice, email JCS@MiamiOH.edu or contact any member of the Justice and Community Studies faculty.

The Graduate Certificate in Criminal Justice Administration prepares students for administrative careers in policing, corrections, and other criminal justice fields through an examination of personnel, budgeting, and law, including agency and individual liability.

## Program Requirements

Code	Title	Credit Hours
<b>Required Courses</b>		
CJS 632	Legal Aspects of Justice Administration	3
POL 567	Public Budgeting	3
POL 568	Public Personnel Administration	3
Three or more additional credit hours of CJS coursework or other related coursework approved by the department.		3
Total Credit Hours		12

Minimum number of credit hours required to complete the Graduate Certificate in Criminal Justice Administration: 12

## Ecology, Evolution and Environmental Biology- Doctor of Philosophy

For information, contact:  
 Director, Ph.D. Program in Ecology, Evolution, and Environmental Biology  
 212 Pearson Hall  
 eeeb@MiamiOH.edu

Ecology, Evolution, and Environmental Biology is a multi-disciplinary program that includes the study of organisms and their interactions with the environment.

## Program Requirements

The focus of a student's program will be his/her dissertation research. Course requirements will be flexible to meet the particular needs and goals of each student. Thus, a student interested in global climate change and its effect on biogeochemical cycling will be permitted to take a set of courses that is largely different from another student interested in the evolutionary genetics of an endangered species.

Each student will be required to earn at least 12 graduate credits from formal courses. At least 2 of these courses must be "program courses." (Program courses are those offered by the various departments, which the EEEB Executive Committee designates as officially approved program courses). In addition, at least one additional course (not including the 2 "program courses" mentioned above) must be from the student's home department. The particular set of courses taken by an individual student will be determined in consultation with his/her advisor and committee.

Each student must also take at least 5 graduate credits of approved EEEB seminar courses, in addition to the 12 credits mentioned above. Two of these seminar credits will be taken in year 1 of the program: BIO 601, and BIO 710 (Emerging Trends in Ecology, Evolution, and Environmental Biology). The other 3 graduate seminar credits will be taken from graduate seminars offered by the participating departments and falling within the EEEB domain (e.g., "journal club" style courses such as BIO 720, GLG 710, MBI 750, and BIO 710). EEEB students can choose from among these seminars, but to meet program requirements these must be officially approved as EEEB related seminars.

## Ecology- Certificate

For more information on this interdepartmental program, contact the director of Ph.D. program in Ecology, Evolution and Environmental Biology at [eeeb@MiamiOH.edu](mailto:eeeb@MiamiOH.edu).

This certificate program is available to students who have been admitted to the Graduate School, earn either a thesis-based Master's Degree or Ph.D. in one of the participating departments, and have met the requirements below. Students must also be admitted to a department, which is referred to as the student's "home" department. Participating departments include Biology, Geography, Geology & Environmental Science, and Microbiology.

### Program Requirements:

Students must earn at least 18 credit hours, distributed as follows:

Code	Title	Credit Hours
BIO 671 or an equivalent graduate course in population and/or community ecology		3
BIO 672 or an equivalent graduate course in ecosystem and/or global ecology		3
Graduate course in the student's home department, not including those used to satisfy above		3
Graduate course in statistics or mathematics modeling		3
At least two graduate seminars for the M.S. in Ecology: at least four graduate seminars for the Ph.D. in Ecology		6-8
Total Credit Hours		18-20

## Economics- Master of Arts

For information, contact:  
 Director of Graduate Studies  
 Department of Economics, Suite 2054  
 Farmer School of Business, 513-529-2836  
[fsb/academics/economics/academics/graduate-program](http://fsb/academics/economics/academics/graduate-program)

This program prepares students for careers as professional economists, equipped to serve academia, government, and the business world. Accordingly, this program provides a background in economics that can serve as a terminal degree or preparation for further graduate study. Emphasis is on theoretical and statistical techniques used in the investigation of empirical problems.

The Farmer School of Business also offers a Master of Business Administration and a Master of Accountancy; these programs are described under their alphabetical listings.

## Admission Requirements

Applicants should have completed, with a grade of C or better: intermediate-level courses in microeconomic and macroeconomic theory, at least one course in calculus, and at least one course in statistics. Additional mathematics courses are strongly recommended. GRE examination scores and three letters of recommendation should be sent to the department address listed above.

## Program Requirements

(31 semester hours)

### Concentration in Applied Economics

Code	Title	Credit Hours
ECO 514	Mathematical Economics	4
ECO 615	Advanced Microeconomic Theory	3
ECO 617	Advanced Macroeconomic Theory	3
ECO 663	Econometrics	3
ECO 671	Topics in Applied Econometrics	3
ECO 672	Applied Time Series Analysis	3
Select 6 hours from ECO 640, ECO 650, or any approved 500/600 level course		6
Select the Thesis or Project Option		6
Total Credit Hours		31

### Thesis Option

Code	Title	Credit Hours
ECO 700	Thesis Research	6

Students must pass a written, oral, or combined examination on their research paper and related study in economics.

### Project Option

Code	Title	Credit Hours
ECO 690	Master's Research	6

Students must pass a written, oral, or combined examination on their project and related study in economics.

### Concentration in Financial Economics

Code	Title	Credit Hours
ECO 514	Mathematical Economics	4
ECO 615	Advanced Microeconomic Theory	3
ECO 617	Advanced Macroeconomic Theory	3
ECO 663	Econometrics	3
ECO 671	Topics in Applied Econometrics	3
ECO 672	Applied Time Series Analysis	3
FIN 635	Investment Management	3
FIN 675	Applied Advanced Corporate Finance	3
Select thesis or project option		6
Total Credit Hours		31

**Thesis Option**

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
ECO 700	Thesis research	6

Students must pass a written, oral, or combined examination on their research paper and related study in economics.

**Project Option**

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
ECO 690	Master's Research	6

Research project and paper conducted under supervision of a faculty member

Students must pass a written, oral, or combined examination on their project and related study in economics.

## **Education- M.A., M.A.T., M.Ed., M.S., Specialist in Education, Ph.D., Ed.D.**

For information, contact:

Director of Graduate Studies in your department Dean's office  
College of Education, Health and Society  
207 McGuffey Hall, 513-529-6317  
<http://www.units.MiamiOH.edu/eap/>

### **Master's Degrees**

All master's degrees require at least 30 semester hours, and some programs require more. At least 15 semester hours must be earned at 600-level or above, and no more than one-third of the credits required for a master's degree may be transfer credits.

The Master of Arts is offered by the Department of Educational Psychology. The Master of Education is offered by the departments of Educational Leadership, Educational Psychology, and Teacher Education. The Educational Leadership and Teacher Education Masters require at least a provisional teaching certificate/license or one earned no later than when your master's degree is awarded. The Educational Psychology Masters has one focus that requires licensure (Educational Focus) and one focus that does not require licensure (Psychological Focus).

Master of Arts in Teaching programs are administered by the Department of Teacher Education. Master of Science programs are offered by the departments of Educational Leadership, Educational Psychology, and Family Studies and Social Work.

Department listings describe these programs. Check with your department for the most recent licensure requirements where appropriate.

### **Teaching Programs**

For information, contact the director of graduate studies in your department or the dean's office in the College of Education, Health and Society, 513-529-6317. Programs in art education and music education are described in art and music.

## **Specialist in Education, Doctoral Degrees**

The Specialist in Education degree is offered by the Department of Educational Psychology. Doctor of Philosophy and Doctor of Education degrees are offered by the Department of Educational Leadership. Department listings describe these programs.

## **Education, Teacher Education- Master of Education, Master of Arts in Teaching**

For information, contact:

Director of Graduate Studies  
Department of Teacher Education  
401 McGuffey Hall, 513-529-6443  
[www.MiamiOH.edu/edt](http://www.MiamiOH.edu/edt)

The Department of Teacher Education (EDT) offers both Master of Education (M.Ed.) and Master of Arts in Teaching (M.A.T.) degrees. Some of the graduate programs in EDT lead to teaching or supervisory licensure by the Ohio Department of Education. The Department also offers a variety of graduate-level courses and workshops for in-service education and professional development of school personnel who may not be interested in degree programs.

### **Admission Requirements**

To receive graduate credit for courses taken, you must be admitted to the Graduate School. Admission to non-degree study requires Graduate School admission with continuing non-degree graduate standing. Admission to any of the master's degree programs requires:

1. Acceptance by the Graduate School.
2. Program Admission Requirements for EDT:
  - a. Essay
  - b. Resume
  - c. GRE (MAT applicants only)
  - d. TOEFL (if English is not your native language)
  - e. Two recommendations

For all programs, apply through the Graduate School at [www.MiamiOH.edu/graduate-studies](http://www.MiamiOH.edu/graduate-studies). You will submit an application, application fee, and official transcripts along with the documents required by the department, which are listed above. For further information or questions you may contact the EDT department at [edtgraduateprogram@MiamiOH.edu](mailto:edtgraduateprogram@MiamiOH.edu).

When the Graduate School notifies the department that you have been admitted with appropriate standing, you will be informed of your admission status and assigned an academic advisor by the department.

### **General Requirements**

Following program admission, you will need to develop a plan of study with your advisor's assistance. You **must** file a copy of this plan, approved by your advisor, with the department within two months of admission to the degree program. If a plan of study has not been submitted within the required time, it could result in an inability to complete the degree in a timely manner. Your plan must satisfy requirements for your area of emphasis, your division, the Graduate

School, and the university. At least 15 semester hours must be earned in 600-level courses or above.

You may make substitutions in your plan, provided that each is consistent with these requirements, is approved by a petition through your advisor, and is filed with the department office as an amended plan of study prior to registration for the substitute course.

A final comprehensive master's presentation defense is required during the last term of course-work for your program. As you approach the completion of graduate course-work in your approved plan of study, consult with your advisor to complete the following required components. The defense will be administered by a committee of three faculty selected by you and your advisor, including at least one other member of the Department of Teacher Education.

## Endorsements

### Reading Endorsement

(13<sup>1</sup>-16 semester hours)

The K-12 Reading Endorsement can be added to a valid Ohio teaching license upon successful completion of required graduate level reading education courses **and** by passing the Ohio Assessments for Educators (OAE) Reading subtest #1/038 & subtest #II/039 both with a qualifying score of 220. Such an endorsement enables a teacher to teach reading in grades K-12 in the State of Ohio. Upon passing the tests you need to complete the application to add the Reading endorsement as a second teaching field. The application is at [www.oh.nesinc.com](http://www.oh.nesinc.com).

Code	Title	Credit Hours
Take all of the following:		
EDT 603	Language, Literacy and Culture	3
EDT 632	Literacy Assessment and Instruction	3
EDT 635	Clinical Literacy Practicum	4
EDT 642	Phonics and Reading Improvement for the Reading Teacher <sup>1</sup>	3
EDT 646	Reading and Writing in Content Areas	3
Total Credit Hours		16

<sup>1</sup> Teachers who completed a phonics course as part of their undergraduate curriculum are exempt from taking EDT 642.

### Early Childhood Generalist 4-5 Endorsement

(10 semester hours)

The Early Childhood Generalist Endorsement can be added to a valid Ohio Early Childhood P-3 teaching license upon successful completion of required education courses and by passing the Ohio Assessments for Educators (OAE) "Elementary Education" Subtest I/018 & Subtest II/019. Such an endorsement enables a teacher to teach all core academic content areas in grades four and five in the State of Ohio. Nine of the 10 hours of the endorsement can apply towards the M.Ed. in Transformative Education degree.

Code	Title	Credit Hours
EDT 505	Advanced Science for the Elementary School Teacher	3
EDT 552	Teaching Social Studies in the Intermediate Grades	3
EDT 565	Learning and Teaching Mathematics in the Intermediate Grades	3
EDT 553	Practicum & Praxis Grades 4-5	1
Total Credit Hours		10

### Middle Childhood Generalist 4-6 Endorsement

This endorsement, including graduate and undergraduate courses, enables candidates who hold an Ohio Middle Childhood license for two content areas to teach one or two of the additional core subjects in grades 4-6. The generalist requirements for each subject are:

1. mathematics --In addition to MTH 115 taken as a Miami Plan course, students add MTH 116 and either EDT 465 or EDT 565 or EDT 265
2. science --In addition to the science courses taken as part of the Miami Plan requirements, students add BIO 155 and either EDT 405 or EDT 505, or GLG 244.
3. language arts -- In addition to taking ENG 111 and the advanced writing course for the Miami Plan, students add ENG 262 and either ENG 304 or EDT 625.
4. social studies -- In addition to one of these two-course sequences (HST111/112 OR 121/122 OR 197/198) students add EDT 362 and either EDT 452 or EDT 552 or SOC 153.

In addition to the coursework, a passing score on the Ohio Assessments for Educators (OAE) "Elementary Education" Subtest I/018 & Subtest II/019 is also required.

For detailed information about courses for the MCE generalist, contact the Department of Teacher Education at 513-529-6443.

### Teaching English to Speakers of Other Languages (TESOL Endorsement)

#### Program Description

Miami's TESOL Endorsement (Teaching English to Speakers of Other Languages) prepares P-12 educators to work effectively with English language learners. Our courses provide real-world understanding and practical strategies to address the linguistic, cultural and academic issues facing English language learners and their teachers in schools.

#### Feature

- Hybrid format: mostly online with three Saturday in-person sessions at Miami University's Voice of America Learning Center (VOALC)
- Take four courses and work with students in your classroom or school for case studies
- ESL Tutors welcome

Code	Title	Credit Hours
Select all of the following:		
EDT 612	TESOL Educational Policies & Second Language Acquisition	3

EDT 614	TESOL Instructional Methodologies	3
EDT 616	Current Issues in TESOL	3
EDT 618	TESOL Cultural Contexts & Assessment	3
Total Credit Hours		12

### Application Process

Students seeking the TESOL endorsement only should apply for Continuing Non-degree status with the Graduate School, and should contact Jeannie Ducher to sign up for the endorsement. Practicing teachers who are already enrolled in a Miami master's program may enroll in the TESOL endorsement by contacting Jeannie Ducher (ducherj@miamiOH.edu).

## Master of Education

- Literacy and Language
- Transformative Education

## Master of Arts in Teaching

- Foreign Language Education
- Integrated English Language Arts Education
- Integrated Mathematics Education
- Integrated Social Studies Education
- Science Education Areas

## Literacy and Language- Master of Education

This program is designed for teacher candidates and other educators with teacher certification/licensure who are interested in careers leading to classroom teaching and service as literacy specialists and other leadership positions.

### Program Requirements

Code	Title	Credit Hours
<b>Foundation &amp; Theory</b>		
Take all of the following courses:		
EDT 603	Language, Literacy and Culture	3
EDT 643	Language and Discourse	3
<b>Literacy &amp; Language Instruction</b>		
Take all of the following courses:		
EDT 625	Teaching Writing	3
EDT 626	Teaching with Literature for Children	3
EDT 632	Literacy Assessment and Instruction	3
EDT 646	Reading and Writing in Content Areas	3
<b>Practicum Experiences</b>		
Take all of the following courses:		
EDT 635	Clinical Literacy Practicum	4
EDT 636	Literacy and Leadership	3
<b>Electives</b>		
Select 6 hours from the following courses:		6

EDT 642 Phonics and Reading Improvement for the Reading Teacher (This is a required course if a phonics course was not taken in the undergraduate program within the past five years.)

EDT 561 Grant Writing Skills and Methods

EDT 606 Curriculum Innovation and Transformation through Understanding and Design

EDP 584 Autism Spectrum Disorder: Social and Communication Development

EDP 641 Visual Design for Instruction

Ohio Writing Project (OWP) Courses or Workshops

Total Credit Hours

31

## Transformative Education- Master of Education

Transformative Education is a Master of Education program jointly administered by the Departments of Teacher Education and Educational Leadership. It prepares educators to provide leadership in transforming teaching and learning in schools and communities. The program emphasizes educational sustainability—creating, nurturing, and continuing effective teaching and learning environments—through the inclusion of both a responsiveness to the specific needs and interests of individual educators and a foundation of shared learning (multicultural education, curriculum, leadership, and data-informed decision making). The program blends a core set of courses that encompass important educational issues with a choice of concentrations that provide both conceptual and practical benefits for educators and the students they serve, giving educators the capacity to synthesize research with knowledge of their students to make professional decisions. The program aims to develop educators who are innovative scholar-practitioners, collaborative leaders, and advocates for equity and social justice.

The M.Ed. in Transformative Education is open to both students with existing teaching licensure and those who do not have an existing license. This degree does not lead to initial license to teach.

### Program Requirements

Code	Title	Credit Hours
<b>Required Courses</b>		
EDL 601	Educational Leadership Theory	3
EDL/EDT 606	Curriculum Innovation and Transformation through Understanding and Design	3
EDL 621	Foundations of Multi-Cultural Education	3
EDL/EDT 648	Data-Informed Decision Making in Education	3

### Concentration

Students will complete 15 hours of focused electives. Some suggested focus areas include: Curriculum & Cultural Studies; Teaching English to Speakers of Other Languages (TESOL) endorsement; Assessment and Evaluation Certificate; Reading Endorsement; Social Justice, among others. Note that these programs are currently offered by Miami's College of Education, Health and Society on a regular basis at the VOALC.

#### Culminating Course

EHS 649	Action Research for Educators	3
Total Credit Hours		30

## Foreign Language Education- Master of Arts in Teaching

For information, contact:  
Director of Graduate Studies  
Department of Teacher Education  
401 McGuffey Hall, 513-529-6443  
www.MiamiOH.edu/edt

Master of Arts in Teaching (M.A.T.) programs combine graduate and undergraduate study and enables a student with a baccalaureate degree to earn teaching licensure and a master's degree in approximately four or five semesters of full-time study, depending upon academic background, experience, and teaching field.

#### Program Requirements

Requirements consist of

1. general requirements, common to all M.A.T. programs,
2. content course requirements and retention requirements, specific to each licensure area and
3. successful completion of benchmarks established for program accreditation compliance.
4. passing score on the OAE content test for the licensure area and passing score on the OAE pedagogy test.

A student who has satisfied all or most of the content course requirements can expect to complete an M.A.T. program in four semesters or in three semesters and one summer; others can expect that additional semesters will be necessary in proportion to the number of content courses that must be satisfied.

#### Admission

In addition to admission requirements previously listed for all master's programs within the department, candidates must have a baccalaureate degree.

#### Cohort

We encourage anyone with a degree who wants to be a teacher to contact us about our MAT programs. When you are admitted to the program, you are automatically admitted to the cohort. A cohort is a group of students in a common teaching field, taking the same methods courses and student teaching in specific academic years.

A cohort is identified by its general subject area and an academic year; for example, integrated mathematics 2017-18, English language arts 2018-19, and chemistry education 2016-17 are separate cohorts. The cohort year indicates the academic year the student is scheduled

for methods courses, and the following academic year when the student is scheduled for student teaching.

You should schedule a pre-application counseling appointment with the Department of Teacher Education coordinator of advising, 513-529-6443. The coordinator will examine your transcript and advise you about your application, estimate time to complete the degree, and cohort year.

#### General Requirements

Code	Title	Credit Hours
<b>Required courses:</b>		
EDP 601 or EDP 603	Advanced Educational Psychology Theories of Human Learning	3
EDL 621	Foundations of Multi-Cultural Education	3
EDP 607	Educational Measurement and Evaluation	3
EDP 656	Education of Individuals with Exceptionalities	3
EDT 519A	Teaching Internship-Adolescent	12
EDT 521A	Classroom Cultures, Community, and Climate	3
EDT/EDL 648	Data-Informed Decision Making in Education	3
EHS 649	Action Research for Educators	3
FSW 581	Adolescent Development in Diverse Families: Ages 13-25	3
Choose one of these		3
EDP 547	eLearning in K-12 Education	
EDP 636	Diversity, Learning & Technology	
EDP 639	Trends in Instructional Design and Learning Analytics	
Take one--depending on program		3
EDT 546L	Reading in the Secondary School (Foreign Language programs only)	
EDT 546A	Integrating Literacy Across the Content Areas (Mathematics, Social Studies, and Science)	
EDT 346A	Reading Instruction for Adolescents (Language Arts only)	
Total Credit Hours		42

This program combines graduate and undergraduate study and enables a student with a baccalaureate degree to earn teaching licensure and a master's degree in approximately four semesters of full-time study, depending upon academic background, experience, and teaching field. A student can earn licensure through this graduate program if he/she has coursework or a degree in Spanish, Latin, German, French or Chinese<sup>1</sup>. Students must complete the following program requirements and the content requirements of the corresponding language undergraduate degree. If the content requirements are lacking from their undergraduate degree programs, a student will be required to complete them.

**Program Requirements**

Code	Title	Credit Hours
EDT 544	Language Teaching and Learning I <sup>1</sup>	3
EDT 545	Language Teaching and Learning II <sup>2</sup>	3
EDT 546L	Reading in the Secondary School <sup>3</sup>	3
EDT 521A	Classroom Cultures, Community, and Climate <sup>3</sup>	3
Total Credit Hours		12

<sup>1</sup> Offered in fall only.<sup>2</sup> Offered in spring only.<sup>3</sup> Offered in spring with EDT 545.**Language Requirements**

Advanced-Low level of proficiency on the Oral Proficiency Interview (OPI) for French, German, & Spanish.

Intermediate-High level of proficiency on the Oral Proficiency Interview (OPI) for Chinese.

**Content Course Requirements**

If a student has not lived or studied in a country where his/her target language is spoken, then they **must** complete a summer or semester study abroad to obtain content and fluency in their language. Study abroad coursework would be pre-approved by an advisor.

**Chinese**

Code	Title	Credit Hours
CHI 101 & CHI 102	Elementary Chinese and Elementary Chinese	8
CHI 201 & CHI 202	Second Year Chinese and Second Year Chinese	6
CHI 301 & CHI 302	Third Year Chinese and Third Year Chinese	6
CHI 401 & CHI 402	Fourth Year Chinese I and Fourth Year Chinese II	6
ENG/ATH/GER 219	Introduction to Linguistics	3
Select two of the following: <sup>1</sup>		
CHI 251	Traditional Chinese Literature in English Translation	3
CHI 252	Modern Chinese Literature in English Translation	3
CHI 255	Drama in China and Japan in Translation	3
CHI 264	Chinese Cinema and Culture	3
Total Credit Hours		41

<sup>1</sup> Study abroad transfer credit may be used**French**

Code	Title	Credit Hours
Take all of the following:		
FRE 301	Culture & Interpretation	3
FRE 302	Pre-Revolutionary Literature and Life	3
FRE 303	Modern and Contemporary Literature and Life	3

FRE 310	Texts in Context	3
FRE 341	Conversation and Current Events in France	3
FRE 361	French Pronunciation <sup>1</sup>	3
FRE 410	Senior Seminar	3
FRE 411	French Civilization	3
Electives in French (399-499) to complete required 34 semester hours: <sup>2</sup>		10
Total Credit Hours		34

<sup>1</sup> Minimum grade of B required.<sup>2</sup> FRE 399W is recommended**German**

Code	Title	Credit Hours
GER 301	German Language Through the Media	3
GER 311	Passionate Friendships in German Literature from the Middle Ages to the Present	3
GER 312	Coming of Age in German Life and Thought	3
GER 471	Linguistic Perspectives on Contemporary German	3
GER 321	Cultural Topics in German-Speaking Europe Since 1870	3
or GER 322	Comparative Study of Everyday Culture: German-Speaking Europe and the U.S.A.	
Select at least six credit hours of 400-level German courses, including one literature course		6
Electives (GER 203-GER 499) to complete required 34 semester hours (not previously taken)		13
Total Credit Hours		34

No courses in translation count in this major

**Latin****Note:** Study abroad is not required in Latin education

Code	Title	Credit Hours
CLS 102	Roman Civilization	3
CLS 121	Introduction to Classical Mythology	3
LAT 201	Intermediate Latin	3
LAT 202	Representative Latin Authors	3
Select three credit hours of courses from CLS 200-499		3
Complete required 34 semester hours from the following:		19
LAT 310	Special Topics in Latin Literature <sup>1</sup>	
LAT 410	Latin Seminar <sup>1</sup>	
Total Credit Hours		34

<sup>1</sup> Repeatable; maximum 12 hours.

**Spanish**

Course	Title	Credit Hours
<b>Required Courses</b>		
SPN 311	Grammar Review and Introductory Composition	3
SPN 312	Introduction to Spanish Language/Linguistics	3
SPN 315	Intro to Hispanic Literatures	3
SPN 316	Intermediate Spanish Composition	3
SPN 342	Advanced Conversational Spanish	3
SPN 351	Cultural History of Spain I	3
SPN 352	Cultural History of Spain II	3
SPN 361	Spanish American Cultural History I	3
SPN 362	Spanish American Cultural History II	3
SPN 420/430/440	Selected Topics in Literature and Culture: Spain	3
SPN 481	Spanish Phonology and Syntax <sup>1</sup>	3
<b>Capstone</b>		
SPN 490	Issues in Hispanic Literature, Linguistics, or Culture	3
<b>Electives</b>		
Select two electives from SPN 450-499:		6
Total Credit Hours		42

<sup>1</sup> See advisor if SPN 481 is not offered.

## Foreign Language - Graduate-Level Licensure Only Program

The program is designed for those who are interested in becoming World Language K-12 teachers in the state of Ohio. The Licensure Only program is comprised of a set of courses that allows completers to apply for a State of Ohio K-12 World Language teaching license. Upon completion of the program, students will be eligible to apply for an Ohio teaching license.

### General Admission Requirements

Applicants must be admitted to the Graduate School at Miami University as a continuing non-degree candidate (see note below) and complete the following licensure program admission requirements:

- Hold a Bachelor's degree from an accredited post-secondary institution in the United States or an equivalent Bachelor's university degree.
- Demonstrate language proficiency in both speaking and writing in the language targeted for licensure by successfully completing both the Oral Proficiency Interview (OPI or OPIc computer) and the Writing Proficiency Test (WPT), which are required for licensure by the state of Ohio. The program requires an "Advanced-Low" or higher level of proficiency in both tests for admission into the program. Students seeking admission to the program should take the OPI/OPIc and the WPT three to five weeks prior to applying for the program.
- Applicants who studied in a country or institution where English is not the official language must submit proof of English proficiency. We accept the following tests for admission: TOEFL iBT, IELTS, and PTE.

- International students seeking admission to the program must possess the appropriate visa status. Make an appointment with an International Student Advisor in the Office of International Education to discuss adding this program at <http://www.units.MiamiOH.edu/internationalprograms/about.php>.

### Application Process

- All students must apply and be admitted to Miami University
- If you are a current international student at Miami University, make an appointment with an International Student Advisor in the Office of International Education to discuss adding this program. Domestic students can apply directly to the program if all admission requirements are met.
- If you are not currently a student at Miami University, apply to the Miami University's Graduate School as a continuing non-degree status candidate. Apply online to Miami's Graduate School.

**NOTE:** If you are admitted as a non-degree candidate and later desire admission to a degree program, you must apply for admission and meet Graduate School and departmental standards for admission. No more than eight of the most recent graduate hours earned with non-degree status can be applied toward a graduate degree and then only with the approval of the department. All eight hours are subject to normal time limitations for credit toward a degree.

### Program Requirements

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
EDT 544	Language Teaching and Learning <sup>1</sup>	3
Select an appropriate content elective <sup>2</sup>		3-4
Select an appropriate education elective <sup>2,3</sup>		3-4
EDP 607	Educational Measurement and Evaluation	3
Credit Hours		12-14
<b>Spring</b>		
EDT 545	Language Teaching and Learning II	3
EDT 546L	Reading in the Secondary School	3
EDT 521A	Classroom Cultures, Community, and Climate	3
Credit Hours		9
<b>Second Year</b>		
<b>Fall</b>		
EDT 519A	Teaching Internship-Adolescent	12
Credit Hours		12
Total Credit Hours		33-35

<sup>1</sup> Cohort class - must take in Fall

<sup>2</sup> Obtain approval from advisor.

<sup>3</sup> Sample courses: EDL 621, EDP 601, EDP 656, FSW 581

# Integrated English Language Arts Education- Master of Arts in Teaching

For information, contact:  
 Director of Graduate Studies  
 Department of Teacher Education  
 401 McGuffey Hall, 513-529-6443  
[www.MiamiOH.edu/edt](http://www.MiamiOH.edu/edt)

Master of Arts in Teaching (M.A.T.) programs combine graduate and undergraduate study and enables a student with a baccalaureate degree to earn teaching licensure and a master's degree in approximately four or five semesters of full-time study, depending upon academic background, experience, and teaching field.

## Program Requirements

Requirements consist of

1. general requirements, common to all M.A.T. programs,
2. content course requirements and retention requirements, specific to each licensure area and
3. successful completion of benchmarks established for program accreditation compliance.
4. passing score on the OAE content test for the licensure area and passing score on the OAE pedagogy test.

A student who has satisfied all or most of the content course requirements can expect to complete an M.A.T. program in four semesters or in three semesters and one summer; others can expect that additional semesters will be necessary in proportion to the number of content courses that must be satisfied.

## Admission

In addition to admission requirements previously listed for all master's programs within the department, candidates must have a baccalaureate degree.

## Cohort

We encourage anyone with a degree who wants to be a teacher to contact us about our MAT programs. When you are admitted to the program, you are automatically admitted to the cohort. A cohort is a group of students in a common teaching field, taking the same methods courses and student teaching in specific academic years.

A cohort is identified by its general subject area and an academic year; for example, integrated mathematics 2017-18, English language arts 2018-19, and chemistry education 2016-17 are separate cohorts. The cohort year indicates the academic year the student is scheduled for methods courses, and the following academic year when the student is scheduled for student teaching.

You should schedule a pre-application counseling appointment with the Department of Teacher Education coordinator of advising, 513-529-6443. The coordinator will examine your transcript and advise you about your application, estimate time to complete the degree, and cohort year.

## General Requirements

Code	Title	Credit Hours
<b>Required courses:</b>		
EDP 601 or EDP 603	Advanced Educational Psychology Theories of Human Learning	3
EDL 621	Foundations of Multi-Cultural Education	3
EDP 607	Educational Measurement and Evaluation	3
EDP 656	Education of Individuals with Exceptionalities	3
EDT 519A	Teaching Internship-Adolescent	12
EDT 521A	Classroom Cultures, Community, and Climate	3
EDT/EDL 648	Data-Informed Decision Making in Education	3
EHS 649	Action Research for Educators	3
FSW 581	Adolescent Development in Diverse Families: Ages 13-25	3
Choose one of these		3
EDP 547	eLearning in K-12 Education	
EDP 636	Diversity, Learning & Technology	
EDP 639	Trends in Instructional Design and Learning Analytics	
Take one--depending on program		3
EDT 546L	Reading in the Secondary School (Foreign Language programs only)	
EDT 546A	Integrating Literacy Across the Content Areas (Mathematics, Social Studies, and Science)	
EDT 346A	Reading Instruction for Adolescents (Language Arts only)	
Total Credit Hours		42

Integrated English/Language Arts Education

## Program Requirements

Code	Title	Credit Hours
<b>Required Courses</b>		
EDT 527	Adolescent Language Arts I (fall only--take with EDT 521A and EDT 346A)	3
EDT 528	Adolescent Language Arts II ( spring semester)	3
EDT 523	Literature and Other Media for Adolescents	3
EDT 625	Teaching Writing	3
<b>Undergraduate Content Courses</b>		
ENG 301	History of the English Language	3
ENG 302	Structure of Modern English	3
ENG 304	Backgrounds to Composition Theory and Research	3
EDT 246A	Foundations of Language and Literacy (prerequisite to EDT 346A)	3
STC 135	Principles of Public Speaking	3

JRN 101 or JRN 201	Introduction to Journalism Reporting and News Writing I	3
Select two of the following:		6
ENG 223	Rhetorical Strategies for Writers	
EDT 284	Writing for Educators	
ENG 224	Digital Writing and Rhetoric: Composing with Words, Images and Sounds	
ENG 225	Advanced Composition	
ENG 226	Introduction to Creative Writing: Short Fiction and Poetry	
Select one of the following:		3
ENG 272	English Literature to 1660	
ENG 273	English Literature 1660-1900	
ENG 274	English Literature 1901 to Present	
Select one of the following:		3
ENG 275	American Literature to 1900	
ENG 276	American Literature 1900 to the Present	
Select one of the following:		3
ENG 134	Introduction to Shakespeare	
ENG 221	Shakespeare and Film	
ENG 372	Shakespeare's Principal Plays: Early Works	
ENG 373	Shakespeare's Principal Plays: Late Works	
Select one of the following:		3
CHI 251	Traditional Chinese Literature in English Translation	
CHI 252	Modern Chinese Literature in English Translation	
CLS 121	Introduction to Classical Mythology	
ENG 251	Introduction to European Literature	
ENG 255	Russian Literature in English Translation From Pushkin to Dostoevsky	
ENG 256	Russian Literature in English Translation: From Tolstoy to Nabokov	
ENG 364	From Marco Polo to Machiavelli	
FRE 131	Masterpieces of French Culture in Translation	
FRE 350	Topics in French Literature in Translation	
RUS 257	Russian Literature in English Translation: From Pasternak to the Present	
Select one of the following: (see advisor for other choices)		3
ENG 336	African American Writing, 1746-1877	
ENG 337	African American Writing, 1878-1945	
ENG 338	African American Writing, 1946- Present	
ENG 348	Ethnic American Literatures	
<b>Electives in ENG, JRN, STC, THE</b>		6
Total Credit Hours		57

### Retention Requirements Methods Checkpoint (for Admission to EDT 527 and EDT 528):

- Admission to appropriate adolescent language arts cohort
- Completion of or transcript credit for at least 21 credit hours of content courses in integrated language arts
- A GPA of at least 2.75 in all undergraduate content courses of your plan of study earned at Miami
- A GPA of at least 3.00 in all graduate content coursework of your plan of study earned at Miami

### Supervised Teaching Checkpoint (for Admission to EDT 519A):

- Admission to appropriate adolescent language arts cohort
- Completion of Adolescent Field Block courses and EDT 528 with GPA of at least 3.00
- A GPA of at least 2.75 in all undergraduate content courses of your plan of study earned at Miami
- A GPA of at least 3.00 in all graduate content course-work of your plan of study earned at Miami
- Completion of the OAE content test

## Integrated Mathematics Education- Master of Arts in Teaching

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Department of Teacher Education  
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Master of Arts in Teaching (M.A.T.) programs combine graduate and undergraduate study and enables a student with a baccalaureate degree to earn teaching licensure and a master's degree in approximately four or five semesters of full-time study, depending upon academic background, experience, and teaching field.

### Program Requirements

Requirements consist of

1. general requirements, common to all M.A.T. programs,
2. content course requirements and retention requirements, specific to each licensure area and
3. successful completion of benchmarks established for program accreditation compliance.
4. passing score on the OAE content test for the licensure area and passing score on the OAE pedagogy test.

A student who has satisfied all or most of the content course requirements can expect to complete an M.A.T. program in four semesters or in three semesters and one summer; others can expect that additional semesters will be necessary in proportion to the number of content courses that must be satisfied.

### Admission

In addition to admission requirements previously listed for all master's programs within the department, candidates must have a baccalaureate degree.

**Cohort**

We encourage anyone with a degree who wants to be a teacher to contact us about our MAT programs. When you are admitted to the program, you are automatically admitted to the cohort. A cohort is a group of students in a common teaching field, taking the same methods courses and student teaching in specific academic years.

A cohort is identified by its general subject area and an academic year; for example, integrated mathematics 2017-18, English language arts 2018-19, and chemistry education 2016-17 are separate cohorts. The cohort year indicates the academic year the student is scheduled for methods courses, and the following academic year when the student is scheduled for student teaching.

You should schedule a pre-application counseling appointment with the Department of Teacher Education coordinator of advising, 513-529-6443. The coordinator will examine your transcript and advise you about your application, estimate time to complete the degree, and cohort year.

**General Requirements**

Code	Title	Credit Hours
<b>Required courses:</b>		
EDP 601 or EDP 603	Advanced Educational Psychology Theories of Human Learning	3
EDL 621	Foundations of Multi-Cultural Education	3
EDP 607	Educational Measurement and Evaluation	3
EDP 656	Education of Individuals with Exceptionalities	3
EDT 519A	Teaching Internship-Adolescent	12
EDT 521A	Classroom Cultures, Community, and Climate	3
EDT/EDL 648	Data-Informed Decision Making in Education	3
EHS 649	Action Research for Educators	3
FSW 581	Adolescent Development in Diverse Families: Ages 13-25	3
Choose one of these		3
EDP 547	eLearning in K-12 Education	
EDP 636	Diversity, Learning & Technology	
EDP 639	Trends in Instructional Design and Learning Analytics	
Take one--depending on program		3
EDT 546L	Reading in the Secondary School (Foreign Language programs only)	
EDT 546A	Integrating Literacy Across the Content Areas (Mathematics, Social Studies, and Science)	
EDT 346A	Reading Instruction for Adolescents (Language Arts only)	
Total Credit Hours		42

**Integrated Mathematics Education****Program Requirements**

Code	Title	Credit Hours
<b>Requirements</b>		
(take EDT 529A fall semester with EDT 521A and EDT 546A, shown above)		
EDT 529A	Adolescent Mathematics I	3
EDT 530	Teaching Adolescent Mathematics (spring semester following EDT 529A)	3
<b>Content Course Requirements</b>		
Select one of the following calculus sequences:		8-13
MTH 151 & MTH 251 & MTH 252	Calculus I and Calculus II and Calculus III	
MTH 249 & MTH 252	Calculus II and Calculus III	
MTH 251 & MTH 252	Calculus II and Calculus III	
Select the following:		
MTH 222	Introduction to Linear Algebra	3
MTH 331	Proof: Introduction to Higher Mathematics	3
MTH 508	Mathematical Problem Solving with Technology	3
MTH 509	Secondary Mathematics from an Advanced Perspective	3
MTH 511	Foundations of Geometry	3
MTH 521	Introduction to Abstract Algebra	4
MTH 482	Great Theorems of Mathematics	3
STA 301 & STA 501	Applied Statistics and Probability	6
Total Credit Hours		42-47

**Retention Requirements****Methods Checkpoint (for Admission to EDT 529A and EDT 530):**

- Admission to appropriate adolescent mathematics cohort
- Completion of transcript credit for one of the designated calculus sequences, MTH 508, and at least nine credit hours of 300-600 level mathematics, statistics, or mathematics education courses approved by your academic advisor
- Content course GPA at least 2.50
- Overall GPA at least 3.00 in all graduate content course-work in your plan of study earned at Miami

**Supervised Teaching Checkpoint (for Admission to EDT 519A):**

- Admission to appropriate adolescent mathematics cohort
- Completion of EDT 529A, EDT 530, and the Adolescent Field Block courses
- Completion of or transfer credit for MTH 511, MTH 521, and STA 501 and at least nine credit hours of graduate-level mathematics, statistics, or mathematics education courses approved by your academic advisor
- Content course GPA at least 2.50

- Overall GPA at least 3.00 in all graduate content course-work in your plan of study earned at Miami
- Completion of the OAE content test.

## Integrated Science Education - Bachelor of Science in Education

The Bachelor of Science in Education degree with an Adolescent/Young Adult (AYA) Integrated Science major provides graduates with the opportunity to teach in 7-12<sup>th</sup> grade schools in all the major science disciplines (biology, chemistry, earth science and physics) while concentrating in one science area.

Candidates are exposed to state-of-the-art teaching methods and science/math courses as well as teaching in diverse settings, taking English Language Learner (ELL) methods, experiencing elective Science, Technology, Engineering and Mathematics (STEM) Education methods and engaging in real world scientific research as part of their program.

Since National Science Teachers Association (NSTA) requires candidates to specialize in one science discipline area and have a broad understanding of the other three disciplines, this increases the total number of credit hours required for this degree. The curriculum was streamlined as much as possible in order to minimize the number of required credit hours (124-131 credit hours for the Integrated Science degree will be required).

Part of the Miami Plan (liberal education requirements) is to engage in a 9-credit hour thematic sequence outside the student's field of study. It is an essential part of the liberal education students receive while studying at Miami University. A thematic sequence is a series of three courses that build developmentally towards a more comprehensive study of a topic.

Within this proposal, the recommended thematic sequence falls within the four science disciplines of study. In addition, there is a STEM thematic sequence of courses that could be taken as electives. It prepares Miami science education majors to infuse STEM into their future schools. Other Miami majors enroll in this thematic sequence (e.g. finance, psychology, language arts, software engineering, computer science) so these courses are not methods courses but focus on issues, history, and societal topics surrounding STEM.

Other possible thematic sequences are built into these science programs, e.g. BIO 2: Molecular Processes: From Cells to Whole Plants, and are available to the students enrolled in the Integrated Science major.

Further, the Miami plan (liberal education experiences) courses will be advised to be taken throughout the four years at Miami University and not just at the end (as seen in the plans of study). The majority of the science education majors enter Miami University with an abundant number of Advanced Placement credit hours thus enabling them more flexibility in scheduling their courses. The Advanced Writing course (a Miami plan course) can be taken later in the program and meet two requirements (science content and advanced writing) thus easing the credit hour requirements of this degree if so chosen by the students.

The current science education programs have similar required credit hours and the students have been able to graduate in four years. We

don't foresee students having difficulty in managing this degree in a four-year period of time.

## Program Requirements Requirements for all Integrated Science Education Specialties

Code	Title	Credit Hours
<b>Required Pre/Co-requisites</b>		
BIO 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
CHM 141 & CHM 144	College Chemistry and College Chemistry Laboratory	5
CHM 142 & CHM 145	College Chemistry and College Chemistry Laboratory	5
GLG 111 & GLG 115L	The Dynamic Earth and Understanding the Earth	4
GLG 307	Water and Society	3
IES 275	Principles of Environmental Science	3
PHY 111	Astronomy and Space Physics	3
STA 261	Statistics	4
	Science Research - BIO, CHM, GLG, or PHY 277R, 377R, or 477R	3-6
<b>Teacher Education Core</b>		
EDL 204	Sociocultural Studies in Education	3
EDP 201	Human Development and Learning in Social and Educational Contexts	3
EDP 256	Psychology of the Exceptional Learner	3
EDT 190	Introduction to Education	3
<b>Integrated Science Education Required Courses</b>		
Fall field block courses - take all three concurrently		
EDP 301A	Assessment and Evaluation in Educational Settings	3
EDT 323	Teaching English Language Learners in PK-12: Instructional Theories & Practices	3
EDT 431	Adolescent Science Methods I	3
Spring field block courses - take all three concurrently		
EDT 421A	Classroom Cultures, Community, and Climate	3
EDT 432	Adolescent Science Methods II	3
EDT 446A	Integrating Literacy Across the Content Areas	3
Supervised teaching semester		
EDT 419A	Teaching Internship- Adolescent	15
Total Credit Hours		83-86

**Integrated Science Education Specialties****Biology**

Code	Title	Credit Hours
<b>Required Courses</b>		
BIO 161	Principles of Human Physiology	4
BIO 203	Introduction to Cell Biology	3
BIO 206	Evolutionary Biology	3
BIO 209	Fundamentals of Ecology	3
BIO 342	Genetics	3
CHM 231	Fundamentals of Organic Chemistry	4
EDT 415	Inquiry Into Life Science	3
PHY 161	Physics for the Life Sciences with Laboratory I	4
PHY 162	Physics for the Life Sciences with Laboratory II	4
Total Credit Hours		31

**Chemistry**

Code	Title	Credit Hours
<b>Required Courses</b>		
BIO 206	Evolutionary Biology	3
CHM 241 & CHM 244	Organic Chemistry and Organic Chemistry Laboratory	5
CHM 242 & CHM 245	Organic Chemistry and Organic Chemistry Laboratory	5
CHM 375	Analytical Chemistry for Majors	3
CHM 415	Misconceptions in Chemistry	3
CHM 491	Chemistry in Societal Issues	3
EDT 415	Inquiry Into Life Science	3
PHY 161	Physics for the Life Sciences with Laboratory I	4
PHY 162	Physics for the Life Sciences with Laboratory II	4
Total Credit Hours		33

**Earth Science**

Code	Title	Credit Hours
<b>Required Courses</b>		
BIO 161	Principles of Human Physiology	4
CHM 231	Fundamentals of Organic Chemistry	4
EDT 415	Inquiry Into Life Science	3
GLG 201	Mineralogy	4
GLG 204	Survival on an Evolving Planet	4
GLG 211	Chemistry of Earth Systems	3
GLG 301	Sedimentology and Stratigraphy	4
PHY 161	Physics for the Life Sciences with Laboratory I	4
PHY 162	Physics for the Life Sciences with Laboratory II	4
GLG Elective		3
Total Credit Hours		37

**Physics**

Code	Title	Credit Hours
<b>Required Courses</b>		
BIO 206	Evolutionary Biology	3
MTH 151	Calculus I	5
MTH 251	Calculus II	4
MTH 252	Calculus III	4
PHY 191	General Physics with Laboratory I	5
PHY 192	General Physics with Laboratory II	5
PHY 215	Physics by Inquiry	3
or EDT 415	Inquiry Into Life Science	
PHY 281	Contemporary Physics I: Foundations	3
Total Credit Hours		32

**Integrated Social Studies Education- Master of Arts in Teaching**

For information, contact:

Director of Graduate Studies

Department of Teacher Education

401 McGuffey Hall, 513-529-6443

[www.MiamiOH.edu/edt](http://www.MiamiOH.edu/edt)

Master of Arts in Teaching (M.A.T.) programs combine graduate and undergraduate study and enables a student with a baccalaureate degree to earn teaching licensure and a master's degree in approximately four or five semesters of full-time study, depending upon academic background, experience, and teaching field.

**Program Requirements**

Requirements consist of

1. general requirements, common to all M.A.T. programs,
2. content course requirements and retention requirements, specific to each licensure area and
3. successful completion of benchmarks established for program accreditation compliance.
4. passing score on the OAE content test for the licensure area and passing score on the OAE pedagogy test.

A student who has satisfied all or most of the content course requirements can expect to complete an M.A.T. program in four semesters or in three semesters and one summer; others can expect that additional semesters will be necessary in proportion to the number of content courses that must be satisfied.

**Admission**

In addition to admission requirements previously listed for all master's programs within the department, candidates must have a baccalaureate degree.

**Cohort**

We encourage anyone with a degree who wants to be a teacher to contact us about our MAT programs. When you are admitted to the program, you are automatically admitted to the cohort. A cohort is a group of students in a common teaching field, taking the same methods courses and student teaching in specific academic years.

A cohort is identified by its general subject area and an academic year; for example, integrated mathematics 2017-18, English language arts 2018-19, and chemistry education 2016-17 are separate cohorts. The cohort year indicates the academic year the student is scheduled for methods courses, and the following academic year when the student is scheduled for student teaching.

You should schedule a pre-application counseling appointment with the Department of Teacher Education coordinator of advising, 513-529-6443. The coordinator will examine your transcript and advise you about your application, estimate time to complete the degree, and cohort year.

### General Requirements

Code	Title	Credit Hours
<b>Required courses:</b>		
EDP 601 or EDP 603	Advanced Educational Psychology Theories of Human Learning	3
EDL 621	Foundations of Multi-Cultural Education	3
EDP 607	Educational Measurement and Evaluation	3
EDP 656	Education of Individuals with Exceptionalities	3
EDT 519A	Teaching Internship-Adolescent	12
EDT 521A	Classroom Cultures, Community, and Climate	3
EDT/EDL 648	Data-Informed Decision Making in Education	3
EHS 649	Action Research for Educators	3
FSW 581	Adolescent Development in Diverse Families: Ages 13-25	3
Choose one of these		3
EDP 547	eLearning in K-12 Education	
EDP 636	Diversity, Learning & Technology	
EDP 639	Trends in Instructional Design and Learning Analytics	
Take one--depending on program		3
EDT 546L	Reading in the Secondary School (Foreign Language programs only)	
EDT 546A	Integrating Literacy Across the Content Areas (Mathematics, Social Studies, and Science)	
EDT 346A	Reading Instruction for Adolescents (Language Arts only)	
Total Credit Hours		42

### Integrated Social Studies Education

#### Program Requirements

Code	Title	Credit Hours
EDT 533	Adolescent Social Studies Methods I (fall semester)	3
EDT 534	Adolescent Social Studies Methods II (spring semester following EDT 533, along with EDT 521A and EDT 546A, shown above)	3

### Content Course Requirements

Select one of the following:		3-4
ATH 155	Introduction to Anthropology	
SOC 151	Social Relations	
SOC 153	Sociology in a Global Context	
Select the following sequence:		6
HST 197 & HST 198	World History to 1500 and World History Since 1500	
ECO 201	Principles of Microeconomics	3
ECO 202	Principles of Macroeconomics	3
HST 111 & HST 112	Survey of American History and Survey of American History	6
GEO 101	Global Forces, Local Diversity	3
GEO 121	Earth's Physical Environment	4
POL 241	American Political System	3
POL 271	World Politics	3
POL 221-499		3
Select four advanced courses in History 200-599 <sup>1</sup>		12
Select one Philosophy course (CHOICE)		3-4
Total Credit Hours		58-60

<sup>1</sup> One course must be a non-western history course.

### Retention Requirements Methods Checkpoint (for Admission to EDT 533 and EDT 534):

- Admission to appropriate adolescent social studies cohort
- Completion of or transcript credit for at least 33 credit hours of content courses in integrated social studies
- A GPA of at least 2.75 in all undergraduate content courses of your plan of study earned at Miami
- A GPA of at least 3.00 in all graduate content course-work of your plan of study earned at Miami

### Supervised Teaching Checkpoint (for Admission to EDT 519A):

- Admission to appropriate adolescent social studies cohort
- Completion of EDT 533 and Adolescent Field Block courses with GPA of at least 3.00
- Completion of or transfer credit for at least 47 credit hours of content courses in integrated social studies
- A GPA of at least 2.75 in all undergraduate content courses of your plan of study earned at Miami
- A GPA of at least 3.00 in all graduate content course-work of your plan of study earned at Miami
- Completion of the OAE content test

Visit the EDT website to see the most current plan of study: <http://www.units.MiamiOH.edu/eap/departments/edt/graduatePrograms/MasterofArtsinTeaching.html>.

## Science Education Areas- Master of Arts in Teaching

For information, contact:  
Director of Graduate Studies  
Department of Teacher Education  
401 McGuffey Hall, 513-529-6443

www.MiamiOH.edu/edt

Master of Arts in Teaching (M.A.T.) programs combine graduate and undergraduate study and enables a student with a baccalaureate degree to earn teaching licensure and a master's degree in approximately four or five semesters of full-time study, depending upon academic background, experience, and teaching field.

### Program Requirements

Requirements consist of

1. general requirements, common to all M.A.T. programs,
2. content course requirements and retention requirements, specific to each licensure area and
3. successful completion of benchmarks established for program accreditation compliance.
4. passing score on the OAE content test for the licensure area and passing score on the OAE pedagogy test.

A student who has satisfied all or most of the content course requirements can expect to complete an M.A.T. program in four semesters or in three semesters and one summer; others can expect that additional semesters will be necessary in proportion to the number of content courses that must be satisfied.

### Admission

In addition to admission requirements previously listed for all master's programs within the department, candidates must have a baccalaureate degree.

### Cohort

We encourage anyone with a degree who wants to be a teacher to contact us about our MAT programs. When you are admitted to the program, you are automatically admitted to the cohort. A cohort is a group of students in a common teaching field, taking the same methods courses and student teaching in specific academic years.

A cohort is identified by its general subject area and an academic year; for example, integrated mathematics 2017-18, English language arts 2018-19, and chemistry education 2016-17 are separate cohorts. The cohort year indicates the academic year the student is scheduled for methods courses, and the following academic year when the student is scheduled for student teaching.

You should schedule a pre-application counseling appointment with the Department of Teacher Education coordinator of advising, 513-529-6443. The coordinator will examine your transcript and advise you about your application, estimate time to complete the degree, and cohort year.

### General Requirements

Code	Title	Credit Hours
EDP 601 or EDP 603	Advanced Educational Psychology Theories of Human Learning	3
EDL 621	Foundations of Multi-Cultural Education	3
EDP 607	Educational Measurement and Evaluation	3
EDP 656	Education of Individuals with Exceptionalities	3
EDT 519A	Teaching Internship-Adolescent	12

EDT 521A	Classroom Cultures, Community, and Climate	3
EDT/EDL 648	Data-Informed Decision Making in Education	3
EHS 649	Action Research for Educators	3
FSW 581	Adolescent Development in Diverse Families: Ages 13-25	3
Choose one of these		3
EDP 547	eLearning in K-12 Education	
EDP 636	Diversity, Learning & Technology	
EDP 639	Trends in Instructional Design and Learning Analytics	
Take one--depending on program		3
EDT 546L	Reading in the Secondary School (Foreign Language programs only)	
EDT 546A	Integrating Literacy Across the Content Areas (Mathematics, Social Studies, and Science)	
EDT 346A	Reading Instruction for Adolescents (Language Arts only)	
Total Credit Hours		42

## Science Programs (Seven Areas)

Subject areas available include chemistry, earth science, earth science/chemistry, life science/chemistry, life science/earth science, life science and physical science. All science areas take the following methods courses.

### Program Requirements

Code	Title	Credit Hours
EDT 531	Adolescent Science Methods I (fall semester only)	3
Take the following course in spring semester following EDT 531 with EDT 521A and EDT 546A, shown above.		
EDT 532	Adolescent Science Methods II	3
Total Credit Hours		6

### Retention Requirements

#### Methods Checkpoint (for Admission to EDT 531 and EDT 532):

- Admission to appropriate adolescent science cohort
- Completion of transcript credit for a minimum of 33 science content courses
- Content course GPA at least 2.50
- Overall GPA at least 3.00 in all graduate content course-work of your plan of study earned at Miami

#### Supervised Teaching Checkpoint (for Admission to EDT 519A):

- Admission to appropriate adolescent science cohort
- Completion of EDT 531, EDT 532, and the Adolescent Field Block courses
- Completion of 47 science credits
- Content course GPA at least 2.50

- Overall GPA at least 3.00 in all graduate content course-work in your plan of study earned at Miami
- Completion of the OAE content test

Visit the EDT website to see the science plans of study: <http://www.units.MiamiOH.edu/eap/departments/edt/graduatePrograms/MasterofArtsinTeaching.html>.

For additional information, please contact the Director of Graduate Studies.

## Educational Leadership- Master of Education, M.S., Ph.D., Ed.D.

### For information, contact:

Director of Graduate Studies  
Department of Educational Leadership  
304 McGuffey Hall, 513-529-6825  
[www.MiamiOH.edu/edl](http://www.MiamiOH.edu/edl)

These programs prepare students for leadership positions in elementary and secondary schools, central office positions in curriculum and instruction and administration, and college teaching positions in leadership, curriculum, administration, and related areas.

A school administration license may be completed to prepare students to become elementary, middle, and/or high school principals, supervisors, curriculum specialists, and professional development specialists.

The department also offers a Graduate Certificate for Professional Development in Family, School, and Community Connections, as well as other professional development experiences for administrators, classroom teachers, and other educators interested in pursuing non-degree graduate study.

## Administrative Specialist Licenses

### Principal

Principal licensure requires an M.Ed. in school leadership. At Miami, this is a 33 credit hour program (please see M.Ed. in School Leadership), although the degree can be conferred after successful completion of 30 credit hours. The other 3 credits need to be completed to fulfill requirements for Ohio's principal license.

Students who have an M.Ed. in Administration from a university that does not include all licensure requirements within their degree programs, can have their transcript reviewed to determine the licensure courses that are needed in order for Miami to recommend the candidate for an Ohio administrative license.

### Superintendent

Superintendent licensure requires the candidate to hold a valid Ohio principal license and complete 12 credits as listed below.

## Program Requirements

Code	Title	Credit Hours
EDL 727	School Business Affairs and Physical Resources	3
EDL 729	Board-Superintendent-Staff Relationships	3

EDL 782	Social Justice and Transformation	3
EDL 710	Internship in Educational Leadership	3
Total Credit Hours		12

### Master of Education Programs

The Master's degree in School Leadership is recommended for students seeking state licensure as elementary or secondary school principals, curriculum directors, or other administrative positions. This license prepares the student for any administrative position in schools with the exception of superintendent. Admission requires an application from the department, in addition to the Graduate School application, and is based on your undergraduate grade point average (GPA), Miller Analogies Test (MAT) or Graduate Record Examination (GRE) score<sup>1</sup>, two letters of recommendation, a writing sample, and an interview.

The Master's degree in Transformative Education is for students who want to improve their professional skills and take on leadership responsibilities as teachers and experts in curriculum, teaching, and learning. It can lead to a professional teaching license. Admission requires an application from the department, in addition to the Graduate School application, and is based on your undergraduate GPA, two letters of recommendation, and the EDL Information Sheet.

Teaching certification/licensure is generally required to earn the M.Ed. in School Leadership or Transformative Education.

Candidates in licensure programs and transformative education will be expected to complete and pass the portfolio review process at established intervals within the program. Information about the portfolio review process should be obtained from the department office.

<sup>1</sup> Please note the GRE is waived for students who hold a master's degree applying to School Leadership.

### School Leadership- Master of Education

This program is designed for educators with a minimum of three years of K-12 teaching experience who wish to become school principals or administrators. Some courses are offered in a hybrid format—a blend of traditional class sessions and on-line components. The program structure allows teachers to complete their studies in two years of part-time enrollment while continuing to work full time. Please note the GRE is waived for students who hold a master's degree applying to School Leadership.

### Program Requirements

(30 hours required for the M.Ed.; 33 hours required for licensure)

Code	Title	Credit Hours
<b>Core</b>		
EDL 601	Educational Leadership Theory	3
EDL 607	School Law	3
EDL 609	Politics In Education	3
EDL 614	Family-Community-School Partnerships	3
EDL 645	Supervision of Teaching	3
EDL 646	Curriculum Development for Instruction	3
EDL 648	Data-Informed Decision Making in Education	3

EDL 710	Internship in Educational Leadership	3
EDL 721	Pupil Personnel Services	2
EDL 723	Public School Finance	3
EDL 725	School Staff Personnel Administration	2
EDL 630B	Connect Sch Ldshp to Standards	2
Total Credit Hours		33

### Transformative Education- Master of Education Educational Leadership- Doctor of Philosophy

The guiding mission of the Ph.D. program in Educational Leadership is to prepare education scholars attuned to culture-based leadership who are critically aware as well as politically and ethically discerning. The program prepares students for positions of school and district leadership and college teaching positions in educational leadership, curriculum or teacher education. The Ph.D. program includes doctoral core seminars, a preliminary examination, a research sequence, a concentration chosen from elective courses, a comprehensive examination, and dissertation research.

## Program Requirements

(64 semester hours)

Code	Title	Credit Hours
<b>Required Core Courses</b>		
EDL 761	Introduction to Doctoral Study in Educational Leadership	3
EDL 762	Culture and Leadership in Education	3
EDL 764	Education and Democratic Society	3
EDL 765	Curriculum, Pedagogy and Diversity	3
EDL 771	Educational Policy Analysis	3
<b>Preliminary Exam</b>		
Typically taken in May of the first or second year after the required core courses are completed		
<b>Electives</b>		
Student select a minimum of 15 hours of electives, including selection from seven advanced EDL electives created as part of the program revision process. Electives must be approved by advisor, at least 6 hours must be 700 level).		15
<b>Required Research Courses</b>		
EDL 683	Qualitative Research in Education	
EDL 763	Seminar in Advanced Qualitative Research Methodology	
EDL 772	Quantitative Research Design in Education	
EDL 775	Capstone in Educational Inquiry	
EHS 667 or EDL 661	Behavior Statistics Quantitative Research in Higher Education	
One advanced research course from across the College or University		
<b>Residency Enrichment Experience</b>		
Typically taken after the Preliminary Examination		
<b>Comprehensive Exam</b>		
May not be taken until all coursework in completed.		

<b>Dissertation</b>	16
Total Credit Hours	64

### Educational Leadership- Doctorate of Education

The Doctorate of Education in Educational Leadership is a 60 credit hour program for educational leaders working in P-12 contexts and institutions around central and south-western Ohio. The primary goal of this degree is to prepare democratic leaders who engage issues of equity, ethics, and social justice to create solutions to complex problems of educational practice. The program includes a 12-credit core focusing on leadership, culture, curriculum, diversity and democracy; an 8-credit major focusing on administration, social justice, and new media literacies for leadership; 15 credits of research/inquiry courses; and a cognate area (9 hours) which allows students to pursue superintendent licensure or to pursue courses in a concentration area designed to enhance their capacity for educational leadership at a building or district level.

## Program Requirements

(60 semester hours)

Code	Title	Credit Hours
<b>Required Core Courses</b>		
EDL 762	Culture and Leadership in Education	3
EDL 771	Educational Policy Analysis	3
EDL 764	Education and Democratic Society	3
EDL 765	Curriculum, Pedagogy and Diversity	3
<b>Major Courses</b>		
EDL 706	Educational Leadership and Organizational Development	3
EDL 730	New Literacies for Educational Leadership	2
EDL 782	Social Justice and Transformation	3
<b>Cognate Courses</b>		
Select one of the following options:		9
Option A: Superintendent Licensure Courses:		
EDL 710	Internship in Educational Leadership	
EDL 727	School Business Affairs and Physical Resources	
EDL 729	Board-Superintendent-Staff Relationships	
Option B: Leadership Concentration:		
9 related hours in a focus area (e.g. technology, special education, law, business - may include approved courses transferred from another accredited institution)		
<b>Research Courses</b>		
EHS 667 or EHS 668	Behavior Statistics <sup>1</sup> Behavior Statistics II	3
EDL 772	Quantitative Research Design in Education	3
EDL 683	Qualitative Research in Education	3
EDP 690	Seminar in Educational Psychology	1-3
EDL 774	Scholarship of Practice	2

**Dissertation**

Select 16 hours of dissertation credit 16

<sup>1</sup> Or equivalent.

## Student Affairs in Higher Education- Master of Science, Doctor of Philosophy

### Student Affairs in Higher Education- Master of Science

The SAHE master's degree program prepares students for leadership positions in student affairs in higher education. The curriculum includes a 15 credit-hour core that address foundations of student affairs, student development theory, foundations of research, educational leadership/organizational development, and diversity, equity and dialogue; a 3 credit-hour additional inquiry requirement; a 7 credit-hour concentration in either student development theory, student affairs leadership, inquiry in education, or diversity, equity and culture; 7 hours of professional development and field experience; and 10 hours of electives.

Admission to the Student Affairs in Higher Education master's degree program is based on undergraduate grade point averages, a personal statement, experiences relevant to student affairs, four letters of recommendation, and an interview.

### Program Requirements

(42 semester hours)

Code	Title	Credit Hours
<b>Core</b>		
EDL 654	Foundations of Educational Research in Higher Education	3
EDL 667	Diversity, Equity, and Dialogue in Student Affairs	3
EDL 675	Student Development Theory I	3
EDL 676	Foundations of Student Affairs in Higher Education	3
EDL 706	Educational Leadership and Organizational Development	3
<b>Concentrations</b>		
Select one of the following areas of concentration:		7
Student Development Theory		
Student Affairs Leadership		
Diversity, Equity and Culture		
Inquiry in Education		
<b>Inquiry Courses</b>		
EDL 661	Quantitative Research in Higher Education	3
or EDL 683	Qualitative Research in Education	
<b>Professional Development and Field Experience</b>		
EDL 656G	Field Experience Exploration	4
EDL 656I	Field Experience Synthesis	3

A third semester of EDL 656 is required as part of the student's concentration. <sup>1</sup> 4**Electives**

Select 10 hours of electives that may include, but are not limited to, additional Professional Development and Field Experience hours, independent studies, graduate courses outside of the program, and/or additional SAHE classes outside of the required course load. 10

<sup>1</sup> Full-time students enroll in an EDL 656 course in the Spring of both their first and second year and Fall of their second year. The students' assistantship counts as the field experience for the final semester enrolled. Part-time students enroll in three semesters (Fall or Spring) over the course of their graduate studies. During the semester that EDL 656 is a part of a concentration (the fall semester of the student's second year for full time students), the student will select a field experience that satisfies concentration learning outcomes.

## Student Affairs in Higher Education- Doctor of Philosophy

This program prepares students for leadership positions and faculty roles in student affairs in higher education. The curriculum, planned by you and your advisor, includes a 12-credit core that address learning partnerships in higher education, college learners' experiences, college learning environments, and social and political engagement in higher education; an 18-credit research sequence; a 6-credit concentration, 9 credits of electives, and dissertation research. A written and oral comprehensive examination is required before you become a candidate for the degree. You must write and defend an acceptable dissertation before your degree is conferred.

Admission to the Student Affairs in Higher Education doctoral program requires a master's degree and is based on undergraduate and graduate grade point averages, a personal statement, relevant experience, letters of recommendation, and an interview. Preference is given to candidates with full-time student affairs experience.

### Program Requirements

(61 semester hours)

Code	Title	Credit Hours
<b>Core Classes</b>		
EDL 731	Learning Partnerships & Transformational Learning	3
EDL 741	Perspectives on College Learners' Experience	3
EDL 745	Perspectives on Higher Education Learning Contexts	3
EDL 751	Social & Political Engagement in Higher Education	3
<b>Inquiry Classes</b>		
EDL 654	Foundations of Educational Research in Higher Education	3
EDL 661	Quantitative Research in Higher Education	3
EDL 683	Qualitative Research in Education	3

Advanced Seminar in Qualitative or Quantitative Research	3
EDL 776 Research/Inquiry Practicum in Student Affairs/Higher Education <sup>1</sup>	3

**Concentration <sup>2</sup>**

A student designs a concentration that satisfies one's own focused learning outcomes. Concentration courses may include, but are not limited to, independent studies, graduate courses outside of the program, and/or additional SAHE classes outside of the required course load.

**Electives <sup>3</sup>**

Select 9 hours of electives that may include, but are not limited to, independent studies, graduate courses outside of the program, and/or additional SAHE classes outside of the required course load.

**Dissertation <sup>4</sup>** 16

<sup>1</sup> 3 per term, taken successively for two terms

<sup>2</sup> Minimum 6 hours

<sup>3</sup> Minimum 9 hours

<sup>4</sup> Minimum 16 hours

## Educational Psychology- Master of Education

For information, contact:  
Department Chair  
Department of Educational Psychology  
201 McGuffey, 513-529-6621  
[www.MiamiOH.edu/edp](http://www.MiamiOH.edu/edp)

This master's program is an interdisciplinary program of study related to applied human development, learning, and family issues.

The program requires 30 semester hours, with 18 in the Core and 12 in the Individualized Focus Area. The Individualized Focus Area is designed in consultation with a faculty advisor, and must fall within the purview of human development, learning, or family issues.

The program does not require previous licensure or certification. However, those who already have certification/licensure in a teaching area can complete the program to obtain a greater depth of understanding of educational issues and teaching practice.

### Admission Requirements

Admission to the educational psychology master's degree program requires:

1. acceptance by the Graduate School,
2. three letters of recommendation, and
3. a brief essay on a topic pertinent to your professional reasons for pursuing the degree.

To apply for the Master of Education, Educational Psychology degree program, go to the graduate school application portal found on the graduate school page via the link below <http://miamiOH.edu/graduate-studies/admission/index.html>.

Complete the application, then upload the required program materials listed here. Once you are admitted, you will be required to mail an official transcript to the graduate school at:

Graduate School  
Miami University  
501 E. High Street  
Room 102 Roudebush Hall  
Oxford, OH 45056

### Undergraduate/Graduate Program Option (4 + 1)

Students who are majoring in Family Science and Social Work have the option to complete the Master's in Educational Psychology as an extension of their undergraduate program. This 4+1 program allows students to complete their undergraduate and graduate degrees in a shortened time-frame. For information on the details of this program, contact the Department of Family Science and Social Work.

### Program Requirements

This program requires 30 semester hours (18 hours in core requirements and 12 hours in an Individualized Focus Area). A culminating research project is required.

### Educational Psychology Program

(30 semester hours)

Code	Title	Credit Hours
<b>Educational Psychology Core</b>		
Required core courses		18
EDP 601	Advanced Educational Psychology	
EDP 603	Theories of Human Learning	
EDP 607	Educational Measurement and Evaluation	
EDP 651	Educational Research	
EDP 652	Educational Research Practicum	
EHS 667	Behavior Statistics	
<b>Individualized Focus Area</b>		
These courses are selected in consultation with faculty advisor.		12
EDL 614	Family-Community-School Partnerships	
EDL 621	Foundations of Multi-Cultural Education	
EDP 632	Instructional Design Theory and Models	
EDP 635	Theories of Human Development	
EDP 655	Theory and Problems in Educational Measurement	
EDP 656	Education of Individuals with Exceptionalities	
EDP 662	Social, Emotional, and Behavioral Assessment	
EDP 669	Qualitative Research in Educational Psychology	
EDP 688	SPSS Series I	

EDP 689	SPSS Series II
EDP 690	Seminar in Educational Psychology
FSW 518	The Family Life Education Process
FSW 551	Family Violence
FSW 562	Family Policy and Law
FSW 566	Interpersonal Perspectives on Adulthood and Aging
FSW 575	Family Theories
FSW 581	Adolescent Development in Diverse Families: Ages 13-25
PSY 551	Cognitive Neuroscience
PSY 574	Advanced Cognitive Processes

Total Credit Hours 30

## Assessment and Evaluation Certificate

For information, contact:  
Department Chair  
Department of Educational Psychology  
201 McGuffey, 513-529-6621  
[www.MiamiOH.edu/edp](http://www.MiamiOH.edu/edp)

The Graduate Certificate for Professional Development: Assessment and Evaluation is built using a unique sequence of courses to develop in-depth expertise in real-world application of evaluation in education, health sciences, market research, and psychology. Students will develop skills in program evaluation as well in the computation and interpretation of data. The certificate provides a coherent set of graduate-level courses as well as a way for participants to earn formal recognition for their expertise.

### Program Requirements

Code	Title	Credit Hours
Required courses:		
EDP 607	Educational Measurement and Evaluation	3
EDP 655	Theory and Problems in Educational Measurement	3
EDP 690	Seminar in Educational Psychology	3
Select one of the following:		3
EDL/EDT 648	Data-Informed Decision Making in Education	
EHS/EDP 667	Behavior Statistics	
Total Credit Hours		12

## Graduate Certificate in Quantitative Data Analysis in Education and Social Sciences

The Quantitative Data Analysis in Social Science Certificate is intended to provide knowledge in statistics and practical skills to conduct both simple and sophisticated statistical analyses in the fields of education, social sciences, and business. Students will be able to identify and utilize appropriate statistical procedures for problems in education,

social sciences and business, and to correctly interpret and report the findings from the results of the statistical analyses.

### Program Requirements

Code	Title	Credit Hours
EDP/EHS 667	Behavioral Statistics I	3
or EHS 668	Behavior Statistics II	
EDP 688	SPSS Series I	3
EDP 689	SPSS Series II	3
Total Credit Hours		9

## English- Master of Arts, M.A. in Teaching, Ph.D.

For information, contact:  
Director of Graduate Studies  
Department of English  
356 Bachelor Hall, 513-529-7530  
[www.MiamiOH.edu/english/graduate](http://www.MiamiOH.edu/english/graduate)

### Admission Requirements

Admission to the Master of Arts program requires three letters of recommendation with recommendation form, a writing sample, a personal statement of intent, and approval of the department committee on admissions. Application deadline is **January 1** for admission in the following academic year.

Admission to the Master of Arts in Teaching (MAT) program requires a baccalaureate degree and licensure for teaching in public schools. Admission also requires the completion of the Master of Arts in Teaching English application, a professional resume, the completion of a recommendation form by a school official, and an application appointment with the Ohio Writing Project Director, 513-529-5245.

Admission to the doctoral program requires an M.A. (or equivalent), three letters of recommendation with recommendation form, a writing sample, a personal statement of intent, and approval of the department committee on admissions. Application deadline is **January 1** for admission in the following academic year.

**The Master of Technical and Scientific Communication (MTSC) is not currently accepting applications.**

### English- Master of Arts Program Requirements

General program requirements include reading proficiency in a language other than English before the final examination, either tested by examination or confirmed by two years of credit in college level language courses. Students whose native language is other than English are exempt from the language requirement. Graduate assistants teaching in the college composition program must also take ENG 731 as well as 2 teaching workshops, ENG 606, and ENG 607. Other requirements follow:

**M.A. with literature concentration (thesis option)**  
(36 semester hours)

Code	Title	Credit Hours
ENG 603	Literary Theories and Their Histories	4
ENG 605	Issues in the Profession	2
Departmental distribution requirements		16
Elective literature		8
Writing the thesis		6
Final Oral Examination		
Total Credit Hours		36

### M.A. with literature concentration (without thesis) (36 semester hours)

Code	Title	Credit Hours
ENG 603	Literary Theories and Their Histories	4
ENG 605	Issues in the Profession	2
Department distribution requirements		16
Elective literature		8
Final written and oral examination		6
Total Credit Hours		36

### M.A. with composition and rhetoric concentration (36 semester hours)

Code	Title	Credit Hours
Core courses in composition and rhetoric		
Select two of the following:		
ENG 732	Histories and Theories of Composition	4
ENG 733	Histories and Theories of Rhetoric	4
ENG 735	Empirical Research Methods in Composition	4
ENG 737	Contemporary Theories of Rhetoric	4
Three elective courses in ENG		12
ENG 605	Issues in the Profession	2
ENG 700	Research for Master's Thesis	6
Final oral examination		
Total Credit Hours		36

## English- Master of Arts in Teaching Program Requirements - Non-GRE

General admission requirements include a valid teaching license, admission to the graduate school and a completed Master of Arts in Teaching in English application at <https://miamioh.edu/cas/academics/departments/english/academics/graduate-studies/ohio-writing-project/teaching/index.html>. Program requirements consist of core classes, elective workshops and classroom research reaching 32 semester hours.

(32 semester hours)

Code	Title	Credit Hours
ENG 622	The Teaching of Writing	6
Electives in writing and reading courses		15
Teacher Research courses		9

Final Teacher Research project, paper, and presentation	2
Total Credit Hours	32

## English- Doctor of Philosophy

Concentrations are offered in composition and rhetoric, and in American and English literature.

### Program Requirements

#### Composition and Rhetoric

Code	Title	Credit Hours
ENG 603	Literary Theories and Their Histories	4
ENG 605	Issues in the Profession	2
Six seminars in composition and rhetoric, including four foundation courses		24
Two open elective seminars in ENG		8
ENG 850	Research for Doctoral Dissertation	22
Total Credit Hours		60

#### American and English Literature

Code	Title	Credit Hours
ENG 603	Literary Theories and Their Histories	4
ENG 605	Issues in the Profession	2
Eight seminars, including one in ENG 750		32
ENG 850	Research for Doctoral Dissertation	22
Total Credit Hours		60

Fulfillment of the departmental historical distribution requirement is expected.

For both concentrations, course of study must be approved by the Graduate Committee.

For students in American and English Literature, the language requirement is met by

reading proficiency in two languages other than English; or

reading proficiency in one language other than English and six semester hours of graduate credit in an approved cognate field.

For students in Composition and Rhetoric, the language requirement is met by

reading proficiency in one language other than English, or six semester hours of graduate credit in an approved cognate field.

Also required for both concentrations are a comprehensive examination, written and oral; a dissertation; and an oral defense of the dissertation.

Graduate assistants and teaching associates teaching in the college composition program must take ENG 731, as well as two teaching workshops, ENG 606 and ENG 607.

## Environmental Sciences- Master of Environmental Science

For information, contact:

Director of Graduate Studies  
 Institute for the Environment and Sustainability (IES)  
 118 Shideler Hall, 513-529-5811  
[www.MiamiOH.edu/ies](http://www.MiamiOH.edu/ies)

## Program and Support Facilities

Faculty, staff, and students are involved in professional service projects, internships, practica, and research, including agricultural ecology, GIS and resource analysis, conservation biology, sustainability, land use issues, pollution prevention, watershed management, water quality, stream and wetland restoration, and conflict resolution of environmental problems.

Facilities include dedicated rooms for graduate-student team projects for external clients (professional service projects), GPS and field equipment, a weather station at the Ecology Research Center, and instrumentation for the analysis of water quality in the Center for Aquatic and Watershed Sciences.

## Admission Requirements

At least a 2.75 grade point average (4.00 scale) or 3.00 in the last two undergraduate years, three letters of recommendation, letter of intent, and a current resume of education and experience are required.

## Professional Science Masters

The IES Masters of Environmental Science degree is designated as a national Professional Science Master's (PSM) program based on its professional skills, experiential learning, and interdisciplinary breadth. PSM programs prepare students for science careers in business, government, or nonprofit organizations, where workforce needs are increasing. Learn more at the PSM website.

## Program Requirements

Satisfactory completion of 36 semester hours including:

Code	Title	Credit Hours
<b>Core courses</b>		
EGM 511	Leading and Managing Projects	3
IES 511	Environmental Protocols	4
IES/ENG/JRN 529	Environmental Communication	3
IES 598	IES Orientation Field Trips	1
IES 605	Introduction to the Professional Service Project	0
IES 610	Professional Service Project	4
IES 611	Environmental Problem Solving and Analysis	1
STA 672	Statistical Modeling and Study Design	4
<b>Professional Experience</b>		
IES 640 or IES 670	Internship Environmental Practicum	2
IES 665	IES Internship or Practicum Development	1
IES 685	Internship/Practicum Final Report Writing	1
<b>Concentration (12 hours in your choice of one of five Areas of Concentration)</b>		12

### 1. Applied Ecology & Conservation

#### Principles of Ecology & Conservation (3 or 6 hrs)

BIO 567	Conservation Biology
BIO 671	Population and Community Ecology
BIO 672	Ecosystem and Global Ecology

#### Landscape & Spatial Analysis (at least 3 hrs)

GEO 541	Geographic Information Systems
GEO 542	Advanced Geographic Information Systems
GEO 544	GIScience Techniques in Landscape Ecology
GEO 548	Techniques and Applications of Remote Sensing

#### Taxonomic & Field Courses (0 or 3 hrs)

BIO 508	Ornithology
BIO 509	Herpetology
BIO 511	General Entomology
BIO/GEO 531	Global Plant Diversity
BIO/GEO 532	Ecoregions of North America
BIO 553	Animal Physiological Ecology
BIO 563	Limnology
BIO 565	Animal Behavior
BIO 621	Advanced Plant Taxonomy
IES 512	Tropical Ecosystems of Costa Rica
IES 523	Tropical Marine Ecology
MBI 575	Microbial Ecology: Exploration of the Diverse Roles of Microorganisms in Earth's Ecology

#### Social, Economic & Policy Dimensions (at least 3 hrs)

ECO 506	Environmental Economics
GEO 554	Urban Geography
IES 550	Environmental Law

### 2. Land & Water Resources

#### Land Resources (0-6 hrs)

BIO/GEO 531	Global Plant Diversity
BIO/GEO 532	Ecoregions of North America
BIO 538	Soil Ecology and Sustainable Use
GEO 528	Soil Geography
GLG 535	Soils and Paleosols

#### Water Resources (0 to 6 hrs)

BIO 563	Limnology
CPB 505	Industrial Environmental Control
GEO 525	Hydrogeography
GEO 526	Watershed Management
GLG 508	Introduction to Hydrogeology
GLG 528	Hydrogeological Modeling: Groundwater Flow and Contaminant Transport and Fate
GLG 596	Isotopes in Environmental Processes

#### Landscape & Spatial Analysis (at least 3 hrs)

GEO 541	Geographic Information Systems
GEO 542	Advanced Geographic Information Systems

GEO 544	GIScience Techniques in Landscape Ecology
GEO 548	Techniques and Applications of Remote Sensing

**Climate & Global Processes (0 to 3 hrs)**

BIO 672	Ecosystem and Global Ecology
GLG 536	Paleoclimatology
GLG 537	Paleontology in Conservation

**Social, Economic & Policy Dimensions (at least 3 hrs)**

ECO 506	Environmental Economics
GEO 554	Urban Geography
IES 550	Environmental Law

**3. The Transport, Fate & Control of Pollution****Environmental Engineering (at least 3 hrs)**

CPB 204	Mass and Energy Balances I (Recommended undergraduate course; undergraduate credits do not count toward the required 12 hours.)
CPB 244	Introduction to Environmental Engineering (Recommended undergraduate course; undergraduate credits do not count toward the required 12 hours.)
CPB 505	Industrial Environmental Control
CPB 541	Pollution Prevention in Environmental Management
CPB 542	Air Pollution Control

**Contaminant Fate and Transport (at least 3 hrs)**

GLG 502	Geomicrobiology
GLG 528	Hydrogeological Modeling: Groundwater Flow and Contaminant Transport and Fate
GLG 596	Isotopes in Environmental Processes
MBI 575	Microbial Ecology: Exploration of the Diverse Roles of Microorganisms in Earth's Ecology

**Air, Land & Water Transport Systems (at least 3 hrs)**

BIO 563	Limnology
BIO 672	Ecosystem and Global Ecology
GEO 525	Hydrogeography
GEO 526	Watershed Management
GLG 508	Introduction to Hydrogeology
GLG 528	Hydrogeological Modeling: Groundwater Flow and Contaminant Transport and Fate

**Social, Economic & Policy Dimensions (at least 3 hrs)**

ECO 506	Environmental Economics
IES 550	Environmental Law

**4. Energy & Environment****Energy & Engineering Systems (at least 3 hrs)**

CPB 204	Mass and Energy Balances I (Recommended undergraduate course; undergraduate credits do not count toward required 15 hrs)
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CPB 541	Pollution Prevention in Environmental Management
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CPB 542	Air Pollution Control
ECE 291	Energy Systems Engineering (Recommended undergraduate course; undergraduate credits do not count toward required 15 hrs)

**Building & Urban Systems (at least 3 hrs)**

ARC 506	Seminars (B: Energy and Sustainability and C: Sustainable Design)
ARC 513	Environmental Control Systems I
GEO 551	Urban and Regional Planning
GEO 554	Urban Geography

Interdisciplinary professional experience or research leading to an internship or practicum.

**Environmental Contamination, Climate & Global Processes (at least 3 hrs)**

BIO 672	Ecosystem and Global Ecology
GLG 502	Geomicrobiology
GLG 528	Hydrogeological Modeling: Groundwater Flow and Contaminant Transport and Fate
GLG 536	Paleoclimatology
GLG 596	Isotopes in Environmental Processes
MBI 575	Microbial Ecology: Exploration of the Diverse Roles of Microorganisms in Earth's Ecology

**Social, Economic & Policy Dimensions (at least 3 hrs)**

ECO 506	Environmental Economics
GEO 554	Urban Geography
IES 550	Environmental Law

**5. Sustainability in Management & Planning****Landscape Analysis and Urban Planning (3-6 hrs\*)**

GEO 541	Geographic Information Systems
GEO 542	Advanced Geographic Information Systems
GEO 548	Techniques and Applications of Remote Sensing
GEO 551	Urban and Regional Planning
GEO 554	Urban Geography
GEO 559	Advanced Urban and Regional Planning

**Management and Information Systems (3-6 hrs\*).**

**Note: Many MKT, MGT, FIN and other Business Courses may have undergraduate prerequisites. Undergraduate credit hours do not count towards the MEn degree.**

MGT 531	Logistics Management
MGT 551	Operations Planning and Scheduling
MGT 553	Quality Management Systems
STA 583	Analysis of Forecasting Systems

**Economic and Policy Dimensions (at least 3 hrs)**

ECO 506	Environmental Economics
GEO 554	Urban Geography
IES 550	Environmental Law

IES 594	Sustainability Perspectives in Resources and Business
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**Satisfactory completion and defense of an internship, practicum or thesis**

Total Credit Hours 36

## Experience Design- Master of Fine Arts

For information, contact:  
Experience Design Graduate Director  
Department of Art  
124 Art Building  
513-529-2900  
<http://xd.MiamiOH.edu>

The mission of the MFA in Experience Design is to enable learners to gain the design thinking, knowledge, and skills required for developing high fidelity, people-driven outcomes at personal and systemic levels. Coursework for this distance-learning program synthesizes theory and methods from design research, service, user experience, and communication design, encompassing digital and physical technologies. Learners grow these competencies through exercises, projects, and learning experiences designed to develop practical, analytical, creative, emotional, and social intelligences. Graduates are prepared to enter a wide range of design practices as designers and educators who are equipped to lead and develop culturally relevant design innovations in complex contexts.

### Program Requirements

Code	Title	Credit Hours
<b>Major Requirements</b>		
ART 555	A History of Design	3
ART 560	Special Topics Design Studio	3
ART 622	Experience Design Methods	3
ART 623	Writing for Design Audiences	3
ART 624	Design for Access	3
ART 625	Systemic Design	3
ART 626	Methods of Dissemination	3
ART 627	Design Research Methods	3
ART 650	Experience Design Studio (take four times)	3
ART 651	Design Research Theory	3
ART 700	Thesis	6
IMS 524	Ethics and Digital Media	3
<b>Electives</b>		
ART 536	Applied Experience Design: Walt Disney World	
ART 571	Sculpture IV	
ART 620	Graduate Study in Drawing	
ART 640	Internship	
ART 645	Graduate Study in Printmaking	
ART 680	Graduate Seminar in Art History	
IMS 504	Advanced Data Visualization	
IMS 507	Interactive Business Communication	

IMS 511	Visual Rhetoric
IMS 514	Web and Social Media Analytics
IMS 518	Social Media Marketing and Online Community Management
IMS 519	Digital Branding
IMS 522	Advanced Interaction Design and Development
IMS 540	Interactive Media Studies Practicum
IMS 561	Virtual Reality

Total Credit Hours 57

## French- Master of Arts

For information, contact:  
Director of Graduate Studies  
Department of French and Italian  
207 Irvin Hall, 513-529-7508  
[www.MiamiOH.edu/frenchitalian](http://www.MiamiOH.edu/frenchitalian)

### Admission Requirements

Applicants must complete the online application form and submit the following materials: official transcripts, two letters of recommendation, a personal statement, and a writing sample of 10-15 pages in French. One of these letters should be written by someone who can vouch for the applicant's abilities in French, if this is not the applicant's native language. International students must submit proof of English proficiency (80 or higher on the TOEFL) as well as official translations of their academic transcripts. The Graduate Record Examination (GRE) is recommended but not required. Deadline for application is March 1.

### Program Requirements

The M.A. in French requires a minimum of 30 semester hours of coursework, a reading list examination, and a thesis. The normal length of the program is four semesters plus two summers. Students take two graduate seminars each semester (one 500- and one 600-level course). In the first semester of study, graduate assistants also take a required pedagogy seminar and teaching workshop, FRE 691. All students are required to take our theory proseminar, FRE 614, offered once every other year. During summer terms, faculty advisors supervise students as they work independently, either preparing for their reading list exam, or finalizing their master's thesis. Graduate students may participate in our five-week summer study abroad program in Dijon (contingent on budgetary approval). There, they take graduate seminars, teach and/or serve as assistants to the program director. Students must pass a comprehensive reading list examination in their third semester of study to be in good standing. During the fourth semester of study, students draft and revise a thesis of at least 50 pages, which represents an original contribution to scholarship in French and Francophone studies. Candidates for the M.A. defend their thesis in May, complete revisions to their thesis, and file for an August degree.

## Geography- Master of Arts

For information, contact:  
Director of Graduate Studies  
Department of Geography  
118 Shideler Hall, 513-529-5010

[www.MiamiOH.edu/geography](http://www.MiamiOH.edu/geography)

The M.A. in Geography is a small program with 10-12 students in residence each year. With 14 permanent faculty, the student to faculty ratio of around 1 to 1 provides students with excellent access to faculty. Graduate faculty are strongly committed to teaching, advising, and research collaboration with graduate students.

## Research and Support Facilities

Two computer labs and a project space with state-of-the-art GIS hardware and software, including ArcGIS and Imagine. This facility is supported by a large format (E size) color ink jet printer. There is a microclimatology/precipitation chemistry station at the nearby Ecology Research Center and three stream monitoring stations at Hueston Woods State Park. An extensive collection of aerial photos, maps, and digital data is available for graduate research support.

## Admission Requirements

Six courses, including introductory human geography, introductory physical geography, cartography or GIS, a quantitative methods course, and two additional advanced courses, are generally required. Deficiencies may be made up after admission. In addition, a statement of purpose/research interests and three letters of recommendation must be provided.

## Requirements: Master of Arts

The Master of Arts degree has both a thesis and internship option. Both options require a minimum of 36 hours.

Code	Title	Credit Hours
Core course work		10
Electives		14-20
Thesis/Internship credit		6-12
Total Credit Hours		36

Before the end of the first year, a formal oral presentation of the thesis/internship proposal is required. This program culminates in the defense of a thesis or internship report.

## Geographic Information Sciences Certificate

For information, contact the Department of Geography, Shideler Hall Room 118B, 513-529-5010.

Geographic Information Science (GISci) is a suite of techniques for collecting, analyzing, and communicating information through geographic information systems (GIS), satellite and aerial imaging (Remote Sensing), global positioning systems (GPS), and related technologies. GISci is applied to problems in fields ranging from environmental science to urban planning to business decision-making. This certificate program builds qualifications for employment and/or further study in GISci.

## Program Requirements

(15-18 credits; at least 15 must be at the graduate level)

Code	Title	Credit Hours
<b>Required courses</b>		
GEO 541	Geographic Information Systems	3
GEO 542	Advanced Geographic Information Systems	3
GEO 543	Python Programming for ArcGIS	3
GEO 548	Techniques and Applications of Remote Sensing	3
<b>Elective courses</b>		
Select 3-6 hours, including at least 3 hours at the 500 level:		3-6
GEO 544	GIScience Techniques in Landscape Ecology	
GEO 545	Geographic Information Systems for Criminal Justice	
GEO 560	Advanced Systematic Geography (topics vary)	
GEO 610	Research in Geography <sup>1</sup>	
GEO 640	Internship (Must be approved by Certificate Advisor)	
IMS 561	Virtual Reality	
CSE 174	Fundamentals of Programming and Problem Solving	
CSE 252	Web Application Programming	
ENT 135	Computer-Aided Drafting	
CIT 214	Database Design and Development	
ISA 245	Database Systems and Data Warehousing	
Total Credit Hours		15-18

<sup>1</sup> Maximum 12 credit hours.

## Geology- Master of Arts, Master of Science, Doctor of Philosophy

For information, contact:

Cathy Edwards, Administrative Assistant  
 Department of Geology & Environmental Earth Science  
 118 Shideler Hall, 513-529-3216  
[www.MiamiOH.edu/geology](http://www.MiamiOH.edu/geology)

## Research and Support Facilities

In addition to standard laboratory and computer equipment, the department houses research laboratories for the investigation of a variety of earth materials and processes including high- and low-temperature mineralogy/geochemistry, geomicrobiology, radiogenic and stable isotope geochemistry, and high-end computational laboratories. Many of these laboratories support material preparation and analysis using departmental instrumentation including: DC plasma spectrometer, multi-collector thermal ionization mass spectrometer, HPLC ion chromatograph, atomic force/scanning tunneling microscope, single-crystal and powder x-ray diffractometers, electrophoretic mobility analyzer, streaming potential analyzer, portable seismometers, and cathode luminescence. Additional shared facilities on campus include microbiology laboratories, scanning and transmission electron microscopy laboratories, ICP-

MS laboratory, and remote sensing and GIS computer laboratories. In addition, collaborations with numerous research laboratories and institutions provide access to facilities not available on campus. The Department maintains active field programs around the world, including a field station in Wyoming.

## Admission Requirements

Prospective students must have an undergraduate major in geology or a related science, including at least one semester of college chemistry, physics, and calculus. Deficiencies in background, as determined by a faculty committee, may be made up after admission. Satisfactory scores on the verbal, quantitative, and analytical tests of the Graduate Record Examination are required. Either TOEFL or IELTS scores are required for all foreign applicants. In addition, a statement of career objectives and research interests, a resume and three letters of recommendation must be provided.

## Geology- Master of Arts

The Master of Arts degree is a non-thesis program requiring 30 credit hours of coursework, at least 15 hours of which must be in geology. Students may select up to 15 credit hours of coursework in cognate disciplines, with the approval of their committee. Students must pass an oral examination prior to receipt of the degree.

## Geology- Master of Science

The Master of Science degree is a thesis program requiring a minimum of 30 credit hours with a minimum of 24 semester hours of course work plus six semester hours of credit for thesis. Before the end of the first year, a formal oral presentation of the thesis proposal is required. This program culminates in the defense of a thesis based on original research.

## Geology- Doctor of Philosophy

The Ph.D. requires completion of 60 semester hours beyond the M.S. degree or its equivalent, of which at least 15 semester hours are earned through graduate-level science coursework. Before the end of the third semester of the program, Ph.D. candidates take written and oral comprehensive examinations administered by the student's advisory committee. The dissertation prospectus may be presented after the candidate has successfully passed the comprehensive examination and advanced to Ph.D. candidacy, but prior to the end of the fourth semester. The prospectus is to take the form of a proposal to an external funding agency to support the dissertation research. The prospectus must be presented in both written form and as an oral public defense. The program culminates in an oral public defense of a dissertation based on original research.

## Gerontology- Master of Gerontological Studies, Doctor of Philosophy

For information, contact:  
Director of Graduate Studies  
Scripps Gerontology Center  
396 Upham Hall, 513-529-2914  
www.scripps.MiamiOH.edu

The MGS and Ph.D. programs are offered through the Department of Sociology and Gerontology with support from the Scripps Gerontology

Center. The Certificate Program is offered through the Scripps Gerontology Center.

## Gerontological Studies- Master of Gerontological Studies Application Requirements

Admission is based on evaluations by the graduate faculty. Applicants must have a minimum undergraduate grade point average of 3.00 on a 4.00 scale. Applicants must submit:

1. academic transcripts,
2. general test scores on the Graduate Record Examination (GRE),
3. a minimum of three recommendation letters evaluating the student's academic capability, potential for success in graduate studies, and professional promise,
4. a personal statement indicating past academic and/or professional experiences, future career goals, and reasons for interest in gerontology, and
5. a resume or CV.

## Program Requirements

Core courses are offered in gerontology, with additional courses available in other departments. This program is designed for students whose interests and career goals include research or applied work in the field of gerontology.

The program requires course work, a practicum in the field of aging, and a critical inquiry paper based on student interest.

(43 semester hours)

Code	Title	Credit Hours
GTY 602	Perspectives in Gerontology	3
GTY 604	Gerontology Proseminar 1	1
GTY 605	Gerontology Proseminar 2	1
GTY 608	The Logic of Inquiry	4
GTY 609	Qualitative Research Methods	3
GTY 611	Linking Research and Practice	3
GTY 641	Organizations and the Aging Enterprise	3
GTY 667	Policy and Politics of Aging	3
GTY 705	Oral and Written Communication for Gerontologists	3
GTY 708	Quantitative Methods and Statistics	4
GTY 640	Internship	6
Choice of electives (include but not limited to):		9
GTY 556	Aging & Health	
GTY 579	Research on Inequality in Aging & Health	
GTY 615	Readings in Gerontology	
GTY 620	Supervised Research or Reading on Selected Topics in Gerontology	
GTY 686	Global Health and Health Care Systems	
KNH 571	Sport, Leisure, and Aging	
KNH 685	Exercise, Age, and Health	

POL 567	Public Budgeting
SOC 554	Formal Organization
STA 671	Environmental Statistics
Total Credit Hours	

43

## Social Gerontology- Doctor of Philosophy

Our doctoral program encourages students to integrate knowledge and research methods from a range of behavioral and social sciences in their study of social gerontology. Our program builds scholars and educators who can meet the challenges, demands, and opportunities presented by global aging. As a graduate of the doctoral program, students are prepared to teach and conduct research in institutions of higher education, and hold positions in policy or service organizations.

### Application Requirements

Application materials required include academic transcripts, Graduate Record Examination (GRE) scores, a letter or statement describing career objectives and areas of interest in gerontology, an interview, and letters of recommendation. Applications may be submitted by those who have earned a bachelor's degree and those who have earned or are in the process of completing a master's degree. Those entering with a bachelor's degree are required to begin their studies by fulfilling the current core requirements for the Master of Gerontological Studies (MGS) Program (43 semester hours). Students are accepted into the doctoral program from a range of disciplines. For students who enter with a master's degree from a discipline other than gerontology, the faculty will determine which MGS core courses must be taken as part of their doctoral studies.

### Program Requirements

In addition to the general requirements specified by the Graduate School, requirements for the Ph.D. in Social Gerontology include 60 post-master's degree credit hours consisting of 40-42 credit hours of coursework; satisfactory performance on oral and written qualifying examinations; submission of an acceptable dissertation; and satisfactory performance on a final oral examination (dissertation defense).

Code	Title	Credit Hours
<b>Required Courses</b>		
GSC 601	College Teaching Enhancement Program	1
GTU 609	Qualitative Research Methods	3
GTU 702	Knowledge Construction & Advanced Theory	3
GTU 705	Oral and Written Communication for Gerontologists	3
GTU 708	Quantitative Methods and Statistics	4
GTU 718	Statistical Modeling in Gerontology	3
GTU 745	Sociology of Aging	3
GTU 850	Doctoral Dissertation Research <sup>1</sup>	16
Complete a minimum of 4 credits from the following:		
GTU 709	Advanced Qualitative Research & Methods	4-6

or GTU 750 Special Topics in Advanced Quantitative & GTU 751 Methodology in Aging Research and Categorical Modeling in Aging

### Elective Courses

18-20

Choose additional hours to total 60. Electives include, but are not limited to the following:

GTU 602	Perspectives in Gerontology
GTU 608	The Logic of Inquiry
GTU 611	Linking Research and Practice
GTU 615	Readings in Gerontology
GTU 620	Supervised Research or Reading on Selected Topics in Gerontology
GTU 667	Policy and Politics of Aging
GTU 705	Oral and Written Communication for Gerontologists
GTU 747	Demography & Epidemiology of Aging

Total Credit Hours

58-62

<sup>1</sup> Minimum 16 credit hours, maximum 60.

## Social Entrepreneurship and Aging Certificate

For information, contact:

Director of Graduate Studies  
Scripps Gerontology Center  
396 Upham Hall, 513-529-2914  
www.scripps.MiamiOH.edu

The Social Entrepreneurship and Aging Online Graduate Certificate prepares individuals to create innovative solutions to opportunities emerging due to population aging. It consists of 12 credits: two courses in GTU and two courses in ESP.

### Program Requirements:

Code	Title	Credit Hours
Select the following:		
ESP 501	Entrepreneurship: New Ventures in the Field of Aging	3
ESP 670	Introduction to Entrepreneurship and Business Models in the Field of Aging	3
GTU 601	New Frontiers in Aging	3
GTU 612	Innovations and Trends in the Aging Marketplace	3
Total Credit Hours		12

## History- Master of Arts, Doctor of Philosophy

For information, contact:

Director of Graduate Studies  
Department of History  
254 Upham Hall, 513-529-5121

**This program is not currently accepting applications for the Doctor of Philosophy degree.**

## Admission Requirements

### Combined Bachelor of Arts/Master of Arts Program

Undergraduate students may apply to participate in the combined bachelors/master's program. This program allows you to pursue a master's degree in an accelerated manner while pursuing your bachelor's degree. Students develop expertise in historical thinking, historical research, historical sub-fields, and writing and teaching history. Please contact the department for more information about the combined program.

### Master of Arts

You must have an undergraduate GPA of at least 3.00 with successful completion of undergraduate history courses. You must submit scores from the GRE general test (subject test in history is optional), a statement about your field of interest and career objectives, an academic writing sample, and three letters of recommendation.

## Program Requirements

### Master of Arts

Thirty-six semester hours are required. The basic curriculum includes:

Code	Title	Credit Hours
HST 601	Historical Methods	3
HST 602	History and Theories	3
HST 603	Research Seminar I	3
HST 604	Research Seminar II	3
HST 670	Colloquium in History <sup>1</sup>	3,3
HST 677	Independent Studies	3
HST 700	Research for Master's Thesis	6
Total Credit Hours		27

<sup>1</sup> Select this course 2 times for a total of 6 hours.

In addition, students must select one three-course module from the following. These modules are designed to provide students with skill sets appropriate to a range of academic and professional options once they complete the Master's degree.

### Art History

Code	Title	Credit Hours
Select three of the following:		9
ART 506	Art Since 1980	
ART 586	Art of the Late 19th Century	
ART 587	Art of the Early 20th Century	
ART 589	Postwar to Postmodern, 1945-1980	
ART 680	Graduate Seminar in Art History	
Total Credit Hours		9

## Geographic Information Systems (GIS)

Code	Title	Credit Hours
GEO 541	Geographic Information Systems	3
GEO 542	Advanced Geographic Information Systems	3
<b>Elective</b>		3
GEO 543	Python Programming for ArcGIS	
GEO 544	GIScience Techniques in Landscape Ecology	
GEO 547	Aerial Photo Interpretation	
GEO 548	Techniques and Applications of Remote Sensing	
<b>Total Credit Hours</b>		9

## Gerontology

Code	Title	Credit Hours
GTY 608	The Logic of Inquiry	4
GTY 609	Qualitative Research Methods	3
<b>Elective</b>		3
GTY 611	Linking Research and Practice	
GTY 641	Organizations and the Aging Enterprise	
GTY 667	Policy and Politics of Aging	
GTY 708	Quantitative Methods and Statistics	
<b>Total Credit Hours</b>		10

## Interactive Media Studies

Code	Title	Credit Hours
IMS 540	Interactive Media Studies Practicum	4
ENG/IMS 511	Visual Rhetoric	3
<b>Elective to be approved by the Director of Graduate Studies</b>		3
<b>Total Credit Hours</b>		10

## History

Code	Title	Credit Hours
HST 670	Colloquium in History	3
HST 677	Independent Studies	3
<b>Elective</b>		3
<b>Total Credit Hours</b>		9

Students will be able to pursue one of three options in competing the degree:

1. Thesis. This is a written product in which students must demonstrate mastery of a specific historiography and a body of original research. Six semester hours of credit are required to complete the thesis, with an oral examination upon completion.
2. Non-thesis project. This might take the form of a museum exhibit or an innovative presentation of extensive archival research. It will have a clear and prominent written component. Six semester

hours of credit are required with an oral examination upon completion.

3. Examination. This option requires the student to take comprehensive finals in three related areas, one in the major field and two in minor fields, defined in conjunction with the advisor. The exams are both written and oral. Six semester hours of credit are required with this option as well.

Language requirements for M.A. students are determined by their faculty advisor; hours taken for licensure in a language do not count toward a degree.

Graduate assistants are required to enroll in HST 645 College Teaching of HST Survey (0 credits), which is offered each year during the week before the fall semester begins.

## Doctor of Philosophy

**(Applications are not currently being accepted for this degree program; not all courses listed below are currently offered)**

The major field is selected from either Origins and History of the United States or Europe Since 1500. Students also gain competency in one minor field, chosen from origins and history of the United States, Europe since 1500, gender and comparative women's history, or world and comparative history

Sixty semester hours beyond the master's degree are required. At least 30 hours must be in course work other than the dissertation (courses numbered 500 or above). Those 30 hours will include the following:

Code	Title	Credit Hours
At least 12 hours in the major field <sup>1</sup>		12
At least nine hours in the minor field <sup>1</sup>		9
HST 703	Doctoral Workshop	1-3
Two courses in other departments		6
HST 850	Research Doctoral Dissertation	1-16
Total Credit Hours		29-46

<sup>1</sup> A minimum of four Readings Colloquia must be among these 21 hours

Students who enter the Ph.D. program with master's degrees from other institutions must take HST 702 and HST 794, or show evidence of completion of equivalent courses.

Graduate assistants and teaching associates are required to enroll in HST 840 which is offered each year during the week before the fall semester begins; and in HST 694 during each semester.

Doctoral students are required to demonstrate competence in a second language; hours taken for certification in a language do not count toward a degree.

## Interactive Media Studies Certificate

For more information, contact:  
Director of Graduate Studies  
Department of Interactive Media Studies

This graduate certificate program in Interactive Media Studies is designed for graduate students and working professionals who wish to gain knowledge about and develop management and leadership skills in developing digital media for social and organizational applications — for business, educational institutions, government, and community organizations and nonprofits. The program emphasizes multidisciplinary thinking, organizational problem solving, research and inquiry, creative production and design, and communication skills. The program will foster the student's ability to think creatively, imaginatively, and practically about how interactive media can be deployed to address society's needs as well as client's needs and to design appropriate solutions and provide entrepreneurial leadership to move teams and organizations to action and implementation. Students will learn basic principles of digital design. They will study and synthesize others' research and conduct their own research projects on interactive media. They will learn to critique, test, and evaluate existing designs. They will learn best practices and principles for interactive design. The program will have a particularly strong emphasis on doing, creating, making, researching, and working within and for real clients and organizations. Students will engage in real-world, client-based projects in nearly every course and will conclude their program with an extended client-based practicum designed to provide them with hands-on experience designing digital media for a real client.

This program is designed to be completed in one year or less of half-time student enrollment. Graduate courses will typically be offered in the evenings to suit student work schedules. Some courses may be offered on the VOA campus. Online and hybrid versions of some classes will be available eventually for students who wish to enroll from distant locations.

## Program Requirements

Code	Title	Credit Hours
<b>Required Foundation Course</b>		
Select one of the following:		3-4
IMS/ENG 507	Interactive Business Communication	
IMS 518	Social Media Marketing and Online Community Management	
IMS/MKT 519	Digital Branding	
IMS 522	Advanced Interaction Design and Development	
<b>Electives</b>		
Select three of the following not selected above: <sup>1</sup>		9-11
IMS/ENG 507	Interactive Business Communication	
IMS 511	Visual Rhetoric	
IMS 514	Web and Social Media Analytics	
IMS 518	Social Media Marketing and Online Community Management	
IMS/MKT 519	Digital Branding	
IMS 522	Advanced Interaction Design and Development	
IMS 561	Virtual Reality	
IMS 587	Game Prototyping, Pipeline and Production	
IMS 590	Advanced Topics in Interactive Media Studies	

IMS 677	Independent Studies
ENG 760	Special Topics in Rhetoric
MKT 632	Information Network Marketing

**Required Practicum**

IMS 540	Interactive Media Studies Practicum <sup>2</sup>	4
Total Credit Hours		16-19

<sup>1</sup> Minimum of 9 credit hours.

<sup>2</sup> Students should take the practicum in their last semester of program work, or near the end of their program.

## Instructional Design and Technology- Master of Arts, Master of Education

For information, contact:  
 Department Chair  
 Department of Educational Psychology  
 201 McGuffey, 513-529-6621  
[www.MiamiOH.edu/edp](http://www.MiamiOH.edu/edp)

## Educational Technology- Master of Education

The Miami University online graduate program in Educational Technology (M.Ed.) is intended to prepare K12 teachers (with licensure) in the design, development and meaningful integration of technology and media to enhance learning. This online program provides a curriculum designed to foster teacher development in the process of designing and integrating technology and digital media for valued added learning. This program is designed to support both novice and advanced users of technology with a focus on promoting the individual needs of each teacher and supporting each teachers practice. This program consists of 10 courses and may be completed in 12-14 months for full-time students. Part-time students are also very welcome. Students completing the program will also earn the Educational Technology Coaching Endorsement.

### Admission Requirements

Admission to the master's degree program requires:

1. acceptance by the Graduate School,
2. a vita or resume detailing education and work experience as well as personal relevant experience,
3. a brief essay (500-750 words) on a topic pertinent to your professional reasons for pursuing the degree,
4. official transcripts, and
5. three letters of recommendation from faculty or other person who can provide insight about your potential for graduate study and interpersonal skills. Candidates for this position also need to hold current P-12 licensure and provide signed statement that you have no record of conviction for a felony (state of Ohio requirement for practice in schools).

To apply for the Master of Education, Educational Technology degree program, go to the graduate school application portal found on the graduate school page via the link below <http://miamiOH.edu/graduate-studies/admission/index.html>. Complete the application, then upload the required program materials listed here. Once you

are admitted, you will be required to mail an official transcript to the graduate school at:

Graduate School  
 Miami University  
 501 E. High Street  
 Room 102 Roudebush Hall  
 Oxford, OH 45056

Applications accepted any time, however, recommended due dates are as follows:

- December 1 (Spring Admission)
- April 1 (Summer Admission)
- July 1 (Fall Admission)

### Program Requirements

The Master of Education (M.Ed.) option requires a minimum of 30 credit hours (including the 6 educational technology coaching endorsement courses and 1 thesis project course). All courses are offered online.

Code	Title	Credit Hours
EDP 583	Game-based Learning Design	3
EDP 631	Foundations of Instructional Design and Technology <sup>1</sup>	3
EDP 632	Instructional Design Theory and Models <sup>1</sup>	3
EDP 633	Evaluation and Assessment for Instructional Design <sup>1</sup>	3
EDP 636	Diversity, Learning & Technology <sup>1</sup>	3
EDP 637	Blended and Online Learning Design	3
EDP 643	Interactive Design <sup>1</sup>	3
EDP 645	Curriculum and Technology <sup>1</sup>	3
EDP 648	Capstone Project	3
EDP 669	Qualitative Research in Educational Psychology	3
Total Credit Hours		30

<sup>1</sup> Educational Technology Coaching Endorsement Courses

## Instructional Design & Technology- Master of Arts

The Miami University online graduate program in Instructional Design and Technology is designed to prepare and foster practitioners in the field of instructional design and technology and educational media for various settings including business, industry, higher education, government, military, and health care. The curriculum allows students to develop foundation knowledge in the process of instructional design and the application of that knowledge with various technology tools and educational media. Students who are interested in working as instructional designers for non-P-12 environments such as higher education, industry, government, military and health care should pursue the Masters of Instructional Design (M.A.). Several courses are designed to prepare instructional designers for various settings which may require more specialized media and technology skills.

## Admission Requirements

Admission to the master's degree program requires:

1. acceptance by the Graduate School,
2. a vita or resume detailing education and work experience as well as personal relevant experience,
3. a brief essay (500-750 words) on a topic pertinent to your professional reasons for pursuing the degree,
4. official transcripts, and
5. three letters of recommendation from faculty or other person who can provide insight about your potential for graduate study and interpersonal skills.

To apply for the Master of Education, Educational Technology degree program, go to the graduate school application portal found on the graduate school page via the link below <http://miamiOH.edu/graduate-studies/admission/index.html>. Complete the application, then upload the required program materials listed here. Once you are admitted, you will be required to mail an official transcript to the graduate school at:

Graduate School  
Miami University  
501 E. High Street  
Room 102 Roudebush Hall  
Oxford, OH 45056

Applications accepted any time, however, recommended due dates are as follows:

- December 1 (Spring Admission)
- April 1 (Summer Admission)
- July 1 (Fall Admission)

## Program Requirements

The Master of Arts (MA) option requires a minimum of 30 credit hours. All courses are offered online.

Code	Title	Credit Hours
<b>Instructional Design Core Courses</b>		
EDP 583	Game-based Learning Design	3
EDP 631	Foundations of Instructional Design and Technology	3
EDP 632	Instructional Design Theory and Models	3
EDP 633	Evaluation and Assessment for Instructional Design	3
EDP 636	Diversity, Learning & Technology	3
EDP 637	Blended and Online Learning Design	3
EDP 639	Trends in Instructional Design and Learning Analytics	3
EDP 643	Interactive Design	3
EDP 669	Qualitative Research in Educational Psychology	3
EDP 648	Capstone Project	3
Total Credit Hours		30

## Endorsement: Educational Technology Endorsement

The Educational Technology Endorsement is a 7 course online graduate sequence of courses designed to prepare K-12 teachers to foster teacher coaches and facilitators in leveraging the power of technology and media to engage students in meaningful learning. This endorsement is designed to foster teacher-coaches to guide and support students and colleagues in the integration of technology and media for digital age teaching and learning.

(18 hours)

Code	Title	Credit Hours
EDP 631	Foundations of Instructional Design and Technology	3
EDP 632	Instructional Design Theory and Models	3
EDP 633	Evaluation and Assessment for Instructional Design	3
EDP 636	Diversity, Learning & Technology	3
EDP 643	Interactive Design	3
EDP 645	Curriculum and Technology	3
EDP 648	Capstone Project	3-6
Total Credit Hours		21-24

## Kinesiology and Health- Master of Science in Kinesiology and Health

For information, contact:

Assistant to the Director of Graduate Studies  
Department of Kinesiology and Health  
106 Phillips Hall, 513-529-2700  
[www.MiamiOH.edu/knh](http://www.MiamiOH.edu/knh)

## Admission Requirements

Undergraduate preparation typically includes coursework in exercise science, psychology, sociology, cultural studies, women's, gender and sexuality studies, zoology, chemistry, health, and related areas.

## Program Requirements

Requirements include at least 15 semester hours in courses 600-level and above and at least 12 semester hours in courses offered by the department.

In the Kinesiology and Health M.S. degree program, students may choose concentrations in kinesiology, health promotion, or sport leadership. Required courses and typical electives are listed and must be approved by your advisor.

Students must complete all KNH requirements for the M.S. in Kinesiology and Health, including a minimum of 30 credits, KNH 621, area of concentration coursework, capstone experience, and successful completion of a final exit examination. The exact program of study is specified in an individual program plan developed with

one's academic advisor. Required coursework for each area of concentration is listed below.

## Exercise and Health Science Concentration

The graduate program in kinesiology is designed for students interested in physiological, psychological, and motoric functioning in a variety of physical activity environments and conditions. Multidisciplinary coursework emphasizes exercise physiology, motor control, biomechanics, and motivation/behavior change.

The department's newly equipped human performance and motor behavior laboratories allow students and faculty to administer bioelectrical impedance, exercise stress tests, respiratory, metabolic, blood lipid, blood pressure, electrocardiography, sensory functioning, motor functioning, electromyography, ground reaction force, and motion analysis, and muscle strength and endurance tests. **This program can also provide preparation for professional programs such as medicine, and chiropractic, physical therapy, occupational therapy, nursing, and other related fields.**

Career opportunities include: clinical exercise physiologist, worksite health promotion, pharmaceutical sales, biomedical research, health and fitness directors, personal training/strength and conditioning specialist, or rehabilitation (e.g., cardiac, physical). This program can also provide preparation for professional programs such as medicine or chiropractic.

Code	Title	Credit Hours
<b>Required courses</b>		
KNH 621	Research Foundations in Kinesiology and Health	3
Select one of the following:		3
EHS 667	Behavior Statistics	
EHS 668	Behavior Statistics II	
KNH 623	Qualitative Methodological Research Approaches in the Exercise, Health, and Sport Studies Fields	
<b>Exercise and Health Science Core Courses</b>		
Select three 600 level courses:		9-10
KNH 583	Advanced Motor Control and Learning	
KNH 654	Physical Activity Motivation	
KNH 668	Advanced Physiology and Biophysics of Human Activity	
KNH 685	Exercise, Age, and Health	
KNH 688	Advanced Biomechanics	
<b>Capstone Experience and Exit Options</b>		
One of these:		4-6
KNH 700	Thesis, M.A. <sup>1</sup>	
OR Four Credits of any combination of:		
KNH 600	Independent Reading	
KNH 610	Internship in Exercise, Health, and Sport Delivery Systems	
KNH 620	Research Problems	
KNH 640	Internship	
<b>Electives</b>		8-11
Total Credit Hours		30

<sup>1</sup> 6 required; 10 towards any degree.

## Health Promotion Concentration

The health promotion concentration is designed to provide breadth and depth of knowledge in the psychosocial and behavioral aspects of health across the human lifespan. The curriculum emphasizes both cultural and personal determinants of health and wellness. Coursework prepares students as program planners and coordinators of health promotion programs in community, worksite, clinical, and educational settings.

Code	Title	Credit Hours
<b>Required Courses</b>		
KNH 621	Research Foundations in Kinesiology and Health	3
Select one of the following:		3
EHS 667	Behavior Statistics	
EHS 668	Behavior Statistics II	
KNH 623	Qualitative Methodological Research Approaches in the Exercise, Health, and Sport Studies Fields	
<b>Health Promotion Core Courses</b>		
KNH 562	Public Health Planning and Evaluation	3
KNH 611	Behavioral Approaches to Health Promotion and Education	3
KNH 612	Theoretical Foundations of Health Promotion and Education	3
KNH 613	Health Communication & Education	3
<b>Capstone Experience and Exit Options</b>		
One of these:		4-6
KNH 700	Thesis, M.A. <sup>1</sup>	
OR Four credits of any combination of:		
KNH 600	Independent Reading	
KNH 620	Research Problems	
KNH 640	Internship	
<b>Electives</b>		6-8
Total Credit Hours		30

<sup>1</sup> 6 required; 10 towards any degree.

## Sport Leadership Concentration

This Master's program is focused on the study of leadership in sport, with supporting interdisciplinary knowledge in kinesiology, health, and related cognate areas. Students gain the knowledge and skills needed to become competent, transformative leaders in the fields of sport and education. The program prepares students for leadership roles in higher education, coaching, athletic administration, student-athlete development, and consulting through required coursework, independent experiences in research, teaching, consulting, coaching, and administrative internships.

Code	Title	Credit Hours
<b>Required courses</b>		
KNH 621	Research Foundations in Kinesiology and Health	3

Select one of the following:	3
EHS 667 Behavior Statistics	
EHS 668 Behavior Statistics II	
KNH 623 Qualitative Methodological Research Approaches in the Exercise, Health, and Sport Studies Fields	
<b>Sport Leadership Core</b>	
Select four courses of the following:	12
KNH 632 Psychological Foundations of Sport	
KNH 633 Psychological Interventions in Sport	
KNH 634 Social Psychology of Sport and Exercise	
KNH 635 Strategic Management of Sport Organizations	
KNH 673 Developmental Perspectives on Youth Sport Participation	
KNH 676 Cultural Studies of Sport	
<b>Capstone Experience and Exit Options</b>	
One of these:	4-6
KNH 700 Thesis, M.A. <sup>1</sup>	
OR Four credits of any combination of:	
KNH 600 Independent Reading	
KNH 620 Research Problems	
KNH 640 Internship	
<b>Electives</b>	6-8
Total Credit Hours	30

<sup>1</sup> 6 required; 10 towards any degree.

## Mathematics- Master of Arts, Master of Arts in Teaching, Master of Science

For information, contact:  
 Director of Graduate Studies  
 Department of Mathematics  
 123 Bachelor Hall, 513-529-5818  
<http://www.cas.MiamiOH.edu/math/>

### Admission Requirements

A Bachelor's degree with an undergraduate major in mathematics or permission of the director of graduate studies is required and a GPA of 2.75 or higher.

### Mathematics- Master of Arts Program Requirements

(32 semester hours)

Code	Title	Credit Hours
<b>Required courses</b>		
MTH 591	Introduction to Topology	3
MTH 621	Abstract Algebra I	4
MTH 641	Functions of a Real Variable	4

Select two of the following, including at least one of MTH 651 and MTH 691:	7-8
MTH 622 Abstract Algebra II	
MTH 632 Advanced Optimization	
MTH 638 Advanced Graph Theory	
MTH 651 Functions of a Complex Variable	
MTH 691 Introduction to Algebraic Topology	

#### Optional

Thesis	
In consultation with Graduate advisor, select additional hours to total 32	14
<hr/>	
Total Credit Hours	32-33

Up to 6 of the 32 hours may come from outside mathematics, with the approval of the graduate committee.

## Mathematics- Master of Science Program Requirements

### Option I

(32 semester hours)

Code	Title	Credit Hours
<b>Required courses</b>		
MTH 621	Abstract Algebra I	4
Select one of the following:		4
MTH 641	Functions of a Real Variable	
MTH 651	Functions of a Complex Variable	
MTH 691	Introduction to Algebraic Topology	
MTH 632	Advanced Optimization	3
or MTH 638	Advanced Graph Theory	
In consultation with Graduate advisor, select additional hours to total 32		21
<hr/>		
Total Credit Hours		32

Up to 6 of the 32 hours may come from outside mathematics, with the approval of the graduate committee.

15 of the 32 semester hours must be 600-level MTH courses. No thesis required.

### Option II Applied Option

(32 semester hours)

Code	Title	Credit Hours
MTH 532	Optimization	3
MTH 538	Theory and Applications of Graphs	3
Select two of the following:		6
MTH 535	Mathematical Modeling Seminar	
MTH 539	Combinatorics	
MTH 553	Numerical Analysis	
MTH 595	Introduction to Applied Nonlinear Dynamics	
STA 563	Regression Analysis	3-4
or STA 583	Analysis of Forecasting Systems	
MTH 632	Advanced Optimization	3

or MTH 638 Advanced Graph Theory

In consultation with Graduate advisor, select additional hours to total 32	14
<b>Total Credit Hours</b>	<b>32-33</b>

The program must include 15 hours at 600 level in MTH or STA, with at least 9 hours in MTH. No thesis required.

## Mathematics- Master of Arts in Teaching

### Program Requirements

This is primarily a summer program for certified/licensed teachers. Courses are offered on a three-year revolving basis in the summer terms. Required are 30 semester hours including:

Code	Title	Credit Hours
MTH 508	Mathematical Problem Solving with Technology	3
MTH 604	Discrete Mathematics for Secondary School Teachers	3
MTH 605	Calculus for Secondary School Teachers	3
MTH 606	Geometry for Secondary School Teachers	3
MTH 607	Algebra for Secondary School Teachers	3
STA 609	Probability and Statistics for Secondary School Teachers	3
Approved alternatives		
Approved electives required to continue to improve the candidate's ability to teach mathematics		12
<b>Total Credit Hours</b>		<b>30</b>

## Mechanical Engineering- Master of Science

For information, contact:

Graduate Program Director  
Department of Mechanical and Manufacturing Engineering  
56 Garland Hall, 513-529-0710  
CECgrad@MiamiOH.edu  
<http://MiamiOH.edu/cec/academics/departments/mme/academics/graduate-studies/index.html>

### Introduction

The Master of Science in Mechanical Engineering prepares students for future engineering practice that requires a higher level of mastery in mechanical engineering. It is best suited for individuals with backgrounds in mechanical engineering or related areas such as materials science, bioengineering or physics. The degree includes core courses in mathematical modeling, dynamical systems and control, thermal-fluid systems, and mechanics and mechanical behavior of materials as well as a diverse option for courses in science, mathematics, or engineering.

The degree is offered with thesis and non-thesis options. All students are required to complete graduate coursework as defined below.

- Students in the thesis option must earn a total of **24 credit hours** in concentration and elective courses (with a minimum of **15 credit hours** of concentration courses), two credit hours in graduate seminar and six credit hours of master's thesis, for a minimum of 32 total credit hours.
- Students in the non-thesis option must earn a **total of 30 credit hours** in concentration and elective courses (with a **minimum of 18 credit hours of concentration courses**), one credit hour in graduate seminar and three credit hours of a graduate research project, for a minimum of 34 total credit hours.

### Program Requirements

Students must complete one of the following two options:

#### Option 1- Research option (thesis)

The research option requires completion of a minimum of 32 credit hours of graduate study and any additional hours needed to satisfy prerequisites. The distribution of hours is summarized as follows:

Code	Title	Credit Hours
Concentration and elective courses - see below (minimum of 15 credit hours of concentration courses) <sup>1</sup>		24
MME 610	Graduate Seminar (take twice)	1,1
MME 700	Research for Master's Thesis	6
<b>Total Credit Hours</b>		<b>32</b>

<sup>1</sup> At least 3 credit hours must be MME 600-level from the list of concentration courses.

#### Option 2 - Course intensive option (non-thesis)

The course intensive option requires the completion of a minimum of 34 credit hours and any additional hours needed to satisfy prerequisites. The distribution of hours is summarized as follows:

Code	Title	Credit Hours
Concentration and elective courses - see below (minimum of 18 credit hours of concentration courses) <sup>1</sup>		30
MME 610	Graduate Seminar	1
MME 704	Non-Thesis Project	3
<b>Total Credit Hours</b>		<b>34</b>

<sup>1</sup> At least 3 credit hours must be MME 600-level from the list of concentration courses.

#### Concentration Courses

Code	Title	Credit Hours
MME 503	Heat Transfer <sup>1</sup>	3
MME 512	Advanced Mechanics of Materials <sup>1</sup>	3
MME 513	Introduction to Compressible Flow <sup>1</sup>	3
MME 536	Control of Dynamic Systems <sup>1</sup>	3
MME 570	Special Topics in Mechanical Engineering <sup>2</sup>	1-4

MME 595	Introduction to Applied Nonlinear Dynamics <sup>1</sup>	3
MME 613	Computational Fluid Dynamics	3
MME 615	Advanced Vibration	3
MME 621	Finite Element Analysis	3
MME 623	Mechanical Behavior of Materials	3
CPB/MME 612	Engineering Analysis	3

<sup>1</sup> Students who have taken the 400-level version of this course or its equivalent must select from among other concentration/elective courses.

<sup>2</sup> Student can take special topics which are pre-approved by the department for graduate level courses

### Elective Courses

Students select elective courses in consultation with their faculty advisor.

Code	Title	Credit Hours
CPB 512	Chemical Engineering Thermodynamics <sup>1</sup>	3
CPB 514	Mass Transfer <sup>1</sup>	3
CPB 518	Biological Transport Phenomena <sup>1</sup>	4
CPB 519	Biomaterials <sup>1</sup>	3
CPB 611	Transport Phenomena in Engineering	3
CSE 541	Applications of Technical Computing Environments <sup>1</sup>	1
CSE 543	High Performance Computing & Parallel Programming <sup>1</sup>	3
CSE 609	Programming for Engineers and Scientists	3
CSE 615	Mathematical Modeling	3
CSE 616	Simulation of Physical Systems	3
ECE 525	Digital Signal Processing <sup>1</sup>	3
ECE 601	State Variables for Engineers	3
MTH 532	Optimization <sup>1</sup>	3
MTH 535	Mathematical Modeling Seminar <sup>1</sup>	3
MTH 632	Advanced Optimization	3
PHY 527	Nano-scale Science and Technology <sup>1</sup>	3
PHY 537	Intermediate Thermodynamics and Introduction to Statistical Physics <sup>1</sup>	4
PHY 551	Classical Mechanics <sup>1</sup>	4
PHY 583	Mathematical Methods in Physics <sup>1</sup>	4
STA 501	Probability <sup>1</sup>	3
STA 504	Advanced Data Visualization <sup>1</sup>	3
STA 563	Regression Analysis <sup>1</sup>	4
STA 566	Experimental Design Methods <sup>1</sup>	4

<sup>1</sup> Students who have taken the 400-level version of this course or its equivalent must select from among other concentration/elective courses.

## Computer Science- Master of Science in Computer Science

For information, contact:

Director of Graduate Programs

Department of Computer Science and Software Engineering

205 Benton Hall, 513-529-0340

CECgrad@MiamiOH.edu

<http://www.cse.MiamiOH.edu/csmasters>

### Introduction

The mission of the Master of Science in Computer Science program is to prepare students for computing professions that require research, invention, and advanced or specialized knowledge. This includes possible pursuit of a PhD in computer science. Students (who are expected to hold a bachelor's degree in computer science or a closely related field) shall complete and document work on independent research with a faculty advisor and study advanced topics in computer science. The advanced coursework and experience in research and invention prepares students for work at the cutting edge of computer science.

### Admission and Application Requirements

Entry into the graduate program requires completion of a bachelor's degree in computer science or a closely related field. Specifically, successful applicants to our program should have mastered the following undergraduate topics:

- Imperative and/or functional programming
- Object-oriented programming
- Basic algorithms and/or complexity
- Computer organization and architecture
- Concurrent and/or parallel programming
- Software development methods and tools
- Differential and integral calculus
- Probability and statistics
- Discrete mathematics or linear algebra

Successful applicants usually also have:

- Undergraduate GPA: Equivalent of at least 3.00 on a 4.00 scale
- GRE scores: Verbal, 35th percentile or better. Quantitative, 60th percentile or better. Analytical writing, 25th percentile or better.
- TOEFL (when required): 80+ internet-based, 100+ preferred.

Applicants are ranked for admission based on these criteria, recommendation letters, and statement of purpose.

### Combined Bachelor/Master's Program

Undergraduate students may apply to participate in the combined bachelors/master's program. This program allows the student to pursue a master's degree in an accelerated manner while simultaneously pursuing a bachelor's degree. Students admitted to the combined degree program may count six credit hours of their graduate coursework towards their bachelor's degree. This enables them to complete their degrees in an accelerated fashion. With an

undergraduate major in computer science or software engineering, it is possible for students to complete the combined program in five years.

Admission to the combined program requires a GPA of 3.25 after earning a minimum of 64 credit hours. Please contact the department for more information.

## Program Requirements

(32 semester hours)

The total course of instruction includes a minimum of 32 credit hours. Students must complete both research and advanced coursework requirements. The research requirement includes four hours of formal coursework related to research and a minimum of seven hours of thesis research. The coursework requirement includes 21 hours of graduate level coursework in both theoretical and applied areas. All students in the program are expected to attend Thesis proposal and defense presentations as well as other research presentations while enrolled in the program.

### Research Requirement (11 credit hours minimum)

The research requirement includes four hours of structured preparation of students to conduct, evaluate, and document Computer Science research followed by a minimum of seven credit hours of thesis research. All students must write and successfully defend a Master's Thesis in order to graduate from the program.

- CSE 610J MSCS Graduate Student Research Seminar(1)
- CSE 601 Computer Science Research Methods (3)
- Seven credit hours of CSE 700 Research for Master's Thesis (7)

Students must be successful in formally proposing and presenting a research problem in order to pass CSE 601.

### Coursework Requirement (21 credit hours )

Students must complete 21 hours of graduate-level course work. The acceptable courses for fulfilling this requirement are categorized as "Theory" and "Application."

- Students must complete at least two courses from both the "Theory" and "Application" categories. Completed 400 level versions of 500 level courses may be used to satisfy this requirement if a grade of B or higher was received in the course. Undergraduate 400 level courses will not be counted towards the required total of 21 hours of graduate level coursework.
- Students must complete at least three courses (nine hours) that are at or above the 600 level.
- Students must earn a grade of 'C' or higher in all courses taken to meet degree requirements.

### Theory Category

Courses that emphasize proofs and theoretical techniques.

Code	Title	Credit Hours
CSE 564	Algorithms	3
CSE 565	Comparative Programming Languages	3
CSE 567	Computer and Network Security	3
CSE 570	Special Topics	3
CSE 573	Automata, Formal Languages, and Computability	3

CSE 574	Compiler Design	3
CSE 585	Advanced Database Systems	3
CSE 586	Introduction to Artificial Intelligence	3
CSE 615	Mathematical Modeling	3
CSE 621	Foundations of Software Engineering	3
CSE 627	Machine Learning	3
CSE 631	Ontologies for Semantic Web	3
CSE 650	Special Topics in Computer Science Theory	3
CSE 664	Advanced Algorithms	3
CSE 667	Cryptography	3
CSE 690	Graduate Research	3

### Application Category

Courses that emphasize systems and programming.

Code	Title	Credit Hours
CSE 543	High Performance Computing & Parallel Programming	3
CSE 551	Web Services and Service Oriented Architectures	3
CSE 565	Comparative Programming Languages	3
CSE 567	Computer and Network Security	3
CSE 570	Special Topics	3
CSE 571	Simulation	3
CSE 574	Compiler Design	3
CSE 585	Advanced Database Systems	3
CSE 586	Introduction to Artificial Intelligence	3
CSE 587	Game Design and Implementation	3
CSE 616	Simulation of Physical Systems	3
CSE 617	Advanced Networks	3
CSE 618	Graphics for Simulation and Virtual Environments	3
CSE 620	Special Topics in Computer Science Applications	3
CSE 621	Foundations of Software Engineering	3
CSE 627	Machine Learning	3
CSE 631	Ontologies for Semantic Web	3
CSE 690	Graduate Research	3

### Additional Graduate Courses

Graduate level courses chosen in consultation with the student's research advisor may be counted towards the coursework requirements for the degree if approved by the department Graduate Director.

### Seminar Requirement

Code	Title	Credit Hours
CSE 611	Computer Science Seminar Attendance Requirement	0

Required seminar attendance as nonparticipant for graduate students during each fall and spring semester in which they are enrolled as full time students. Attendance must be verified at a designated number of approved events each semester. Approved events include proposal

and defense presentations, and presentations by faculty search candidates.

## Microbiology- M.S., Ph.D.

For information, contact:  
 Director of Graduate Studies  
 Department of Microbiology  
 212 Pearson Hall, 513-529-5422  
 microbiology.MiamiOH.edu

## Research and Support Facilities

The department provides excellent research facilities and modern instrumentation that supply resources for flow cytometry, DNA sequencing and analysis, bioinformatics, microarrays, computer facilities, high performance liquid chromatography, fluorescence microscopy, and access to confocal microscopy and scanning and transmission electron microscopy.

## Admission Requirements

Admission is based on evaluations of each applicant by the department graduate studies committee and faculty approval. You must provide the admission committee with:

1. an academic record of undergraduate and graduate performance,
2. scores of the Graduate Record Examination (GRE),
3. three letters of recommendation, and
4. a one to two page statement describing research and career goals.

A personal interview is encouraged for M.S. and Ph.D. applicants. The department accepts students with a good background of college study in the biological sciences and chemistry with a foundation in microbiology.

Research opportunities and facilities are available in the major areas of these disciplines: microbial genetics, immunology, pathogenic microbiology, microbial physiology, microbial ecology, molecular biology, bioinformatics, and animal virology.

## Microbiology- Master of Science Program Requirements

(30 semester hours)

The Master of Science in Microbiology requires a minimum of 30 semester hours in graduate credits.

### Thesis Option

Upon graduation, M.S. students pursuing the thesis option will have fulfilled the following requirements:

- Completed a research project approved by the thesis committee and present the project as a written dissertation and in a public seminar.

### Non-Thesis Option

Upon graduation, M.S. students pursuing the non-thesis option will have fulfilled the following requirements:

- Completed four courses chosen from groups I-III below, representing each group.
- Completed additional courses in groups I-IV below to complete the 30 semester hours.
- Enrolled in MBI 690 each semester.
- Passed a final examination based on one's graduate courses.

### Group I - Molecular Biology, Structural Biology, and Bioinformatics

Code	Title	Credit Hours
MBI 524	Advanced Experimental Techniques in Structural and Functional Genomics	4
MBI 525	Microbial Physiology	4
MBI 545	Microbial Genetics	3
MBI 564	Human Viruses	3
MBI 585	Bioinformatics Principles	3

### Group II - Medical Microbiology, Microbial Ecology, and Cellular Microbiology

Code	Title	Credit Hours
MBI 505	Medical Bacteriology	4
MBI 514	Immunology Principles	3-4
or MBI 515	Immunology Principles and Practice	
MBI 535	Medical Mycology	3
MBI 575	Microbial Ecology: Exploration of the Diverse Roles of Microorganisms in Earth's Ecology	4
MBI 595	Bacterial Cellular and Developmental Biology	3

### Group III - Advanced Courses

Code	Title	Credit Hours
MBI 605	Advanced Molecular Biology	3
MBI 606	Advanced Cell Biology	3
MBI 671	Population and Community Ecology	4
or MBI 672	Ecosystem and Global Ecology	

### Group IV - Electives

Code	Title	Credit Hours
BIO 581	Theory of Electron Microscopy	3
BIO 582	Scanning Electron Microscopy Laboratory	2
BIO 583	Transmission Electron Microscopy Laboratory	3
CHM 532	Fundamentals of Biochemistry	4
CSE 564	Algorithms	3
MBI 566	Bioinformatics Computing Skills	3

MBI 615	Communicating Science: Papers, Proposals, and Presentations	2
MBI 750	Advanced Topics in Microbiology	1-3
STA graduate level courses		1-3

## Microbiology- Doctor of Philosophy Program Requirements

The degree of Doctor of Philosophy in Microbiology requires a minimum of 60 semester hours in graduate credits beyond the M.S. degree or its equivalent.

Upon graduation, doctoral students will have fulfilled the following requirements:

- Completed 3 courses from groups I and II, representing both groups, and 2 courses from group III.
- Completed additional courses in groups I-IV and/or Research for Doctoral Dissertation (MBI 850) as deemed appropriate by the advisor and dissertation committee.
- Enrolled in Graduate Seminar (MBI 690) or Molecular Biology Seminar (MBI 650) each semester.
- Enrolled in a literature-intensive course each academic year.
- Passed a written and oral comprehensive examination administered by a committee of graduate faculty.
- Passed an oral defense of a dissertation proposal, approved by a dissertation committee of graduate faculty.
- Conducted a research project approved by the dissertation committee, presented the project as a written thesis and in a public seminar, and submitted a manuscript based on the project for publication in a refereed journal.
- Passed an oral examination by the dissertation committee in defense of your dissertation.

Doctoral students entering with an M.S. may bypass some or all of the requirements from courses in groups I-IV by demonstrating proficiency in them.

For Ph.D. students interested in strengthening their teaching credentials, the department offers the opportunity for Ph.D. candidates to teach one semester of an introductory lecture course in microbiology under the supervision of a member of the microbiology faculty. This experience can also count towards the Certificate Program in College Teaching.

## Music- Master of Music

For information, please contact the Director of Graduate Studies, Department of Music, 109 Presser Hall, 513-529-3014, [www.MiamiOH.edu/music](http://www.MiamiOH.edu/music).

## Admission Requirements Music Performance Major

In addition to the Graduate School requirements, the department requires the following to be uploaded in the Graduate School on-line application:

1. A transcript showing a bachelor's degree in music or undergraduate courses equivalent to a bachelor's degree in music performance.

2. Brief statement describing the personal and professional objectives to be served by a master's degree from Miami University.
3. Letters from three people recommending admission to graduate study in music.
4. Live audition of performance in the principal performing medium is strongly recommended; a high-quality recording may be submitted to the Department of Music if travel is impossible for the applicant. Audition repertoire for voice students must include works in English, German, French, and Italian. Additional supportive information is considered.

## Music Education Major

In addition to the Graduate School requirements, the department requires the following to be sent to the director of graduate studies:

1. A transcript showing a bachelor's degree in music education or undergraduate courses equivalent to a bachelor's degree in music education plus state certification/licensure (can include certification/licensure in another state).
2. A copy of the state certification/licensure (can include certification/licensure in another state).
3. A short essay describing:
  - a. your philosophy of music education and how you put that into practice in your most recent teaching position, and
  - b. your personal and professional objectives to be served by a master's degree from Miami University.
4. Letters from three people recommending your admission to graduate study in music.
5. A video recording (20 minutes in length) of a recent rehearsal or music class. The primary focus of the recording should be on the teacher rather than on the students, and the recording should be of a single, uninterrupted class. Please do not include more than five minutes of warm-up activities.
6. Prior full-time teaching experience is required.

## Continuing Status for Music Performance and Music Education Majors

For music performance majors, a diagnostic test is given early in the graduate program to confirm prerequisite competence in the following areas: music theory and sight singing and dictation.

For music education majors, transcripts are reviewed to evaluate baccalaureate competency in music history, music theory, sight singing and dictation, piano proficiency, and music education. A diagnostic test and/or additional course work may be necessary.

Means for removing deficiencies are recommended by graduate faculty. To remain a candidate for the master's degree, these deficiencies must be removed by the end of two semesters of study.

## Recital Requirement for Music Performance

To fulfill degree requirements for MUS 690:

1. Register for at least two credit hours of MUS 690 (either one credit during two terms or two credits during one term) with the major applied music instructor.

2. Perform the complete recital for a three-member jury at least three weeks prior to the scheduled public performance date. The jury consists of the major applied music instructor, one other faculty member from the same applied music division, and one member of the graduate studies committee. The jury decides (by simple majority vote) if the student is adequately prepared for the public performance.
3. Present the public performance in a Miami University performance venue. The jury votes (by simple majority) if the recital passes or fails. The major applied music instructor assigns a letter grade for the recital. A grade of B or better is required for the degree.
4. If the public performance is failed, the procedure above is repeated no earlier than the next term in which the student is enrolled. The applied music instructor decides the repertoire content of the second performance. Failure of a second performance results in elimination from degree candidacy.

## Exit Procedure

### Music Education and Music Performance Majors

In addition to course requirements, a research project and an oral exam given by the graduate faculty are required. Guidelines for both are available in the Department of Music office. The research project requirement, MUS 611, is fulfilled with either a lecture/recital or a research paper.

The oral exam is administered after all degree work, proficiency requirements, and lecture/recital or research documents are completed. The exam content includes the major field of study, music theory, and music history. It may be attempted twice; content of the second exam will comprise areas identified as deficient or failed in the first exam. The second attempt may not be scheduled until the end of the next semester.

## Music Performance- Master of Music Program Requirements

### Except Vocal

(34 semester hours)

**Special requirements:** A full-time graduate student must participate in a major ensemble each semester of residency. A pianist may meet this requirement by accompanying.

Code	Title	Credit Hours
MUS 611	Research Project	3
MUS 621	Graduate Research in Music	3
MUS 644	Applied Music	4,4
MUS 661	Graduate Analysis	3
MUS 682	Repertory	4
or MUS 684	Repertory	
MUS 690	Graduate Recital (Including pre-performance hearing)	2
	Graduate level course in musicology	3
	Ensemble: band or orchestra; for pianists, chamber music	4

Advised music elective	4
<b>Total Credit Hours</b>	<b>34</b>

### Vocal

(36 semester hours)

**Special requirement:** A full-time graduate student must participate in a major ensemble each semester of residency.

Code	Title	Credit Hours
MUS 520	Vocal Coaching	1
MUS 526	Opera Production	1
MUS 611	Research Project	3
MUS 621	Graduate Research in Music	3
MUS 644	Applied Music	4,4
MUS 661	Graduate Analysis	3
MUS 682	Repertory	4
or MUS 684	Repertory	
MUS 690	Graduate Recital (including pre-performance hearing)	2
	Advised music elective	4
	Graduate level course in musicology	3
	Ensemble: major choral ensemble each semester	4
<b>Total Credit Hours</b>		<b>36</b>

## Music Education- Master of Music Program Requirements

(32 semester hours)

Code	Title	Credit Hours
<b>Music Education</b>		
MUS 611	Research Project	3
MUS 626	Foundations of Music Education	3
MUS 627	Recent Developments in Music Education	3
MUS 628	Research Problems in Music Education	3
<b>Music Core</b>		
MUS 501	Advanced Studies in Music Theory	3
MUS 642	Applied Music <sup>1</sup>	2
MUS 645	Concepts In Music History	3
<b>Electives</b>		
	Select twelve hours of the following:	12
MUS 504	Wind Band Ensemble Literature	
MUS 505	Choral Literature	
MUS 610	Special Project <sup>2</sup>	
or MUS 642	Applied Music	
MUS 622	Teaching Elementary Music: Theory and Practice	
MUS 623	Integrating Multiculturalism into Music Curriculum	
MUS 636	Advanced Choral Conducting	

Workshops for music educators: Music Technology courses, Orff-Schulwerk Teacher Training, and College of Education, Health and Society courses (6 credits maximum)

Total Credit Hours 32

<sup>1</sup> Principal instrument or secondary applied with focus on pedagogy and performance.

## Theatre and Practice- Master of Arts

The Master of Arts in Theatre and Practice provides students with a foundation in performance studies and theatre scholarship, while at the same time allowing students to refine skills as directors, playwrights, dramaturgs, designers, or educators. Students learn research skills for both creative practice and scholarly writing. This degree prepares students for further study at the doctoral or MFA level or for working in professional theatre.

For more information, please contact the Director of Graduate Studies, Department of Theatre, 119 Center for Performing Arts, 513-529-3053, arts.miamioh.edu/theatre.

### Program Requirements

(31 semester hours)

Code	Title	Credit Hours
<b>Core requirements</b>		
THE 522	Politics and Ethics of Theatre and Performance: Representation, Race, Gender, Class and Sexuality	3
or THE 523	Topics in Theatre and Performance Studies	
or THE 524	Topics in Applied Theatre, Practice, and Pedagogy	
THE 581	Integrating Performance, Theory and Practice	3
THE 601	Research and Methodology	3
THE 605	Introduction to Theatre and Performance Theory	3
THE 703	Graduate Colloquium in Theatre Studies (maximum 4)	1, 1, 1, 1

#### Electives

At least one graduate-level course outside the department approved by the student's advisor 3

#### Field of special interest

Each student must take an additional 6 hours in his or her field of special interest within theatre studies (directing, design, playwriting, dramaturgy, history, or criticism). 6

#### Thesis Options

Option 1: Creative Portfolio with oral defense: Through a single or a series of creative engagements, the student will document her/his creative work, methodology, and results. The portfolio will be introduced with an essay synthesizing the work, and it will result in an oral defense.

Option 2: Thesis (either research or creative): This scholarship will be defended with oral examination.

THE 700	Research for Master's Thesis (minimum 6, maximum 12)	6
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#### Non-thesis Option

A student who chooses the Non-thesis option will take a minimum of 6 additional credits of THE 500-level classes (or other 500/600 level classes outside the department) and complete a Comprehensive Examination with an oral defense.

Total Credit Hours 31

## Philosophy- Master of Arts

For information, contact:

Director of Graduate Studies

Department of Philosophy

212 Hall Auditorium, 513-529-2440

[www.units.MiamiOH.edu/philosophy/grad\\_program/index.shtml](http://www.units.MiamiOH.edu/philosophy/grad_program/index.shtml)

### Research and Support Facilities

In addition to university resources, the department has a lecture series and an extensive library, which is especially strong in books on feminist thought. Computers are available for philosophy graduate assistants to use for course work. Students also have shared offices available for their use.

### Admission Requirements

Admission requirements include three letters of recommendation, transcript, Graduate Record Examination (GRE), a statement of purpose, and a writing sample.

### Combined Bachelor/Master's Program

High-achieving undergraduate majors can apply for admission to the combined BA/MA program, in which students can earn a BA and an MA in 5 years. To be eligible to apply for the combined degree program, students must have completed at least 64 credit hours with a minimum GPA of 3.25 and have completed at least half of the department credit hour requirements for the major. Please contact the department's Director of Graduate Studies for more information about this option.

### Program Requirements

(46 semester hours)

This program requires full-time enrollment and includes a minimum of ten 4 credit-hour graduate courses in philosophy plus two research seminars and one teaching practicum. This is typically done in two years by taking three graduate courses each fall semester and two graduate courses plus the graduate research seminar each spring semester, with the addition of the teaching practicum in the spring semester of the second year. For the research seminar, students select one essay from their courses each year to develop into an extended paper worthy of submission for publication, and defend that paper in an oral exam. While the exam focuses on the paper, it also tests the student's mastery of those fields of philosophy related to the paper. The teaching practicum introduces students to the pedagogy of philosophy by practicing and reflecting upon the fundamentals of grading, teaching, giving a lecture, directing

a discussion group and preparing a syllabus as these activities specifically apply to the discipline.

## Physics- Master of Science

For information, contact:  
 Director of Graduate Studies  
 Department of Physics  
 217 Kreger Hall, 513-529-5625  
<http://www.MiamiOH.edu/physics>

### Research

The department has ongoing experimental research programs in Quantum Optics & Information; Condensed Matter & NanoPhysics; Biophysics; as well as Atomic, Molecular & Optical Physics, Astrophysics, and Physics Education Research. Theoretical and computational work is done in Quantum Optics and Information, Atomic Physics, and Astrophysics.

### Program Requirements

For the **thesis option**, a minimum of 30 semester hours of graduate course work, research, and thesis credit is required. You must complete at least two 600-level courses in physics other than PHY 610 and a minimum of six hours of PHY 700. Before registering for PHY 700, you must write a thesis proposal and defend it before your thesis committee. Subsequent completion and defense of the thesis are required.

For the **non-thesis option**, a minimum of 36 semester hours of graduate credit is required. You must complete at least four 600-level courses in physics other than PHY 610. Credit earned in PHY 700 may not be counted toward the minimum 36 semester hours. The student must also pass a comprehensive examination for the non-thesis option.

For the **thesis or non-thesis option**, you are expected to show proficiency in the areas of quantum physics, classical mechanics, electromagnetic theory, statistical physics, and mathematical, computational, and laboratory techniques used in physics. Evidence of proficiency is successful completion of courses at 500- or 600-level or equivalent. Graduate course work is selected in consultation with the thesis director (for the thesis option) and graduate program director. Your program of study must be approved in writing by the graduate program director.

## Political Science- Master of Arts, Master of Arts in Teaching, Doctor of Philosophy

For information, contact:  
 Director of Graduate Studies  
 Department of Political Science  
 218 Harrison Hall, 513-529-2000  
<http://MiamiOH.edu/politicalscience>

**This program is not currently accepting applications for the Master of Arts in Teaching or the Doctor of Philosophy.**

## Admission Requirements

### Combined Bachelor/Master's Program

Undergraduate students may apply to the combined BA/MA Program where they can earn a MA Degree while completing their BA Degree. To apply for the combined degree program, students must have completed 64 hours toward the BA with a 3.25 GPA and must have completed 17 hours of political science course work (with a 3.50 GPA), including at least 9 hours at the 300 level or above. Please contact the department's Director of Graduate Studies for more information.

### Master of Arts

You may enter this program only in the fall term; apply by **March 1**. Admission requirements include:

1. at least 18 semester hours of undergraduate work in political science or at least 12 semester hours in political science and 12 in other social sciences, including a survey course in the American political system or introduction to political science;
2. at least a 3.00 (4.00 scale) grade point average (GPA) in the above undergraduate course work;
3. three letters of recommendation;
4. Graduate Record Examination (GRE) general test scores;
5. a letter or statement describing career objective and fields of interest in political science.
6. a writing sample.

### Program Requirements

The Master of Arts in Political Science at Miami University is a terminal degree for students intending to pursue careers in politics at all levels of government and in nongovernmental organizations. The MA program is designed to equip students with the analytical skills and substantive knowledge necessary for engaging in applied politics, public affairs, and public policy study. Students in the MA program are exposed to the discipline of political science, specifically focusing on how political science theories underpin the systematic study of the behavior of political actors and processes in the American context and globally. Special emphasis is placed on developing the student's understanding of the frameworks for active participation in governance, issue advocacy, law and legal affairs, and public policy research, while developing the research, analytical and writing skills essential for public leaders.

31 graduate hours required, including:

Code	Title	Credit Hours
<b>Core Courses</b>		
POL 601	Foundations of Political Analysis	3
POL 603	Introduction to Quantitative Methods	2
POL 604	Public Policy Research	2
POL 606	Final Project for Master's Degree	3
Human Subjects Research Certification		
<b>Concentration</b>		
Select a minimum of 9 hours of political science graduate course work from one of the following groups:		9
American Political System/Political Theory		
Comparative Political Systems/International Relations		
Public Administration and Policy Analysis		

**Electives**

Select 12 hours of political science graduate course work, 9 hours of which must be outside the concentration <sup>1</sup>	12
<b>Total Credit Hours</b>	<b>31</b>

<sup>1</sup> This may include up to 6 hours of graduate course work from outside the department with the approval of the graduate studies committee. Internship experience while in the program may count for up to 6 hours with the approval of the graduate studies committee.

## Psychology- Master of Arts, Doctor of Philosophy

For information, contact:  
Director of Graduate Studies  
Department of Psychology  
100 Psychology Building, 513-529-7224  
MiamiOH.edu/psychology/grad.html

For information on school psychology, see the educational psychology section.

### Admission Requirements

The M.A. and Ph.D. are offered in the areas of clinical psychology; social psychology; and brain, cognitive, and developmental science (BCD). You may enter the program fall semester only; apply by **December 1**. Minimum requirements include at least one course in mathematics, one in statistics, and one laboratory course in psychology; three letters of recommendation; and acceptable scores on the Graduate Record Examination (GRE).

### Psychology- Master of Arts Program Requirements

The master's degree, offered only as a requirement toward the Ph.D., requires a minimum of 30 semester hours, including 24 semester hours of course work and research plus six hours of thesis. A thesis and oral examination are required. Requirements include the following:

Code	Title	Credit Hours
PSY 601	Statistics and Methods I	3
PSY 602	Statistics and Methods II	3
PSY 603	Proseminar in Psychology I	1
PSY 604	Proseminar in Psychology II	1
PSY 690	Research Practicum I	1-4
PSY 692	Research Practicum II	1-3
PSY 700	Research for Master's Thesis	6-12
Other courses depending on the area of concentration and background.		14
<b>Total Credit Hours</b>		<b>30-41</b>

Specific programs (Clinical Psychology, Social Psychology, BCD) typically impose additional requirements. Please consult the department website for specific details.

There is no terminal master's degree program.

## Psychology- Doctor of Philosophy Program Requirements

The M.A. and Ph.D. are offered in the areas of clinical psychology; social psychology; and brain, cognitive, and developmental science (BCD).

Permission to prepare for the comprehensive examination and pursue a dissertation is granted by vote of the graduate faculty based upon evaluations of your academic performance, research capability, and professional qualities. This vote is normally taken upon successful completion of the master's thesis.

Requirements for the Ph.D. include a minimum of 90 semester hours:

Code	Title	Credit Hours
Master's degree		30
Course work and research		44
Dissertation		16
<b>Total Credit Hours</b>		<b>90</b>

Required courses include those listed above for the master's degree; one of the following: PSY 596, PSY 694 or PSY 697; continuing research participation: PSY 650, PSY 692, PSY 710, or PSY 850; successful completion of the comprehensive examination; a dissertation and final oral examination; and additional courses and other requirements depending on your area of concentration and background. In addition to the requirements of the department and graduate school, each specific program (Clinical Psychology, Social Psychology, BCD) typically imposes additional requirements. Please consult the department website for specific details.

You must demonstrate motivation and ability to accomplish independent and original research, high academic performance, and professional qualities and standards of conduct appropriate to the discipline.

## Russian, East European and Eurasian Studies- Certificate

For information, contact:

Havighurst Center for Russian and Post-Soviet Studies  
116 Harrison Hall, 513-529-3303

A Graduate Certificate in Russian, Eastern European and Eurasian Studies (REEES) allows graduate students to meet specialized and interdisciplinary educational goals, positioning them upon graduation to engage in professional opportunities that are not available without it. The REEES certificate enriches a graduate student's academic record and is a distinguished accomplishment that reflects advanced language ability and interdisciplinary study, increasing the marketability of graduate degrees upon their completion. Students who wish to earn the certificate are required to take the Havighurst Colloquium TWICE; it may be taken a third time with permission. Students must have 3 years of study (or the equivalent) in a language of the region; the language requirement cannot be counted toward the 15 hours. Other courses can be applied and may include:

## Program Requirements

(15 semester hours)

Code	Title	Credit Hours
<b>Required Course:</b>		
ATH/HST/RUS 536/POL 540/ REL 570	Havighurst Colloquium	3,3
Select from the following to total 15 hours:		9
ATH 505	Food, Taste, and Desire	
ATH 532	Secrecy and Statecraft: Spies, Censors, and Prisoners in Authoritarian and Democratic Societies	
HST 677	Independent Studies	
Total Credit Hours		15

## Social Work- Master of Arts

For information, contact:

Co-Director of Greater Miami Valley Joint MASW Program  
Department of Family Science and Social Work  
101 McGuffey Hall, 513-529-2323, MASW@miamioh.edu  
<http://miamioh.edu/ehs/academics/departments/fsw/academics/graduate-studies/index.html>

## Admission Requirements

All prospective graduate students seeking admission to the Greater Miami Valley Joint Master of Art in Social Work (MASW) Program should apply directly to the Miami University Graduate School. Applicants will need to submit the Miami University graduate application, university transcript(s) from their most recent university, 3 letters of recommendation, resume, and a personal statement regarding their professional goals and accomplishments. Each of the aforementioned items should be uploaded in the Graduate School application. Students admitted to the Traditional program are expected to have an overall GPA of 3.00 or higher. Students admitted to the Advanced Standing MASW Program are expected to have an overall GPA of 3.25 or higher, as well as an undergraduate degree in social work obtained within the last 5 years.

## Program Requirements

The Greater Miami Valley MASW Program seeks to prepare students to become advanced generalist social work professionals who use critical thinking skills, as well as social work knowledge, theories, skills, values and ethics. Our program focuses on building the capacity of our graduates to engage, assess, intervene and evaluate across the micro, mezzo, exo, and macro systems. Our courses and field education program are designed to provide the knowledge and skills to successfully empower our graduates for a successful social work career.

Emphasis in the graduate social work program is placed on the best practices and skills needed to enrich human diversity, promote social and economic justice, alleviate oppression in urban and rural areas. Our curriculum integrates foundational courses and with field placements and the opportunity to specialize in children and families or the aging population.

## Foundation Courses

Collectively these foundation courses provide those students with an undergraduate degree outside of the social work field with the knowledge, values, and skills required for generalist social work practice:

Code	Title	Credit Hours
FSW 611	Social Welfare Policy I <sup>1</sup>	3
FSW 613	Social Work Ethics: Social Work Ethics, Professionalism and Self Care <sup>1</sup>	3
FSW 615	Cultural Competency	3
FSW 617	Human Behavior in the Social Environment I <sup>1</sup>	3
FSW 621 & FSW 622	Social Work Practice I and Social Work Practice II <sup>1</sup>	6
FSW 616	Graduate Social Work Research I	3
FSW 661 & FSW 664	Field Education I and SW Field Education Seminar I	3
Total Credit Hours		24

<sup>1</sup> Advanced Standing students are exempt from these courses.

## Concentration Courses

The Concentration for all students admitted to the MASW Program will be Advanced Generalist Practice. Advanced Generalist Practice, which is grounded in the Person-In-Environment construct, seeks to understand and promote human and social well-being. Students in the program will develop expertise to use a range of prevention and intervention methods in practice with individuals, families, groups, organizations, and communities. Students will also apply ethical principles, critical thinking and build on the strengths and resiliency of all human beings by engaging in research-informed practice.

### The Advanced Generalist Social Work Practice Concentration Courses are as follows:

Code	Title	Credit Hours
FSW 716 & FSW 717	Graduate Social Work Research II and Social Work Capstone	6
FSW 723 & FSW 724	Social Work Assessment and the DSM and Advanced Generalist Social Work II: Macro	6
FSW 762 & FSW 765	Social Work Field Education II and Social Work Field Education Seminar II	3
FSW 763 & FSW 766	Social Work Field Education III and Social Work Field Education Seminar III	3
FSW 761	Advanced Standing Field Seminar	1
Total Credit Hours		19

## Concentration Focus Area Courses

In addition to the Advanced Generalist Concentration, students in the MASW Program are expected to choose between two Focus Areas that are offered: Families and Children and Older Adults. Students will develop skills in both social work practice and policy. These courses

delve into the use of current evidenced-based research to support to improvement of systemic practice, programs and policies.

The concentration focus area courses are as follows:

Code	Title	Credit Hours
	Concentration Focus Area Practice Course	3
	:Families and Children OR Older Adults	
	Concentration Focus Area Policy Course	3
	:Families and Children OR Older Adults	
	Concentration Elective	3
Total Credit Hours		9

## Field Education

Field education is the signature pedagogy of the MASW Program. All competencies and practice behaviors are applied and practiced in the field placement. Students demonstrate mastery of the practice behaviors by working collaboratively with the course instructors, field instructor, and Masters level social worker who acts as the field supervisor.

Students admitted to the Advanced Standing MASW program will complete 500 hours of field education across two semesters. Students admitted to the Traditional MASW Program will complete 900 hours of field education across three semesters.

## Integration of Courses and Programs

The Greater Miami Valley MASW Program integrates each of the aforementioned areas (foundation courses, concentration courses, concentration focus area courses, and field integration) for students whose interests and career goals include applied work in the field of social work. At the conclusion of the program, students will receive the Master of Arts degree with a major in Social Work.

## Spanish- Master of Arts

For information, contact:  
 Director of Graduate Studies  
 Department of Spanish and Portuguese  
 268 Irvin Hall, 513-529-4500  
[www.MiamiOH.edu/spanport](http://www.MiamiOH.edu/spanport)

The graduate program in Spanish at Miami University offers students the opportunity to earn the Master's Degree through advanced study of Spanish and Spanish American culture and Spanish linguistics. Faculty's interests and areas of research comprise Spain, Spanish-America, and a Trans-Atlantic perspective from a variety of literary, cinematic, and cultural studies standpoints. Graduate students are therefore able to concentrate on specific areas of study according to their interests.

## Admission Requirements

You must have an undergraduate GPA of at least 3.25. Applications are on a rolling basis, but you are encouraged to express your interest to the graduate adviser as soon as possible. Funding opportunities may be available. To apply you will need a letter of application in Spanish (statement of purpose), copies of academic transcripts, and two letters of recommendation.

## Combined Bachelor of Arts/Master of Arts Program

The combined BA/MA program allows highly qualified students to simultaneously pursue both a bachelor's and a master degree in Spanish. Areas of interest can include Peninsular literature, film and culture; Latin American literature, film and culture; Spanish linguistics; and individualized studies. If you are interested contact the graduate director as soon as possible and ask for more information and a brochure.

## Admission requirements

Upon earning a minimum of 64 hours and having a cumulative GPA of 3.25 (GPA in Spanish of 3.50) students may apply. Applications are on a rolling basis, but you are encouraged to express your interest to the graduate adviser as soon as possible. Funding opportunities may be available.

In the 4th and 5th years, at least 30 semester hours of graduate courses will be completed toward the graduate degree component, six three-credit courses or seminars plus four three-credit courses of SPN 600 or above. Students will have two options:

1. Write a MA theses or
2. Written and oral Comprehensive Examination and complete a Research Tutorial.

It is strongly recommended that six (6) semester hours (SPN 700) be devoted to work on the thesis during the Fall and Spring semesters of the second year, or for students selecting the Comprehensive Exam, SPN 680 in either semester. At the end of the Fall Semester, students must complete a second draft of their theses.

## Program Requirements: Master of Arts

(30 semester hours)

At least 30 semester hours of graduate courses will be completed: six three-credit courses or seminars plus four three-credit courses numbered 600 or above. Students will have two options:

1. Write a MA thesis or
2. Complete a written and oral Comprehensive Examination and complete a Research Tutorial.

For the thesis option, it is strongly recommended that six (6) semester hours of SPN 700 be devoted to work on the thesis during the Fall and Spring semesters of the second year. For the examination option, students should take six (6) hours of SPN 680 in either semester.

## Special Education- Master of Education

For information contact:  
 Department Chair  
 Department of Educational Psychology  
 201 McGuffey, 513-529-2767  
[www.SEOH.MiamiOH.edu](http://www.SEOH.MiamiOH.edu)

The degree serves two purposes:

1. provide required coursework to lead to initial teaching license in mild/moderate special education; and
2. provide advanced coursework for teachers already licensed in special education.

Within the licensure component of the degree there are options for both educators who are currently licensed and for students who do not currently hold a teaching license in any area. The degree program is offered in a hybrid format. Each course in this program includes online course work and 3 required class sessions held at the beginning, middle, and end of the course session at the Miami University Voice of America Learning Center in West Chester, OH.

## Admission Requirements

Admission to the master's degree program requires:

1. acceptance by the Graduate School,
2. official transcripts,
3. three letters of recommendation from professional contacts, specifically addressing your potential for advanced graduate study, and
4. a brief essay (500-750 words) that describe
  - a. your reasons for pursuing a career in special education, and
  - b. your ability to complete courses that are mostly online.

To apply for the Master of Education, Special Education degree program, go to the graduate school application portal found on the graduate school page via the link below <http://miamiOH.edu/graduate-studies/admission/index.html>. Complete the application, then upload the required program materials listed here. Once you are admitted, you will be required to mail an official transcript to the graduate school at:

Graduate School  
Miami University  
501 E. High Street  
Room 102 Roudebush Hall  
Oxford, OH 45056

The application deadline for fall term admission is **June 15** for international applicants, and **August 1** for domestic applicants.

## Program Requirements

Resulting in a Master's degree or M.Ed with Intervention Specialist (Mild/Moderate) licensure.

### M.Ed. degree only:

- 18 credit hours from Special Education Core, Autism Electives, or Literacy Electives in consultation with program academic advisor.
- 12 hours from Graduate Research Courses.

### M.Ed. + Licensure:

This option is for students who currently hold a teaching license and wish to add K-12 Mild/Moderate Intervention Specialist Licensure.

- 24 credit hours of Special Education Core
- 1 credit hour Supervised Field Experience.
- 12 credit hours from Graduate Research Courses

### M.Ed. + Initial Licensure

This option is for students who are seeking an initial teaching license.

- 24 credit hours of Special Education Core
- 12 credit hour Supervised Field Experience.
- 12 credit hours from Graduate Research Courses

Code	Title	Credit Hours
<b>Special Education Program Core</b>		
EDP 656	Education of Individuals with Exceptionalities	3
EDP 650	Seminar in Special Education (EDP 650A and EDP 650K)	6
EDP 586	Methods I: Learners with Mild/Moderate Disabilities	3
EDP 578	Effective Social Skills Development, Collaboration and Transition Planning in Special Education	3
EDP 571	Literacy Seminar: Clinical	3
EDP 596	Behavioral Interventions: Theory, Principles, and Techniques	3
EDP 591	Methods II: Learners with Mild to Moderate Disabilities	3
<b>Graduate Research Courses</b>		
All 12 credit hours below are required for M.Ed. Degree		
EDP 601	Advanced Educational Psychology	3
EDP 667 or EHS 667	Behavioral Statistics I Behavior Statistics	3
EDP 651	Educational Research	3
EDP 652	Educational Research Practicum	3
<b>Literacy Electives</b>		
EDT 603	Language, Literacy and Culture	3
EDT 642	Phonics and Reading Improvement for the Reading Teacher	3
EDT 646	Reading and Writing in Content Areas	3
EDT 632	Literacy Assessment and Instruction	3
<b>Special Education Electives</b>		
EDP 579	Autism: Introduction and Current Research	3
EDP 582	Autism Spectrum Disorder: Best Practice in Teaching Strategies	3
EDP 584	Autism Spectrum Disorder: Social and Communication Development	3
EDP 585	Autism Spectrum Disorder: Positive Behavior Supports and Interventions	3
EDP 650	Seminar in Special Education (EDP 650B: Assistive Technology)	3
<b>Field Experience</b>		
EDP 605F	Supervised Field Experience: Mild/Moderate Intervention Specialist	1-12

12 credit hours of EDP 605F are required for students who do not hold a current teaching license.

1 credit hour of EDP 605F is required for students who currently hold a teaching license and have successfully completed a student teaching placement previously.

## School Psychology- Master of Science, Specialist in Education

For information, contact:  
 Department Chair  
 Department of Educational Psychology  
 201 McGuffey, 513-529-6621  
<http://www.MiamiOH.edu/edp>

### Professional Entry Program

This program leads to the specialist in education degree as well as to licensure as a professional school psychologist. A master's degree is also earned during the course of study. Assessment, intervention and consultation training; school-based practicum experiences; and a full-time supervised nine- to 10-month internship are included in this three-year program. Your program of study must be approved by the department; minor substitutions can be approved. After you complete 34 hours in the foundation component and pass a comprehensive examination, you are awarded an M.S. degree and admitted to candidacy for the Ed.S. degree. After completing requirements for the professional practice component, which includes a thesis research project, you receive an Ed.S. degree.

### Admission Requirements

Admission to the school psychology specialist program requires:

1. acceptance by the Graduate School,
2. acceptable scores on the verbal, analytical and quantitative sections of the GRE,
3. three letters of recommendation specifically addressing your interpersonal skills and potential for advanced graduate study, and
4. an essay of 500-750 words addressing your reasons for pursuing a career in school psychology.

To apply for the Master of Science, Specialist in Education degree program, go to the Graduate School application portal found on the graduate school page via the link below <http://miamiOH.edu/graduate-studies/admission/index.html>. Complete the application, then upload the required program materials listed here. Once you are admitted, you will be required to mail an official transcript to the Graduate School at:

Graduate School  
 Miami University  
 501 E. High Street  
 Room 102 Roudebush Hall  
 Oxford, OH 45056

The deadline for admission to the school psychology program is January 15. This is a competitive program that typically admits 10-12 students, per year.

### Program Requirements

Code	Title	Credit Hours
<b>Foundation Component</b>		
EDP 556	Advanced Seminar in Evaluation with Evidence-Based Interventions	3

EDP 596	Behavioral Interventions: Theory, Principles, and Techniques	3
EDP 603	Theories of Human Learning	3
EDP 604	Role and Function of the School Psychologist	3
EDP 611	Psychoeducational Assessment and Interventions I	5
EDP 651	Educational Research	3
EDP 652	Educational Research Practicum	3
EDP 656	Education of Individuals with Exceptionalities	3
EDP 662	Social, Emotional, and Behavioral Assessment	3
EDP 695	Supervised Public School Experience for School Psychology Students (2 hours taken)	1,1
EDP 667	Behavioral Statistics I	3
<b>Professional Practice Component</b>		
EDP 612	Psychoeducational Assessment and Interventions II	5
EDP 650	Seminar in Special Education	3
EDP 654	Counseling Practicum	4
EDP 660	Practicum in School Psychology Practice	4
EDP 666	Educational Consultation, Collaboration, and Community Psychology	3
EDP 672	Counseling Theories and Issues	3
EDP 695	Supervised Public School Experience for School Psychology Students (2 hours taken)	1,1
EDP 795	Internship for Educational Specialist Degree in School Psychology	7
EDP 796	Internship for Educational Specialist Degree in School Psychology	7
EDP 800	Specialist Degree (10 hours taken)	10
Total Credit Hours		82

## Speech-Language Pathology - Master of Arts, Master of Science

For information, contact:  
 Director of Graduate Studies  
 Department of Speech Pathology and Audiology  
 2 Bachelor Hall, 513-529-2500  
[www.MiamiOH.edu/spa](http://www.MiamiOH.edu/spa)

### Admission Requirements

You must have an undergraduate degree in speech-language pathology and audiology and have a 3.20 minimum cumulative grade point average (GPA) (4.00 scale) in your undergraduate course work. If you have a B.S. or B.A. in a related discipline, you must take undergraduate prerequisite course work in speech pathology and audiology prior to admission and/or may inquire about provisional

graduate status. In addition to meeting the minimum academic admission requirements you must submit:

1. Graduate Record examination (GRE) test scores,
2. information about scholarships, awards, accomplishments, clinical observation/experience, leadership, volunteer, research and/or work experience,
3. three recommendations, and
4. a personal statement.

This program leads to a master's degree in speech-language pathology.

## Program Requirements

When you are admitted into the graduate program in speech pathology, you must maintain an overall GPA of 3.00. In addition, you may receive no more than two grades of C of any type for two required courses (not exceeding a total of six hours for both courses) at 500 level or above. You must also meet the requirements for academic and clinical knowledge and skills as required for certification in the profession of speech-language pathology as well as complete a thesis or a final research project.

### Requirements: Master of Arts

This program requires a minimum of 49 semester hours in appropriate courses, including six hours of credit for thesis.

### Requirements: Master of Science

This degree requires a minimum of 49 semester hours in the appropriate coursework, including credit for an empirically-based or evidence-based graduate research project or examinations as determined by the graduate faculty.

## Sport Psychology Certificate

For information, contact:

Assistant to the Director of Graduate Studies  
Department of Kinesiology and Health  
106 Phillips Hall, 513-529-2700  
[www.MiamiOH.edu/knh](http://www.MiamiOH.edu/knh)

The Sport Psychology Graduate Certificate focuses on the study of psychological and social factors that influence sport and physical activity participation. Sport psychology involves the study of human thought, emotion, and behavior in recreational and competitive sport. This includes the study of individual processes such as motivational orientations, self-efficacy, and stress/anxiety, as well as social factors such as group processes, coaching, and leadership effectiveness.

## Program Requirements

Code	Title	Credit Hours
Select the following:		
KNH 632	Psychological Foundations of Sport	3
KNH 633	Psychological Interventions in Sport	3
KNH 634	Social Psychology of Sport and Exercise	3
Select one of the following:		
KNH 654	Physical Activity Motivation	3

KNH 673 Developmental Perspectives on Youth Sport Participation

KNH 676 Cultural Studies of Sport

Total Credit Hours

12

## Statistics- Master of Science in Statistics, Certificates

For more information, contact:

Director of Graduate Studies  
Department of Statistics  
311 Upham Hall, 513-529-7828  
<http://www.units.MiamiOH.edu/sta/>

### Admission Requirement - Master of Science in Statistics

An undergraduate degree with at least a 3.00 (of 4.00) grade point average and strong performance in calculus (at least equivalent to multidimensional calculus), linear algebra, and a probability / mathematical statistics course is required.

## Program Requirements

(32 semester hours)

Code	Title	Credit Hours
STA 502	Statistical Programming	3
STA 563	Regression Analysis	4
STA 566	Experimental Design Methods	4
STA 664 & STA 665	Theory of Statistics and Theory of Statistics	6
STA 666	General Linear Models	3
STA 660	Practicum in Data Analysis	3
Select nine additional hours of the following:		9
STA 504	Advanced Data Visualization	
STA 527	Introduction to Bayesian Statistics	
STA 567	Statistical Learning	
STA 583	Analysis of Forecasting Systems	
STA 650	Topics in Statistics	
STA 667	An Introduction to Multivariate Statistical Analysis	
STA 668		
STA 669		
STA 684		
STA 685	Biostatistics	
STA 686	Quality Control and Industrial Statistics	

Total Credit Hours

32

No thesis is required.

### Applied Statistics - Certificate

Statistics is the language of experimentation and scientific inquiry. Statistics as a discipline provides insights into the best methods associated with the collection, analysis, and presentation of numerical data. Decisions related to the design of surveys and experiments, the

collection, processing, and analysis of data; and the interpretation of the results are directly impacted by statistics. Further, these decisions cut across disciplines. This graduate certificate provides a broader exposure to statistics that includes basic background (introductory statistics), essential ideas in modeling (regression and experimental design), programming to generate customized analytic solutions and a collection of advanced methods courses. The certificate requires a minimum of twelve hours of coursework comprised of one course from each of the four areas below:

## Program Requirements

Code	Title	Credit Hours
<b>Introductory Statistics</b>		
Select one of the following:		3-6
EHS 667	Behavior Statistics	
GTY 708	Quantitative Methods and Statistics	
PSY 601	Statistics and Methods I	
STA 501 & STA 562	Probability and Inferential Statistics	
STA 671	Environmental Statistics	
Other comparable course(s) approved by the Coordinating Committee		
<b>Regression and Experimental Design</b>		
Select one of the following:		3-4
EHS 668	Behavior Statistics II	
GTY 718	Statistical Modeling in Gerontology	
PSY 602	Statistics and Methods II	
STA 563	Regression Analysis	
STA 672	Statistical Modeling and Study Design	
Other comparable course(s) approved by the Coordinating Committee		
<b>Statistical Programming</b>		
Select one of the following:		3
STA 502	Statistical Programming	
STA 504	Advanced Data Visualization	
Other comparable course(s) approved by the Coordinating Committee		
<b>Advanced Methods</b>		
Select one of the following:		3-4
CSE 620	Special Topics in Computer Science Applications	
GTY 750	Special Topics in Advanced Quantitative Methodology in Aging Research	
GTY 751	Categorical Modeling in Aging	
PSY 694	Advanced Regression Analysis for Psychological Research	
PSY 696	Structural Equation Modeling for the Behavioral Scientist	
STA 527	Introduction to Bayesian Statistics	
STA 583	Analysis of Forecasting Systems	
STA 650	Topics in Statistics	

Other comparable course(s) approved by the Coordinating Committee

Total Credit Hours 12-17

Notes:

1. Courses must be taken from at least two departments.
2. Any upper level STA class will satisfy the Advanced Methods requirement.
3. If students satisfy the Introductory Statistics requirement based on undergraduate experience, then an additional 3 h of Advanced Methods classes are required.

## Analytics for Professionals - Certificate

Analytics describes the extensive use of data to guide evidence-based decision-making. This field has emerged during a time when massively large data sets are being collected throughout society. Analytics lives at the junction between numerous traditional disciplines including information systems and statistics. This program will provide a framework for thinking about the collection and use of so-called "big data" and students will develop skills for handling structured and unstructured data sets and for developing models to predict behavior in data-rich environments.

Code	Title	Credit Hours
STA/ISA 635	Introduction to Predictive Analytics	3
ISA 636	Managing Data for Business Analytics	3
STA 637	Statistical Programming and Data Visualization	3
ISA/STA 638	Predictive Analytics and Data Mining	3
Total Credit Hours		12

## Women's, Gender, and Sexuality Studies- Certificate

For information, contact:  
 Director of Women's, Gender, and Sexuality Studies  
 126 MacMillan Hall, 513-529-4616  
[miamioh.edu/cas/academics/programs/wgs/](http://miamioh.edu/cas/academics/programs/wgs/)

This certificate program is available to master's and doctoral candidates in any field of study across the university. Its purpose is to enhance a disciplinary graduate degree with specialization in Women's, Gender, and Sexuality Studies. Using a multidisciplinary approach, students explore the influence of gender and other social differences on production and dissemination of knowledge within disciplines. The program provides intensive study of a variety of feminist theories and methodologies. Courses stress interaction between theory and practice and connections between academic work and public life.

## Program Requirements

(12-14 semester hours)

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
<b>Core Requirements</b>		
WGS 601	Introduction To Women's Studies	3
WGS 602	Feminist Theory & Methodology	3
<b>Electives</b>		
Two 500-level courses (3-4 credit hours each) taught from a feminist perspective, including one in your major field and one in another discipline, selected with your WGS advisor.		6-8
<b>Final Project</b>		
Planned with and approved by your WGS advisor includes presentation.		
Total Credit Hours		12-14

# Courses of Instruction

## General Course Information

This section of the Bulletin lists all courses offered at the university on all campuses. With each department or area, we give in parentheses the university's abbreviation and the division offering the courses—for example, **ACCOUNTANCY (ACC-Business)** means that ACC is the abbreviation for accountancy courses and they are offered by the Farmer School of Business.

Course offerings are listed online (<http://www.MiamiOH.edu/courselist>).

Course descriptions are necessarily brief. For more information about a course, consult the instructor or the department.

## Abbreviations and Terms

**Note:** A registration glossary is in the Registering for Courses chapter.

**CAS-A, CAS-B, etc.:** Course fulfills a part of that section(s) of the College of Arts and Science requirement. (Please see the College of Arts and Science section). These are CAS requirement abbreviations in the course descriptions:

**CAS-A:** Foreign language

**CAS-B:** Humanities

**CAS-B-LIT:** Fulfills a part of the literature requirement of CAS-B.

**CAS-C:** Social science

**CAS-D:** Natural science

**CAS-D/LAB:** Fulfills laboratory requirement of CAS -D (LAB must be preceded by CAS-D/to fulfill the CAS lab requirement)

**CAS-E:** Formal reasoning

**CAS-W:** Writing

**CAS-QL:** Quantitative Literacy

**Co-requisite:** Courses that must be taken during the same semester because their subject matter is similar or complementary. Co-requisites are given at the end of course descriptions.

**Course sections:** Courses with large enrollments are divided into sections. Sections are identified by letters, for example KNH 120A. A five-digit CRN (Course Reference Number) also identifies a course section.

**Credit/no-credit course:** No grades are received for these courses. You will get credit for a D- or better; you do not get credit if your grade is lower. Credit/no-credit courses are not figured in your GPA. No more than 10 percent of your course work can be taken on a credit/no-credit basis, and usually you cannot take courses in your major this way. Freshmen may register for courses on a credit/no-credit basis, providing they are concurrently enrolled for 12 semester hours for grades. After 20 percent of the class meetings, you cannot change from credit/no-credit to a letter grade or from a letter grade to credit/no-credit. See the Grades chapter for more detail.

**Cross-listed course:** Course where material taught crosses multiple disciplines. The course may or may not be offered by two or more departments during the same term.

**Department Topics Courses:** are permanently approved courses and usually carrying a zero ending course number. The goal of these courses is to provide the opportunity:

1. to offer emerging material not covered in existing courses;
2. to make effective use of a traditional classroom setting for the development and piloting of a new course for several terms or semesters; or
3. to cover material for which a visiting faculty member has expertise. Any single topic may be offered for a duration of up to 8 consecutive academic terms. Once that period of time has expired, the course on that topic should undergo permanent course approval on its own merits.

**Field Experience (FE):** Field experience is planned, paid work activity which relates to an individual student's occupational objectives, such as geology or archaeology, and which is taken in lieu of elective or required courses in his or her program with the permission of a faculty advisor. The experience is coordinated by a faculty member of the college who assists the student in planning the experience, visits the site of the experience for a conference with the student and his or her supervisor at least once during the quarter or semester, and assigns the course grade to the student after the appropriate consultation with the employer or supervisor.

**GPA:** Grade point average. See the Grades chapter for more detail.

**Lab:** Laboratory.

**Lec. Lab.:** Lecture and laboratory; used to indicate how many credit hours are earned in lecture and/or in laboratory (for example, 3 Lec. 1 Lab.).

**Modifiers:** are letters placed at the end of a course number which typically designate one of the following:

1. the type or teaching approach used in the course (e.g., service learning);
2. the location of the course (e.g., Luxembourg); or
3. a particular population of students (e.g., honors).

Modifiers may only be used for permanently approved courses and may be requested by emailing [courseapproval@MiamiOH.edu](mailto:courseapproval@MiamiOH.edu). Examples of existing modifiers:

- Existing Departmental Topics Course
- Registration purposes (e.g., EDT 419A, EDT 419E to facilitate the correct majors into the course)
- Honors - noted with H
- Service Learning - noted with X on appropriate Global Miami Plan courses
- Majors only - noted with M
- CAS Writing - noted with W on sections that are CAS Writing approved, but the course with no modifier is not approved CAS Writing
- Luxembourg Campus - noted with L
- Associated Laboratory courses - noted with L (e.g. CHM 111L)

**MPF:** Global Miami Plan for Liberal Education. Course fulfills a part of the MPF requirement. (Please see the Liberal Education at Miami chapter.) These refer to the MPF courses outline:

**I:** English composition

**IIA:** Fine Arts

**IIB:** Humanities

**IIC:** Social Science

**III:** Global Perspectives

**IVA:** Biological science

**IVB:** Physical science

**V:** Mathematics, formal reasoning, technology

**LAB:** Fulfills laboratory course requirement for the Miami Plan; LAB must be preceded by IVA or IVB to fulfill the MP natural science laboratory requirement.

**MPT:** Miami Plan Thematic Sequence course.

**MPC:** Miami Plan Capstone Experience course.

**Offered infrequently:** Courses may be offered every two or three years.

**Practicum:** A practicum is an on- or off-campus work experience which is integrated with academic instruction in which the student applies concurrently learned concepts to practical situations within an occupational field. To assure proper coordination of the experience, the practicum is coordinated by a faculty member who visits the student at least once every two weeks, provides the final grade, and teaches at least one course on the campus.

**Prerequisite:** Course(s) that must be taken to provide background for the course requiring the prerequisite. Sometimes permission of the instructor or another requirement (such as graduate standing) may be a prerequisite to a course.

**Semester credit hour:** Unit used to measure course work. The number of credit hours is usually based on the number of hours per week the class meets; for example, a three-hour course typically meets three times a week for 50 minutes each time. One credit hour is usually assigned for two or three hours in laboratory and studio courses.

**Service course:** Course designed by a department to serve the program requirements of another department or division. Choose a service course carefully. It may not meet the requirements for your department.

**Sprint course:** Course that meets for less than the full semester or term, in periods of four, six, eight, or twelve weeks. For additional information see Course Length Options by Term.

**Summer only:** Offered in the summer only.

## Course Numbering System

The number by which a course is designated indicates the level of the course:

**000-099:** Developmental courses, not creditable toward a degree.

**100-299:** Lower-division, undergraduate courses primarily for first – and second-year students; typically used for introductory and Global Miami Plan Foundation courses.

**100-199:** Introductory courses.

**200-299:** Intermediate-level courses.

**300-499:** Upper-division, undergraduate courses primarily for third- and fourth-year students; typically used for advanced courses in the major and advanced requirements in the Global Miami Plan.

**300-399:** Advanced intermediate-level courses.

**400-499:** Advanced and capstone level courses.

**500-850:** Graduate level courses. Restricted to graduate degree-seeking or certificate-seeking students, or to post-baccalaureate students admitted to the graduate school under continuing graduate status. On occasion, undergraduates with senior status may seek permission to take graduate level courses with the approval of the course instructor, department chair, and the dean of the Graduate School.

**599 and 699:** Workshops or similar offerings. Workshops must go through an approval process each year. Workshops may be offered a maximum of five times, after which instructors must submit a proposal for permanent course approval.

**700:** Restricted to independent graduate study involving research or thesis for master's students.

**790:** Restricted to pre-candidacy doctoral research.

**850:** Restricted to independent graduate study involving dissertation for doctoral students.

## Special Course Numbers

**Course numbers at two levels** (such as 433/533) may be taken either for undergraduate or graduate credit. Students must complete graduate level work and achieve graduate level learning outcomes to receive credit at the 500 level.

**Course numbers separated by a comma** (such as 233, 234) are related. It is possible to take one or more of the series, and they may be taken in any order (unless otherwise indicated in the course description).

**Course numbers separated by a hyphen** (such as 233-234) must be taken in numerical order and both must be taken to receive credit for graduation.

**Independent Work:** Independent work comes in two forms:

1. internship or co-operative education, and
2. independent study.

Internships and “co-ops” are a partnership between the student, the University, and employers that formally integrate students’ academic study with work or community service experience. Internships are typically of a specified and definite duration, may or may not involve credit hours, and may or may not include compensation in the forms of wages, salaries, stipends or scholarships. Co-ops may provide students with compensation from the cooperative employer in the form of wages or salaries for work performed as well as academic credit; typically students alternate or combine periods of academic study and work experience.

An independent study is a course taken with ongoing supervision by the instructor for rigorous learning and knowledge enhancement in a particular area of interest beyond the courses offered. The content

of an independent study course should not duplicate any course available to the student.

In order to register for an Independent Study, faculty must print an Independent Study Permit available on the One Stop website, complete the form, sign, and send to the department chair or regional campus coordinator before it is submitted in person to the One Stop or by campus mail to the Office of the University Registrar who will assign a full term or sprint class section code corresponding to the beginning and end dates of the independent work experience.

Enrollment in an independent study becomes part of the student's academic load. Procedures for withdrawal from such courses are the same as for regularly scheduled courses. Independent Study courses do not carry over from one semester or term to another; a new permit must be completed and submitted each term or semester.

With the permission of the instructor, students may register for zero to five credit hours of independent study each semester or term (with no more than a total of 10 credit hours per academic year).

Independent study courses should be numbered 177, 277, 377 or 477 in accordance with the student's class level (e.g., first-year students register for 177, and second year students register for 277). The 340 number should be only used for internships.

Independent Study Permits must:

- Be submitted prior to or during the first week of the semester to be assigned a full semester, summer or winter term course. Those permits submitted after the first week will be assigned the next available sprint part of term in which the work is to be completed;
- Include approvals of both the instructor and department chair;
- Indicate the course number for transcript purposes.

Permits may not be processed if they are incomplete, incorrect, or after the beginning of the last sprint part of term offered in a given semester.

**100:** Each department in the College of Arts and Science can offer a seminar numbered 100, cross-listed with at least two departments. This course number is reserved especially to allow students and faculty a chance to learn how different disciplines deal with the same problem. The 100 course has one or two semester hours of credit; you cannot receive more than four semester hours credit for all courses numbered 100. These courses may not be offered every year.

**300:** This course, Special Topics, is offered according to student request together with instructor permission. It carries one to three semester hours of credit; you cannot receive more than six semester hours of credit for this course.

**177, 277, 377, and 477:** These courses are designated for independent study. You can register for zero to five hours of independent study each semester (no more than 10 per year). Registration for each course is in accordance with the course's class level (177 for first-year material, 277 for second-year material, etc.). Independent study projects must be approved by the instructor and the department chair. Students completing experiential learning in association with a Global Miami Plan course will register for 177E, 277E, 377E or 477E. Students completing research for independent study purposes will register with an R modifier in the appropriate 177R, 277R, 377R or 477R. Students completing Extended Study or Service Learning in association with a Global Miami Plan course

will register for one credit hour with an X modifier the appropriate 177X, 277X, 377X or 477X. When taking this course for zero credits, the student must enroll in either 177, 277, 377, or 477, rather than modified versions of the courses.

**340:** This course is for internships. It can be worth up to 20 semester hours of credit depending on the agreement between student and instructor.

**199, 299, 399, 499/599 and 699:** These numbers are used for workshops or similar offerings. Workshops must go through an approval process each year. Some departments/programs utilize workshop numbers ending in 97, 98 or 99 based upon volume and frequency of workshop offerings.

**640:** This course is for graduate internships. It can be worth up to 12 semester hours of credit depending on the agreement between student and instructor. A maximum of 6 hours may count toward a graduate degree.

**677:** This course is used for departments/programs without an established Independent Study course number. You can register for 0-5 credit hours of independent study each semester (no more than 10 per year). Registration for each course is in accordance with the level of instruction. Independent study projects must be approved by the instructor and the department chair/program director.

**700:** This number is used for Master's thesis research credit.

**790:** This number is used for Pre-candidacy doctoral research.

**850:** This number is used for Doctoral Dissertation credit.

## Semester Credit Hours

Semester credit hours are indicated in parentheses following the course title; for example, **282 Art and Politics (3)**. Some courses carry variable credit, a range of credit hours for courses such as independent study, special topics, thesis hours, etc. The maximum number of hours you can earn in the course may also be indicated, for example, (3; maximum 6).

## Frequency of Offerings

Information on frequency of offerings is provided to assist you in advance planning. These are normative patterns for program scheduling and are subject to change without notice based on student demand and other programmatic priorities.

## Accountancy (ACC)

### ACC 177. Independent Studies. (0-5)

#### ACC 211. Accounting for the Non-Business Major. (3)

Introduction to basic accounting and management concepts for an individual who would like to own, manage or start a business one day. Focus is on the most important areas a user (not a preparer) of financial statements needs to know to effectively run or manage a business such as the following: interpreting financial statements, knowledge of simple and useful tax concepts, analyzing budgeting, assessing cash flow, and making business decisions using financial data. Not open to business majors.

**ACC 221. Introduction to Financial Accounting. (3) (MPT)**

Introduction to the purposes of financial statements and the recognition, measurement, and disclosure concepts and methods underlying financial statements. Focus is on preparing, using and interpreting financial statements and on understanding the impact of transactions and events on financial statements and financial ratios.

**ACC 222. Introduction to Managerial Accounting. (3) (MPT)**

Introduction to the uses of accounting information provided to managers in production, service, and resale businesses. Focus is on classifying, measuring, and analyzing product and service costs for decision making, preparing budgets, and evaluating performance. Prerequisite: ACC 221.

**ACC 256. Accountancy Career Exploration and Planning. (1)**

This course will explore the historical, current and possible future role of the accounting profession in the domestic and global economy. Students will understand the various standard setters and opportunities for the accounting profession to interact and influence the outcomes of business organizations. This course will assist accountancy majors to explore career interests in future accountancy positions within public accounting, private industry or governmental positions. Specifically, the course will focus on helping students understand the variety of career opportunities available to accounting majors. The course will assist students with understanding the key career planning and job searching opportunities at Miami University. Students will be exposed to the timeline and types of events they can expect in the interview process and will be informed about how best to prepare for and be successful in executing each.

**ACC 277. Independent Studies. (0-5)****ACC 301. CBL Corporate Governance & Executive Leadership Lab. (1)**

This lab allows students in the later stage of their CBL experience to understand how executives and board of directors seize opportunities and manage risks associated with achieving strategic objectives and engaging stakeholders to create long-term shareholder value. Prerequisite: Acceptance into The Issac and Oxley Center for Business Leadership and completion of MGT 101 and MGT 102, which are the Buck Rodgers Individual and Team weekend labs, respectively.

**ACC 321. Intermediate Financial Accounting. (3) (MPT)**

Study of the conceptual framework and standard-setting process followed by the application and evaluation of generally accepted accounting principles underlying financial statements. Focus is on recording and reporting intermediate-level transactions and events in accordance with authoritative standards related to the recognition, measurement, and disclosure of assets, liabilities, owners' equity, revenues, expenses, gains, and losses. Prerequisites: ACC 221 and ACC 222.

**ACC 333. Managerial Accounting. (3)**

Focuses on the interactions between firm strategy and accounting information, with an emphasis on employee decision-making and analytical tools. Examines these topics in a variety of contexts, such as budgeting and forecasting; performance measurement, management, and incentives; product and service costing; or transfer pricing. Prerequisites: ACC 221 and ACC 222.

**ACC 340. Internship. (0-20)**

Available to Farmer School of Business (FSB) majors and minors. Available for 0 credit hour during spring, summer and fall terms. Available for 1 credit hour during summer terms only. For one hour of credit, student must secure a sponsoring FSB faculty member within his/her major or minor to supervise the internship and accompanying required internship reflection paper. ACC 340 is not available during winter term. Students are to work through their respective academic departments to enroll in the course. Credit/no credit only. Note: FSB students may earn a maximum 2 credit hours toward graduation for BLS/BUS/ECO/ESP/FIN/ISA/MGT/MKT 340. Prerequisite: 55 earned hours and permission of department.

**ACC 343. Federal Income Tax Accounting. (3)**

Study of the basic features of the federal income tax system. Focuses on the determination of taxable individuals and corporations and on the effects of tax laws and regulations on decision making. Prerequisites: ACC 221 and ACC 222.

**ACC 361. Modeling Business Processes in Accounting Information Systems. (3)**

Introduction to accounting information systems (AIS) as an enterprise-wide, process-focused information system. Also focuses on modeling business processes for AIS by studying processes and learning how to build information systems to support them. Uses data modeling tools such as the REA model and entity-relationship diagrams to construct relational database systems. Prerequisites: ACC 221, ACC 222 and ISA 235.

**ACC 370. Applied Accounting Research. (1-3; maximum 3)**

This course provides students with the opportunity to apply their knowledge of accounting along with their research, team and communication skills to real world problems. The typical mode of learning will be a case competition requiring students to work in a team to research and propose a solution to an accounting issue. The cases used in this course are developed from actual situations faced by accountants. In many cases, students will be judged on their proposed solutions by a panel of accounting professionals. Prerequisite: ACC 221.

**ACC 377. Independent Studies. (0-5)****ACC 422/ACC 522. Financial Accounting Research. (3) (MPT)**

Study of professional research methods and resources used for financial accounting and reporting. Focuses on the application of research methods and resources, through case analyses, to determine applicable recognition, measurement, and disclosure standards for advanced-level transactions and events. Prerequisite: ACC 321.

**ACC 433. Management Accounting for Processes. (3)**

Focuses on the roles firm strategy and management accounting information play in managing business processes. Emphasizes value chain analysis, business process re-engineering, balanced scorecard performance measurement, benchmarking, master budgeting and variance analysis, process value analysis, nonfinancial operational performance measurement, and throughout accounting. Prerequisites: ACC 333 and MGT 302.

**ACC 445/ACC 545. Taxation of Flow-through Entities and Corporations. (3)**

Study of the federal tax consequences of the formation and operation of corporations, partnerships, and S corporations. The course also provides a basic understanding of the legal tax research process and how to access online and evaluate the various sources of federal income tax law.

Prerequisite: ACC 343.

**ACC 452. Internal Auditing. (3)**

Focuses on the theory and practice of auditing within organizations. Covers internal auditing standards, overview of operational, performance and compliance type audits, and the application of common internal audit techniques. Prerequisites: ACC 333 and ACC 361.

**ACC 453/ACC 553. Financial Statement Auditing. (3)**

Introduction to financial statement audits conducted by independent public accountants. Emphasizes the technical knowledge and skills required by entry-level auditors to meet professional standards, plan and perform audits, and communicate results.

Prerequisites: ACC 321 and ACC 361.

**ACC 458. Advanced Auditing Topics and Research. (3)**

This course will cover advanced auditing topics including risk assessment, internal control testing and the situational and dispositional factors affecting auditor judgment and decision making. To examine these topics students will read a mix of popular press articles, technical guidance from both the AICPA and PCAOB, and academic journal articles. Recommended prerequisite: ACC 453/ACC 553.

**ACC 461. Accounting for Business Combinations. (3)**

Accounting for mergers and acquisitions with emphasis on preparation of consolidated financial statements. The course also covers accounting for business entities operating as partnerships. Prerequisite: ACC 321.

**ACC 468/ACC 568. Accounting for Governmental and Not-for-Profit Organizations. (3)**

Application of accounting principles for governmental organizations with emphasis on fund accounting, budgetary control, and financial reporting. Also includes the study of accounting issues for health care organizations, public and private colleges and universities, and voluntary health and welfare organizations with a focus on assessing an organization's use of resources in light of its mission.

Prerequisite: ACC 221 and ACC 222.

**ACC 477. Independent Studies. (0-5)****ACC 490/ACC 590. Current Topics in Accounting and Auditing. (1-3; maximum 6)**

Since accounting exists in an ever-changing environment, this course will expose students to the latest issues in financial accounting, managerial accounting, tax, auditing and accounting systems. The format for the course will depend on the specific topic being addressed in the course.

Prerequisites: ACC 321, 333, 343 and 361.

**ACC 495/ACC 595. Accounting Analysis. (3) (MPC)**

This course is intended to assist accounting students with the development of integrative and higher order skills through the review of data analytics. The course is heavily focused on problem solving and analysis.

Prerequisites: FSB Business Core - ACC 221, 222; ECO 201,202; MGT 291; MKT 291; FIN 301; ISA 235.

**ACC 611. Accounting for Managers. (3)**

This course explores how accounting information is used by managers to make internal business decisions, to create financial plans, and to evaluate actual performance relative to those plans. It also explores how managers analyze financial statements for internal management purposes.

Prerequisite: Enrollment in MBA Program.

**ACC 622. Information for Business Valuation and Decisions. (3)**

Framework and skills to analyze financial information for business valuation and capital allocation decisions including applications through case analysis. Emphasis on using financial information for four types of analyses: business strategy, accounting, financial, and prospective.

Prerequisite: Enrollment in Master of Accountancy Program.

**ACC 628. Advanced Issues in Financial Accounting and Reporting. (3)**

This course covers a selected set of advanced issues in financial accounting, including merger and acquisition and its implications for financial reporting, the use of financial derivatives for trading and/or hedging purposes and related accounting treatments, and other topics that are of high relevance and importance to business entities' financial accounting and reporting in current business environment.

Prerequisite: Enrollment in Master of Accountancy program.

**ACC 635. Financial Leadership in Organizations. (3)**

Examines the roles of the CFO in the financial leadership of organizations, particularly in the areas of guidance and governance. Focuses on CFO interactions with various stakeholders, and the support role that various functional areas within the organization play to assist the CFO. Investigates differences in CFO-stakeholder interactions and support roles across various types of organizations and over time within one firm. Analysis of the knowledge and skills that financial professionals must bring to leadership roles within organizations.

**ACC 646. Taxes and Business Decisions. (3)**

Taxes play a major role in determining the costs and benefits of all business transactions. This course will provide the tools necessary to identify, understand and evaluate tax planning opportunities.

Prerequisite: Enrollment in Master of Accountancy Program.

**ACC 650. Fraud Examination. (3)**

Study of the process of locating, investigating and documenting fraud in a business environment. In addition to learning about several common types of fraud schemes, students will learn how and why occupational fraud is committed, how fraudulent conduct can be deterred, and how allegations of fraud should be investigated and resolved within the current legal environment.

Prerequisite: Enrollment in Master of Accountancy Program.

**ACC 653. Assurance Services. (3)**

Focuses on fundamentals and emerging issues related to the practice of auditing and involves researching and resolving practice-oriented problems. In addition to other relevant topics, the course covers audit sampling, EDP auditing, and computer-assisted audit techniques.

Prerequisite: Enrollment in Master of Accountancy Program.

**ACC 655. Control of Accounting & Reporting Risk. (3)**

Study of the process of identifying, measuring and controlling strategic and business process risk utilizing accepted accounting frameworks from both internal and external perspectives. The concepts studied in this course are the theoretical foundation for business risk auditing approaches being utilized by international accounting firms. The process of designing effective risk management strategies and controls are examined within specific industries and accounting settings.

Prerequisite: Enrollment in Master of Accountancy Program.

**ACC 661. Accounting Theory and Research. (3)**

This course is focused on examining academic research related to accounting topics. Specifically the course will review key research articles with the intent of understanding the underlying motivation and competing theories, the research method and approach, and the specific findings of the research. The goal of the course is to expose students to existing research and research tools while assisting students in the development of their analytical thinking skills related to the accounting discipline.

**ACC 677. Independent Studies. (0-5)****ACC 681. Special Studies in Accounting. (1-4; maximum 6)**

Since accounting exists in an ever-changing environment, this course will expose graduate students to the latest issues in financial accounting, managerial accounting, tax, auditing and accounting systems. The format for the course will depend on the specific topic being addressed in the course.

**ACC 695. Integrative Accounting Capstone. (3) (MPC)**

Integration of auditing, accounting systems, financial accounting, managerial cost accounting, and income tax accounting.

Prerequisite: Enrollment in Master of Accountancy Program.

## Aerospace Studies (AES)

**AES 110. Leadership Laboratory. (1)**

Introduction and orientation to the Air Force through study and supervised practice of customs and courtesies, drill and ceremonies, and development of basic leadership skills. Provides orientation to life and work of an Air Force junior officer and officer career opportunities. Instruction, typically including field trips to Air Force installations, conducted within framework of an organized cadet corps with a progression of experiences to develop leadership potential. Limited to qualified cadets pursuing an Air Force commission.

Co-requisite: AES 121.

**AES 111. Leadership Laboratory. (1)**

Continues introduction and orientation to Air Force and ROTC program through study and supervised practice of customs and courtesies, drill and ceremonies, development of basic leadership skills, and junior officer responsibilities and career opportunities. Instruction conducted via direct student involvement in organized cadet corps activities and progressive cadet experiences designed to develop leadership potential. Limited to qualified cadets pursuing an Air Force commission.

Co-requisite: AES 122.

**AES 121. Heritage and Values of the United States Air Force. (1)**

Fall semester survey course addresses basic topics relating to the Air Force and its role in national defense. Focuses on military standards, customs and courtesies, officership, career opportunities and benefits. Reviews the organization and mission of the Air Force and its role in achieving U.S. national objectives. Examines the Air Force major command structure, its heritage and includes an introduction to the military style of communicative skills.

**AES 122. Heritage and Values of the United States Air Force. (1)**

Continuation of AES 121. Further addresses basic topics related to the Air Force and airpower. Focuses on the evolution of the Air Force, the principles of war, the Department of the Air Force organization and resources, and interpersonal communications and their impact on military operations. Develops fundamental military-oriented oral and written communicative skills. Prerequisite: AES 121 or permission of instructor.

**AES 177. Independent Studies. (0-5)****AES 210. Leadership Laboratory. (1)**

Provides fundamental training and experience in Air Force military management and leadership techniques via direct student participation in organized cadet corps activities and exercises with continued emphasis on developing leadership potential. Instruction includes customs and courtesies, drill and ceremonies, and knowledge of junior officer responsibilities and career opportunities. Limited to qualified cadets pursuing an Air Force commission. Prerequisite: AES 110, 111, or permission from instructor.

Co-requisite: AES 221.

**AES 211. Leadership Laboratory. (1)**

Provides continuation of fundamental training and learning experiences in Air Force military management and leadership techniques in organized cadet corps leadership development activities and exercises. Instruction includes Air Force customs and courtesies' drill and ceremonies, and knowledge of junior officer responsibilities and career opportunities. Limited to qualified cadets pursuing an Air Force commission.

Prerequisite: AES 110, 111, or permission from instructor.

Co-requisite: AES 222.

**AES 221. Team and Leadership Fundamentals. (1) (MPT)**

Survey course designed to provide a fundamental understanding of both leadership and team building. Overview of the many layers of leadership to include listening, understanding one's self, being a good follower and problem solving efficiently; application of leadership perspectives in team building activities and discussions on conflict management. Students will demonstrate basic verbal and written communication skills in this course.

**AES 222. Team and Leadership Fundamentals. (1) (MPT)**

Continuation of AES 221. Survey course designed to provide a fundamental understanding of both leadership and team building. Overview of the many layers of leadership to include listening, understanding one's self, being a good follower and problem solving efficiently; application of leadership perspectives in team building activities and discussions on conflict management. Students will demonstrate basic verbal and written communication skills in this course.

Prerequisite: AES 221 or permission from instructor.

**AES 277. Independent Studies. (0-5)****AES 310. Leadership Laboratory. (1)**

Provides intermediate-level management training and learning experiences through practical application of military management techniques in organized cadet corps leadership development activities. Limited to qualified cadets pursuing Air Force commission. Co-requisite: AES 331.

**AES 311. Leadership Laboratory. (1)**

Continues intermediate-level management training and learning experiences of military management techniques in organized cadet corps leadership development activities. Limited to qualified cadets pursuing an Air Force commission.

Prerequisite: AES 310.

Co-requisite: AES 332.

**AES 331. Leading People and Effective Communication. (3)**

Study of the skills and knowledge necessary for leader development and effective supervision. Examines critical thinking, change management, priority management, bias and cross-cultural competence. Explores various case studies on leadership, management, airmanship and ethics. Emphasizes Air Force communication skills in writing and briefing.

**AES 332. Leading People and Effective Communication. (3)**

Continuation of AES 331. Examines aspects of leadership and communication as it relates to the individual and the group. Topic highlights include mentoring, feedback and organizational climate. Explores self-awareness, professionalism and stress management and resiliency techniques. Examines ethical issues in the context of the Air Force officer's leadership authority, responsibility, and accountability while focusing on ways to develop effective leadership and management skills. This course continues to emphasize Air Force communication skills in writing and briefing.

Prerequisite: AES 331 or permission of instructor.

**AES 340. Internship. (0-20)****AES 377. Independent Studies. (0-5)****AES 410. Leadership Laboratory. (1)**

Provides advanced-level management training and learning experiences through practical application of military leadership principles in organized cadet corps leadership development activities. Strong emphasis on professionalism and officership. Limited to qualified cadets pursuing an Air Force commission.

Prerequisite: AES 311.

Co-requisite: AES 431.

**AES 411. Leadership Laboratory. (1)**

Continues advanced-level management training and learning experiences through practical application of military leadership techniques in organized cadet corps leadership development activities. Strong emphasis on professionalism and officership. Limited to qualified cadets pursuing an Air Force commission.

Prerequisite: AES 410.

Co-requisite: AES 432.

**AES 431. National Security/Leadership Responsibilities/Commissioning Preparation. (3) (MPT)**

Examines the basic elements of national security policy and process. Focuses on air, space and cyberspace operations; selected roles of the military in society; and, current domestic and international issues affecting the military profession. Examines functions and operations of the Department of Defense, the Air Force and other military services. Focuses on several global hot spots and analyzes their impact on U.S. national security. Examines other defense/security issues, such as nuclear operations, terrorism, deployments and the concept of civilian control of the military.

**AES 432. National Security/Leadership Responsibilities/Commissioning Preparation. (3) (MPC)**

Covers advanced leadership topics, ethics, and Air Force doctrine for prospective Air Force officers about to assume active duty. Special topics focus on the military as a profession, the oath of office, military justice, the military evaluation system, career progression and assignments, benefits and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills.

Prerequisite: AES 431 or permission from instructor.

**AES 477. Independent Studies. (0-5)**

## American Culture & English Program (ACE)

**ACE 111. American Academic Culture for International Students. (2)**

An orientation to the principles, values, conventions, and practices of the American university, with an emphasis on the intellectual competencies, cultural knowledge, and communication skills needed for success. Intended for first-year international students. Topics include academic integrity and ethics, comprehension and critical analysis of texts, effective classroom participation and interaction, and basic communication tools and strategies. (Open only to international students).

**ACE 112. Advanced Communications Strategies: Speaking and Listening for Academic Contexts. (5)**

For non-native, English speaking students, intensive practice in spoken English in an academic context; includes discussion, formal presentations, understanding lectures and note-taking; to promote advancement of language fluency as well as acculturation to the American classroom experience; also includes casual spoken English. Only open to conditional admission students in ACE Program.

**ACE 113. Reading and Writing in Academic Contexts. (4)**

For non-native, English speaking students, an intensive reading and writing course focusing on reading comprehension, textual analysis, vocabulary, composing, and rhetoric. Students learn critical skills needed for success in academic writing. Open only to conditional admission students in ACE Program and students who have been recommended based on their English Placement Test scores.

**ACE 310. Special Topics in American Academic Culture for International Students. (1-3; maximum 6)**

Orientation to American academic culture for international students. Primary emphasis on strategies, practices, and conventions of academic writing and speaking/presenting. Variable topics include: strategies for academic writing and discussing/presenting; practical grammar; collaboration and team work; citation practices; written genres common in various disciplines. Open only to international students.

**ACE 612. Advanced Communication Strategies for Graduate International Students. (5)**

For non-native, English speaking graduate students, intensive instruction and practice in oral English, both listening and speaking, in graduate-level academic and professional contexts. Includes conversation, discussion, formal presentation and lecturing, interviewing, working in teams with speakers of different languages, and note-taking.

**ACE 613. Advanced Reading and Writing for Graduate International Students. (4)**

For non-native, English speaking graduate students, an intensive reading and writing course focusing on English vocabulary development, reading comprehension and analysis, composing and rhetoric. Students learn critical skills needed for success in academic writing.

**ACE 619. Advanced Speaking and Presentation for Graduate International Students. (2)**

For non-native, English speaking graduate students, an intensive course in English speaking, pronunciation, and presentation, with an emphasis on improving accuracy, fluency, comprehensibility, and clarity of speech, particularly for instructional contexts.

## American Studies (AMS)

**AMS 105. American Studies Film Series. (1)**

This course examines selected films addressing a particular theme or issue in American culture. Themes and films vary from semester to semester.

**AMS 135. Understanding Jazz, Its History and Context. (3) (MPF, MPT)**

History of jazz in the United States from its origins to the present. Emphasis placed on developing aural perceptions of stylistic differences between historical periods and significant performers. IIA, IIB, IIIB.

Cross-listed with MUS.

**AMS 177. Independent Studies. (0-5)****AMS 183. Images of America. (3) (MPF)**

Investigating the power and influence of visual art imagery, either about, targeted to, or made by diverse segments of historic and contemporary American society and how this imagery has helped or hindered our coming together as a diverse nation. Explores the use of art stereotypes as a basis for evaluation, how visual components help define culture, the decoding of cultural codes and how the idea of taste and aesthetics influences the way we see ourselves and others. IC, IIA, IIB.

Cross-listed with ART.

**AMS 205. Introduction to American Cultures. (3) (MPF)**

Explores what it means to be "American." As an introduction to the interdisciplinary study of American cultures and identities, past and present, it examines key ideas, events, texts, images, objects, places, and other reflections of American cultures and identities. Students will consider how the meaning and significance of American and American identity has been defined, discussed and debated from multiple perspectives. IC, IIB. CAS-B.

**AMS 206. Approaches to American Culture. (3)**

Examines a specific topic or case study, e.g., a form of cultural expression, a place, a historical moment, a social movement, and an identity group. Emphasis is placed on interdisciplinary skills, teaching students to analyze and inter-relate different kinds of texts to explore the idea of culture. ADVW.

Prerequisite: AMS 205.

**AMS 207. America: Global and Intercultural Perspectives. (3) (MPF, MPT)**

Explores the local dimensions of globalization by focusing on how global networks and practices affect life and culture in the United States. Students examine the theoretical and practical questions associated with membership in local communities, in the US as a nation-state, and in the global community at large. IC, IIB, IIIB. CAS-B.

**AMS 211. Writing with Purpose: Interdisciplinary Inquiry and Communication. (3)**

This is an intermediate level course which enables students to investigate and discuss interdisciplinary practices of knowledge creation and dissemination. Students will practice a variety of writing and other communication strategies necessary for the effective dissemination of ideas to interdisciplinary audiences and the general public, and can expect to gain experience in working with a wide spectrum of interdisciplinary research, tools and methods while engaging intellectually in interdisciplinary modes of thinking, reading, listening, and speaking. ADVW.

Cross-listed with AAA/BWS/LAS/WGS.

**AMS 216. Introduction to Public History. (3)**

Introduction to the major issues addressed by historians who work in the public sphere, with emphasis on the creation of a shared public past and the disciplines that comprise the field of public history.

Cross-listed with HST.

**AMS 222. Italian American Culture. (3) (MPF)**

A survey and investigation of the history of Italian immigration in America, the development of Italian American communities across the land, and the contributions that Italian Americans have made to American society and culture. Taught in English. No prerequisites. IC, IIB. CAS-B.

Cross-listed with FST/ITL.

**AMS 241. Religions of the American Peoples. (3) (MPT)**

American religious pluralism and the experience of minority peoples such as Roman Catholics, Jews, and Eastern Orthodox. Emphasis on historical, social, and cultural themes. Readings in fiction and autobiographical writings. IC. CAS-B.

Cross-listed with REL.

**AMS 246. Native American Literature. (3) (MPF)**

Survey of published Native American fiction, poetry, memoir, drama, and non-fiction from the mid-19th century to the present. Explores cultural contexts and emphasizes an interdisciplinary approach that includes historical, sociological, and anthropological as well as literary perspectives. IC, IIB. CAS-B-LIT.

Cross-listed with ENG 246.

**AMS 248. Asian American Literature. (3) (MPF)**

Survey of Asian American writing (including the novel, poetry, drama, nonfiction, etc.) from the early 20th century to the present. Addresses immigration experiences, growing up in America, and writing as cultural expression. Course uses an interdisciplinary approach to the study of literature, drawing on history, sociology, ethnic studies, and current trends in American literary studies. IC, IIB, IIIB. CAS-B-LIT. Cross-listed with AAA and ENG.

**AMS 277. Independent Studies. (0-5)****AMS 285. Introduction to African American Music. (3) (MPF, MPT)**

A general survey of traditional West African music and its offsprings in America from slavery to the early 1990s. Major emphasis is placed on the contributory, sociological settings for significant musical forms and styles. IIA, IIB, IIIB. IC.

Prerequisite: MUS/AMS 135 or MUS 185.

Cross-listed with MUS.

**AMS 301. American Identities. (3) (MPT)**

Focusing on a specific theme, topic or issue, the course explores social and cultural identity, intercultural exchange, and public culture in the United States. The course connects theory and practice through collaborative and interactive research and learning in American Studies. Approaches include service learning, field research, experiential learning, or applied research. IC.

Prerequisite: AMS 205.

**AMS 302. Immigrant America. (3) (MPT)**

Examination of U.S. immigration and emigration in historical and contemporary perspective. Using a transnational lens, the course explores a range of topics related to American culture, identity, politics, and history in the context of growing global interconnectedness. IC. Recommended prerequisite: AMS 205.

**AMS 303. Consumer Culture. (3)**

This course examines the messages, meanings, practices, and products of consumer culture in the United States. It explores consumption from an interdisciplinary perspective integrating literature, politics, visual imagery, multimedia, and technology that frame the business of buying and selling of goods. Central topics include advertising and desire, the meaning of consumer goods and the construction of consumer lifestyles, as well as the developing practices of salesmanship, marketing, and public relations in historical context. Course themes will focus on the analysis and interpretation of the American practices of consumerism with an emphasis on issues of commodification, globalization, transnationalism and issues of identity. Students will explore how consumerism affects ideals of belonging, citizenship, and membership in a heterogenous transnational America.

**AMS 304. History, Memory, Tradition. (3)**

Examination of the role of history, memory, and tradition in American culture, and the theoretical underpinnings of public history.

Cross-listed with HST 304.

**AMS 305. American Icons. (3)**

American Icons are objects, images, and symbols of identification, which represent the United States and are associated with the idea of America both at home and in the global world. The significance of American icons derives not solely from their own internal qualities, but often from the qualities and ambitions that they have come to represent for others. Through a critical examination of their creation, dissemination, and legacies, this course explores the variety of meanings that these figures and symbols have come to represent. Central themes include the relevance of the past for the present, varieties of cultural representation, the impact that different forms of representation have on their content, and the coherence of American culture. IC.

**AMS 310. Special Topics in American Studies. (1-4; maximum 16)**

Topical offerings in American Studies on themes such as popular culture, material culture, ethnicity, or periods in American life such as the 1950s. May be taken for credit more than once with different content and permission of instructor.

Prerequisite: AMS 205 or permission of instructor.

**AMS 310I. Selected Topics/Black World Studies. (3)**

These courses examine specific aspects of the research, theories, roles, status, and experiences associated with blacks in America and throughout the world.

**AMS 315. Latin American Diaspora: Communities, Conditions and Issues. (3)**

Study realities and challenges of Hispanic-Latino communities in Southwest Ohio in the context of transnational connections that link communities across the Americas. Incorporates Service-Learning projects and community based research. IC.

Cross-listed with LAS.

**AMS 340. Internship in American Studies. (0-20)****AMS 342. Religious Pluralism in Modern America. (4) (MPT)**

Historical and cultural analysis of religious communities of the U.S. of primarily non-European origin. Includes African American, Native American, Latino, and Middle Eastern and Asian traditions, including Islam. IC. CAS-B.

Cross-listed with REL.

**AMS 345. Women, Religion and Social Change in America. (3) (MPT)**

An exploration of various ways in which women lifted their own voices, engaged with societal issues, and constructed their communities and themselves through the institutions and frameworks of religion in America.

Cross-listed with REL/WGS.

**AMS 346. Issues in the Study of Native American Religions. (3) (MPT)**

This course focuses on the methods by which Native American religions have been studied and represented, and ways in which these methods and representations have been, and continue to be, critiqued.

Prerequisite: REL 101 or 242.

Cross-listed with REL.

**AMS 348. Ethnic American Literatures. (3)**

Intensive introduction to theories of race, ethnicity, and identity through the study of American literature by ethnic minorities. IC. CAS-B-LIT.

Cross-listed with ENG.

**AMS 352. Geographies of Urban Change. (3) (MPF, MPT)**

Examines the cultural, social and political dimensions of urban planning and development practices in the United States. Drawing on an array of source materials and using multiple methods of representing past places, students apply analytical tools to document the nature, extent, and significance of urban change and to communicate their understanding of the complex forces shaping urban America.

Prerequisites: GEO 201 or AMS 205 or GEO 101 or GIC 101 or permission of the instructor.

Cross-listed with GEO.

**AMS 357. Gilded Age America. (3)**

Covering the period between 1877 and about 1920, this course explores the political, economic, social, and cultural history of the era in the United States known as the Gilded Age, as well as Progressive Era responses to issues raised in that era. Pedagogy includes both lecture and hands-on experiential work with primary and secondary sources.

Cross-listed with HST.

**AMS 362. The Era of the American Revolution. (3)**

Origins, events, and legacies of the American Revolution with particular emphasis on political and social developments. CAS-B.

Cross-listed with HST 362.

**AMS 363. The Early American Republic 1783-1815. (3)**

Emphasizes the Constitution, the Federalists, and the Jeffersonians with study of Washington, Madison, Hamilton, John Adams, and Jefferson as major figures.

Cross-listed with HST 363.

**AMS 367. The United States in the 1960s. (3) (MPT)**

Examines political, social, and cultural changes in the United States in the turbulent decade of the 1960s. Describes the consensus that existed in the 1950s, and then explores such topics as the civil rights movement, the women's movement, expansion of the welfare state, war in Vietnam, and the growth of a counterculture.

Cross-listed with HST.

**AMS 371. Native American History to 1840. (3)**

American Indian history from the period before European contact through the removal era of the 1830s and 1840s.

Cross-listed with HST.

**AMS 377. Independent Studies. (0-5)****AMS 379. U.S. Consumerism, 1890-Present. (3)**

Examines the history of mass consumerism in North American society, including the rise of mass production and the mechanisms that have made mass-produced goods available to American and global markets.

Cross-listed with HST 379.

**AMS 382. Women in American History. (3) (MPT)**

Survey of the history of women's lives and roles in American society from the colonial period to present. Emphasis on examining women's individual and collective roles in private and public spheres and on exploring how specific economic and political transformations have affected women's lives. IC. CAS-B.

Cross-listed with HST/WGS.

**AMS 386. The History and Development of Hip Hop Culture in America. (3) (MPT)**

Surveys development of the Hip Hop culture (rapping, graffiti art, breaking, DJing) from black vernacular forms in Africa and America. IC. Prerequisite: MUS/AMS 285, MUS 385 or permission of instructor. Cross-listed with MUS.

**AMS 390. Studies in American Regionalism. (3; maximum 6) (MPT)**

Literature of the West: imaginative treatments of the American frontier and the postfrontier West, Cooper to the present; major Southern American writers from Byrd to the present. CAS-B-LIT. Cross-listed with ENG.

**AMS 392. Sex and Gender in American Culture. (3) (MPT)**

Examination of change over time in the construction of sexual norms, attitudes, and behaviors in American culture, as well as of gender roles. Covers the period just prior to the Indian-European encounter to the present. IC. CAS-B.

Cross-listed with HST/WGS.

**AMS 397. American Environmental History. (3)**

Introduction to human-natural environmental relationships in English North America and the United States, ca. 1600 to present. Chronological and regional approach with emphasis upon political economy and the American conservationist/environmentalist movement.

Cross-listed with HST 397 and WST 397.

**AMS 401. Senior Capstone in American Studies. (4) (MPC)**

A colloquium in which students undertake and complete a research or creative project in an area of American cultural studies. Emphasis is on the collaborative selection and design of issues for discussion as well as on sharing the process of project development. Required for American studies majors and minors.

Prerequisite: AMS 205, nine additional hours of American studies-related course work, or permission of instructor.

**AMS 405. American Studies Workshop. (1-4; maximum 4)**

Practice, reflection, and presentation of student driven research and engagement in American Studies.

Prerequisite: permission of instructor.

**AMS 435. Public History Practicum. (3)**

Combines classroom study, primary and secondary source research, and fieldwork in the public sphere. Projects may include digital history projects including database projects, digital visual representations, and creation of online exhibits. Other projects may include archival research, local museum and historical society collaborative projects, and public writing.

Cross-listed with HST.

**AMS 477. Independent Studies. (0-5)****AMS 677. Independent Studies. (0-5)**

## Anthropology (ATH)

**ATH 135. Film as Ethnography. (1) (MPF)**

Explores anthropological approaches to the study of human diversity and variation through the lens of ethnographic and documentary films. Exposes students to basic concepts in anthropology including cultural and linguistic relativity, globalization, and representational practices. IIIB. CAS-C.

Cross-listed with FST.

**ATH 145. Lost Cities & Ancient Civilizations. (3) (MPF)**

Archaeological and anthropological approaches for understanding human cultural, social, and ecological adaptations in global prehistory. Examines similarities and differences among prehistoric peoples and civilizations and their global contexts and interconnectedness in terms of political economy and social organization; technologies, engineering, and environment; and religion and symbolic systems. IIC, IIIB. CAS-C.

**ATH 155. Introduction to Anthropology. (3) (MPF)**

Introduction to anthropology with emphasis on understanding the social and biological contexts of human life. Topics include the biological and cultural origins of humanity, prehistory, and cultural diversity. IIC, IIIB. CAS-C.

**ATH 175. Peoples of the World. (3) (MPF, MPT)**

Provides an appreciation of human cultural, social, and linguistic variation around the world and through time. Develops anthropological and ethnographic approaches to understanding cultural differences and similarities in political, social and economic organization; marriage and family patterns; environment and beliefs systems; and other aspects of globalized human cultural life. IIC, IIIB. CAS-C.

**ATH 177. Independent Studies. (0-5)****ATH 185. Cultural Diversity in the U.S.. (3) (MPF)**

Anthropological and ethnographic approaches to the study of cultural, social, and linguistic variation in the United States, its territories, and borderlands. As an introduction to cultural anthropology, the course provides a foundation for understanding historical and contemporary contexts related to globalization and diaspora; ethnic, racial, and class identities; political economy and environment; belief systems; and ethnographic methodology. IC, IIC, IIIB. CAS-C.

**ATH 206. Introduction to Latin America. (3) (MPF, MPT)**

An interdisciplinary introduction to contemporary Latin America and the Caribbean through anthropology, art, geography, environment, film, history, literature, music, politics, sports and others. IC, IIC, IIIB. CAS-C.  
Cross-listed with LAS 208.

**ATH 212. Introduction to Archaeological Theory and Methods. (4)**

Introduction to theory, methods, and techniques of archaeology.

**ATH 219. Introduction to Linguistics. (3) (MPF)**

Scope of linguistics: fundamental concepts and methods of linguistic science (phonetics, phonology, morphology, syntax, semantics, and pragmatics) in its descriptive and historical aspects. V. CAS-E.  
Cross-listed with ENG/GER.

**ATH 231. Foundations of Cultural Anthropology. (4) (MPT)**

Survey of major theoretical perspectives in cultural anthropology. History, themes, debates, and controversies are approached in terms of their intellectual lineage, theoretical content, fieldwork methodologies and ethics, policy applications, and global relevance. ADVW. CAS-C.

**ATH 235. Imagining and Encountering the Anthropological Other. (3) (MPF)**

This course explores the emergence of 'the Other' in Western imagination in conjunction with global exploration and colonization, and the emergence of anthropology as a field for testing those imaginings. Students will be introduced and given opportunities to practice anthropology's basic methods for engaging with and learning from individuals living in cultural worlds different from their own. IIC, IIIB. CAS-C.

**ATH 235L. The Anthropological Other. (3)**

Explores the emergence of 'the Other' in Western imagination in conjunction with global exploration and colonization, and the emergence of anthropology as a field for testing those imaginings. Students will be introduced and given opportunities to practice anthropology's basic methods for engaging with and learning from individuals living in cultural worlds different from their own.

**ATH 254. Introduction to Russian and Eurasian Studies. (3) (MPF)**

Examines the major developments that have shaped Russian and Eurasian culture, society and politics over the last millennium. The course incorporates perspectives from the social sciences, humanities and the fine arts. IIB. ADVW. CAS-B.  
Cross-listed with CLS/HST/ITS/POL/REL/RUS.

**ATH 255. Foundations of Biological Anthropology. (4)**

Introduction to biological anthropology using framework of evolutionary theory. Includes human origins, especially ancestral hominids, nonhuman primate studies, models of human evolution, and human variation.

**ATH 265. Introduction to Linguistic Anthropology. (4) (MPT)**

Survey of theories and methods in linguistic anthropology, including history of the discipline and linguistic relativity; verbal art, language ideologies, and identities; and discourse-centered, interactional, and semiotic approaches to the ethnographic study of the language-culture-individual nexus.

**ATH 277. Independent Studies. (0-5)****ATH 301. Intercultural Relations. (3) (MPT)**

Development of cultural awareness; in-depth study of theory and field-based research on the cross-cultural dynamics of cross-national encounters, trends, and events.  
Cross-listed with ITS.

**ATH 302. Africa: Anthropological Perspectives. (3)**

Explores Africa and Africa issues by critically examining anthropological representations of the continent and diaspora, including ethnography, ethnographic film, and fieldwork accounts. Examines myriad cultural and regional variations in historical and contemporary contexts, including social organization and conflict; globalization, colonialism, and modernity; economies, politics and nationalism; belief systems; gender, sexuality, health and the body; and expressive and popular culture.

**ATH 304. Native North America: Anthropological Perspectives. (3) (MPT)**

Critical and interdisciplinary approaches to the anthropological and ethnographic study of the Indigenous peoples of North America, including examination of the multifaceted cultures, histories, and identities of contemporary Native American/First Nations communities. Topics include sovereignty and interdependence, colonization and resistance, linguistic and cultural vitality, and expressive culture and representational practices. IC.

**ATH 305. Latin America: Anthropological Perspectives. (3) (MPT)**

Survey of the culture areas of Middle and South America including prehistory, ethnology, linguistics, and contemporary developments.

**ATH 306. Russia and Eurasia: Anthropological Perspectives. (3) (MPT)**

Description and analysis of the cultures of Russia and Eurasia with a focus on non-Russian peoples and contemporary survival.

**ATH 307. The Middle East: Anthropological Perspectives. (3) (MPF, MPT)**

Survey and analysis of various cultural groups in contemporary Southwest Asia and North Africa. IIIB. CASW-C.  
Cross-listed with BWS.

**ATH 308. South Asia: Anthropological Perspectives. (3)**

Anthropologically examines contemporary South Asian societies focusing on ethnographic accounts of how people understand and manipulate their social, economic, political, ideological, religious, and technical resources to solve local and universal human problems within a context of colonialism and globalization.

**ATH 312. North American Archaeology. (3)**

Explores the major debates in the archaeology of North America from its first peopling through the colonial period up to the present, emphasizing intercultural connections and the diversity and variability of the major cultural traditions. Variable topics include indigenous communities; archaeology of slavery; collecting, looting, and museum representation; and cultural resource legislation.

**ATH 313. Latin American Archaeology. (3) (MPF)**

Explores the archaeology of Central and South America through topics such as the Aztec temples, Maya hieroglyphs, and Inka Imperial roads. Students learn about Latin America from the first people to European colonialism and beyond through scientific investigation and hands-on work with artifacts. IC, IIC, IIIB. CASC.

**ATH 314. Old World Archaeology. (3)**

Introduction to the archaeology of Africa and Eurasia in premodern contexts in order to understand ancient lifeways and cultural interactions in the Old World. Variable topics may include the emergence of modern humans in Africa; the development of complex societies in ancient Mesopotamia and Egypt; the role of ritual and symbolism in ancient China; or the meaning of social violence in Western Europe.

**ATH 325. Identity, Race, Gender, Class. (3) (MPT)**

Develops conceptual tools and critical perspectives that enable students to better understand and analyze the processes through which identities are constructed and experienced. Learning activities facilitate analysis of individual identities as experienced through the life cycle and across diverse cultural and subcultural contexts, and build a systematic understanding of the processes and dynamics through which identities and identity groups develop and interact. IC. CAS-C.

Cross-listed with BWS/LAS/WGS.

**ATH 329. Religions of Africa. (3) (MPT)**

Indigenous African religious traditions with consideration of their contemporary interaction with other traditions. CAS-C.

**ATH 331. Social Anthropology. (3) (MPT)**

Exploration of classic and contemporary approaches to social practices and institutions, including kinship, law, political economy, religion and ritual, gender, identity, mobility and violence. CAS-C.

**ATH 335L. Multiculturalism in Europe: Anthropological Perspectives. (3)**

Explores diverse expressions and challenges of multiculturalism in Europe. Readings and class discussions develop anthropological tools and critical perspectives to better understand processes through which identities are constructed and experienced, and to analyze political, economic and historical dynamics through which identity groups develop and interact. Attention is given to the construction of national identities and unmarked racial, religious and sexual majorities against which minority experiences play out, and to understanding politics of difference, ideologies of integration, and processes of cultural change in particular European contexts.

**ATH 340. Internship. (0-20)****ATH 345. Global Media, Ethnography, and Film. (3)**

Explores anthropological and ethnographic frameworks to the study of global media flows across boundaries, borders, and time. Examines the ways in which mediated performances, texts, and images are instrumental in building and negotiating communities, cultures, and identities.

Cross-listed with FST.

**ATH 348. Introduction to Medical Anthropology. (3)**

Topics and theoretical approaches of medical anthropology. Explores why disease emerges within particular socio-cultural settings and how people in those settings understand and treat their ills. Topics include historical and current pandemics, culturally specific illnesses, local medical practices, and individuals' struggles with particular ills.

**ATH 355. Paleoanthropology. (3)**

In-depth survey of the human fossil record as interpreted in the light of modern evolutionary theory. Taught alternate years.

Prerequisite: ATH 255 or permission of instructor, or BIO 206.

**ATH 358. Travelers, Migrants, and Refugees: Transnational Migration and Diasporic Communities. (3) (MPF, MPT)**

Explores global flows of people across national and cultural boundaries; investigates ways dispersed people build and maintain social networks, communities, and identities. IIIB. CAS-C.

**ATH 361. Language and Power. (3) (MPF, MPT)**

Explores the role of linguistic performance, verbal art, and other communicative practices in negotiating power and disparate access to opportunities and resources within and among social groups. Special attention will be given to how identities, ideologies, and worldviews are linguistically created, recreated, and challenged in global contexts. IIIB. CAS-C.

**ATH 364. Language and Culture in Native North America. (3) (MPT)**

Explores the multifaceted communicative and sociolinguistic practices of indigenous peoples of North America in historical and contemporary contexts. Topics include linguistic and cultural vitality; performance, popular culture, and ethnopoetics; identities and language ideologies; and emergent discursive practices. Recommended prerequisite: ATH 265 or ATH/ENG/GER 219.

**ATH 366. African Oral Traditions. (3) (MPT)**

Explores interactions between language and culture among African peoples, especially sub-Saharan peoples. Surveys the indigenous languages of Africa, explores African meaning systems, and examines the uses of language in African societies.

**ATH 368. Key Questions in Psychological Anthropology. (3)**

Psychological anthropology focuses on understanding the individual within society, and thus the ways in which culture constructs and is constructed by the individual. As a subfield, psychological anthropology provides theoretical frameworks widely used throughout anthropology and perspectives useful in cross-cultural and clinical psychology. Through this course, students will have opportunities to analyze the role of culture in individual well-being, and to engage with the key questions and the associated key theoretical concepts that are driving the field forward.

**ATH 377. Independent Studies. (0-5)****ATH 378. Doctors, Clinics, and Epidemics. (3)**

Explores the contemporary social, cultural, and communicative practices of biomedicine, and links these to the responses to epidemics and social hierarchies that form its European roots. Engages various understandings of clinical language, communication, and structural inequities that challenge the efficacy of medical practice.

**ATH 384. Anthropology of Capitalism: Russia. (3) (MPT)**

Introduces students to the comparative study of capitalism as social and cultural form. Topics to be covered include: exchange, labor, consumer society, gender, perceptions of time and space, "transitions" to capitalism, financial markets.

**ATH 388. Culture, Art, and Artifacts. (3)**

Explores the place of artistic expression and related material culture in diverse socio-cultural contexts. It uses various analytical approaches to address the cultural aspects of origins, function, symbolism, gender, psychology, and change emphasizing non-western cultures.

**ATH 390. Horizons Of Anthropology. (1-3; maximum 12)**

Seminar focused on recent anthropological research.  
Prerequisite: permission of instructor.

**ATH 395. Primate Biology and Behavior. (3)**

Taxonomic survey of the primate order including anatomy, distribution, adaptation, and morphological characteristics of various taxa. Selected primatological topics including primate conservation, reproduction and development, manipulation, and tool use. Recommended prerequisite: ATH 255 or BIO 206; junior or senior status; or permission of instructor.  
Cross-listed with BIO.

**ATH 403/ATH 503. Anthropology of Religion. (3)**

Examines the study of religion anthropologically and ethnographically, exploring topics of historic interest such as conversion and pilgrimage and emerging debates such as the globalization of religion. Emphasizes the power of religion in human cultural life and its relationship to other social institutions through the study of indigenous religious traditions and major world religions. Introduces anthropological paradigms including cultural materialism, interpretive approaches, structuralism, and religion as an evolutionary adaptation.  
Prerequisite: ATH 155, 175, 185, 231 or 301.

**ATH 405/ATH 505. Food, Taste, and Desire. (3) (MPF)**

Explores food consumption as a meaningful practice embedded in local, national, and global relations and in social, economic, and political contexts. Topics include history of food consumption; food and power; nation, the state, and food; gender, sexuality and consumption; consumption, marketing, and subjectivity; globalization; hunger and memory; need, taste, and desire; and food aesthetics, moralities, and poetics. IIC, IIIB. CAS-C.

**ATH 411. Applied Anthropology. (3) (MPT)**

New possibilities for using anthropological principles and methods in contemporary nonacademic settings.

**ATH 415. Field Methods in Archaeology. (1-6; maximum 6)**

Practicum course in field and laboratory methods in archaeology. Variable geographic location, content and credit hours.

**ATH 416. Applying Archaeology. (3)**

Capstone with variable topics and experiential learning in SW Ohio on the theories, methods, and practices of archaeology, including research design and field methods; material culture studies; and archaeology's role in cultural heritage projects and debates.

**ATH 421/ATH 521. Senior Seminar in Anthropology. (3) (MPC)**

Focuses on key issues in anthropology, including a review of the tools of the discipline and anthropology's role in the future.  
Prerequisite: ATH 212, 231, 255, and ATH 265, senior status and anthropology major, or permission of instructor.

**ATH 425/ATH 525. Ethnographic Field Methods. (3)**

Organization, observation, measurement, and strategy in ethnographic field research.

**ATH 426. Field Research. (4-6; maximum 6) (MPF, MPC)**

This experiential, off-campus capstone allows students to conduct ethnographic fieldwork in local, regional, or global practicum contexts. Students will learn to design ethnographic research, collect data using ethnographic methods, conduct qualitative analysis of original data, and create ethnographic representations based on original data. In addition, students will gain experience with formal research ethics training. IIIB, IC.  
Prerequisite: at least three ATH credit hours or permission of instructor.

**ATH 428. Anthropology of Women's Health. (3)**

Explores how culture shapes women's bodies and health from a cross-cultural perspective; topics include cross-cultural examinations of women's life-cycle, illnesses, bodily violations, and notions of beauty.  
Prerequisite: ATH 155 or 175 or 185, or permission of instructor.

**ATH 431/ATH 531. Archaeology of Power. (3) (MPT)**

Examines social and political power in the past, from small scale societies to states and global systems. Explores theoretical approaches to diversity and inequality with case studies from around the world and throughout history that include authority, gender, race, religion, class, colonialism and empire. IC.  
Cross-listed with CLS 431/CLS 531.

**ATH 432/ATH 532. Secrecy and Statecraft: Spies, Censors, and Prisoners in Authoritarian and Democratic Societies. (3) (MPT)**

Explores secrecy and statecraft through the anthropology of secrecy in modern authoritarian and democratic societies, including state security regimes, state and market surveillance, nuclear and scientific secrets, and censorship. It also explores popular resistance to state power from concentration camp secrets, anti-state jokes, anti-nuclear and other contemporary anti-secrecy activism. Case studies primarily include the Soviet Union, socialist Eastern Europe, and the USA. CAS-C.

**ATH 436/ATH 536. Havighurst Colloquium. (3)**

Exploration of significant issues related to Russian and post communist affairs. Each semester focuses on a central theme or topic that is examined through presentations, readings, research, discussion, and writing. May be repeated once for credit with only 3 hours counting towards the history major.

Cross-listed with CLS 436; HST 436/HST 536/536; RUS 436/RUS 536/536; POL 440/POL 540/540 and REL 470A.

**ATH 448. Developing Solutions in Global Health. (3) (MPC)**

Global health is the study of illness and health as a consequence of bio-cultural processes that are both local and global. This is a transdisciplinary capstone encouraging teamwork to understand the complexities of and develop a grant proposal to address a student-identified global health problem.

Prerequisite: junior or senior status.

**ATH 465/ATH 565. Ethnography of Communication. (3)**

Practicum course on the conception, implementation, and analysis of original field research in the ethnography of communication. Provides training in research design, ethnographic and sociolinguistic methods, and multimedia approaches to understanding how individuals and communities negotiate their place in social and cultural worlds through everyday communicative practices.

Prerequisite: ATH 219/ENG 219/GER 219.

**ATH 471/ATH 571. Ecological Anthropology. (3) (MPT)**

Survey of ecological methods and models used by anthropologists in the analysis of cultural-environmental relations and in conservation planning.

Prerequisite: ATH 155, 175 or 185, or permission of instructor.

**ATH 477. Independent Studies. (0-5)****ATH 480. Independent Reading for Departmental Honors. (1-6)****ATH 482. Russian, Eastern European and Eurasian Summer Workshop. (3-6; maximum 12)**

A three-week study tour (taught in English) will be an intensive study of the history, politics, and culture of this area. The location of the trip may vary from year to year. Students examine the intersection of religion, literature, film, visual arts, history, politics and/or architecture. The tour will visit major historical and cultural sites and hear lectures from local specialists. Recommended prerequisites: REL/RUS 133 or ATH/HST/REL/RUS 254.

**ATH 491. Anthropology Practicum. (1-4; maximum 8)**

Taken in conjunction with a methods course, a fieldschool, or an on-site research-based learning opportunity in anthropology. Students conduct supervised research-oriented projects such as ethics, research design, internships, ethnographic participant-observation, site analysis, and data analysis. This course is a flexible offering so that faculty and students can develop learning opportunities in response to current and changing issues and needs in the discipline. Permission of the instructor.

**ATH 496. Observing Primate Behavior. (4)**

Theory and method in the study of primate behavior. Applied behavioral primatology entails original research projects done at an appropriate venue, e.g., Cincinnati ZOO. CAS-QL.

Prerequisite: ATH 255 or BIO 206, junior or senior status, or permission of instructor.

**ATH 497. Socio-Ecology of Primates. (3)**

Ethology and ecology of living prosimians, monkeys, and apes from comparative and evolutionary perspectives emphasizing field studies of natural populations. Recommended prerequisite: ATH 255 or BIO 206, junior or senior status, or permission of instructor. Cross-listed with BIO.

**ATH 498. Evolution of Human Behavior. (3) (MPC)**

Ethology and ecology of *Homo sapiens*, from comparative and evolutionary perspectives, drawing on primatology, palaeo-anthropology, and sociocultural studies of traditional societies. Prerequisite: ATH 255 or BIO 206, junior or senior status, or permission of instructor. Cross-listed with BIO.

**ATH 670. Independent Study in Anthropology. (1-5; maximum 12)**

Advanced independent study in selected topics of current interest in anthropology.

**ATH 677. Independent Studies. (0-5)**

## Biological Sciences (BSC)

**BSC 292. Applied Biology Sophomore Seminar: Planning Your Future in Applied Biology. (1)**

This is a one-credit course designed for sophomores majoring in Applied Biology. Students will explore career options in applied biology and professional fields, while completing a 10-hour online training course leading to certification by the Occupational Safety and Health Administration (OSHA10). Students will review internship and undergraduate research opportunities, and will attend at least one public biology seminar, workshop or forum. Students will complete a plan of study; a resume; and an application for an internship, co-op or independent research experience.

Prerequisite: Completion of BIO 115 or BIO 116, or permission of instructor.

**BSC 313. Microbial Diversity. (4)**

Molecular, biochemical and evolutionary diversity of the microbial world, including Bacteria, Archaea, and Eukaryotes. Taught in Hamilton and Middletown only.

Prerequisite: BIO/MBI 116 or MBI 161 and BIO 203 or permission from instructor.

**BSC 321. Research in Applied Biology. (1-3; maximum 3)**

Analysis of issues and concepts in applied biology utilizing laboratory, field, and computational techniques. Only a total of three semester hours of BSC 321 can be used to fulfill Professional Courses requirement for Applied Biology majors. EL.

Prerequisites: BIO 115 and BIO 116, and permission of instructor.

**BSC 340. Internship. (0-20)****BSC 415. Approaches to Problem Solving and Research in Applied Biology Capstone. (3) (MPC)**

An exploration into the manner in which we seek solutions to real world problems and the way in which we answer scientific questions in the biological sciences. The specific focus will vary and will either be related to the environment or to human health.

Prerequisite: Senior level standing and have completed at least 9 credit hours at the 200 level or above in natural sciences.

**BSC 416. Applications of Biotechnology to Human Health: Concepts and Issues. (3) (MPC)**

An in-depth analysis that focuses on the ethics and trends in biotechnology and its applications to human health. Selected topics in science and technology that drive innovative approaches to human healthcare as they relate to disease and therapies to disease will be covered; including, but not limited to, drug development, bioinformatics, stem cell therapies, vaccines, DNA diagnostics, and biotechnology in agriculture/genetically modified foods.  
Prerequisites: BIO 342 and BIO 464/BIO 564, plus one year college chemistry.

**BSC 475. Capstone in Environmental Biology. (3) (MPC)**

The environment affects humans in many ways, so changes to the environment can alter our well-being (e.g., health, standard of living). This course will explore the causes of environmental problems resulting from anthropogenic activities, and the strategies that can be used to mitigate or manage these issues. An interdisciplinary approach will be taken, emphasizing the interplay among the ecological, political, social, cultural and economic aspects of environmental problems. Students will be required to develop and critically evaluate effective strategies for abating environmental problems of local, national or global concern.  
Prerequisites: BIO 209 or 209W and junior standing; or permission of instructor.

**BSC 492. Applied Biology Senior Seminar: Becoming a Professional Biologist. (1)**

This is a one-credit course designed for seniors majoring in Applied Biology. Students will prepare to enter the workforce as professional biologists or continue on to postgraduate training, while completing a 40-hour online training course leading to certification by the Occupational Safety and Health Administration. Emphasis will be placed on understanding emerging issues in biology, obtaining employment or further education, and integrating the Tool requirement into a career in Applied Biology.  
Prerequisites: Completion of at least 24 hours of biological sciences courses (BIO, BSC, MBI) and senior standing, or permission of the instructor.

## Applied Communication (APC)

**APC 201. Introduction to Health and Risk Communication. (3)**

Basic theories and approaches to studying environmental health and risk communication. Possible topics include doctor/patient communication, organizational communication in health contexts, health communication campaigns, and organizational responses to health and scientific crises.

**APC 311. Science and Medicine in Public Communication. (3)**

Considers lay and public understandings of medical and scientific research including the importance of framing and definition in mainstream discourse and its effects on scientific research and public policy and health education programs.  
Prerequisite: sophomore standing.

**APC 312. Computer-mediated Communication and Social Media. (3)**

The purpose of this class is to teach you theories and skills related to successful communication in a society in which communication is often facilitated by new technologies.  
Prerequisite: minimum sophomore standing.

**APC 332. Argumentation & Debate. (3)**

Study of the theory and practice of constructing, analyzing, and evaluating arguments. Consideration given to various debate formats as models of argumentation.

**APC 336. Advanced Interpersonal Communication. (3)**

In-depth examination of interpersonal communication theories and research. Particular emphasis placed on the role of communication through the life cycle of relationships, from their initiation and maintenance to their deterioration or escalation.  
Prerequisite: STC 136 or permission of instructor.

**APC 340. Internship. (0-20)****APC 341. Methods of Rhetorical Criticism. (3)**

Examination of various methods related to the description, analysis, and interpretation of communicative acts. Rhetorical approaches treated include neo-Aristotelian, dramatic, fantasy theme, generic, and narrative methods.

**APC 363. Advanced Methods in Applied Communication. (3)**

Focuses on qualitative and interpretive methods of communication research. Possible topics include interviewing, ethnography, case studies, action research, textual and media criticism, interpretivist epistemology, and research ethics.  
Prerequisite: ENG 111 or equivalent.

**APC 377. Independent Studies. (0-5)****APC 401. Applied Communication Capstone. (3) (MPC)**

This course brings together students' study of health communication by applying their understanding of health communication to produce an original product/outcome within the context of a course theme. This product/outcome can include a health campaign, analysis of health messages, a collaborative project, or other product/outcome deemed appropriate by the instructor and one situated within the course theme (determined by instructor).  
Prerequisites: APC 201, APC 363 STC 262 and senior standing.

**APC 428. Communication in Conflict Management. (3)**

Examination of the role of communication in the management of conflict in various contexts. Stresses relevant theories and research as a basis for analyzing and understanding diverse types of conflict.

**APC 438. Political Communication. (3)**

Study of communication methods used in political campaigns. Special consideration of such aspects of political communication as analyzing audiences, structuring messages, developing stock speeches, political debating, selecting media, and interpersonal communication in political campaigns.

**APC 450. Topics in Applied Communication. (3; maximum 9)**

Study or research of issues and problems associated with communication under the guidance of a faculty member of the department.  
Prerequisite: major status or permission of instructor.

## Applied Social Research (ASO)

### **ASO 201. Introduction to Applied Social Research. (3) (MPF)**

Social scientists (anthropologists, geographers, psychologists, sociologists, etc.) conduct empirical research in order to explain our social world. ASO 201 is the first course in a sequence of three foundational courses (ASO 201, ASO 301, ASO 401) that will provide students with the knowledge and skills they need to design, conduct, and interpret applied social research. In ASO 201, students gain an overview of the multiple theoretical approaches guiding social research. Students will examine approaches from multiple disciplines within the social sciences to determine how research is conducted within these fields to explore, understand, and implement practical solutions to important social issues. IIC, IIIB, IC.

Prerequisite: at least one 100 level social science course.

### **ASO 211. Career Development in Psychology & Related Social Sciences. (2)**

What can you do with a degree in Psychological Science, Psychology, or a related Social Science major? Whether you plan to enter directly into the workforce after college or continue in graduate school in psychological science or a related field, this course will help you to explore careers, design a vocational plan, set goals, and develop strategies to make you ready for your professional life after college. Helping you develop professional competencies, this course will look at three key areas for you to focus upon while you are an undergraduate student: the ATTITUDE you need to have toward your studies, the KNOWLEDGE you need to be competitive, and the SKILLS you should attain to be marketable.

Cross-listed with PSS 211.

### **ASO 277. Independent Studies. (0-5)**

#### **ASO 301. Applied Social Research Methods. (4)**

Social scientists (anthropologists, geographers, psychologists, sociologists, etc.) conduct empirical research in order to explain our social world. ASO 301 is the second in a sequence of three foundational courses (ASO 201, ASO 301, and ASO 401) designed to provide students the knowledge and skills they need to design, conduct, and interpret applied social science research. In ASR 201, students learned the theoretical approaches guiding social research. In ASO 301, students are introduced to the processes and skills required to conceive, design, conduct, analyze, interpret, visualize, and report results from social science research. Students will learn how to formulate research questions, identify study variables, employ theories to explain the relationship between variables, and to collect, analyze, and report data using both qualitative and quantitative research methods.

### **ASO 340. Internship. (0-20)**

### **ASO 377. Independent Studies. (0-5)**

#### **ASO 401. Applied Social Research Capstone. (3) (MPC)**

The final capstone course in a sequence of three foundational courses (ASO 201, ASO 301, and ASO 401) designed to provide students the knowledge and skills necessary to design, conduct, and interpret applied social science research. In ASO 401, students will demonstrate their integrated knowledge and professional growth by completing an individualized research project that draws from an array of applied social research methods. After successfully completing the capstone course, students will understand what is expected of an applied social research scientist and will have the skills to confidently design and implement appropriate research methods essential for graduate studies or future employment.

Prerequisite: ASO 301.

### **ASO 477. Independent Studies. (0-5)**

## Arabic (ARB)

#### **ARB 101. Elementary Arabic I. (4)**

Study of the Arabic alphabet and sounds system. Builds a foundation of speaking, listening, reading, and writing skills, with culturally appropriate behavior. For students with no prior study of Arabic.

#### **ARB 102. Elementary Arabic II. (4)**

Continues to build communication skills in spoken and standard Arabic. Develops a balanced knowledge of listening, speaking, reading and writing skills.

Prerequisite: ARB 101 or equivalent.

### **ARB 177. Independent Studies. (0-5)**

#### **ARB 201. Intermediate Modern Arabic. (3)**

Strengthens listening comprehension, speaking, reading and writing skills in spoken and standard Arabic. Builds knowledge of Arabic language and culture.

Prerequisite: ARB 102 or equivalent.

#### **ARB 202. Intermediate Modern Arabic. (3)**

Builds a solid intermediate level of skill in Arabic so that students can read and discuss topics of general interest, including aspects of Arab culture.

Prerequisite: ARB 201 or permission of instructor.

#### **ARB 230. Topics in Arabic Literature in Translation. (3)**

Examines travel as a major theme in Arabic literature from the classical era to modern time. It considers four types of travel: the nomadic tradition, voyages of pilgrimage and discovery, encounters with outsiders, and Arab diasporas. All works read in English translation.

### **ARB 277. Independent Studies. (0-5)**

#### **ARB 301. Advanced Arabic. (3)**

Focuses on advanced reading and discussion of literary and cultural topics that range from the classical period to the present day. Integrates comprehension and communication skills in spoken and standard Arabic.

Prerequisite: ARB 202 or permission of instructor.

**ARB 302. Advanced Arabic. (3)**

Focuses on advanced reading and discussion on literary and cultural topics that range from the classical period to the present day. Integrates comprehension and communication skills in spoken and standard Arabic.

Prerequisite: ARB 301 or permission of instructor.

**ARB 311. Media Arabic. (3)**

Focuses on developing student's ability to understand and use authentic materials from electronic, broadcast, and print media.

Prerequisite: ARB 301 or permission of instructor.

**ARB 340. Internship. (0-20)****ARB 377. Independent Studies. (0-5)****ARB 401. Advanced Arabic Conversation and Composition. (3)**

Develops abilities to communicate orally and in writing through reading and discussion of literary and cultural topics from the classical period to the present day. Integrates comprehension and communication skills in spoken and standard Arabic.

Prerequisite: ARB 302 or permission of instructor.

**ARB 477. Independent Studies. (0-5)****ARB 677. Independent Studies. (0-5)****ARB 680. Directed Study in Arabic Language and Literature. (1-4; maximum 12)**

Prerequisite: Graduate Standing and permission of department chair and instructors.

## Architecture & Interior Design (ARC)

**ARC 101. Beginning Design Studio. (5)**

Introduction to spectrum of influences which determine environmental form. Emphasis placed upon development of understanding and appreciation of our man-made environment. Methods of communication and development of visual vocabulary capable of understanding and expressing three-dimensional form and space emphasized. Open to majors only.

**ARC 102. Beginning Design Studio. (5)**

Introduction to spectrum of influences which determine environmental form. Emphasis placed upon development of understanding and appreciation of our man-made environment. Methods of communication and development of visual vocabulary capable of understanding and expressing three-dimensional form and space emphasized. Open to majors only.

**ARC 103. Shop Methods and Materials. (1)**

An exploration and study of building materials and the tools and techniques used to shape them.

Co-requisite: ARC 101, ARC 501, ARC 601, or ARC 701.

**ARC 105. Introduction to Architecture. (3)**

Introduction to spectrum of influences which determine environmental form. Emphasis placed upon development of understanding and appreciation of our man-made environment. Methods of communication and development of visual vocabulary capable of understanding and expressing three-dimensional form and space emphasized. Course supports transfers into Architecture + Interior Design, and others interested in exploring Architecture + Interior Design as majors.

**ARC 107. Global Design. (3) (MPF)**

Introduces the role and influence of design on people and environments within a contemporary global context. Open to students in all majors. IIA, IIIB.

**ARC 113. Methods of Presentation, Representation and Re-Presentation. (2)**

Introduction to various graphic media as tools of environmental design. Emphasis is placed on use and integration of traditional and digital media as tools of 3-dimensional analysis and synthesis in design process and representation. Includes orthographics, perspective, sketching, drafting, photography, rendering, and web design. Open to majors only.

**ARC 114. Methods of Presentation, Representation and Re-Presentation. (2)**

Introduction to various graphic media as tools of environmental design. Emphasis is placed on use and integration of traditional and digital media as tools of 3-dimensional analysis and synthesis in design process and representation. Includes orthographics, perspective, sketching, drafting, photography, rendering, and web design. Open to majors only.

**ARC 177. Independent Studies. (0-5)****ARC 188. Ideas in Architecture. (3) (MPF)**

Study of the relationship between architecture and the cultural, social, and environmental contexts in which it exists through selected historical and contemporary examples. Primarily intended for non-majors. (Does not meet requirements for major in Architecture or Interior Design). IIA, IIB. CAS-B.

**ARC 201. Architecture Studio. (5)**

Design of the environment as a creative process requiring a language and methods similar yet distinct from other arts. Design projects in man-made environment at different scales, and in natural and man-made environment interface. Introduction to paths in the environmental design curriculum and career opportunities. Open to majors only.

Prerequisite: ARC 101-102.

**ARC 202. Architecture Studio. (5)**

Design of the environment as a creative process requiring a language and methods similar yet distinct from other arts. Design projects in man-made environment at different scales, and in natural and man-made environment interface. Introduction to paths in the environmental design curriculum and career opportunities. Open to majors only.

Prerequisite: ARC 101-102.

**ARC 203. Interior Design Studio. (5)**

Introductory problems in interior design integrating aesthetic, social, technical, and graphic communication requirements. Emphasis on design theory, process, programming, and human factors. Focus on residential and small-scale commercial building types. Open to majors only.

Prerequisites: ARC 101-102.

**ARC 204. Interior Design Studio. (5)**

Introductory problems in interior design integrating aesthetic, social, technical, and graphic communication requirements. Emphasis on design theory, process, programming, and human factors. Focus on residential and small-scale commercial building types. Open to majors only.

Prerequisites: ARC 101-102.

**ARC 211. Introduction to Landscape and Urban Design. (3)**

Introduction to principles and elements of the larger environment: landscape and urban design. Co-requisite for architecture majors: ARC 202; co-requisite waived for nonmajors.

**ARC 212. Principles of Environmental Systems. (3) (MPF)**

Understanding of the basic principles that inform the design of environmental and structural systems and their integration into building design. V.

Co-requisite: ARC 211, ARC 201 or 203; co-requisite and prerequisite waived for nonmajors.

**ARC 213. Graphic Media III. (2)**

Introduction to the use of graphic media as tools of architectural design. Emphasis placed on the integration of traditional and digital media in the design process. Includes CAD, rendering techniques, perspective, sketching and modeling.

Prerequisites: ARC 113 and ARC 114.

Co-requisite: ARC 201 or 203.

**ARC 214. Graphic Media IV. (2)**

Introduction to the use of graphic media as tools of architectural design. Emphasis placed on the integration of traditional and digital media in the design process. Includes 3-D modeling and rendering software, advanced rendering techniques, perspective sketching and modeling.

Prerequisites: ARC 113, ARC 114, and ARC 213.

Co-requisite: ARC 202 or 204.

**ARC 221. History of Architecture I. (3) (MPF)**

Thorough and systematic survey of the history of architecture, urban design, and allied arts across global contexts. Non-majors welcome. IIA, IIB.

**ARC 222. History of Architecture II. (3) (MPF)**

Thorough and systematic survey of the history of architecture, urban design, and allied arts across global contexts. Non-majors welcome. IIA, IIB.

**ARC 225. Design: Behavior, Perception, Aesthetics. (3)**

Study of perception and psychological response to the built environment. Emphasis on cultural differences, design for special populations, ergonomics, and anthropometrics.

**ARC 277. Independent Studies. (0-5)****ARC 301. Architecture Studio. (6)**

Study of design processes and methods of implementation in the solution of architectural and other environmental design problems at an intermediate level of complexity.

Prerequisite: ARC 201-202; open to majors only.

**ARC 302. Architecture Studio. (6)**

Study of design processes and methods of implementation in the solution of architectural and other environmental design problems at an intermediate level of complexity.

Prerequisite: ARC 201-202; open to majors only.

**ARC 303. Interior Design Studio. (6)**

Intermediate problems in interior design integrating aesthetic, social, technical, and graphic communication requirements. Emphasis on retail, institutional, hospitality, and preservation and reuse project types.

Prerequisite: ARC 203-204 or ARC 201-202; open to architecture majors with approval of instructor.

**ARC 304. Interior Design Studio. (6)**

Intermediate problems in interior design integrating aesthetic, social, technical, and graphic communication requirements. Emphasis on retail, institutional, hospitality, and preservation and reuse project types.

Prerequisite: ARC 203-204 or ARC 201-202; open to architecture majors with approval of instructor.

**ARC 309. Furniture Design and Construction. (3)**

Exploration of the process of designing, detailing, and constructing furniture and millwork. Introduction to the materials of architectural millwork and the technologies of construction. Studio exercises provide experience in both design and execution of furniture and millwork.

Prerequisite: third-year standing or approval of instructor; required for interior design majors; open to nonmajors with approval of instructor.

**ARC 321. History of Interiors. (3)**

Thorough and systematic survey of interior design from prehistoric times to present. Emphasis on the social and cultural influences on the design and evolution of interior environments.

Prerequisite: ARC 221-222.

**ARC 340. Internship. (0-20; maximum 3)****ARC 377. Independent Studies. (0-5)****ARC 401. Architecture Studio. (6)**

Study of design processes and methods of implementation in the comprehensive solution of complex environmental design problems. Prerequisite: ARC 301-302; open to majors only.

**ARC 402. Architecture Studio. (6)**

Study of design processes and methods of implementation in the comprehensive solution of complex environmental design problems. Prerequisite: ARC 301-302; open to majors only.

**ARC 402C. Senior Studio Capstone Experience. (6) (MPC)**

This is a culminating studio in which the exploration of professional issues is placed in dialogue with questions raised by liberal learning. Students will be expected to examine how technical and aesthetic issues interact with professional, social, political, and cultural issues. A weekly seminar component will treat a common set of readings selected to help students compare their discoveries and interrogate their perceptions about their work.

Prerequisite: Intended for architecture majors who have completed 7 semesters of design studio; students with extensive training and background in related design areas may petition the studio faculty for admission and selection will be based on the strength of an interview and a design portfolio.

**ARC 403. Interior Design Studio. (6)**

Comprehensive studio integrating all programmatic, technical, and professional requirements of a complex project. Emphasis on space planning, systems furniture design, and the preparation of construction drawings and specifications for a commercial office project. Open to architecture majors with approval of instructor.

Prerequisites: ARC 303, 304 or ARC302.

**ARC 404/ARC 504. Seminars. (1-3)**

Courses in three of the primary curricular areas: communication process; history and theory; environmental systems/practice. Offerings vary. May include: housing, contemporary architecture theory and practice, vernacular architecture, urban studies, architectural theory, exploration of graphic media, advanced work in building systems, etc. Seminar descriptions available at departmental office during preregistration each semester. Nonmajors encouraged to seek course work in their area of interest.

**ARC 404Y. Mind and Medium. (3)**

Courses in three of the primary curricular areas: communication process; history and theory; environmental systems. Offerings vary. May include: housing, contemporary architecture theory and practice, vernacular architecture, urban studies, architectural theory, exploration of graphic media, advanced work in building systems, etc. Seminar descriptions available at departmental office during preregistration each semester. Cross-listed with IMS.

**ARC 405/ARC 505. Seminars. (1-3)**

Courses in three of the primary curricular areas: communication process; history and theory; environmental systems/practice. Offerings vary. May include: housing, contemporary architecture theory and practice, vernacular architecture, urban studies, architectural theory, exploration of graphic media, advanced work in building systems, etc. Seminar descriptions available at departmental office during preregistration each semester. Nonmajors encouraged to seek course work in their area of interest.

**ARC 405V/ARC 505V. Film & Mixed+MultiMedia. (3)**

The seminar explores the juncture between architectural processes and film (cinema) processes. Influential 35mm and digital films (major releases, international independent works, historic and contemporary classics), and films made with new media technology for global theatrical release are viewed. Films presented explore an unfolding of narrative 'events' through time and consider how we perceive, interpret, understand, and intervene with or create spaces and places.

**ARC 406/ARC 506. Seminars. (1-3)**

Courses in three of the primary curricular areas: communication process; history and theory; environmental systems/practice. Offerings vary. May include: housing, contemporary architecture theory and practice, vernacular architecture, urban studies, architectural theory, exploration of graphic media, advanced work in building systems, etc. Seminar descriptions available at departmental office during preregistration each semester. Nonmajors encouraged to seek course work in their area of interest.

**ARC 408. Interior Design Studio. (6) (MPC)**

Summative studio integrating liberal learning and specialized knowledge in a single, complex project of the student's choosing. Open to interior design majors only. Prerequisite: ARC 403.

**ARC 410/ARC 510. Statics & Strengths of Materials. (3)**

An introduction to two dimensional engineering statics and mechanics of materials. Topics covered include the study of rigid bodies in static equilibrium and the study of the mechanics of materials with emphasis on stress and strain relationships.

**ARC 411/ARC 511. Structural Design. (3)**

Development of basic applied knowledge in the design of structural elements and systems using common constructional materials in accordance with relevant code requirements. Prerequisite: ARC 410/ARC 510.

**ARC 412/ARC 512. Structural Design. (3)**

Development of basic applied knowledge in the design of structural elements and systems using common constructional materials in accordance with relevant code requirements. Prerequisite: ARC 410/ARC 510.

**ARC 413/ARC 513. Environmental Systems I. (3)**

Understanding of the basic principles that inform the design of environmental systems, with an emphasis on the building envelope and energy-efficient systems, heat gain and loss, alternative energy systems, the design and integration of climate control systems (heating, ventilating, air-conditioning), and plumbing and fire prevention systems.

**ARC 414/ARC 514. Environmental Systems II. (3)**

Understanding of the basic principles that inform the design of environmental systems, with an emphasis on lighting and power/data systems. Course topics include acoustics, life-safety systems, and building service systems.

**ARC 417/ARC 517. Architectural Materials. (3)**

Introduction to materials and criteria for selection in architectural structures. Prerequisite: ARC 212.

**ARC 418/ARC 518. Construction Methods. (3)**

Systematic approach to construction. Investigation of systems, concepts, and system building. Prerequisite: ARC 417/ARC 517.

**ARC 419. Materials of Interior Design. (3)**

Exploration of the various materials and finishes available to the interior designer, their inherent characteristics, and the ways in which they can be combined into construction assemblies. Emphasis on interior finish materials and textiles. Prerequisite: ARC 417/ARC 517 or permission of instructor.

**ARC 424/ARC 524. Seminar on Modern Architecture in Latin America. (3)**

The course combines general background readings on the subject with specific readings on a selected group of countries, architects and projects based on a thematic organization. The faculty presents introductory lectures, while class members will present the results of individual and team research and analysis as assigned. Some of the analysis will be graphical, some will be written; all presentations will require illustrations of the work(s) in question. Cross-listed with LAS.

**ARC 426/ARC 526. Architecture and Society. (3) (MPC)**

Examination of the relation between design professions and varying social-economic orders, with special emphasis given to the effect of this order on theory and practice of architecture.

**ARC 427/ARC 527. The American City Since 1940. (3) (MPT)**

Examination of the American city and its physical transformation since 1940. Studies how different experiences of the city are conditioned by issues of class, race, gender, culture. IC.

**ARC 435/ARC 535. Theory and History of Landscape Architecture. (3)**

Examination of the role of the landscape architect in the environmental design process through discussion of history, methodology, and practice of contemporary landscape design.

**ARC 436. Independent Research & Programming. (3)**

Seminar course focuses on the cultivation and discipline necessary to conduct independent research investigating real-world issues from multiple perspectives, including gathering, analyzing, and synthesizing information from various sources in order to develop credible and valid evidence-based arguments (qualitative and quantitative research) as foundation for design decision-making. Course designed in tandem with ARC408 Interior Design Studio; this course provides the research framework to deeply explore a topic, problem, or issue of individual interest, and to develop a formal project proposal (scope, size, scale, location, program, design intention, etc.) that will serve as the basis for a highly developed interior design solution for a complex facility in the spring interior design (capstone) studio.  
Prerequisite: ARC 304.

**ARC 441/ARC 541. Professional Practice. (3)**

Awareness of current legal problems and professional ethics relative to handling building projects from feasibility studies through development drawings, contract documents, bidding, and construction observation.  
Prerequisite: fourth year standing.

**ARC 444. Professional Practice in Interior Design. (3)**

Investigation of processes, practices, and ethics involved in interior design profession. Course emphasizes integration of specifications, cost estimating, office and project management, and contract writing into the design process.  
Prerequisite: fourth-year standing or approval of instructor.

**ARC 451/ARC 551. Contemporary Architectural Theory and Practice. (3)**

This seminar explores and critiques contemporary theories and practices that inform current domestic and global architectural works by considering the intellectual, cultural, and technological forces that shape them.

**ARC 477. Independent Studies. (0-5)****ARC 490/ARC 590. Independent Studies. (1-3)****ARC 581. Architectural Design Studio. (6)**

Design Studio for M.Arch. Graduate Students.

**ARC 582. Architectural Design Studio. (6)**

Design Studio for M.Arch. Graduate Students.

**ARC 583. Architectural Design Studio. (6)**

Design Studio for M.Arch. Graduate Students.

**ARC 601. Architecture Studio. (6)**

Professional-level architectural studio; variable topics.

**ARC 602. Architecture Studio. (6)**

Professional-level architectural studio; variable topics.

**ARC 613. Graphic Media II. (2-3; maximum 3)**

Course taken in the Fall in conjunction with ARC582 studio. Objective includes the full breadth of design communication techniques such as hand-based processes, digital 2D processes and 3D modeling and introduces modeling software, as well as time-based processes such as video, animation and web presentation techniques. In addition to skill based learning objectives, ARC613 supports architecture design communication based in history and contemporary theory. The graphic media sequence of ARC 612, ARC 613, ARC 614 encompass creative expressivity, design analysis and representation through analytical, orthographic, and speculative drawings, media, and models.

**ARC 614. Graphic Media III. (2-3; maximum 3)**

Course completed in Spring in conjunction with ARC583 studio. Objective continues the full breadth of design communication techniques such as hand-based processes, digital 2D processes and 3D modeling and modeling software, as well as time-based processes such as video, animation and web presentation techniques. In addition to skill based learning objectives, ARC614 supports architecture design communication based in history and contemporary theory. The graphic media sequence of ARC612, ARC613, ARC614 encompass creative expressivity, design analysis and representation through analytical, orthographic, and speculative drawings and models.

**ARC 621. History of Architecture I. (3)**

Thorough and systematic survey of the history of architecture, urban design, and allied arts across global contexts.

**ARC 622. History of Architecture II. (3)**

Thorough and systematic survey of the history of architecture, urban design, and allied arts across global contexts.

**ARC 634. Architectural Theory. (3)**

Introduction to techniques and procedures involved in methodical architectural research. Each student undertakes research project on a particular aspect of design. Open to majors only.

**ARC 636. Design & Research Methods. (3)**

Essentials of architectural and cultural theory and possible research methods in support of theses and scholarly activity.

**ARC 677. Independent Studies. (1-5)****ARC 690. Independent Studies. (1-3)****ARC 699A. Design/Build in Ghana West Afr. (6)**

The Design/Build Workshop is a six week study abroad experience in Ghana, West Africa. A group of between 14-18 students will design a building to meet the needs of a small village near Cape Coast. The design of the structure will take place as the group explores Ghana for two and a half weeks to inform their design. Upon returning to the village the designs are presented, discussed and refined after which construction begins. Led by local, skilled carpenters and masons the students build their design in the remaining three and a half weeks.

**ARC 700. Thesis Coursework. (1-9)**

Students in the M.Arch.II and M.Arch.III programs are required to develop a thesis that contains both a written and a design component. Students pursue this research independently in the context of a committee that typically includes a chair and at least one reader during the summer between the ARC 600 and ARC 700 studio levels and into the fall term. ARC 700 serves as an independent study research course directed by the student's thesis mentor leading toward the development of a professional journal format paper and design project reviewed by a jury of professionals.

**ARC 701. Pre-Thesis Design Studio. (6)**

Comprehensive, professional-level architectural studio with visiting critics. Open to majors only. (6) Students engage in design issues facilitated through a series of thesis preparatory problems during the first half of the term. Preparatory problems are conducted when possible with visiting scholars and may involve travel to engage significant scholars and design problem settings. The second half of the term involves the presentation of the written thesis research document to a panel of nationally recognized critics and a final end of the semester presentation focusing on the student's thesis program and site design.

**ARC 702. Thesis Design Studio. (6)**

Students select a major field of interest and pursue in-depth study and research into special areas of concentration, such as architectural design, environmental controls, architectural structures, or urban and regional planning. Open to majors only.

**Art (ART)****ART 102. Color Theory and Practice. (1.5)**

This course will introduce the students to basic theory, physical properties, and use of color through hands-on projects, readings, lecture, discussion, and critiques. During the 7-week sprint course period, students will develop various short and long-term projects that apply color in 2d, 3d, and 4d mediums. Students will learn how color is made and manipulated, what color looks like, the cultural context that gives color meaning.

**ART 103. Creative Practices in New Technology. (1.5)**

Students will investigate strategies for integrating contemporary media tools into their art and design practice through a series of exercises and projects. As a part of this investigative strategy, students will be introduced to relevant digital technologies for creative output as well as publicizing their artwork such as personal websites, pdf, and social media.

**ART 104. Problem Solving. (1.5)**

This course considers the role and processes of “thinking” as an integral tool of art making, considered in its relation to the training of the hand and the eye. Students will be asked to solve problems, old and new, and to identify and create new problems. Problems are understood here in an abstract sense — they may come in the form of materials, situations, social encounters and more. At the end of the course the student should be able to demonstrate an improved ability to identify and articulate a line of investigation that interests them, along with their motivations and strategies for embarking on that path.

**ART 105. Technical Drawing. (1.5)**

This is an introductory course focusing on the understanding and practical application of drawing from imagination using codified systems of construction and representation. During this course we will gain a working knowledge of how structured systems of drawing can be used to both ideate and communicate ideas. Emphasis is placed on learning the basics of linear perspective and the use of drawing to create objects and environments as an inventive process, the development of technical hand skills, the application of those skills using drawing tools, and the introduction and exploration of digital processes such as computer assisted drawing (CAD).

**ART 106. Introduction to Figure Drawing. (1.5)**

This course offers an introduction to drawing the human form. Through various figure drawings and supplemental studies, students will become familiarized with basic anatomy of the human body; strengthen their understanding of the fundamental techniques of observational drawing such as sight measuring, study of essential structures, proportioning, and compositional sketches; and explore content and form through the study of figure and space as main subject matter. Presentations and critiques will complement the studio practice.  
Prerequisite: ART 121, or permission of the instructor.

**ART 111. Design and Composition. (3; maximum 6)**

This is an introductory course focusing on the design elements and design principals in two, three, and four dimensions. Students will practice idea generation, good craftsmanship, and design vocabulary. Class will consist of discussions, presentations, quizzes, and critiques. Projects will be completed in some of the following media: paper, assemblage, cardboard, plaster, found object, Adobe Photoshop, and Adobe Illustrator. A laptop computer and Adobe Creative Suite/Cloud are required tools for this course.

**ART 121. Observational Drawing. (3; maximum 6)**

This studio course introduces the students to the basic theory and practice of drawing. Through variety of observational drawing activities, students will develop perceptual drawing skills; become versatile with achromatic drawing media such as graphite and charcoal; and gain conceptual and practical understanding of composing two-dimensional space. Lectures, demonstrations, critiques, and critical readings will complement the hands-on-learning process.

**ART 130. Lasercutting and Digital Design for Everyday Use. (1.5)**

This course is an introduction to Computer Aided Design (CAD) processes and lasercutting for non-designers focusing on the techniques involved in the rapidly developing fabrication industry. By using digital fabrication tools and techniques, outcomes will focus on the creation of objects for practical application and everyday use.

**ART 131. 3D Printing and Digital Fabrication for Everyday Use. (1.5)**

This course focuses on learning techniques and design processes using 3D printers and associated computer software. Students will create unique design objects for practical purposes and their personal everyday use. Emphasis is placed on the techniques involved in the rapidly developing fabrication industry focusing on the modeling and creation of three-dimensional forms.

**ART 140. Beginning Glass. (1.5)**

Basic course to provide foundation exercises and instruction in various glass techniques such as kilnforming and some hot glass processes, ranging from fusing and beadmaking to casting.

**ART 145. Beginning Sewing I. (2)**

Introductory course to learn basic machine functions, fabric preparation, applied sewing skills for garment construction, e-pattern use, body measurement, basic closures and finishing.

**ART 146. Beginning Sewing II. (2)**

Continuation of Beginning Sewing 1. Refinement and additional development of machine sewing skills. More advanced stitching techniques, custom pattern development, draping and fitting related to garment construction, design, fitting and finishing.  
Prerequisite: ART 145.

**ART 147. Beginning Art Photography. (1.5)**

Basic 35 mm camera operation, black and white darkroom technique and theories of photographic composition. 35mm manually adjustable camera required.

**ART 149. Beginning Digital Photography. (1.5)**

Intro to digital photography. Camera controls, file management, digital editing, and printing. Emphasis will be placed on composition, lighting and subject matter. Digital camera required. No camera phones.

**ART 151. Pre-Communication Design. (1)**

An introductory course that defines the field and gives an overview of the professional design practice as well as the skills, thinking, and knowledge required of communication designers.

**ART 155. Beginning Drawing. (1.5)**

Basic drawing instruction to non-art majors. Exploration of line, value, media measurement, and composition.

**ART 160. Beginning Ceramics. (1.5)**

Basic ceramic construction, composition, and firing techniques.

**ART 162. Arts of Africa, Oceania and Native America. (3) (MPF)**

This course is a survey of the visual and performed arts of Africa, Oceania and Native America. These regions and their arts, often relegated to the constructed category of "non-Western," will be considered from their religious, political, historical and cultural contexts. The course also explores the Western bias inherent in the study of "non-Western" art, providing students with a broader understanding to the ways in which cultures from around the world produce, employ and conceptualize what the West has conventionally label as "art." In examining sculpture, multi-media installation, festivals, masquerade, textiles, dress, ritual spaces, international artists and many more, students are exposed to alternative ways of looking at and understanding visual and performed expression. IIA, IIIB.

**ART 165. Beginning Metals. (1.5)**

Introductory metalsmithing and design for the beginning student.

**ART 170. Basic Woodworking. (1.5)**

Basic course to provide foundation exercises and instruction in the use of woodworking tools and machinery.

**ART 171. Visual Fundamentals: 3-D. (3)**

Basic foundation studio course dealing with methods, materials, principals of organization and elements of design applied to the third dimension.

Prerequisite: Art 111.

**ART 177. Independent Studies. (0-5)****ART 181. Concepts in Art. (3) (MPF)**

Introduction to visual and thematic concepts as applied to art in various cultures and historical periods. IIA.

**ART 183. Images of America. (3) (MPF)**

Investigating the power and influence of visual art imagery, either about, targeted to, or made by diverse segments of historic and contemporary American society and how this imagery has helped or hindered our coming together as a diverse nation. Explores the use of art stereotypes as a basis for evaluation, how visual components help define culture, the decoding of cultural codes and how the idea of taste and aesthetics influences the way we see ourselves and others. IC, IIA, IIB.

Cross-listed with AMS.

**ART 187. History of Western Art: Prehistoric-Gothic. (3) (MPF)**

Historical survey of Western art, including development of concepts necessary for analysis and appreciation of great works of art. IIA, IIB. CAS-B.

**ART 188. History of Western Art: Renaissance - Modern. (3) (MPF)**

Historical survey of Western art, including development of concepts necessary for analysis and appreciation of great works of art. IIA, IIB. CAS-B.

**ART 189. History of Western Dress. (3) (MPF, MPT)**

Provides an overview of Western dress from ancient times to the present. Emphasis placed on the social and cultural factors that have influenced the evolution of dress for both men and women. IIA, IIB.

**ART 194. Introduction to Art Therapy. (3)**

Introductory seminar to the field of art therapy as a career, history and origins of the field, education standards and application, and art experientials.

**ART 195. Introduction to Art Education. (3) (MPF, MPT)**

Thematic approaches to art education will be discussed and applied through personal artmaking, lesson planning and experiences in community settings. Students will visit PK-12 schools and other educational sites and practice methods of digital documentation and reflective practice. Field experience hours required. Can be taken with ART 295 or ART 296. IIA.

**ART 215. 3D Digital Sculpting. (3)**

Digital sculpting is an essential part of 3D content creation. This course needs to be a requirement for students in the game program who want to work as an artist creating assets for video games. This course teaches industry standard software and the methodologies that game studios use when producing professional quality 3D assets for video games and other media. The course is project driven, and grades will be based on the visual quality and passion expressed in the work submitted for assignments, ability to follow instructions for submission and their ability to meet deadlines for assignments. Cross-listed with IMS.

**ART 218. 3D Shading and Texturing. (3)**

In this course, students will learn the workflows necessary to create materials, textures, and shaders for physically based render systems. Students will learn how to edit shaders and materials through the creation and editing of textures in an image-editing program. Students will also be taught the theory behind physically based rendering and how it relates to rendering objects in real time through game engine technology. The course is project driven and grades will be based on the visual quality and passion expressed in the work submitted for assignments, ability to follow instructions for submission, and ability to meet deadlines for assignments. Cross-listed with IMS.

**ART 221. Intermediate Drawing 1. (3)**

Intermediate-level drawing problems. This intermediate drawing class focuses on the study of figure in various drawing media. Through various fast studies and extended drawing projects, students will learn to draw figures from observation; become familiarized with basic anatomy of the body; explore various media such as graphite, charcoal, soft pastel, and ink; and develop individual content through theme-based figure drawing projects. Presentations and critiques will complement the studio practice.

Prerequisite: ART 121.

**ART 222. Intermediate Drawing 2. (3)**

Intermediate-level drawing problems. This intermediate drawing class focuses on the study of figure in various drawing media. Through various fast studies and extended drawing projects, students will learn to draw figures from observation; become familiarized with basic anatomy of the body; explore various media such as graphite, charcoal, soft pastel, and ink; and develop individual content through theme-based figure drawing projects. Presentations and critiques will complement the studio practice.

Prerequisite: ART 121.

**ART 231. Painting I. (3)**

Introduction to the use of oil and/or waterbase media with emphasis on pictorial structure.

3 Lab. includes Lec.

Prerequisite: ART 121 or permission of instructor.

**ART 233. Global Perspectives on Dress. (3) (MPF)**

Provides the student with an overview of the study of dress with emphasis on the relationship between dress and its meaning in a variety of cultures. Dress in its physical and social environments and as an art form will be examined. IIA.

**ART 241. Printmaking I. (3)**

Studio introduction to printmaking media and processes with emphasis on intaglio and relief printing such as etching and woodcut. Composition and concepts for pictorial communication.

Prerequisite: ART 121 or permission of instructor.

**ART 248. Design Research Methods Basics. (1.5)**

A basic introduction to primary and secondary design research methods that support the discovery of unarticulated needs and opportunities for design innovation. Learners will gain familiarity with design research methods by completing readings, presenting content analysis, and completing a design research project. Includes qualitative and quantitative methods that render data like observations, surveys, interviews, focus groups, and design outcome analyses.

Prerequisite: acceptance into Communication Design program via entry portfolio review or permission of instructor.

**ART 249. Letterpress for Designers. (1.5)**

Foundational design studio focused on the letterpress printing process. Explores the impact of printing on communication and its relationship with design.

Prerequisite: acceptance into Communication Design program via entry portfolio review or permission of instructor.

**ART 251. Typography. (3)**

This course concentrates on design principles specific to typography. Project based topics include: design drawing, letterform constructions, and the visual enhancement of language and message. Typographic methods and terminology of both traditional and digital processes are also covered.

Prerequisite: acceptance into Communication Design program via entry portfolio review or permission of instructor.

**ART 252. Image. (3)**

This course covers visual and symbolic communication, including generation of visual symbols, graphic simplification, communication of content through form, and visual metaphor. Visual problem-solving skills and concepts are addressed. Further development of technical skills.

Prerequisite: acceptance into Communication Design program via entry portfolio review or permission of instructor.

**ART 253. Design Systems. (3)**

Synthesizes fundamental design and research concepts through the development of visual design for sequential viewing. Ideas of organization and clarity of communication, series and sequence, advanced typography, and visual literacy are addressed through complex systems-based projects.

Prerequisites: ART 248, ART 249, ART 251 and ART 252.

**ART 254. Communication Design Studio 1. (3)**

Investigation of the impact of technology on communication design. The influence of time and non-linear organization on a design solution will be carefully studied through various digital technologies. Prerequisite: ART 248, ART 249, ART 251 and ART 252.

**ART 255. Introduction to Digital Imaging. (3)**

This introduction course will cover the basics of digital camera operation, adjusting and manipulating images in Adobe Photoshop and digital printing methods.

**ART 256. Design, Perception & Audience. (3) (MPF, MPT)**

An introduction to perception and audience issues for the artist/designer and those interested in art/design, to learn how audiences perceive, receive and react to visual messages. Universal design principles, usability, learning theory, communication theory and semiotics are discussed. IIA.

**ART 257. Photography. (3)**

Introduction to basic 35 mm camera operation, black and white darkroom technique and aesthetic approaches to art of photography.

**ART 259. Art and Digital Tools I. (3)**

This course builds a solid foundation for making and manipulating digital images and graphics, and for thinking about the cultural nature of visual materials produced with these processes and software tools. Students will critically engage with a variety of related imagery, from fine art to marketing. Technical theory is coupled with projects to provide hands-on mastery of fundamental ideas, techniques, and specific software tools.

Cross-listed with IMS.

**ART 261. Ceramics I. (3) (MPT)**

Exploring plastic materials in three-dimensional form using coil, slab, mold fabrication, and wheel throwing as an introductory experience in clay. Traditional and contemporary approaches explored. Several decorative methods and firings extend perception of the entire ceramic process. Materials fee.

3 Lab. includes Lec.

Prerequisite: ART 111 or permission of instructor.

**ART 264. Jewelry Design and Metals I. (3) (MPT)**

Exploration of three-dimensional forms in nonferrous metals. Introduction to basic metalworking processes and techniques of the jeweler and silversmith. Materials fee.

3 Lab. includes Lec.

Prerequisite: ART 111 or permission of instructor.

**ART 271. Sculpture I. (3) (MPT)**

Studio course to provide the beginning sculpture student with a foundation in critical aesthetic thinking and of methods, techniques, and materials used in the process of making sculpture. Materials fee.

3 Lab., includes Lec.

**ART 276. Introduction to the Art of the Black Diaspora. (3) (MPF)**

Introduces visual arts produced by black artists in Africa, the U.S., and the Black Diaspora. Examines seminal creative ideas, philosophies, and movements and focuses on the work of key artists in analyzing the contextual significance of art in society. IIA, IIIB. CAS-B.

Cross-listed with BWS 276.

**ART 277. Independent Studies. (0-5)****ART 281. Contemporary Art Forum. (1; maximum 8)**

This is a lecture-based course that focuses on the discussion of contemporary visual art and design issues and their relationship to fundamental visual art practices. Students will attend lectures by visiting artists, write reflective responses, attend one field trip to a contemporary art venue, and attend break-out discussion sessions. The course uses a credit/no credit system based on attendance and written responses to lectures. Students will be exposed to current trends and issues in the art world causing them to think critically of their place in contemporary practice of art and design.

**ART 283. Modern America. (3) (MPF)**

A chronological survey of 20th-century American art and visual culture that examines how modern artists challenged traditions of making art and the structure of the art world and addressed issues of gender, race, and class. Explores works of art and visual representation that shaped and reflected culture through the lenses of patriotism, politics, and progress. IIA, IIB.

**ART 285. Writing and the Visual Arts. (3)**

A course for beginning art history majors and others interested in a critical approach to reading texts, researching, and talking about works of art. Focuses on research methods, critical thinking, reading and writing, and formal presentation techniques. Students will learn how to recognize and use art historical methodology; how to read critically in order to determine an author's thesis, argument, approach(es), and biases; and how to perform specialized research using the methods discussed in class, resulting in a class presentation and research paper. ADVW.

**ART 286. History of Asian Art, China, Korea, and Japan. (3) (MPF, MPT)**

Introduction to major artistic traditions of China, Korea, and Japan. Emphasis placed on understanding the cultural foundations of Bronze Age art in East Asia, the impact of Buddhism in the region, and later painting and ceramic traditions. IIA, IIB. CAS-B.

**ART 295. Elementary Art Methods. (3) (MPT)**

Philosophy, methodology, and application of art education at the elementary level. Planning for artistic growth and early creative development in students from Pre-K through elementary grades will be explored including thematic planning, backwards design, instructional strategies, curriculum mapping, assessment, advocacy, and arts integration. Lecture, discussion, and hands-on course for students majoring in art education. Field experience hours required. Can be taken with ART 195.

**ART 296. Secondary Art Methods. (3) (MPT)**

Philosophy, methodology, and application of art education at the secondary level. Planning for artistic growth in students from middle to high school art education will be explored including thematic planning, backwards design, instructional strategies, curriculum mapping, assessment, advocacy, and arts integration. Lecture, discussion, and hands-on course for students majoring in art education. Field experience hours required. Can be taken with ART 195.

**ART 305. 3D Character Design. (3; maximum 6)**

In this course, students will create fully realized characters using 3D animation software to be implemented in a game engine. Students will learn a complete workflow for taking a character concept through all stages of a 3D character-creation process. This includes concept art, proper scene setup, 3D modeling, digital sculpting, degrading assets, UV Unwrapping, texture painting, and character rigging, posing, rendering, and importing into a game engine. The course is project driven and grades will be based on the visual quality and passion expressed in the work submitted for assignments, ability to follow instructions for submission, and ability to meet deadlines for assignments.

Prerequisites: ART/IMS 215, ART/IMS 218, and IMS 319 or permission of instructor.

Cross-listed with IMS.

**ART 309. The Arts of African Peoples. (3) (MPF)**

Introduction to the arts of Africa and exploration of the central function of the arts in African systems of thought. The role of ancestors and deities will be explored, as will the context within which the arts are produced and used. IC, IIIB.

**ART 311. Chinese Painting History. (3) (MPT)**

A thematic and chronological study of the various genres of Chinese painting, emphasizing major issues and artists from the Han period to the twentieth century. Recommended prerequisite: ART 286.

**ART 314. The Renaissance in Italy. (3) (MPT)**

Surveys the visual arts of Italy from 1300 to 1500 and especially the artistic centers of Florence, Rome and Venice. Examines the individuals, corporations, as well as the various historical, social, and religious phenomena driving the production of painting, sculpture, and architecture.

**ART 315. High Renaissance and Mannerism. (3)**

Information and insight toward an understanding of the major developments in the history of art from the late fifteenth through sixteenth century in Europe, Italy in particular. Called High Renaissance and Mannerism, the relationship of these trends with concurrent political events, social, religious, and philosophical ideas will be discussed at times to enhance this understanding.

**ART 316. Baroque Art in Europe. (3)**

This course covers the painting, sculpture and architecture of Europe from the late sixteenth century through the early eighteenth century. It will focus on the individuals, corporations, as well as the various historical, social, and religious phenomena driving the production of painting, sculpture, and architecture.

**ART 317. The Arts of Colonial Latin America. (3)**

Explores the art of Iberia and Latin America, with a particular emphasis on the latter, from 1492 to 1810. Topics to be examined include conquest, assimilation, integration, and resistance as it informed the predominantly religious art and urban fabric of Latin America.

Cross-listed with LAS.

**ART 320. Thematic Studio. (3; maximum 12)**

Topics in art/drawing methodologies that are extensions and/or applications of skills and concepts offered in previous drawing courses. Thematic subjects include such topics as animation, experimental media, and advanced drawing.

Prerequisite: ART 222 or permission of the instructor.

**ART 321. Drawing V. (3; maximum 6)**

Drawing problems requiring advanced conceptual and technical skills.  
3 Lab. includes Lec.

Prerequisite: six semester hours in ART 221, ART 222.

**ART 322. Drawing VI. (3; maximum 6)**

Drawing problems requiring advanced conceptual and technical skills.  
3 Lab. includes Lec.

Prerequisite: six semester hours in ART 221, ART 222.

**ART 326. Modern & Contemporary East Asian Art. (3)**

This course is an investigation of the various modern and contemporary art movements in East Asia from the nineteenth century through the twenty-first century. What did the modern ideal mean in the various regions of China, Japan, Korea, and the diaspora? What forms did it take? The establishment of traditionalist movements will be equally as important to tracing the development of Asian modernism(s). Can one exist without the idea of the other? Taking art objects and their related texts as our core evidence, this course will also consider the ways that the politics, literatures, popular cultures, and pasts of modern East Asia nations have intersected with one another and with the world. Coming forward into the present, what does it mean to be an artist from East Asia in the contemporary art world of global biennials and art fairs? Key concepts will include: post-colonialism, Marxism, nationalism, socialism, gender, ethnicity, modernism, traditionalism, post-modernism, diaspora, etc.

**ART 331. Painting II. (3)**

Painting problems using both representational and abstract approaches in various painting media.

3 Lab. includes Lec.

Prerequisite: ART 231.

**ART 332. Painting III. (3)**

Painting problems using both representational and abstract approaches in various painting media.

3 Lab. includes Lec.

Prerequisite: ART 231.

**ART 335. Arts of West Africa. (3) (MPF)**

This course examines the visual and performed expressions of West Africa, spanning from centuries-old archaeological sculpture to contemporary art and artists working today. Due to Africa's long and layered history with neighboring regions and global interactions, the course also addresses connections to North Africa, the trans-Saharan trade network, the trans-Atlantic slave trade, Diaspora cultures and international artists who identify with West Africa. West Africa is well known for its rich artistic culture: wooden sculpture, masquerades, ritual, elaborate textiles, dress, ceramics, architecture, metalwork, multi-media installation, beadwork, festivals and many more. This course explores these artistic genres, learning about the role of art in the lives of the people who make and use it. IIIB.

Cross-listed with BWS.

**ART 340. Internship. (0-20)****ART 341. Printmaking II. (3)**

Lithography and intaglio techniques.

3 Lab. includes Lec.

Prerequisite: ART 241.

**ART 342. Printmaking III. (3)**

Lithography and intaglio techniques.

3 Lab. includes Lec.

Prerequisite: ART 241.

**ART 343. Fundamentals of Communication Design. (3)**

Introductory course that provides foundational understanding of the skills, thinking, and knowledge required of communication designers. Concentrates on the development and use of the core elements of design: typography and imagery. Open to all majors.

**ART 344. Visual Identity Design. (3)**

In this course students will learn the general strategies and principles of branding. Projects will focus on how to promote oneself through such applications as a unique personal logo/mark, promotional video, resume, and social media. Special emphasis will be placed upon logo development and brainstorming. (Adobe Creative Cloud subscription is required).

Prerequisite: ART 343.

**ART 345. Communication Design Prototyping. (3)**

In this course students will learn the process of design thinking which they will then apply to layout for both print and web. Projects will result in prototypes that could be tested with the user (publications, posters, mobile apps, websites, etc.) Special emphasis will be placed upon typography. (Adobe Creative Cloud subscription is required).

Prerequisite: ART 343.

**ART 350. Illustration. (3; maximum 6)**

Emphasizes development of drawing and painting techniques significant to the creation of illustrations for publication and related pragmatic conditions. Addresses problem analysis, visual research, media and space constraints, cost and time factors as well as personal stylistic growth in this specialized discipline. Lecture and slides supplement studio work.

Prerequisites: ART 121 and 231, or permission of instructor.

**ART 352. Communication Design Studio 2. (3)**

Examination and application of the materials and media for communication design. From pixels and dots to surfaces and objects, learners will explore how to work at dramatically different levels of scale of experience.

Prerequisite: ART 254.

**ART 353. The Business of Design. (3)**

An introduction to basic business issues relevant for graphic designers in today's competitive marketplace, including the development of strategic marketing skills, finances and budgeting, the creation of client contracts, basic production knowledge, and other business management issues.

Prerequisite: ART 254 or students in the Communication Design Minor.

**ART 354. Design for Use. (3)**

Explores how design decisions impact access for people of diverse abilities and cultures. Applies people-driven design approaches for problem definition, outcome development, and design outcome production. Special attention paid to usability, access, and how design can delight audiences while meeting their unique needs. Involves collaborative and individual project work to simulate human-centered approaches within professional design practice.

Prerequisite: ART 254.

**ART 357. Photography II. (3)**

Continued development of aesthetic, conceptual and technical processes in photography. Emphasis on traditional black and white film exposure, processing and printing.

Prerequisite: ART 257 or permission of instructor.

**ART 358. Photography III. (3)**

Continued development of aesthetic, conceptual and technical processes in photography. Emphasis on Color/Digital image processing and printing.

Prerequisite: ART 255 or permission of instructor.

**ART 361. Ceramics II. (3) (MPT)**

Pottery, design, wheel throwing, decoration, glazing, and firing. Raw materials introduction, lectures and applied. Materials fee.

3 Lab. includes Lec.

Prerequisite: ART 261.

**ART 362. Ceramics III. (3) (MPT)**

Pottery and sculpture design, forming, wheel throwing, decoration, glazing, and firing. Clay and glaze materials and formulations covered. Materials fee.

3 Lab. includes Lec.

Prerequisite: ART 261, 361 or permission of instructor.

**ART 364. Jewelry Design and Metals II. (3) (MPT)**

Creative designing of two- and three-dimensional forms for contemporary jewelry and holloware. Development of basic metals processes: fabrication, raising, stone-setting, forging, casting. Materials fee. 3 Lab includes Lec.

Prerequisite: ART 264.

**ART 365. Jewelry Design and Metals III. (3) (MPT)**

Intermediate problems in design and process for jewelry, holloware and flatware. Materials fee. 3 Lab includes Lec.

Prerequisite: ART 364.

**ART 371. Sculpture II. (3) (MPT)**

Studio problems based on concepts applied to various three-dimensional methods, techniques, and materials. Materials fee.

3 Lab. includes Lec.

Prerequisite: ART 271.

**ART 372. Sculpture III. (3) (MPT)**

Intermediate studio problems based on concepts applied to three-dimensional methods, techniques, and materials. Beginning emphasis on individual direction. Materials fee.

3 Lab. includes Lec.

Prerequisite: ART 371.

**ART 377. Independent Studies. (0-5)****ART 382. Greek and Roman Sculpture. (3) (MPT)**

Sculpture in the Greek, Hellenistic, and Roman world. Emphasis on the development of the human figure in the Greek world with attention to sculptures of Pheidias, Praxiteles, Scopas, and Lysippos. The Roman response to the Greek Canons is evaluated and development of Roman portrait sculpture is critically reviewed.

**ART 383. Greek and Roman Painting. (3) (MPT)**

Greek and Roman painting; examination of the development of Greek vase painting with special emphasis on red and black figure vase painting; examination of tomb paintings of Etruscan civilization with study of Roman painting from Pompeii and Herculaneum with attention to styles, perspective, methods of painting, and uses of color.

**ART 384. Greek and Roman Decorative Arts. (3)**

This course is designed to introduce students to the decorative arts of antiquity. Generally referred to as the minor arts or, archaeologically, small finds, the small scale and decorative arts of antiquity provide us with the majority of our evidence for art in the ancient world, but are frequently understudied. This course will introduce you to material not covered in depth in the introductory courses on ancient art.

Unlike ancient painting or monumental sculpture, the decorative arts of antiquity represent forms that the majority of people experienced, that the majority of artists created, and that provide the best evidence for workshops, stylistic transmission and movement of artists and works in antiquity. Decorative arts, therefore, give a much more complete sense of the artistic heritage of the Greco-Roman world.

**ART 386. Art of the Weimar Republic. (3)**

This class will trace developments in painting, photography, film, and architecture in Germany from 1918-1933. We will focus on connections between art and the historical and political events of this particularly turbulent time in Germany history. Artists to be studied include: Walter Gropius, Mies van der Rohe, Fritz Lang, Hannah Hoch, Georg Grosz, August Sander, and Laszlo Moholy-Nagy. Relevant artistic movements include: Expressionism, Dada, the Bauhaus, and New Objectivity.

Cross-listed with GER.

**ART 389. The History of Photography. (3)**

This course will trace central developments in photography's history, from its nineteenth-century origins to its present digital afterlife. Rather than attempting a comprehensive survey of the medium, we will examine a series of case studies taken from the diverse discourses in which photography functions, including art, science, law, journalism, criminology, urban planning, and entertainment. Particular attention will be paid to theoretical and methodological questions underpinning the medium. Recommended prerequisite: ART 188.

**ART 390. Supplemental Problems. (1-3; maximum 6)**

Supplemental problems in any one of the department's 300-level studio areas.

Co-requisite: related 300-level course and permission of instructor.

**ART 391. Field Study in Art and Architecture History. (3; maximum 3)**

Structured experience outside the classroom; internship or study abroad. Restricted to majors who have completed the sophomore year.

**ART 395. Art Across the Curriculum. (3) (MPT)**

Philosophy, art education theory and cross-curricular teaching and learning methodology. Students will apply methodology to both coursework and field experience, collaborating with non-art areas. Students will design and produce lessons and sequential curriculum that takes into account both visual arts and common core standards. Upon completion of this course, students will conceptualize art as an interdisciplinary subject as well as demonstrate a competency for designing and implementing interdisciplinary art lessons. Field experience hours required.

Prerequisites: ART 195, ART 295, ART 296, or permission of instructor.

**ART 406/ART 506. Art Since 1980. (3)**

This course surveys contemporary art from 1980 to the present. By examining major themes and critical issues, this course will chart historical genealogies and continuous threads through the incredibly diverse nature of art today. Looking at traditional media, new media, performance, and socially engaged art, this course explores the nature of artistic production in the contemporary, interconnected world. Students will regularly engage primary sources, work collaboratively on interpretive projects, and complete an original research paper and presentation.

**ART 419. Supervised Student Teaching in Art. (15) (MPC)**

Supervised teaching in a public school or approved social agency. Regularly scheduled seminars with university supervisor. Completion of assessments including edTPA and content and pedagogy exams for certification. Regular assessments by cooperating teacher for the purpose of assisting the student teacher in practice teaching. Required overall GPA of 2.80 and expected GPA of 3.00 in the major field. Cannot be taken concurrently with any other courses. Prerequisite: all Professional Ed and Art Ed courses must be taken last (or second to last semester before graduation with instructor approval).

**ART 420/ART 520. Special Lecture Topics in Art History. (3; maximum 12)**

Lecture in the history of art. Subjects vary, but will deal with a special topic related to the area of expertise of the particular faculty teaching the course.

**ART 421. Drawing VII. (3)**

Application of concepts, techniques, and design through various painting media. Emphasis on personalized statement by the student. Designed to complete the logical sequence of drawing offerings. 3 Lab. includes Lec. Prerequisite: ART 321, 322.

**ART 431/ART 531. Painting IV. (3)**

Application of concepts, techniques, and composition through various painting media. Emphasis on a personalized statement by the student. 3 Lab. includes Lec. Prerequisite: ART 331, 332.

**ART 432/ART 532. Painting V. (3)**

Application of concepts, techniques, and composition through various painting media. Emphasis on a personalized statement by the student. 3 Lab. includes Lec. Prerequisite: ART 331, 332.

**ART 436/ART 536. Applied Experience Design: Walt Disney World. (3)**

The Walt Disney World Resort is a leader in entertainment where multisensory design facilitates memorable guest experiences. This course will pull back the curtain to reveal how architecture, service, interaction, graphic, and interior design decisions at the resort create "magic" while also meeting functional needs and balancing complex logistics. Learners will explore experience design from a story-based, Disney perspective via two weeks of engaged online learning. This will be followed by one week of on-site, experiential learning at The Walt Disney World Resort to explore experience design in action via immersive learning activities at the parks and resorts. The course will conclude with two weeks of online study where the immersive experience will enable learners to apply Disney's approaches and attention to detail to their own design-related practices. Prerequisites: MFA in Experience Design students: ART 627; Communication Design majors: ART 248; Communication Design minors: ART 343; students in other majors admitted by instructor approval.

**ART 441/ART 541. Printmaking IV. (3)**

Emphasis on personal investigation in intaglio, lithography, silkscreen, or relief processes. 3 Lab. includes Lec. Prerequisite: ART 341, 342.

**ART 442. Printmaking V. (3)**

Emphasis on personal investigation in intaglio, lithography, silkscreen, or relief processes. 3 Lab. includes Lec. Prerequisite: ART 341, 342.

**ART 450/ART 550. Letterpress Printing. (3; maximum 9)**

Studio engaging with the letterpress printing process for craft, artistic expression, and as a vehicle for visual communication. The physical design process includes use of historic, experimental, and hand-created materials for print production.

**ART 451. The Professional Portfolio. (3)**

Includes revision of existing pieces to professional standards and the execution of work to complete the professional portfolio. Photographing of work, design, craft, organization, and presentation of the portfolio discussed. Covers topics related to the business of graphic design and the production knowledge necessary to work in today's profession. Prerequisite: ART 352.

**ART 452. Communication Design Studio 3: Degree Project. (3) (MPC)**

Individual projects proposed, researched, and executed. Enables students to learn how to define and limit a project, choose the best format for a particular communication goal, organize and schedule time, and set and meet interim goals. Participation in a gallery exhibit is a requirement of this course. Prerequisite: ART 451.

**ART 453. Highwire Brand Studio. (4) (MPC)**

Multidisciplinary practicum involving students from marketing, graphic design and other relevant majors. Competing, multi-disciplinary student teams work for a semester on an actual client's current brandings and marketing communications challenge. Campaign solutions typically include primary research and market analysis, campaign strategy development and graphic design for advertising and other sales support materials. Incorporates contemporary technology and industry standard materials and research. Expertise and facilities of marketing, graphic design and other relevant majors are fully integrated within each team. Each campaign is formally presented to the client at the end of the semester.

Prerequisites: ART 352 or permission of instructor.

**ART 455/ART 555. A History of Design. (3)**

Overview of the history and cultural context of various design disciplines. The prevalent styles and design traditions expressed in the mass-produced products of both Europe and America from the Industrial Revolution to the present.

**ART 457. Photography IV. (3)**

Development of a personal body of photographic work. Advanced study of experimental techniques, conceptual practice and photographic theory.

Prerequisite: ART 357, 358.

**ART 458. Photography V. (3)**

Advanced development of a personal body of photographic work.

Prerequisite: ART 457.

**ART 460/ART 560. Special Topics Design Studio. (3; maximum 9)**

A transdisciplinary design studio where undergraduate and graduate students from different design-related disciplines work collaboratively to address a range of topics via design thinking and doing. Topics change depending on instructor research agenda and interests.

Prerequisite: permission of instructor.

**ART 461/ART 561. Ceramics IV. (3)**

Advanced problems in ceramic design emphasizing individual creativity and requiring technical proficiency. Materials fee.

3 Lab. includes Lec.

Prerequisite: nine semester hours in ceramics.

**ART 462/ART 562. Ceramics V. (3)**

Advanced problems in ceramic design emphasizing individual creativity and requiring technical proficiency. Students must complete a professional portfolio of work. Materials fee.

3 Lab. includes Lec.

Prerequisite: 12 hours in ceramics.

**ART 464/ART 564. Jewelry Design and Metals IV. (3; maximum 6)**

Advanced design and technical problems in jewelry, holloware, flatware, and/or other areas of individual interest. Emphasis on personal expression and research, portfolio development. Materials fee.

3 Lab. includes Lec.

Prerequisite: ART 365.

**ART 465/ART 565. Jewelry Design & Metals V. (3)**

Advanced problems in jewelry design & metals requiring individual creativity and technical proficiency. Emphasis on creative personal direction, research, and creating a professional portfolio. Materials fee.

Prerequisite: ART 464/ART 564.

**ART 471/ART 571. Sculpture IV. (3)**

Advanced problems in sculpture requiring skill with sculpture processes and ability to interpret ideas three-dimensionally.

3 Lab. includes Lec.

Prerequisite: ART 372.

**ART 472/ART 572. Sculpture V. (3)**

Advanced problems in sculpture requiring skill with sculpture processes and ability to interpret ideas three-dimensionally. Emphasis on creative personal direction, professional portfolio, and research. Materials fee.

3 Lab. includes Lec.

Prerequisite: ART 471/ART 571.

**ART 477. Independent Studies. (0-5)****ART 480. Seminar in Art History. (3; maximum 6)**

Seminar for advanced students. Topics vary.

**ART 486/ART 586. Art of the Late 19th Century. (3) (MPT)**

Painting and sculpture in Western Europe and the United States from mid-19th century to the turn of the century with special emphasis on realism, impressionism, and post-impressionism.

**ART 487/ART 587. Art of the Early 20th Century. (3) (MPT)**

Development of modernist painting and sculpture in Western Europe and the United States from 1900 to 1945.

**ART 488/ART 588. Art in the Age of Revolution: 1789-1848. (3)**

This course explores the artistic production of Europe and the United States from 1789-1848. Topics include the influence of political revolutions and colonialism, the invention of modern forms of visual culture such as photography and lithography, the traditions of academic painting, and rebellions against those traditions.

**ART 489/ART 589. Postwar to Postmodern, 1945-1980. (3) (MPT)**

Painting, sculpture, architecture, and allied arts from 1945 through post-modernism.

**ART 490. Supplemental Problems. (1-3; maximum 9)**

Supplemental problems in any one of the department's 400-level studio areas.

Co-requisite: related 400-level course and permission of instructor.

**ART 492. Professional Artist's Portfolio and Exhibition Experience. (3) (MPC)**

Supervised development of individual professional artist's portfolio and participation in a group or solo gallery exhibition. Periodic scheduled meetings with peers and faculty mentors in the individual studio areas. With permission of instructor, students who have completed a focus sequence in one of the vertical studio offerings may be permitted to enroll in this studio Capstone.

Prerequisite: senior standing in one of these studio concentrations: ceramics, metals, photography, painting, printmaking, or sculpture.

Co-requisite: a 400-level studio.

**ART 493. Professional Dispositions in Art Education. (3) (MPC)**

This course is designed to engage students in the development of professional dispositions and preparation of being an effective and productive art educator. Students will participate in local and national professional organizations, network with practicing educators, hone philosophy statements and understandings, maintain a professional website, develop and utilize professional resources, explore writing for publication, and participate in the planning/dissemination of the John Michael Autobiographical Series. This course can be taken with ART 495.

Prerequisites: ART 195, 295, 296, and 395 or permission of instructor.

**ART 495. Art Education Practicum. (3)**

Supervised participation in practicum at art education site. Students will develop proficiency in curriculum planning, instructional methodology, effective communication in and outside the classroom, and self and program assessment. Often referred to as Saturday Art, students will have the opportunity to directly plan, teach, and assess a class of K-12 students. This course can be taken with ART 493. 495 can be taken multiple times.

Prerequisites: ART 195, 295, 296, and 395.

**ART 496/ART 596. Seminar on Theory for Visual Artists. (3; maximum 6)**

Links theoretical contexts influential in educating visual artists to varied thematic structures and practical issues as utilized by visual artists.

Prerequisite: ART 221.

**ART 498. History and Methods in Art and Architectural History. (3) (MPC)**

Culminating class for Art and Architecture History majors. Discussions and projects that give students the opportunity to assimilate knowledge gained in the study of art history.

Prerequisite: senior in the History of Art and Architecture.

**ART 600. Advanced Research Problems. (1-3; maximum 18)**

Research in art and art literature.

Prerequisite: graduate standing in art.

**ART 601. Teaching Assistant Seminar. (3)**

Includes prevalent issues, concerns, and problems confronting art teacher in college studio setting. For students with little or no experience teaching art; provides insight into teaching.

Prerequisite: admission to Department of Art graduate program.

**ART 620. Graduate Study in Drawing. (3-6; maximum 18)**

Professionally oriented studio drawing problems emphasizing personal interpretation.

Prerequisite: graduate standing in art.

**ART 622. Experience Design Methods. (3)**

Explores methods for facilitating and producing experience-focused design outcomes. Methods such as personas, sprint facilitation, co-creation, charettes, and experience mapping are covered. Learners will complete projects where they will produce design outcomes including services, interaction design, and design for experience.

**ART 623. Writing for Design Audiences. (3)**

Develops skills in different writing styles for design research, education, and practice. Includes grant and proposal writing, writing for publication, and refining writing for design work. Special attention paid to developing tone and form so writing meets audience expectations.

**ART 624. Design for Access. (3)**

Approaches goal formulation and problem definition for experience-focused design with usability and access as primary drivers. Projects grow learners' sensitivity to different needs, cultural and lifestyle diversity, socioeconomic status, literacy, globalization, sustainability, and other aspects of design when it impacts people of diverse needs. Particularly focuses on developing innovations for enabling access for marginalized people groups who have not been equitably served by design.

**ART 625. Systemic Design. (3)**

Explores and applies theory and methods for exploring complex "wicked problems" at a systemic level. Primary and secondary research are conducted in order to more clearly define real and perceived factors inherent in complex areas of need. A systemic approach is practiced via projects that consider a wide range of stakeholders from social good initiatives to industry innovation.

**ART 626. Methods of Dissemination. (3)**

Explores methods for reporting design research outcomes and project processes to a wide range of audiences and channels. Includes writing for publication and promotion, presenting to share information and facilitate consensus, and development of digital and tangible materials. Integrates digital, physical, and spoken methods including social media and publication processes in order to enable access and discussion for audiences across academia, education, design practice, news outlets, and the public.

**ART 627. Design Research Methods. (3)**

Introduces primary and secondary research methods that support the discovery of unarticulated needs and opportunities for design innovation. Learners will gain familiarity with design research methods by operating several research projects individually and collaboratively. Special attention paid to operating design research in varied contexts while respecting the wishes and needs of research participants. Includes qualitative and quantitative methods that render data like observations, surveys, interviews, focus groups, and design outcome analysis.

**ART 630. Graduate Study in Painting. (3-6; maximum 48)**

Application of advanced techniques and pictorial concepts to problems in painting directed toward individual professional performance. Appropriate research and related studio work.

Prerequisite: graduate standing in studio art.

**ART 640. Internship. (0-12; maximum 12)****ART 645. Graduate Study in Printmaking. (3-6; maximum 48)**

Research and related laboratory work in fine print media. Advanced study in intaglio, relief, and planographic media.

Prerequisite: graduate standing in studio art.

**ART 650. Experience Design Studio. (3; maximum 18)**

A synthesis studio where design theory and methods are applied via goal formulation, problem definition, and design solution production. Design, development, deployment, and testing of experience design outcomes involves independent and collaborative work. Learners will meet off-site for one "Destination Weekend" each semester to research and design in a different location.

**ART 651. Design Research Theory. (3)**

Explores both theoretical and pragmatic approaches to aid the identification, evaluation, application, and development of systems for addressing 'hard' and 'soft' problems. Addresses the evaluation and formulation of design problems with both human and non-human factors by applying theory from a wide range of disciplines.

**ART 657. Graduate Study in Photography. (3-6; maximum 24)**

Application of advanced techniques and pictorial concepts to problems in photography directed toward individual professional performance. Appropriate research and related studio work.

Prerequisite: Graduate standing in Studio Art.

**ART 660. Graduate Study in Ceramics. (3-6; maximum 48)**

Intensive studio problems in ceramics stressing professional orientation and personal interpretation. Materials fee.

Prerequisite: graduate standing in studio art.

**ART 664. Graduate Study in Metals. (3-6; maximum 48)**

Provides qualified graduate student with intensive study in metal craftsmanship as an art form.

Prerequisite: graduate standing in studio art.

**ART 670. Graduate Study in Sculpture. (3-6; maximum 48)**

Intensive studio problems in sculpting emphasizing professional orientation and personal interpretation.

Prerequisite: graduate standing in studio art.

**ART 677. Independent Studies. (0-5)****ART 680. Graduate Seminar in Art History. (3; maximum 9)**

Special studies in the history of art centered upon a designated topic or area of study which may vary with each offering.

Prerequisite: graduate standing in art or permission of instructor.

**ART 690. Special Problems. (1-3; maximum 18)**

Individual studio problems for graduate art student.

Prerequisite: graduate standing in art.

**ART 700. Thesis. (1-12; maximum 18)**

## Asian/Asian American Studies (AAA)

**AAA 177. Independent Studies. (0-5)****AAA 201. Introduction to Asian/ Asian American Studies. (3) (MPF)**

Since the mid-nineteenth century, Americans have viewed Asia as alien, mysterious, alluring, repressed and have alternately been compelled by and frightened by what they have regarded as incommensurable cultural differences between the United States and Asia. In addressing this, we will focus on the following themes: colonialism and nationalism, national and ethnic identities, emigration and immigration, and popular culture and mass media, as a way to put in perspective, if not dispel, prevailing stereotypes of Asian and Asian America and gain a more complex and nuanced understanding of the complex and rich geo-political, cultural and historical terrain of Asia/ Asian America. This course is designed to provide a general introduction to the related disciplines of Asian Studies, and Asian American Studies and to familiarize students with some of the major debates, points of connection and contention. We will consider how "Asia" and "Asian America" are defined, geopolitically and strategically to allow us to develop a critical view about Asian and Asian American studies in a transnational frame. Through an examination of fiction, film and sociological works, students will acquire a better understanding about what is being researched in this field. IC, IIB, IIC, IIIB. CAS-B or CAS-C.

**AAA 203. Global Religions of India. (3) (MPF)**

Explores the major religions of India and their growth outside India. Asks how these religions have contributed to the religious pluralism of America. Also asks how Asian American and non-Asian American practitioners of these religions have changed the way that religion is practiced in India and other parts of Asia. IIB, IIIB. CAS-B. Cross-listed with REL.

**AAA 207. Asia and Globalization. (3) (MPF)**

The Asian-Pacific region is one of the most dynamic, complex, and challenging focal points of world today. In the past half century, many countries in Asia have undergone significant political, economic, social, and cultural changes, which are tightly intertwined with the concepts and tenets of globalization. With countries such as China and India on the rise, and global superpowers such as Russia and Japan encountering their own modern challenges, the Asian continent has been facing a transformation that is at once a response to globalization and itself a powerful force influencing global community. Accordingly, the course highlights cross-cultural values through a comparative lens of Asia and globalization, and aims to study recent transformations in Asia and their impact on its own future and the world. The study will be framed both in the Asian internal context and in the external context of globalization. The course specifically focuses on, though is not limited to, how external global influence and the internal cultures of major Asian countries interact with each other in ways that uniquely mark and inform the economic, social, religious, educational, and cultural transformations in Asia. IIC, IIIB. CAS-C.

**AAA 210. Psychology Across Cultures. (3) (MPF)**

A topics course, focused on the examination of culture and cultural perspectives, within the United States and globally, as frameworks through which theories and findings of the field of psychology may be critically evaluated. IC, IIC, IIIB. CAS-C.

Prerequisite: PSY 111.

Cross-listed with BWS/PSY.

**AAA 211. Writing with Purpose: Interdisciplinary Inquiry and Communication. (3)**

This is an intermediate level course which enables students to investigate and discuss interdisciplinary practices of knowledge creation and dissemination. Students will practice a variety of writing and other communication strategies necessary for the effective dissemination of ideas to interdisciplinary audiences and the general public, and can expect to gain experience in working with a wide spectrum of interdisciplinary research, tools and methods while engaging intellectually in interdisciplinary modes of thinking, reading, listening, and speaking. ADVW.

Cross-listed with AMS/BWS/LAS/WGS.

**AAA 248. Asian American Literature. (3) (MPF)**

Survey of Asian American writing (including the novel, poetry, drama, nonfiction, etc.) from the early 20th century to the present. Addresses immigration experiences, growing up in America, and writing as cultural expression. Course uses an interdisciplinary approach to the study of literature, drawing on history, sociology, ethnic studies, and current trends in American literary studies. IC, IIB, IIIB. CAS-B-LIT.

Cross-listed with AMS/ENG.

**AAA 249. Asian & Asian American Cinema. (3) (MPF)**

Explores films in the contexts of Western colonial influences and legacies in Asia and Asian America. Students will learn how mainstream notions of nation, gender, sexuality, family values, social hierarchies and social change are constructed at the intersection of the audience, visual imagery, political, and economic contexts. We will also explore the role alternative cinema plays in challenging mainstream forms of knowledge production with the overall goal of critically evaluating how cinema creates, recreates, perpetuates and reproduces "Asian" cultures for global and local audiences. IC, IIB, IIIB. CAS-B-Humanities.

Cross-listed with ENG/FST.

**AAA 269. Colonial & Postcolonial Literature. (3) (MPF)**

Introduction to postcolonial literature and theories of colonial and postcolonial identity. IIB, IIIB. CAS-B-LIT.  
Cross-listed with ENG 269.

**AAA 277. Independent Studies. (0-5)****AAA 334. Transnational Youth Cultures. (3) (MPF, MPT)**

Using contemporary social and educational theory, this course introduces the student to the historical construction of adolescence and youth in global context. The course also explores cultural practices of transnational youths as a socio-historical construction that is affected by contemporary conditions of neo-liberalism, neo-colonialism and globalization. IIIB, IC.  
Cross-listed with EDL.

**AAA 351. Cultural Politics of Gender and Sexuality in Asian/America. (3)**

Intensive interdisciplinary study of imaginative representations of the encounters between "Asia" and "America," broadly conceived, particularly the entangled relations among their diverse constituencies in the contexts of colonialism and globalization. Key topics include feminist critique of gendered violence and human rights issues; Euro-American militarism and sex tourism; the emergence of new categories of sex, gender, and kinship as lived experiences mediated by transnational consumer culture and institutional structures; masculinity and Asian diasporic nationalisms; pan-Asian movements against racism, colonialism, and neoliberalism both in Asia and the U.S.; and the emergence of new critical, artistic and aesthetic practices. IC.  
Cross-listed with ENG/WGS.

**AAA 377. Independent Studies. (0-5)****AAA 410. Asian/Asian American Studies. (3; maximum 9)**

In-depth examination of political-economic relations, historical and socio-cultural formations, ethno-linguistic, rhetorical, and religious practices, and literary and artistic representations connecting and affecting Asia and communities of Asian descent in the U.S. and in the diasporas. Detailed descriptions of topics available from the Director of the Asian/Asian American Studies Program. IC. CAS-B.

**AAA 477. Independent Studies. (0-5)**

## Biological Sciences (BSC)

**BSC 292. Applied Biology Sophomore Seminar: Planning Your Future in Applied Biology. (1)**

This is a one-credit course designed for sophomores majoring in Applied Biology. Students will explore career options in applied biology and professional fields, while completing a 10-hour online training course leading to certification by the Occupational Safety and Health Administration (OSHA10). Students will review internship and undergraduate research opportunities, and will attend at least one public biology seminar, workshop or forum. Students will complete a plan of study; a resume; and an application for an internship, co-op or independent research experience.  
Prerequisite: Completion of BIO 115 or BIO 116, or permission of instructor.

**BSC 313. Microbial Diversity. (4)**

Molecular, biochemical and evolutionary diversity of the microbial world, including Bacteria, Archaea, and Eukaryotes. Taught in Hamilton and Middletown only.

Prerequisite: BIO/MBI 116 or MBI 161 and BIO 203 or permission from instructor.

**BSC 321. Research in Applied Biology. (1-3; maximum 3)**

Analysis of issues and concepts in applied biology utilizing laboratory, field, and computational techniques. Only a total of three semester hours of BSC 321 can be used to fulfill Professional Courses requirement for Applied Biology majors. EL.  
Prerequisites: BIO 115 and BIO 116, and permission of instructor.

**BSC 340. Internship. (0-20)****BSC 415. Approaches to Problem Solving and Research in Applied Biology Capstone. (3) (MPC)**

An exploration into the manner in which we seek solutions to real world problems and the way in which we answer scientific questions in the biological sciences. The specific focus will vary and will either be related to the environment or to human health.  
Prerequisite: Senior level standing and have completed at least 9 credit hours at the 200 level or above in natural sciences.

**BSC 416. Applications of Biotechnology to Human Health: Concepts and Issues. (3) (MPC)**

An in-depth analysis that focuses on the ethics and trends in biotechnology and its applications to human health. Selected topics in science and technology that drive innovative approaches to human healthcare as they relate to disease and therapies to disease will be covered; including, but not limited to, drug development, bioinformatics, stem cell therapies, vaccines, DNA diagnostics, and biotechnology in agriculture/genetically modified foods.  
Prerequisites: BIO 342 and BIO 464/BIO 564, plus one year college chemistry.

**BSC 475. Capstone in Environmental Biology. (3) (MPC)**

The environment affects humans in many ways, so changes to the environment can alter our well-being (e.g., health, standard of living). This course will explore the causes of environmental problems resulting from anthropogenic activities, and the strategies that can be used to mitigate or manage these issues. An interdisciplinary approach will be taken, emphasizing the interplay among the ecological, political, social, cultural and economic aspects of environmental problems. Students will be required to develop and critically evaluate effective strategies for abating environmental problems of local, national or global concern.  
Prerequisites: BIO 209 or 209W and junior standing; or permission of instructor.

**BSC 492. Applied Biology Senior Seminar: Becoming a Professional Biologist. (1)**

This is a one-credit course designed for seniors majoring in Applied Biology. Students will prepare to enter the workforce as professional biologists or continue on to postgraduate training, while completing a 40-hour online training course leading to certification by the Occupational Safety and Health Administration. Emphasis will be placed on understanding emerging issues in biology, obtaining employment or further education, and integrating the Tool requirement into a career in Applied Biology.  
Prerequisites: Completion of at least 24 hours of biological sciences courses (BIO, BSC, MBI) and senior standing, or permission of the instructor.

## Biology (BIO)

### **BIO 101. Biotechnology: Coming of Age in the 21st Century. (3) (MPF)**

An introduction to biotechnology. The course provides an in-depth examination of new developments in biotechnology. Scientific concepts, applications, and social, ethical, and legal issues are emphasized. IVA. CAS-D.

### **BIO 102. Introduction to Research in Biology. (1)**

Designed to meet the following goals: 1) To provide an introduction to research in the general areas of cell, molecular and structural biology (CMSB). (2) To appreciate the overall research theme of Signaling mechanisms and cellular responses. (How cells respond to their environment by regulation of gene expression, cellular physiology, cell and tissue morphogenesis, as well as behavior). (3) To convey the significance and relevance of research being conducted in individual research labs. (4) To learn about research based careers in the Biological sciences.

Cross-listed with CHM.

### **BIO 103. Introduction to Research in Biology (Lab Rotations). (2)**

Designed to complement the seminar course which provides an introduction to research in the general areas of cell, molecular and structural biology (CMSB). Students will have the opportunity to conduct two 8 week laboratory rotations and become involved in ongoing research projects. Through laboratory experiences, students will become familiar with skills essential for laboratory research, and become aware of routinely used tools and techniques.

Prerequisite: CHM/MBI 102.

### **BIO 104. Developing skills and Approaches for Science Success. (1-2; maximum 2)**

Teaches effective study strategies to enable comprehension of basic biology concepts emphasized in the introductory biology course, BIO/MBI 115/116; Explores the relationship of these concepts to current endeavors such as scientific research; emphasizes development of skills and habits of mind that will ensure success for biological science majors.

Cross-listed with MBI.

### **BIO 105. Behavior of Companion Animals: Dog and Cat Behavior. (3)**

Examination of the evolution and behavior of two common companion animals, the domestic dog and cat. General principles of animal behavior will be briefly introduced followed by lecture and discussions of some topics in dog and cat behavior such as behavioral development, communication, aggressive behavior, mating behavior, and social interactions. Discussions and readings will include current ideas on benefits to humans from associations with companion animals. The course will also contain some of the current ideas about dealing with problem behavior in these popular companion.

### **BIO 115. Biological Concepts: Ecology, Evolution, Genetics, and Diversity. (4) (MPF, MPT)**

Integrated study of microbes, plants, and animals emphasizing biological diversity and interdependence of life and environment. IVA, LAB. CAS-D/LAB.

3 Lec. 1 Lab.

Cross-listed with MBI.

### **BIO 116. Biological Concepts: Structure, Function, Cellular, and Molecular Biology. (4) (MPF, MPT)**

Biological principles common to microbes, plants, and animals, including interactions between organism and environment. IVA, LAB. CAS-D/LAB. CAS-QL.

3 Lec. 1 Lab.

Cross-listed with MBI.

### **BIO 121. Environmental Biology. (3) (MPF, MPT)**

Local, regional, and global environmental issues examined in the context of current ecological theory and principles of resource use and management. IVA.CAS-D.

### **BIO 126. Evolution: Just a theory?. (3) (MPF)**

An introduction to the principles of evolutionary theory and the nature of science that emphasizes the relevance of evolutionary biology to our lives and society as a whole. IVA. CAS-D.

### **BIO 128. Religion, Science, and Origins. (3) (MPF)**

A team-taught, interdisciplinary introduction to the science behind the theory of evolution and to religious responses to that theory, including contemporary controversies around creation science and intelligent design. Multiple disciplinary perspectives are brought to bear, drawn from fields in both the natural sciences (such as biology) and the humanities (such as philosophy of science, sociology of knowledge, science studies, intellectual and cultural history, and comparative religion). IIB. CAS-B.

Cross-listed with REL.

### **BIO 131. Plants, Humanity, and Environment. (3) (MPF, MPT)**

Introduction to fundamental concepts in plant biology, ecology, and scientific perspective as they relate to issues of social concern. IVA. CAS-D.

### **BIO 147. Biology Introductory Seminar. (1)**

Introduction to the majors offered by Department of Biology as well as the requirements of the College of Arts and Science and the Global Miami Plan. Students learn about departmental, College, and University resources available to help decide what courses to take to achieve their academic goals. Includes discussion of effective learning strategies, how to be involved in independent research, and provides information to help students develop their career goals by providing interactions with first year faculty advisors, undergraduate and graduate students, and alumnae. Finally, the seminar will provide students with opportunities to develop a more thorough understanding of how they can become successful scholars and members of the Miami community and any other community of professionals.

### **BIO 155. Field Botany. (3) (MPF)**

Field/laboratory-oriented, interpretive introduction to botany in the regional out-of-doors. Emphasis given to identification, uses, habit, habitat and communities of plants, and fungi in the context of local terrestrial and aquatic environments. IVA, LAB. CAS-D/LAB.

1 Lec. 2 Lab.

### **BIO 159. Seminar in Neuroscience. (1)**

Provides an introduction to the field of neuroscience and includes discussions of experimental techniques and methodology and career opportunities in neuroscience, the interdisciplinary nature of the field, and the scientific method and the development and testing of hypotheses; will expose students to the synthesis of scientific literature in the field of neuroscience and to ways to effectively communicate this information to a broad audience.

Cross-listed with PSY 159.

**BIO 161. Principles of Human Physiology. (4) (MPF)**

Examines physiological systems of the human body. Lecture provides basic information regarding function of these systems from an integrative perspective. In laboratory, use hands-on approach and work in small groups to conduct experiments and/or carry out projects to illustrate the physiological concepts presented in lecture. Not open to Biology, Botany, or Zoology majors. IVA, LAB. CAS-D/LAB. CAS-QL.  
3 Lec. 1 Lab.

**BIO 171. Human Anatomy and Physiology. (4) (MPF)**

Study of the structure and function of the human body including basic cellular principles, embryology, reproductive system, endocrine system, and nervous system. Does not count toward Biology, Botany or Zoology majors. IVA, LAB. CAS-D/LAB.  
3 Lec. 1 Lab.

**BIO 172. Human Anatomy and Physiology. (4)**

Study of the structure and function of the human body including respiratory, digestive, urinary, skeletal, muscular, and circulatory systems. Does not count toward Biology, Botany or Zoology majors. CAS-D/LAB.  
3 Lec. 1 Lab.  
Prerequisite: BIO 171.

**BIO 176. Ecology of North America. (3) (MPF, MPT)**

Basic principles of ecology, major biomes of North America, and pertinent environmental issues. Biomes range from tundra to tropical rain forest. Environmental issues include biodiversity, deforestation, desertification, and other land management problems, each analyzed from a scientific perspective but involving social, economic, and humanistic factors as well. IVA. CAS-D.

**BIO 177. Independent Studies. (0-5)****BIO 181. Medicinal and Therapeutic Plants. (3) (MPF)**

Plants have been used as medicines for thousands of years, and continue to be an important source of new cures and therapies for human disease. This course will trace the history of their use, discuss modern debates concerning the use of plants as medicines, and explore examples of medicinal and therapeutic plants. IVA. CAS-D.

**BIO 191. Plant Biology. (4) (MPF, MPT)**

Consideration of how plant structure, chemical composition, and genetic makeup interact with growth, development, evolution, and metabolic processes of living plants. IVA. CAS-D/LAB.  
3 Lec. 1 Lab.

**BIO 201. Human Anatomy. (4)**

Anatomy of typical vertebrates. CAS-D/LAB.  
2 Lec. 2 Lab.

**BIO 203. Introduction to Cell Biology. (3) (MPT)**

Introductory study of eukaryotic cell structure and function.  
Prerequisite: BIO 116/MBI 116, or BIO 191.

**BIO 203L. Plant Cell Biology Laboratory. (1)**

Laboratory exercises to illustrate the principles of plant cell and molecular biology.  
Prerequisite or Co-requisite: BIO 203.

**BIO 204. Evolution of Plant Biodiversity: Genes to Biosphere. (4) (MPT)**

Along with BIO 203, provides a foundation for botany majors. Covers genetic basis of evolution, heredity and genetic continuity, processes of evolution, and systematic and ecological end-products of evolution with an emphasis on plants, algae, and fungi. Students may not receive credit toward the major for both BIO 204 and BIO 206.  
Prerequisite: BIO/MBI 115 or BIO 191.

**BIO 205. Dendrology. (4)**

Identification and distribution of native and introduced trees, characteristics and use of their woods, and an introduction to forestry practice. CAS-D/LAB.  
2 Lec. 2 Lab.

**BIO 206. Evolutionary Biology. (3) (MPT)**

Development of major evolutionary concepts and application of such concepts within the biological sciences and related scientific fields are examined. Students cannot receive credit toward the major for both BIO 204 and 206.  
Prerequisite: one year of biological science.

**BIO 209. Fundamentals of Ecology. (3) (MPT)**

Interrelationships between organisms and their environments.  
Prerequisite: One course in the biological sciences (BIO or MBI); or permission of the instructor.

**BIO 209W. Fundamentals of Ecology. (3) (MPT)**

Interrelationships between organisms and their environments. This course covers the same content as BIO 209, but emphasizes scientific writing for a general audience.  
Prerequisite: one course in the biological sciences (BIO or MBI); or permission of the instructor.

**BIO 221. Plant Propagation. (4)**

Provides students with knowledge of the scientific and applied aspects of plant propagation in a closed system including basic plant production, watering, fertilization, crop management, insect and disease control, and problem solving.  
Prerequisite: BIO/MBI 115, BIO/MBI 116, BIO 131, BIO 176 or BIO 191.

**BIO 232. Human Heredity. (3) (MPT)**

Introduction to the basic principles of genetics and their relevance to human society. Not open to Biology, Botany, or Zoology majors.  
Prerequisites: completion of a minimum of six semester hours of biological sciences, which must include one of the following: BIO 116/MBI 116, BIO 172 or MBI 161.

**BIO 241. Botanical Principles in Landscape Gardening. (3)**

Plant materials in relation to home, garden, and landscape uses.

**BIO 244. Viticulture and Enology. (3)**

Botanical description of the grape (*Vitis*) and the principles of viticulture (grape growing) and enology (wine making). Various horticultural techniques used throughout the world in these disciplines. Tastings and lab fee.  
Prerequisite: BIO/MBI 115, BIO/MBI 116 or BIO 191; or permission of instructor.

**BIO 255. Introduction to Biotechnology. (3)**

Examination of modern biotechnology and issues emerging from this technology. Emphasis on plant biotechnology and practical application of plants or their components in industry, agriculture, medicine, and the environment. Basic principles of molecular biology and recombinant DNA technology introduced.

**BIO 256. Introduction to Programming for the Life Sciences. (3)**

This course serves as an introduction to programming designed specifically for life science majors, targeting the specific skills and techniques commonly needed and explaining the fundamental methods of working with biological data while centering programming assignments around topics of interest to those studying the life sciences. Topics covered include basic programming techniques, representation and manipulation of genomic and protein sequence data, and the automated interface with BLAST and the NCBI GenBank database.

Cross-listed with CSE/MBI.

**BIO 277. Independent Studies. (0-5)****BIO 302. Plant Taxonomy. (4)**

Identification of flowering plants in field and laboratory, including local flora and majors critical plant families. Additional topics include nomenclature, history of taxonomy, methods of systematics, phylogeny of plants.

**BIO 305. Human Physiology. (4) (MPT)**

Study of general physiological principles necessary for basic understanding of life processes. CAS-D/LAB.

3 Lec. 1 Lab.

Prerequisite: one year of chemistry, junior standing, and BIO 203 or MBI 365, or permission of instructor.

**BIO 306. Basic Horticulture. (3)**

Principal factors involved in the production of vegetables and fruits. Senior standing recommended.

**BIO 311. Vertebrate Zoology. (4) (MPT)**

Taxonomy and life histories with emphasis on local fauna. CAS-D/LAB. 2 Lec. 2 Lab.

**BIO 312. Invertebrate Zoology. (4) (MPT)**

Morphology and taxonomy with emphasis on local fauna. CAS-D/LAB. 2 Lec. 2 Lab.

**BIO 314. Plant and Fungal Diversity. (4) (MPT)**

Overview of plant and fungal diversity considering all major groups of non-animal eukaryotes. Although primarily a survey of structural and biochemical characteristics that define each group, the course also examines evolutionary themes among these organisms with particular emphasis on land plant evolution and the polyphyletic nature of the algae and fungi.

Prerequisite: a course in biological science.

**BIO 320. Directed Research. (1-3)**

Problems involving library, field, or laboratory work. Only three semester hours of BIO 320 can be used to fulfill advanced hour requirement.

**BIO 325. Pathophysiology. (4) (MPT)**

Study of relationship between normal body functioning and physiologic changes that occur as the result of illness. Not open to Biology, Botany, or Zoology majors.

Prerequisite: BIO 172 or equivalent.

**BIO 333. Field Ecology. (3)**

Experience in collection, analysis, and interpretation of ecological data. 1.5 Lec. 1.5 Lab. CAS-D/LAB.

Prerequisite: BIO 209.

Cross-listed with MBI.

**BIO 340. Internship. (0-20)****BIO 342. Genetics. (3) (MPT)**

Introduction to basic principles of genetic organization, function, and inheritance.

Prerequisite: one year of chemistry, junior standing, and at least one 200-level biology course, or permission of instructor.

**BIO 351. Environmental Education: Focus on Natural History. (4)**

Introduction to the field of environmental education emphasizing the natural history and interpretation of natural habitats of southwestern Ohio. Recommended prerequisite: BIO 115.

2 Lec. 2 Lab.

**BIO 355. Paleoanthropology. (3)**

In-depth survey of the human fossil record as interpreted in the light of modern evolutionary theory.

Prerequisite: ATH 255 or BIO 206 or permission of the instructor.

**BIO 361. Patterns in Development. (4) (MPT)**

Cellular, molecular and genetic analysis of developmental processes by which a single celled zygote is transformed into a multi-cellular organism, comparative analyses of the mechanisms across animals, and an understanding of classical and modern experimental approaches in Developmental Biology. CAS-D/LAB.

3 Lec. 1 Lab.

Prerequisite: BIO 203.

**BIO 364. Molecular Techniques. (2)**

Emphasizes techniques of modern molecular genetics, including gel electrophoresis, hybridization, gene cloning, polymerase chain reaction, quantitative gene analysis, drosophila genetics, DNA sequencing, STR analysis, protein fingerprinting, and Mutagenesis. Students cannot receive credit for both BIO/MBI 364 and BIO/MBI 465, or BIO 464/BIO 564.

Prerequisite: BIO 116.

Co-requisite: BIO 342.

**BIO 377. Independent Studies. (0-5)****BIO 395. Primate Biology and Behavior. (3)**

Taxonomic survey of the primate order including anatomy, distribution, adaptation, and morphological characteristics of various taxa. Selected primatological topics including primate conservation, reproduction and development, manipulation, and tool use. Recommended prerequisite: ATH 255 or BIO 206; junior or senior status; or permission of instructor.

Cross-listed with ATH.

**BIO 400. Capstone Seminar: Contemporary Issues in Biology. (3) (MPC)**

Requires seniors to critically evaluate and form positions on current biological issues of national interest. Format, theme, and topics change from term to term. Examples of themes include the management and use of natural resources, preservation of biological diversity, nature of the medical profession, and issues raised by advances in biotechnology. Faculty as well as other recognized authorities participate.

**BIO 401/BIO 501. Plant Ecology. (3) (MPT)**

Studies of plant communities, populations, and individuals in relation to their environment.

Prerequisite: one of the following: BIO/MBI 115, BIO 131, BIO 176 or BIO 209; or by permission of instructor.

**BIO 402/BIO 502. Plant Anatomy. (3) (MPT)**

Study of structural characteristics of plant cells organized into functional tissue groups within organs comprising plant bodies. Emphasis placed on identification of plant cell types using histochemistry and light microscopy, how various combinations of cell types form functional vegetative tissues, and how these functional tissues are organized within leaves, stems, and roots to form integrated plant bodies that are able to survive in diverse environments. (2 Lec. 1 Lab).

Prerequisite: BIO 203 or permission of instructor.

**BIO 403/BIO 503. Plant Development. (3)**

Study of growth and development of plants. Emphasis placed on methods of study and analytic models and genetic analysis of the growth and development of plant embryos, roots, stems, leaves and reproductive organs.

Prerequisite: BIO 402/BIO 502 and 425, or permission of instructor.

**BIO 407/BIO 507. Ichthyology. (4)**

General biology of fishes: their systematics and taxonomy, anatomy, systemic physiology, ecology, zoogeography, and management. Laboratory includes methods of collection and identification; studies of selected structural, functional, and behavioral attributes of fishes; and four field trips. CAS-D/LAB.

2 Lec. 2 Lab.

**BIO 408/BIO 508. Ornithology. (4)**

General biological principles of birds, their classification, evolution, adaptations, ecology, behavior, and relationship to humans. CAS-D/LAB.

2 Lec. 2 Lab.

Prerequisite: two advanced courses in biological sciences or permission of instructor.

**BIO 409/BIO 509. Herpetology. (4)**

Classification, speciation, morphological adaptations, mode of life, history, and ecology of amphibians and reptiles; emphasis on recent advances in the field. CAS-D/LAB.

2 Lec. 2 Lab.

**BIO 410/BIO 510. Mammalogy. (4)**

Examines the evolution, taxonomy, morphology, behavior and distribution of mammals. Emphasis is on placing modern mammal species in an evolutionary and comparative context. 2 Lec, 2 Lab. CAS-D/LAB.

Prerequisite: at least 14 hours of biology.

**BIO 411/BIO 511. General Entomology. (4)**

Introductory study of insects. CAS-D/LAB.

2 Lec. 2 Lab.

Prerequisite: BIO 115 or 312; or equivalent.

**BIO 419R. Independent Research Capstone. (3) (MPC)**

Provides students with an in-depth research experience. Requires that students understand scientific literature in a specific area, develop a research proposal, perform research, write a summary report, and orally present the research findings.

Prerequisite: permission of instructor and department chair or chair designate.

**BIO 422/BIO 522. Evolutionary and Population Genetics. (4) (MPC)**

Detailed examination of evolutionary and biosystematic concepts that have promoted advances in understanding the origins, structure, function, behavior, and distribution of present-day organisms and taxa.

Prerequisite: BIO 342 or equivalent.

**BIO 424/BIO 524. Advanced Experimental Techniques in Structural and Functional Genomics. (4)**

Theory and application of modern biological instrumentation and techniques. Basic and advanced skills including use, maintenance and calibration of biological instruments. Recommended prerequisites: BIO/MBI 115 or BIO/MBI 116 or BIO 191 or MBI 201 or MBI 202 or equivalent, CHM 141 and CHM 142 or equivalent, or permission of instructor.

Cross-listed with CHM/MBI.

**BIO 425/BIO 525. Environmental Plant Physiology. (4) (MPT)**

Examines the structure and function of plants from the cellular to the whole plant level focusing on plant-environment interactions.

Prerequisite: a course in biological science.

**BIO 431/BIO 531. Global Plant Diversity. (3) (MPT)**

Research-focused seminar on floristic, ecological, and cultural influences on global patterns of plant diversity, especially in tropical regions. Comparative topics include the role of disturbances and global environmental change. Recommended prerequisite: BIO/MBI 115, BIO 191, or higher, GEO 121 or higher, or permission of instructor.

Cross-listed with GEO.

**BIO 432/BIO 532. Ecoregions of North America. (3) (MPT)**

Ecological study of vegetation that applies an understanding of climate, soils, and physiography across the continent toward interpreting major vegetation types and local patterns of diversity.

Discussions and field work focus on current research and conservation issues. Required field trip. Recommended prerequisite: BIO/MBI 115, BIO 191, or higher; GEO 121 or higher; or permission of instructor.

Cross-listed with GEO.

**BIO 435/BIO 535. Winter Biology. (3) (MPC)**

Study of adaptations for survival and life in the winter environment with particular emphasis on effects of ice, snow, and low temperature.

Prerequisite: BIO 305 or equivalent or permission of instructor.

**BIO 437/BIO 537. Paleontology in Conservation. (3)**

This course explores the needs of conservation scientists, what paleontological data contribute, and new methods for synthesizing modern and paleontological data to develop effective strategies for conservation, remediation, restoration, and policy.

Prerequisite: BIO 206, or BIO 209, GLG 204, or permission of the instructor.

Cross-listed with GLG.

**BIO 438/BIO 538. Soil Ecology and Sustainable Use. (3)**

Introduces processes of soil formation and consequent physical, chemical, and biological properties. Analyzes soil functions related to plant growth, agricultural productivity, water quality, and biodiversity, and evaluates sustainability of the soil resource in the context of environmental change and ecosystem management.

Prerequisite: CHM 141 or equivalent.

**BIO 444/BIO 544. Molecular Biology. (3) (MPC)**

Emphasis on molecular biology of the gene and the molecular basis of gene action. Recommended prerequisite: organic or physical chemistry and BIO 342; or equivalent.

**BIO 449/BIO 549. Biology of Cancer. (3)**

Study of cancer in animals at the molecular, cellular, and physiological levels. Causes, development, and treatment of cancer are examined as well as the characteristics of the 10 most common cancers in humans. Recommended prerequisite: BIO 203 and organic chemistry.

**BIO 451/BIO 551. Conservation Education and Community Engagement. (3)**

Theory and practice of participatory education, collaborative research, and conservation action for positive ecological, educational, and social change. Includes community engagement projects and case studies in diverse local and global contexts.

Prerequisite: at least one course in the life sciences at the 200 level or above, or permission of instructor.

**BIO 452/BIO 552. Nerve and Muscle Physiology. (4) (MPC)**

Study of nervous, muscular, and circulatory systems in a diversity of organisms (vertebrates and invertebrates). Experience with experimental techniques used to study these systems. Recommended prerequisite: BIO 305 and 361 or BIO 203 or 342, CHM 242 or 332, or permission of instructor. CAS-D/LAB.

3 Lec. 1 Lab.

**BIO 453/BIO 553. Animal Physiological Ecology. (4) (MPC)**

Study of physiological and behavioral adaptations of organisms. Topics include discussions of flying, diving, and swimming adaptations as well as consideration of specific environments such as deserts, caves, and estuaries. Recommended prerequisite: BIO 209, 305, or equivalent, and permission of instructor. CAS-D/LAB.

3 Lec. 1 Lab.

**BIO 454/BIO 554. Endocrinology. (3) (MPC)**

Study of the role of chemical messengers and hormones from endocrine and neural origin, in control of physiological processes. Includes review and discussion of current techniques and methodologies in the literature. CAS-D/LAB.

Prerequisite: BIO 305, or both BIO 161 and BIO 203, and CHM 241.

**BIO 455. Comparative Exercise Physiology. (3)**

Study of muscular, cardiovascular and pulmonary systems in a diversity of organisms (vertebrates and invertebrates). Focus on activity and locomotion with emphasis on comparative methods. Prerequisite: BIO 305 or KNH 468/KNH 568; or permission of instructor.

Cross-listed with KNH.

**BIO 457/BIO 557. Neuroanatomy. (3)**

Study of structural and functional organization of the mammalian central nervous system. Emphasis on organization of and current methodologies used in study of major neuroanatomical pathways and neurotransmitters of mammalian brain and spinal cord. Includes computer-assisted imaging of brain structures and methods of data analysis.

Prerequisite: BIO 305, or both BIO 161 and BIO 203.

**BIO 458/BIO 558. Neuroanatomical Methods. (1)**

Students review basic brain anatomy and review techniques in neuroanatomical research. Students gain experience in data collection and analysis and neuroimaging methods. Prerequisite or co-requisite: BIO 457/BIO 557.

**BIO 459/BIO 559. Advanced Neuroscience with Lab. (3)**

An in-depth, hands-on exploration of experimental design and laboratory techniques in neuroscience research, with emphasis on physiological, behavioral, cellular, and molecular mechanisms of nervous system function. Students use vertebrate and invertebrate model organisms and research methods such as gross dissection, immunohistochemistry, electrophysiology and liquid chromatography, to investigate structural and functional features of nervous tissues and cells. Collaborative teams design and conduct semester-long research projects. Students learn to interpret the neuroscience research literature, analyze current research trends, identify gaps in knowledge, and develop competencies in scientific writing and communication.

Prerequisite: BIO 305 or graduate standing.

**BIO 463/BIO 563. Limnology. (4) (MPT)**

Physical, chemical, and biological characteristics of freshwater ecosystems. CAS-D/LAB.

3 Lec. 1 Lab.

Prerequisite: BIO 209 or equivalent, a year of chemistry, or permission of instructor.

**BIO 464/BIO 564. Laboratory in Cell and Molecular Biology. (3)**

An in-depth, hands-on laboratory experience that supplements any of the 400 level cell, developmental, genetic, or molecular biology courses. Emphasis is on techniques used in modern cell and molecular biology.

Prerequisite or Co-requisite: BIO 342; or permission of instructor.

**BIO 465/BIO 565. Animal Behavior. (4) (MPC)**

Evolutionary approach to the study of animal behavior with emphasis upon the description, measurement, and interpretation of behavior of animals. Emphasizes a problem-solving approach to help students understand how and why behavior influences the ways in which animals live and reproduce. Emphasizes examination of behavior using a combination of lectures, discussions, and laboratory experiences. Students gain experience in evaluating published scientific research as well as data gathered in lab exercises and an independent research project. CAS-D/LAB.

2 Lec. 2 Lab.

Prerequisite: nine hours of advanced courses in biological science and a course in statistics or permission of instructor.

**BIO 466/BIO 566. Bioinformatics Computing Skills. (3)**

Study of the core computational and biological concepts in bioinformatics, with programming in Python, MySQL and Ubuntu OS. You will gain hands-on experience in popular bioinformatics applications, including BLAST, sequence alignment, genome browser, and gene annotation, among others.

Prerequisites: BIO 256; or CSE 174; or permission of instructor.

Cross-listed with CHM/CSE/MBI.

**BIO 467/BIO 567. Conservation Biology. (3) (MPC)**

Principles of ecology and organismal biology applicable to conservation of uncommon plant and animal populations or ecosystems as related to anthropogenic influences and relevant legislation.

Prerequisite: BIO 209 or BIO 401/BIO 501; or equivalent.

**BIO 469/BIO 569. Neurophysiology. (3) (MPC)**

Study of the physiology of the central nervous system with emphasis on the cellular and molecular basis of signal transmission in the brain. Includes a review of current techniques and topics in the literature.

Prerequisite: BIO 305, or both BIO 161 and BIO 203; graduate standing for 569.

**BIO 471/BIO 571. Molecular Physiology. (3)**

Emphasis on how modern biological techniques are applied to the understanding of molecular physiology in both the normal and abnormal disease states. Specific topics will be complemented with current literature to illustrate investigations into physiology at the cellular and molecular level.

Prerequisite: BIO 305 and a 200-level (or higher) course in molecular/cell biology.

**BIO 477. Independent Studies. (0-5)****BIO 480. Departmental Honors. (1-6; maximum 6)**

Departmental honors may be taken for minimum of 4 credit hours and maximum of 6 credit hours, in one or more semesters of student's senior year.

**BIO 481/BIO 581. Theory of Electron Microscopy. (3)**

Principles and theory of scanning and transmission electron microscopy and advanced microscopies.

**BIO 482/BIO 582. Scanning Electron Microscopy Laboratory. (2)**

Practical course providing training in scanning electron microscopy (SEM). Sample preparation, SEM operation, darkroom work, manuscript preparation, and an individual research project.

Prerequisite or Co-requisite: BIO 481/BIO 581 and permission of instructor.

**BIO 483/BIO 583. Transmission Electron Microscopy Laboratory. (3)**

Practical course in transmission electron microscopy: specimen preparation microscope usage, data collection, and photographic plate preparation.

Prerequisite or Co-requisite: BIO 481/BIO 581 and permission of instructor.

**BIO 485/BIO 585. Bioinformatics Principles. (3)**

Concepts and basic computational techniques for mainstream bioinformatics problems. Emphasis placed on transforming biological problems into computable ones and seeking solutions.

Prerequisite: (BIO/CSE/MBI 256 or CSE 174) and (BIO/MBI 116 or MBI 201 or BIO 342) or permission of instructor.

Cross-listed with CSE 485/CSE 585 and MBI 485/MBI 585.

**BIO 490. Botany Capstone Seminar. (1) (MPC)**

This seminar meets weekly and accompanies directed study or independent research for students interested in graduate or professional school. Two semester hours of independent study or internship are required to complete the three-hour Capstone requirement.

**BIO 491. Seminar in Biology. (1; maximum 2)**

Review and discussion of topics in biology.

Prerequisite: senior biology, botany or zoology major; or permission of instructor.

**BIO 496. Biodiversity of Kenya. (6) (MPC)**

Intensive field-workshop on: 1) the ecology of tropical ecosystems in Kenya; 2) indigenous human relationships with Kenyan environments; and 3) conservation issues from interdisciplinary perspectives.

Includes pre-trip seminars that introduce basic concepts in Kenya's ecology, a two-week intensive field experience in Kenya, and follow-up discussions and project presentations. CAS-C.

Prerequisite: permission of the instructor.

Cross-listed with GEO.

**BIO 497/BIO 597. Socio-Ecology of Primates. (3)**

Ethology and ecology of living prosimians, monkeys, and apes, from comparative and evolutionary perspectives, emphasizing field studies of natural populations.

Prerequisite: junior or senior status; nine advanced hours in BIO; for others, permission of instructor.

Cross-listed with ATH.

**BIO 498/BIO 598. Evolution of Human Behavior. (3) (MPC)**

Ethology and ecology of *Homo sapiens*, from comparative and evolutionary perspectives, drawing on primatology, paleoanthropology, and sociocultural studies of traditional societies.

Prerequisite: junior or senior status; nine advanced hours of BIO; permission of instructor.

Cross-listed with ATH.

**BIO 601. Seminar for Graduate Students. (1)**

Introduction to methods of searching literature, preparation of audiovisual materials, preparation of grant applications and manuscripts, good teaching practices, and other aspects of the profession. Seminar for beginning graduate students in the biological sciences.

**BIO 603. Cell Molecular and Structural Biology First Year Graduate Seminar. (1)**

Introduction to methods of searching literature, preparation of audiovisual materials, preparation of grant applications and manuscripts, developing good presentation skills, and other aspects of the profession. Seminar for beginning graduate students in the Cell Molecular and Structural Biology Program.

**BIO 605. Advanced Molecular Biology. (3)**

In-depth study of genome organization, rearrangement, replication, and expression in prokaryotic and eukaryotic cells and their viruses, with an emphasis on regulatory mechanisms.

Prerequisite: graduate status, a course in molecular genetics, biochemistry, or cell biology, and permission of instructor.

Cross-listed with MBI.

**BIO 606. Advanced Cell Biology. (3)**

Advanced level study of molecular basis of prokaryotic and eukaryotic cell structure/function relationships.

Prerequisite: graduate status, course in molecular genetics, cell biology, or biochemistry, and permission of instructor.

Cross-listed with MBI.

**BIO 620. Graduate Research. (1-12; maximum 14)**

Special problems in the biological sciences.

**BIO 621. Advanced Plant Taxonomy. (3)**

Principles of classification with emphasis on modern approaches to study the evolution and relationships of flowering plants.

2 Lec. 1 Lab.

Prerequisite: course in taxonomy or permission of instructor.

**BIO 631. Conservation Science & Community. (2)**

Conservation science is a field driven by concern over the impacts of humans on biological resources, species survival, and environmental health. Humans have a considerable capacity to alter environmental systems, harming ourselves and other species. And through it all we display a remarkable resistance to change our behavior to better sustain life, or even to fully grasp the consequences of our actions. Amidst these distressing facts, there are also signs of hope as more people become directly involved in environmental stewardship. Conservation scientists, educators, community leaders, youth, and others have been directly involved in efforts that have brought species back from the brink of extinction, restored ecosystems, and caused the creation of vast protected areas. This course explores the theory and practice of Conservation Science, which will require discussion of concepts central to the field, such as conservation genetics, population biology, and ecology, as well as ideas from other disciplines, since all problems become interdisciplinary when applied to the human condition. This course occurs in Dragonfly's web-based learning community.

**BIO 632. Biology in the Age of Technology. (2)**

Biology in the Age of Technology is a graduate seminar that considers current and foundational issues in biological technology. Students explore established and emerging technologies related to biological science, which have profound implications for environmental studies and learning. Emphasis will be placed on how technology can be used to deepen public engagement in science and conservation. Specific topics will be suited to the current state of the field. This course occurs in Dragonfly's web-based learning community.

**BIO 633. Issues in Biodiversity. (2)**

Issues in Biodiversity is a graduate seminar covering current and foundational issues in biodiversity. The seminar will focus on the forces that create and sustain biodiversity, patterns of biodiversity over time and space, and human impacts on biodiversity, with specific topics suited to the current state of the field. This course occurs in Dragonfly's web-based learning community.

**BIO 634. Issues in Evolution. (2)**

As the leading unifying concept of the biological sciences, an interest and familiarity with evolution is critical for those seeking to better understand life on earth. Evolutionary theory also provides an essential framework for educators and other professionals interested in increasing community engagement in environmental problems. Issues in Evolution is an Advanced Graduate Seminar that provides participants the opportunity to learn and discuss both foundational issues in the field as well as current topics with significant ecological and social impacts. Under the guidance of the course instructors and facilitators, students working in small teams will take turns helping to define and lead two-week discussions on topics covered in the primary literature of evolutionary biology. Specific topics in this course vary from year to year to capture changes in the field, but the course will begin with foundational readings. This course occurs in Dragonfly's web-based learning community.

**BIO 635. Leadership in Science Inquiry. (2)**

Leadership in Science Inquiry is a graduate seminar that challenges students to explore a leadership dimension within their professional careers. Students in this course demonstrate collaborative leadership in an area appropriate and specific to their master's studies, while providing critical peer review of others' work and projects. This course occurs in Dragonfly's web-based learning community.

**BIO 636. Professional Media Workshop. (2)**

Professional Media Workshop is a graduate seminar in which students focus on increasing scientific writing skills, on critically reflecting about their own and others' work, on considering how ideas can change a field of practice, and on developing a better understanding of authorship and its contribution to professional and personal development. This course occurs in Dragonfly's web-based learning community.

**BIO 637. Master's Capstone. (2)**

Master's Capstone is the cornerstone exit course of the Advanced Inquiry Program (AIP) and the Global Field Program (GFP) master's degrees from Miami University. Students synthesize, analyze, share, discuss, and make final reflections about the projects and artifacts they have created throughout their master's experience and how those projects have helped lead them to a deeper understanding of the master's program core tenets of local, regional and global understanding; inquiry; environmental stewardship; and community participation/voice. This course occurs in Dragonfly's web-based learning community.

**BIO 638. Climate Change. (3)**

Global warming is irrevocably altering our polar ice caps, our oceans, our forests, and the world's plant and animal life. In this course, participants study the science of climate change, the diverse causes of climate change, and the impact of climate change at local, regional, and global scales. Topics include global warming's effect on weather and climate, ice caps, deforestation, and species conservation. Because the public plays a central role in how the world responds to climate change, students also investigate the factors that guide public perception, ranging from media to social interaction. Students explore the effect of climate change specific to the biology of their local region and consider what actions they and their communities can take locally. Through project assignments and research, at the end of this course participants not only have a solid understanding of current issues surrounding climate change but will also have considered and developed strategies for taking action. This is a hybrid course with interaction on-site and in Dragonfly's web-based learning community.

**BIO 639. Master's Capstone: MAT. (2)**

A required exit course for students earning a Master of Arts in Teaching (MAT) in the Biological Sciences as part of the Advanced Inquiry Program (AIP) or the Global Field Program (GFP) master's degrees from Miami University. Students review, analyze, and synthesize their own work throughout the degree and create a master's portfolio. They share their portfolio with peers and discuss their academic and personal progress through their master's experience. Student portfolios must demonstrate relevance to learning and teaching in formal education settings.

**BIO 640. Internship. (0-12; maximum 12)****BIO 641. Earth Expeditions: Advanced Field. (5)**

The Earth Expeditions: Advanced Field course allows students to more fully and deeply explore community-based conservation, participatory education, and inquiry at an international conservation site they have previously visited during a past Earth Expeditions course. Possible field sites for the Advanced Field course include Baja, Belize, Borneo, Costa Rica, Guyana, Hawai'i, Kenya, Mongolia, Namibia, and Thailand (see EarthExpeditions.org for detailed descriptions of each field site). Prior to and following the field experience, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with IES.

**BIO 642. Amazon: Avian & Tropical Ecology. (5)**

In the Amazonian Neotropical regions of Peru, reality has attained mythic proportions: more than 400 species of mammal, 1,300 bird species, 3,000 fish, 40,000 plants, and 2.5 million insect species. And still counting. Why is this area of South America the most diverse on the planet? How have the varied human groups that inhabit this region adapted to their unique environments? And perhaps the most relevant question for life on Earth, what is the future of the Amazon? Students travel to the Peruvian Amazon rainforest and work with educators, researchers, and local communities to better understand the evolution and maintenance of biodiversity in this region, and to experience firsthand the effects of human interventions in the Amazon, from deforestation and urbanization to restoration efforts by local groups. Prior to and following the field experience in the Amazon, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with IES.

**BIO 643. Australia: Great Barrier Reef. (5)**

One of the seven wonders of the natural world, the Great Barrier Reef lies in the clear blue waters off the northeast coast of Australia. This complex reef system is not only the world's greatest expanse of coral, it is the Earth's largest living structure, a massive, beautiful, and ancient biological phenomenon of bewildering diversity and immense ecological significance. This graduate course is offered jointly with Reef HQ Aquarium, Australia's National Education Centre for the Great Barrier Reef. We sleep near the corals in the aquarium itself, venturing forth on several excursions for direct research on the Great Barrier Reef, and hiking in some of Australia's unique terrestrial habitats. Discussion topics include marine science issues, citizen engagement in marine science and environmental stewardship. Prior to and following the field experience in Australia, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with IES.

**BIO 644. Baja: Field Methods. (5)**

Students discover the rich waters and terrestrial ecosystems of Baja's UNESCO World Heritage site and biosphere reserve on the Sea of Cortez. Bahia de los Angeles is a unique ecoregion with remarkable marine and terrestrial environments. Students also explore Rancho San Gregorio, a family-owned ranch located in a small canyon where its isolation and climate make it a hotspot for desert investigations. Students gain proficiency in applying field methods to ecological questions and conservation practice. A premise of this course is that field methods are not only essential for ecological research, they can serve as the basis for participatory education, public engagement in science, and community-based environmental stewardship. Many groups, from teachers leading schoolyard ecology to parataxonomists involved in ethnobotanical research, share a need for reliable information obtained through robust field methods to build understanding and to promote informed action. Prior to and following the field experience in Baja, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with IES.

**BIO 645. Belize: Approaches to Environmental Stewardship. (5)**

Students join our partner, the Belize Zoo, and explore diverse terrestrial, coastal, and coral reef communities of Belize, while learning about conservation programs on such species as harpy eagles, jaguars, manatees, and howler monkeys. Possible investigations include monitoring manatee population dynamics, human influence on coral reefs, aquatic mangrove species sampling, and species behavior studies at the Belize Zoo. Discover the power of inquiry to generate knowledge and inspire conservation. All students will have the chance to conduct an investigation of the local ecosystem, asking their own questions, collecting data, and presenting conclusions. Prior to and following the field experience in Belize, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with IES.

**BIO 646. Borneo: Primate Conservation. (5)**

Borneo's primate community is exceptionally rich, including proboscis monkeys, which occur only in Borneo, leaf monkey, macaque, gibbons, tarsier and slow loris. Of greatest conservation concern is the orangutan, which occurs naturally on only two islands in the world, Borneo and Sumatra, and is under increasingly severe pressure, primarily from habitat loss. The orangutan, the only great ape in Asia, may completely vanish from the wild within two decades. Partnered with the Woodland Park Zoo, we will join researchers from the NGO Hutan and the Danau Girang Field Centre, and villagers of the Kinabatangan region who are responsible for model community-based efforts to preserve orangutans, Bornean pygmy elephants, and other species. In addition to exploring primatological field methods, students will work with local groups and develop new ways to engage communities worldwide in saving orangutans and other wildlife. Prior to and following the field experience in Borneo, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with IES.

**BIO 647. Guyana: Local Wisdom & Conservation. (5)**

Guyana's rain forests are part of the Guiana Shield considered one of the last four Frontier Forests in the world. Guyana is famous for its relative abundance of iconic Amazonian species such as jaguars, arapaima (a "living fossil" and one of the largest freshwater fishes in the world), harpy eagles, giant anteaters, giant river otter, and the giant water lily. Guyana is also culturally and ethnically diverse. We will spend most of our time with the Makushi, an indigenous group that has lived in these forests and savannas for thousands of years. The Makushi and their lands face a striking transition as the forces of development provide new opportunities and challenges, the greatest perhaps being the rapid extinction of traditional knowledge. Conscious of the value of indigenous and non-indigenous knowledge, Guyana's Makushi people are becoming masters of straddling both worlds. Prior to and following the field experience in Guyana, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with IES.

**BIO 648. Hawai'i: Saving Species. (5)**

The extraordinary island ecosystems of Hawai'i evolved in isolation over millions of years, and the islands have long been home to species that occur nowhere else on the planet. However, since the arrival of humans, native species have been under tremendous threat, and by many measures Hawai'i is becoming one of the United States' most profound conservation failures. Habitat destruction, environmental degradation, introduced species, and other forces have made Hawai'i a global center for extinction. Students in this course will join with San Diego Zoo Global (SDZG), Project Dragonfly, and Hawaiian partners to explore what it takes to save species in the wild. We will focus especially on the inspirational work of SDZG's Institute for Conservation Research, which uses science, education, and community programs to rescue species from the brink of extinction. We expect Earth Expedition's Hawai'i program to immerse graduate students and local partners in developing and testing site-specific methods of community engagement to sustain ecological and social health. Prior to and following the field experience in Hawai'i, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions. Cross-listed with IES.

**BIO 649. Kenya: Wildlife & People in Integrated Landscapes. (5)**

The South Rift Valley of Kenya is one of the most spectacular wildlife areas on the planet. Project Dragonfly has partnered with the Cincinnati Zoo & Botanical Garden and the African Conservation Centre to advance community-based conservation in this dynamic landscape. This effort builds on the decades-long research of Dr. David Western, former head of the Kenya Wildlife Service, and the centuries-long research of the Maasai pastoralists, who have long co-existed with wildlife in an open grassland ecosystem populated by elephants, lions, giraffes, zebra, wildebeests, and a remarkable diversity of other species. With the rise of nontraditional lifestyles, private ranches, and fenced lands that prevent needed wildlife migrations, communities of the South Rift have recognized the need to understand the impact of these changes and to work together for a better future. Join Kenyan conservationists, educators, community leaders, and youth to study sustainable approaches to human-wildlife coexistence. Prior to and following the field experience in Kenya, students will complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with IES.

**BIO 650. Seminar in Molecular Biology. (1)**

Discussion of current literature in molecular biology.

Prerequisite: graduate standing.

Cross-listed with CHM/MBI.

**BIO 651. Mongolia: Steppe Ecology & Civic Media. (5)**

Students travel to Mongolia, the "Land of Blue Sky." The birthplace of the Mongol Empire, the largest contiguous empire in human history, Mongolia is now a vibrant democracy and home to an open wilderness that has few parallels in the modern world. We will explore the great steppes, and especially engage in the conservation story of two key steppe species: Pallas' cats and Przewalski's horse. Pallas' cats are important steppe predators whose conservation provides insights into the challenges facing the survival of small wild cats worldwide. Przewalski's horse, also called takhi, are considered to be the only true wild horse left in the world. We will join research on an ambitious reintroduction project based in Mongolia that has returned this remarkable species to its former homeland after being driven to extinction in the wild. Prior to and following the field experience in Mongolia, students will complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with IES.

**BIO 652. Thailand: Buddhism & Conservation. (5)**

Students travel to Thailand to investigate this country's astonishing Old World rain forests and diverse cultural environments. This course will address key topics in ecology while exploring emerging models of conservation and education. Possible research projects include Buddhism and the environment, indigenous ecological knowledge, spiritual connections to nature, and community forests. Discover the power of inquiry to generate knowledge and inspire conservation. All students conduct an investigation of the local ecosystem, asking their own questions, collecting data, and presenting conclusions. Prior to and following the field experience in Thailand, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with IES.

**BIO 653. India: Species, Deities & Communities. (5)**

Students journey to India through the rich ecological, cultural, and spiritual landscapes of the Western Ghats, exploring sacred groves and forest temples where the fate of wildlife, people, and deities meet. The Western Ghats region is well known to conservationists as a biodiversity hotspot, home to diverse local ecosystems with an abundance of plant and animal species found nowhere else. The existence of sacred groves in the Western Ghats predates recorded history. For social scientists, sacred groves are valued as centers for community life. For the spiritually inclined, sacred groves transcend earthly bounds, allowing people to commune with gods and other powerful beings that offer protection, enlightenment, absolution, or guidance. In this course, we seek to better understand the multifaceted relationship between people and nature, and we address specific questions about a sustainable future. Prior to and following the field experience in India, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with IES.

**BIO 654. Foundations of Inquiry. (3)**

This course engages students in exploring the foundations of inquiry-based teaching and learning while students gain a new familiarity with Advanced Inquiry Program (AIP) Master Institution (MI) facilities as informal science education settings. Through making observations on zoo grounds, developing comparative questions, devising investigations to answer those questions and communicating results, participants will experience the full process of inquiry and will learn how to guide this process with their own students and in their own communities. This type of firsthand, experiential learning encourages independent and critical thinking, increasing the communities' awareness and concern for the local environment and its inhabitants. We will engage in activities that demonstrate the applications of inquiry in the classroom, on zoo grounds, in the schoolyard and other settings. Through this course, students will develop the investigation, critical reflection, and collaboration skills needed to lead inquiry-driven learning for diverse communities. This is a hybrid course with interaction on-site and in Dragonfly's web-based learning community.

**BIO 655. Master Plan in Action. (1-2)**

The AIP Master Plan (MP) represents a student's ideas and areas of interest as those ideas relate to the student's professional and community goals. By writing a Master Plan, students are able to focus their AIP journey and visualize the actions and steps that they might take toward completing their master's degree during the 2.5- to 5-year timeframe. During this course with guidance and input from peers and the AIP Cohort advisor, students work on completing their Master Plans. This method ensures that students have a workable plan that helps them anticipate ways to incorporate the projects they create as part of their AIP experiences into their professional and life goals. Students will also think about the common threads and program tenets among the projects in this cohesive body of work, which ultimately becomes their final master's portfolio due as the culminating experience at the end of their degree. This is a Miami University online course with experiential learning through an affiliate Dragonfly Advanced Inquiry Program (AIP) institution.

**BIO 656. Environmental Stewardship in My Community. (3)**

Students in this course investigate environmental stewardship, research science and conservation opportunities and solutions in their local communities, practice inquiry-based learning, develop a conservation project to be used in their classroom or community, and reflect on ecological and carbon footprints. At the end of this course, students will have a solid understanding of community-based conservation, with a particular emphasis on current issues facing local habitats in the communities where they live. Students will also explore and begin to design stewardship strategies for empowering their own students or community members to generate solutions and take action. This is a hybrid course with interaction on-site and in Dragonfly's web-based learning community.

**BIO 657. Regional Ecology. (3)**

Through both zoo-based and field-based experiences, this course explores regional wildlife conservation issues, as well as field investigation techniques that scientists and citizens can use to study and conserve local ecoregions and wildlife. Students will be exposed to observational and experimental approaches and will practice field investigation techniques that can provide rigorous, engaging inquiry experiences for students. Student-conducted investigations will be used to contribute to local ecological knowledge by describing natural systems, noting differences in habitats, and identifying environmental trends and issues. This course focuses on different ecoregions in the area and highlights different conservation issues or themes based on that ecoregion. This is a hybrid course with interaction on-site and in Dragonfly's web-based learning community.

**BIO 658. Ecophysiology. (3)**

Students in this course will explore the ways in which humans can (and do) emulate systems and designs found in nature to create materials, medicines, social systems, computers and so much more. Students will fine tune their observation skills and complete a design challenge using nature as their guide. Through this course, students will develop their observation and collaboration skills and will acquire research experience in the life sciences on such topics as the principles of ecophysiology, form and function of organismal adaptations, phenotypic and behavioral plasticity, and maintenance of homeostasis. Students will think critically and scientifically about the ways in which nature can benefit humankind through technological inspiration and solutions to environmental problems. Students will apply what they have learned as they develop curricula and create design challenges for professional use. This is a hybrid course with interaction on-site and in Dragonfly's web-based learning community.

**BIO 659. Great Lakes Ecosystems. (3)**

The focus of this course is the study of the biology of the Great Lakes watershed, combining classroom work with field science inquiry and research. In addition to exploring the general function of watersheds, students become familiar with historical and contemporary human influences on ecosystems within the watershed basin, and they discuss and understand negative human impacts including point and non-point source pollution, multiple-stressors, "urban stream syndrome," and local sewage treatment and its relationship to the basin. Students gain skills observing and describing biotic and abiotic characteristics of area watershed ecosystems and understand the status of threatened and endangered species in the watershed basin. This is a hybrid course with interaction on-site and in Dragonfly's web-based learning community.

**BIO 662. Animal Behavior & Conservation. (3)**

Investigations of animal behavior comprise a rich field of study that began as a means to survival for early humans. It has now become a captivating field of scientific study in its own right. Invertebrates, birds, mammals, reptiles, amphibians, and other animals are ideal for comparative observational studies on topics ranging from complex behaviors and adaptations to public engagement with conservation. Students in this course investigate animal behavior through direct observation of the zoo's diverse animal species to explore key questions about how and why species act the way they do in different situations. This course will provide a foundation for understanding ethological research methods and animal conservation issues that can be applied and adapted to increased understanding about animal welfare and wildlife conservation in local educational and community settings. This is a hybrid course with interaction on-site and in Dragonfly's web-based learning community.

**BIO 663. Project Design & Assessment. (3)**

This course instructs students about one of the most important scientific endeavors: evaluation to indicate whether their own work or the work of others is showing a trend and, thus, having an impact. The course is focused on two main sets of evaluation, natural science and social science studies. The course will review statistical thinking and discuss how to construct successful studies that will open students to accurate and effective evaluation. We will discuss how to choose between different statistical tests and the consequences for their experimental design. Students will be engaged in the different ways researchers and others apply statistics to natural science and social science studies. Students conducting social science research will determine whether to conduct qualitative or quantitative studies and will parse out the differences and values of each approach. This is a hybrid course with interaction on-site and in Dragonfly's web-based learning community.

**BIO 667. Conservation Research at Living Collection Institutions. (3)**

This course provides students with an overview of conservation research conducted in zoological, reserve, aquaria and other ex situ settings. Students will explore key science concepts within the contexts of wildlife conservation, the imperative of in-situ conservation, the multi-disciplinary nature of science, and hands-on conservation research. Participants will learn about current research in the fields of genetics, reproductive physiology, disease diagnostics, ecology, and animal behavior. Course themes explore sustainable population maintenance, wildlife health, bioresource banking, restoration ecology, reintroduction biology, and the role of zoos, reserves and aquaria in conservation. This is a hybrid course with interaction on-site and in Dragonfly's web-based learning community.

**BIO 668. Biology Through Inquiry. (3)**

This course will explore fundamental topics in biology from a student-driven, inquiry-based perspective. Course topics include cell biology, plant biology, DNA and gene expression, evolution, diversity of life and classification, populations, communities, and ecosystems. Students will conduct mini-inquiries throughout the course, helping to link core concepts to their everyday lives. Through collaborative discussions, students will further their understanding of these key concepts and articulate relationships between biology and many of the major challenges currently facing humanity. Finally, students will conduct their own biological investigation, developing skills in experimental design, data collection, and communication of findings. This course occurs in Dragonfly's web-based learning community.

**BIO 671. Population and Community Ecology. (4)**

Principles and applications of population and community ecology: population dynamics, direct and indirect species interactions, food webs, species diversity.

Prerequisite: at least one course in general ecology; calculus recommended.

Cross-listed with MBI.

**BIO 672. Ecosystem and Global Ecology. (4)**

Structure, dynamics and management of ecosystems and the biosphere, including food web interactions, nutrient cycling, ecosystem functioning, and biogeochemical cycles at local, regional and global scales.

Prerequisite: at least one course in general ecology and general chemistry.

Cross-listed with MBI.

**BIO 675. Inquiry & Action. (2; maximum 6)**

A follow-on course to summer Earth Expeditions global field courses, BIO 675 enables students to work with faculty, peers, and their local communities to address key ecological and education issues through hands-on investigation and action. Each student conducts a semester-long Inquiry Action Project (IAP) that requires scientific research in a community context as well as shared action or a plan of shared action addressing a focus issue.

Prerequisites: Earth Expeditions field course, or permission of instructor.

**BIO 677. Independent Studies. (0-5)****BIO 689. Pedagogy For Graduate Students. (1)**

Introduction to teaching for new graduate students. Role of the graduate teaching assistant, teaching methodology and good teaching practices are covered. Summer only.

Prerequisite: acceptance into one of the graduate programs associated with the department.

**BIO 691. Costa Rica: Ecology & Ecotourism. (5)**

Students join a summer field course in Costa Rica to explore Neotropical systems, including lowland rain forest and cloud forest; engage in inquiry and action projects on vital issues in education and conservation. Prior to and following the field experience in Costa Rica, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions. Cross-listed with IES.

**BIO 692. Namibia: Great Cat Conservation. (5)**

Students join a summer field course in Namibia, Africa, to connect with the Cheetah Conservation Fund, the global center of cheetah conservation worldwide; engage in inquiry and action projects on vital issues in education and conservation. Prior to and following the field experience in Namibia, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with IES.

**BIO 694. Habitats, Adaptations, & Evolution: Earth Expeditions. (3)**

Students will complete a semester-long research project to explore habitats, evolutionary theory and adaptation; create research questions which can also cover individual classroom goals or district goals or state or national standards. This is a hybrid course with interaction on-site and in Dragonfly's web-based learning community. Cross-listed with GLG/IES.

**BIO 695. Plants & People: Earth Expeditions. (3)**

Students will complete a semester-long research project to explore emerging, vital conversation about the role of nature in human development and learning, with a particular focus on plants and their use in education; generate knowledge and illuminate the relationship between plants and people. This is a hybrid course with interaction on-site and in Dragonfly's web-based learning community.

**BIO 696. Primate Behavior & Conservation. (3)**

Students will complete a semester-long research project to investigate primate conservation and behavior through direct observation of prosimians, monkeys, and apes at the Cincinnati Zoo & Botanical Garden. This is a hybrid course with interaction on-site and in Dragonfly's web-based learning community.

Cross-listed with IES.

**BIO 700. Research for Master's Thesis. (1-12; maximum 12)**

Research in biology for those who successfully defend their master's thesis proposal.

Prerequisite: undergraduate biological science major and related scientific subjects.

**BIO 704. Non-Thesis Project. (0-12; maximum 12)**

This repeatable course is for non-thesis culminating experiences.

Permission of the instructor is required.

**BIO 710. Advanced Seminar. (1-4; maximum 4)**

Discussion of current problems and literature.

**BIO 720. Doctoral Research. (1-12; maximum 14)**

Research performed by doctoral student prior to successful completion of doctoral comprehensive examination.

**BIO 750. Advanced Topics in Biology. (1-5; maximum 20)**

Study of specialized topics from current research.

**BIO 790. Research in Biology. (1-8; maximum 12)****BIO 850. Research for Doctoral Dissertation. (1-16)**

## Business Analysis (BUS)

**BUS 101. Foundations of Business. (2)**

One of four courses that students will complete as part of the eight-credit hour First-Year Integrated Core. BUS 101 introduces students to the foundational concepts of business and allows students to develop essential skills including critical and creative thinking, communication and collaboration, ethical decision making, and utilizing technology to support business functions. Students will learn their own thinking preferences and identify their personal and professional goals.

Prerequisites: enrollment in Farmer School of Business.

Co-requisites: BUS 102, ESP 103, and BUS 104.

**BUS 102. Foundations of Business Communication. (2)**

As part of the Farmer School of Business's first-year integrated core curriculum, this course introduces students to the fundamentals of business rhetoric and laying the foundation for effective oral and written business communications. EL.

Co-requisite: BUS 101, ESP 103, BUS 104.

**BUS 104. Introduction to Computational Thinking for Business. (2)**

As part of the Farmer School of Business first-year integrated core curriculum, this course introduces students to the fundamentals of computational thinking as an aid to data-driven business problem-solving. Topics include: computational thinking as problem solving, representing data through abstractions, and thinking in terms of algorithms (loops, conditions, reusable code, functions and events) to automate finding solutions. The course lays the foundations for students identifying, analyzing, and implementing solutions for data-driven business problems and the communication of results. EL.

Co-requisite: BUS 101, 102, 103.

**BUS 106. Farmer School of Business Success Strategies. (1)**

This course will provide business students with the resources, tools, and information to support personal, academic, and career goals. Students will explore the liberal arts and business curriculum, begin to develop a personal and professional brand, connect with valuable FSB resources, and build relationships within the diverse FSB community. This course will offer the necessary knowledge and preparation for success in the Farmer School of Business.

**BUS 115. Int'l Student Support. (1)**

The Business Communication and Support for International Students class offers customized and specialized support to international students who are also enrolled in First Year Integrated Core (FYIC) classes. The class will teach students additional strategies on topics they learn in the FYIC classes such as writing cover letters, writing research papers, producing presentations, understanding abstract concepts such as "ambiguity," "failure," and "risk." The small class will allow for the instructor to spend one-on-one time with the students. In class, the instructor will give directive workshops and then students will work with support to complete assignments from the FYIC classes. Co-requisites: BUS 101, BUS 102, ESP 103, and BUS 104.

**BUS 151. Exploring International Business. (1)**

This course introduces topics of interest to first-year students exploring international business. Focus is on globalization, cultural differences, and essentials for working in an international business context.

**BUS 177. Independent Studies. (0-5)****BUS 203. Business Writing Consulting. (1)**

Students will learn principles and practices of writing center consulting for business communications. Students will review key genres of business communications, including memos, letters, executive summaries, reports, proposals, and visual presentation aids. Students who successfully complete the course will be eligible to apply to be paid writing center consultants in the Howe Writing Initiative in the Farmer School of Business. Admission by application only.

Prerequisite: BUS 102.

**BUS 206. Exploration for Business Majors. (1)**

This course will explore the diverse career paths available to students studying the field of business, from public and private corporate settings to nonprofit and government sectors. Students will explore personal and academic strengths, identify/confirm possible business majors and potential career paths, and develop their Philosophy of Work. In addition to developing career related documents and job search/interview skills, students will have the opportunity to engage and network with FSB employers and alumni. Credit/No Credit only.

**BUS 241. China Business Seminar I. (2)**

This course contains lectures and guest speakers who focus on the historical, geographical, cultural, economic, political, legal and religious environments and how these factors influence companies doing business in China. This course will provide students a basic understanding about the issues, challenges, and problems faced in China and also prepare students for the advanced course --- "BUS 341, China Business Seminar II.

**BUS 277. Independent Studies. (0-5)****BUS 284. Professional Communication for Business. (3)**

As part of the Farmer School of Business's core curriculum, this course develops advanced rhetoric knowledge and skills needed to write and present effectively in local and global business contexts, including working in intercultural teams and digital networks.

Prerequisites: ENG 109 or ENG 111 and BUS 101, BUS 102 BUS 104 and ESP 103.

Cross-listed with ENG.

**BUS 301. Basics of Business I. (3) (MPT)**

An introduction to core business principles and skills. It is designed for students without academic preparation in business and who have majors outside the School of Business. Principles and skills include critical thinking, creative thinking, ethics, oral and written communication, computational thinking, data-driven decision-making, and collaboration. One to three mandatory half day field trips are also included in this course which provide context for BUS 301, 302 and 303.

Prerequisite: Enrollment in Miami PRIME and co-registration with BUS 302 and BUS 303.

Co-requisites: BUS 302 and BUS 303.

**BUS 302. Basics of Business II. (3) (MPT)**

An introduction to business concepts across the major business disciplines. This course is designed for students without academic preparation in business who have majors outside the School of Business. Topics include major concepts in accounting, management, strategy, entrepreneurship, marketing, finance, and information technology. It exposes students to these areas in the context of the various processes a business must execute in order to add value to the customer.

Prerequisite: Enrollment in Miami PRIME and co-registration with BUS 301 and BUS 303.

Co-requisite: BUS 301 and BUS 303.

**BUS 303. Business Process Integration. (3) (MPT)**

A project based course where material introduced in BUS 301 and BUS 302 is supplemented with additional material on the strategic planning and supply chain management processes. The course integrates student understanding of business processes through a multidisciplinary and cross-functional team project. This project is coached by a group of instructors from a variety of academic areas. The project simulates the development of a new product within an existing business. This course is designed for students without academic preparation in business who have majors outside the School of Business.

Prerequisite: Enrollment in Miami PRIME and co-registration with BUS 301 and BUS 302.

**BUS 340. Internship. (0-20)**

Available to Farmer School of Business (FSB) majors and minors. Available for 0 credit hour during spring, summer and fall terms. Available for 1 credit hour during summer terms only. For one hour of credit, student must secure a sponsoring FSB faculty member within his/her major or minor to supervise the internship and accompanying required internship reflection paper. BUS 340 is not available during winter term. Students are to work through their respective academic departments to enroll in the course. Credit/no credit only. Note: FSB students may earn a maximum 2 credit hours toward graduation for BLS/BUS/ECO/ESP/FIN/ISA/MGT/MKT 340.

Prerequisite: 55 earned hours and permission of department.

**BUS 341. China Business Seminar II. (2)**

This course contains traditional lectures, guest speakers and case discussions which focus on integrating all important aspects including historical, geographical, economic, political, legal and religious factors and how these factors can be used within a business context to make an effective business decision from a Chinese culture/custom perspective. This course will provide students an opportunity to integrate/combine the knowledge learned from the business disciplines/courses with the issues, challenges, and problems encountered and also the lessons learned in/from China. In addition, this course will help students to deal with business problems by comparing, contrasting and negotiating different cultures to gain a competitive advantage.

**BUS 371. International Business. (3)**

Acquaints students with problems encountered and adaptations required in business operations within foreign environments.

Prerequisites: ECO 201 and ECO 202.

**BUS 371L. International Business. (3)**

Acquaints students with basic concepts and analysis of environmental factors in which international businesses operate, strategic alternatives and applications, case studies, and country analyses.

Credit for graduation will not be awarded for more than one of BUS 371 or BUS 371L.

Prerequisite: ECO 201 and ECO 202.

**BUS 373. International Business in Focus. (3)**

Survey of the interrelationships of world business operations; an introduction to current conceptual perspectives; cultural, political/legal and economic constraints, the international financial and trade frameworks, and the problems, challenges, and opportunities facing the multinational corporation in a particular country or region of the world.

Prerequisite: enrollment in School of Business summer international workshop.

**BUS 377. Independent Studies. (0-5)****BUS 420. FSB International Studies Programs. (1-3; maximum 6)**

The class provides an introduction to the history, culture, geography, business environment, economy, and language of the places FSB students will travel during their summer international experience. Portions of the class are in Oxford prior to departure, and portions are held in the country of the program.

Prerequisite: Admission to FSB International Studies Program.

**BUS 450C. Senior Honors Colloquium. (1)**

The Senior Business Honors Colloquium will focus on current issues and topics in business. Students will be expected to conduct original research and present findings to the class, as well as actively engage in others' presentations.

Prerequisite: senior standing in the business honors program.

**BUS 477. Independent Studies. (0-5)****BUS 494/BUS 594. Sustainability Perspectives in Resources and Business. (3) (MPC)**

Provides students with interdisciplinary perspectives of sustainability in business and resource management through consideration of the economic, social, and environmental value of organizations.

The course covers principles, case studies, and best practices used by organizations in several areas of sustainability, such as energy efficiency and alternatives, waste management and recycling, ecosystem services, product redesign and life cycle management, resource management, and sustainability planning and reporting. Cross-listed with IES.

**BUS 601. MBA Strategy Module. (1)**

Introduces the MBA student to concepts, theory, and decisions associated with business strategy. Examines the role and importance of cross-functional integration as it relates to business strategy and competitive success.

**BUS 637. Managing Competition. (3)**

The examination of competitive forces in the marketplace and how they can be managed to deliver winning business outcomes. This course will leverage previous MBA course work to take a wholistic view of the various strategic drivers, both internal and external to a firm.

## Business Legal Studies (BLS)

**BLS 177. Independent Studies. (0-5)****BLS 277. Independent Studies. (0-5)****BLS 316. Legal Writing and Reasoning. (3)**

Students in this course will learn strategies for effective and persuasive legal writing, including the appropriate methodologies for legal reading, research and analysis. Students will gain experience writing in a number of genres, including case briefs, memoranda of law, and professional correspondence.

Prerequisite: ENG 111/112 or waiver of the 111/112 requirement (through AP credit, honors program, etc); sophomore standing or above.

Cross-listed with ENG.

**BLS 340. Internship. (0-20)**

Available to Farmer School of Business (FSB) majors and minors. Available for 0 credit hour during spring, summer and fall terms.

Available for 1 credit hour during summer terms only. For one hour of credit, student must secure a sponsoring FSB faculty member within his/her major or minor to supervise the internship and accompanying required internship reflection paper. BLS 340 is not available during winter term. Students are to work through their respective academic departments to enroll in the course. Credit/no credit only. Note: FSB students may earn a maximum 2 credit hours toward graduation for BLS/BUS/ECO/ESP/FIN/ISA/MGT/MKT 340.

Prerequisite: 55 earned hours and permission of department.

**BLS 342. Legal Environment of Business. (3) (MPT)**

Nature and sources of law; legal analysis and reasoning; judicial system, litigation and alternative dispute resolution; constitutional and administrative law; criminal law; law of torts and products liability; ethics; international business law; law of contracts; law of agency; employment law; and government regulation of business.

**BLS 377. Independent Studies. (0-5)****BLS 442. Business Associations & Communal Law. (3) (MPT)**

Study of the legal framework of various organizational forms in business; partnership; corporations; securities regulation and the study of the law of sales; commercial paper; secured transactions and bankruptcy.

Prerequisite: BLS 342.

**BLS 443. Property Law. (3)**

Principles of real and personal property law; estates in land, instruments of conveyance, mortgages and leases; personal property topics include bailments, intellectual property, and computer law.

Prerequisite: BLS 342.

**BLS 462. Estates, Wills & Trusts. (3) (MPT)**

Legal, financial, and practical considerations in creation, management, and conservation of an estate. Trust principles and practices; and federal estate and gift rules and planning techniques.

Prerequisite: BLS 342.

**BLS 464. International Business Law. (3) (MPT)**

Provides framework for understanding international business and legal environment within which it operates. Study traditional commercial law topics, such as rights and obligations of buyer and seller under contract for international sale of goods. Study of private law of international business transactions and public law of international trade. Credit for graduation will not be given for more than one of BLS 464 or BLS 483.

Prerequisite: BLS 342.

**BLS 465. Ethics, Law, & Business. (3) (MPC)**

Explores legal aspects of business decision-making from an ethical perspective. Focuses on the business manager as an ethical decision-maker and on the corporation as a social moral agent. Conducted in seminar style using cross-functional cases from the core business disciplines. This course may not be used as a finance major elective. Prerequisite: Farmer Business School core courses and senior standing or permission of instructor.

**BLS 477. Independent Studies. (0-5)****BLS 677. Independent Studies. (0-5)**

## Chemical, Paper & Biomedical Engineering (CPB)

**CPB 102. Introduction to Chemical and Bioengineering. (3)**

This course introduces an approach to problem solving for engineering students. Students will apply systematic approaches to problem solving including mathematics and quantitative methods appropriate to chemical engineering and bioengineering. The course introduces computational and discipline-specific tools to assist in problem analysis, modeling, design, and hands-on learning. Students will demonstrate engineering solutions to problems in the laboratory. Students will practice their teamwork and communication skills. This course is open to all majors.

Prerequisite or Co-requisite: MTH 151.

**CPB 177. Independent Studies. (0-5)****CPB 201. Principles of Paper Science and Engineering. (3)**

Introduction to pulping and papermaking. Course will discuss scientific and engineering aspects of papermaking from fiber procurement through pulping, conditioning, papermachine and converting. Develop practical lab skills. Apply engineering skills to problem solving related to paper industry.

Prerequisite: CHM 141.

**CPB 202. Pulp and Paper Physics. (3)**

Discovery of how pulping, papermaking and converting are utilized to develop required performance properties of products from paper. Conduct laboratory investigations to determine the properties of paper made in the laboratory and from a pilot paper machine.

Prerequisite: PHY 191 with a grade of C or better.

**CPB 204. Mass and Energy Balances I. (2) (MPT)**

The first of a two course series with a focus on the application of mass conservation equations for solving engineering problems involving batch and continuous systems. Introduction to chemical reaction fundamentals and phase equilibria for multicomponent systems. Examples drawn from a variety of chemical, paper and biomedical applications.

Prerequisite: A grade of C or better in CPB 102, CHM 142 and PHY 191.

Prerequisite or Co-requisite: MTH 251.

**CPB 205. Mass and Energy Balances II. (2)**

The second of a two course series with a focus on the application of energy conservation equations for solving engineering problems involving batch and continuous systems. Application of mass and energy balances to processes involving chemical reactions, phase changes, and multicomponent. Examples drawn from a variety of chemical, paper and biomedical applications.

Prerequisites: MTH 251 and CPB 204 (grade of C or better on CPB 204 only).

**CPB 219. Statics and Mechanics of Materials. (3)**

This course provides an introduction to the fundamentals of the mechanics of materials for Bioengineering and Chemical Engineering students. The course stresses statics and mechanics of deformable media, and material behavior. Advanced topics in material behavior and stability that are relevant to bio/chem engineering will be introduced and related to the course materials. The course takes an integrated approach to problem formulation in terms of kinematics, constitutive behavior, equilibrium, and compatibility. in PHY 191.

Prerequisites: MTH 251, and a grade of C or better.

**CPB 244. Introduction to Environmental Engineering. (3)**

Introductory design concepts for the control of water pollution, air pollution, and solid waste will be covered. Environmental legislation will be discussed. Solutions to environmental problems will be investigated, considering technical, economical and ethical aspects of engineering.

Prerequisites: CHM 141 or equivalent, MTH 151 or equivalent.

**CPB 277. Independent Studies. (0-5)****CPB 301. Pulp and Paper Chemistry. (3)**

Wood chemistry, chemical pulping chemistry and processes, and wet end chemistry. Chemical composition and structure of lignocellulosic wood fibers. The unit processes used in chemical pulping and bleaching. Kraft Recovery. Colloidal science of retention, sizing, process and functional additives.

Prerequisite: CPB 201 and one of the following: CHM 231 or CHM 241 or CHM 251.

**CPB 311. Unit Operations Laboratory I. (2)**

Laboratory course; students conduct experiments and do computer simulations in the areas of material and energy balances and fluid dynamics. Emphasizes acquisition of knowledge about instrumentation commonly used in process industries. Both oral and written laboratory reports required.

Prerequisites: grade of C or better in PHY 191 and CPB 204.

Prerequisite or Co-requisite: CPB/MME 313.

**CPB 313. Fluid Mechanics. (3) (MPT)**

Fundamentals and application of the mechanics of fluids including properties, statics and dynamics of fluids, dimensional analysis and similitude, steady state flow, and topics in compressible flow.

Prerequisite: MTH 251 or equivalent, PHY 191, and either CPB 219 or MME 211, or permission of instructor.

Cross-listed with MME.

**CPB 314. Engineering Thermodynamics. (3)**

Study of the fundamental principles of thermodynamics. Emphasis placed on engineering applications such as power cycles, refrigeration, and heat transfer systems.

Prerequisite: MME 211 or CPB 204 or CPB 219.

Prerequisite or Co-requisite: MTH 251 or equivalent.

Cross-listed with MME.

**CPB 318. Transport Phenomena I. (4)**

Fundamentals and integration of concepts from fluid mechanics, heat transfer, and mass transfer to biological, chemical, and mechanical systems. An integrated approach will be used to study fundamental concepts in transport phenomena including: fluid properties, mechanics of fluids, dimensional analysis, steady and transient flow regimes, steady and unsteady conduction, forced and free convection, radiation heat transfer, laminar and turbulent flow, heat exchangers, mass diffusion, and interphase transport. Analogy of heat, mass, and momentum transport phenomena principles will be presented. with a grade of C or better.

Prerequisites: MME/CPB 314; MTH 245; CPB 219 or MME 211, and CPB 204.

**CPB 320. Professional Practice. (0)**

Students participating in paper science and engineering co-op program register for this course during semesters when they are away from Oxford on work assignment. This enables students to remain in good standing with the University Registrar.

**CPB 324. Chemical and Bio- Engineering Computation and Statistics. (3)**

Study of numerical methods of scientific computing and their application to modeling chemical and bio- engineering systems and the interpretation of experimental data. Algorithms for solving algebraic and differential equations, differentiation, integration, and optimization are derived and implemented using modern computational software. Statistics and error analysis constitute a significant part of the course.

Prerequisite: CPB 204 with a grade of C or better.

Prerequisite or Co-requisite: MTH 245 and (ECE 345 or STA 301 or STA 261).

**CPB 326. Fundamentals of Medical Device Design. (3)**

This course addresses a wide range of topics concerned with medical devices including the history of devices, basics of medical terminology, FDA regulations, industrial design and human factors, and types of medical devices and their uses. Issues of intellectual property, innovation, and advanced devices will also be discussed.

Prerequisites: ECE 205 and (CPB 219 or MME 311).

**CPB 340. Internship. (0-20)****CPB 341. Engineering Economics. (3)**

Engineering economic decisions; breakeven and minimum cost analysis; engineering methods of resource allocation; concepts of interest; time evaluation of tactical and strategic alternatives.

Prerequisite: MTH 151 and (CPB 102 or CEC 102 or MME102 or equivalent).

Prerequisite or Co-requisite: STA 301 or STA 261 or ECE 345.

Cross-listed with MME.

**CPB 377. Independent Studies. (0-5)****CPB 403/CPB 503. Heat Transfer. (3) (MPT)**

Continued study of unit operations with emphasis on heat transfer. Study of steady and unsteady conduction, and laminar, turbulent, boiling, and condensing convective heat transfer. Radiation heat transfer, heat exchangers, evaporators, and transfer units.

Prerequisites: CPB/MME 314 and (CPB/MME 313 or CPB 318 or CPB 418/CPB 518) and (MTH 245 or MTH 246).

Cross-listed with MME.

**CPB 404. Papermaking. (3)**

Papermaking process with emphasis on chemical engineering principles involved.

Prerequisite: CPB 201 and CPB 202 and (CPB/MME 403/MME 503 or CPB 414/CPB 514).

**CPB 405/CPB 505. Industrial Environmental Control. (3)**

Survey of environmental issues facing the industry and how the industry addresses these issues. In-plant pollution abatement alternatives discussed as well as external treatment. Computer-based modeling applications introduced and applied to problems. Design considerations involved in selecting among alternative pollution control strategies are presented and applied to examples.

Prerequisite: a grade of C or better in CPB 204.

**CPB 411. Advanced Paper Manufacturing. (3) (MPC)**

Provides students with the opportunity to synthesize their accumulated knowledge and skills in paper science, paper engineering, economics, statistical methods, environmental technology, writing, oral presentation, safety, ethical standards, and teamwork fundamentals. Student teams determine the raw materials and processing conditions required to produce paper that matches a sample of "unknown paper."

Prerequisite: CPB 404 and senior standing, or by permission of the instructor.

**CPB 412/CPB 512. Chemical Engineering Thermodynamics. (3)**

Advanced thermodynamics with emphasis in phase and chemical equilibrium. Thermodynamic relations and applications. Properties of ideal and non-ideal one-component and multi-component systems: ideal and non-ideal phase equilibria; phase diagrams; design of equilibrium flash separators. Phase equilibria using equation of state; chemical equilibrium; optimum conditions for feasible reaction equilibria.

Prerequisite: CPB/MME 314.

**CPB 414/CPB 514. Mass Transfer. (3)**

Continued study of unit operations, with emphasis on mass transfer and special problems. Steady and unsteady diffusion, convective mass transfer, absorption, scrubbing, and stripping. Humidification, psychrometry, and drying. Multiple effect evaporators, cooling towers, packed towers, distillation.

Prerequisites: CPB/MME 313; CPB/MME 314, MTH 245 and a grade of C or better in CPB 204.

**CPB 415/CPB 515. Chemical Kinetics and Reactor Design. (3)**

Chemical Kinetics of homogeneous and heterogeneous reactions, kinetic theories, mechanism and modeling, reactor design, design of multiple reactions; temperature and pressure effects. Non-ideal reactors, survey of catalytic and biochemical reaction systems.

Prerequisites: CPB/MME 313 or CPB 418/CPB 518, CPB/MME 314; MTH 245 and a grade of C or better in CPB 204.

**CPB 416/CPB 516. Biochemical Engineering. (3)**

This course is an introduction to the fundamental concepts concerning biochemical kinetics and bioreactors. In particular, this course will focus on enzymatic reactions and fermentations using genetically engineered organisms. Biochemical topics include overviews of cell structure, enzyme kinetics and cell growth kinetics. Engineering topics include: immobilization, fermenter design and sterilization processes.

Prerequisites: MTH 245; (BIO 203 or CHM 332 or 432); (CPB 414/CPB 514 or CPB 415/CPB 515 or CPB 418/CPB 518), and a grade of C or better in CPB 204 or permission of instructor.

**CPB 417/CPB 517. Biomedical Engineering. (3)**

This course is an introduction to the fundamental concepts in biomedical engineering with a special focus on chemical engineering applications. In particular, this course will focus on transport phenomena in biological systems, pharmacokinetics and tissue engineering. Engineering topics will also include discussions concerning the design of equipment and materials for, dialysis, oxygenation, artificial organs, and tissue engineering.

Prerequisites: MTH 245, CPB 414/CPB 514 or CPB 418/CPB 518, a grade of C or better in CPB 204 or permission of instructor.

**CPB 418/CPB 518. Biological Transport Phenomena. (4)**

Fundamentals and integration of fluid mechanics, heat transfer, and mass transfer in living systems. Basic concepts of transport phenomena are presented and applied to biological systems and to the design of medical devices.

Prerequisites: MME/CPB 314; MTH 245; PHY 191 and CPB 219 or MME 211.

**CPB 419/CPB 519. Biomaterials. (3)**

Integration and application of the fundamentals of natural and synthetic biomaterials, with focus on polymers, ceramics, composites, nanomaterials, and metals. Other topics include biomimetic/biomechanical design, biomaterial/tissue interaction and regulatory issues.

Prerequisites: CHM 231 or (CHM 241 and CHM 244); CPB 418/CPB 518 or (CPB/MME 403/MME 503 and CPB 414/CPB 514).

**CPB 421. Bioethics. (1)**

The application of ethical theories and codes of ethics to the ethical decision-making processes. Ethical issues involved around making choices about human life saving and enhancing its quality, human and animal experimentation, regulation involving bio-related research and data collection and analysis, standards for the design of medical devices and their certification. Other related issues such as intellectual property rights will be considered.

Prerequisites: senior standing or permission of instructor.

**CPB 422/CPB 522. Biological Systems and Controls. (3)**

This course provides an introduction to the fundamentals of control theory as it relates to bioengineering applications. Specific topics include linear systems analysis, electromechanical transfer functions, process transfer functions, stability, feedback control and modeling physiological systems. Applications involving membrane transport, pharmacokinetics and extracorporeal devices will also be covered. Prerequisites: ECE 205; MTH 245; CPB 204 and CPB 418/CPB 518.

**CPB 423/CPB 523. Biomechanics. (3)**

Introduction to mechanics of living systems. Constitutive models are presented and applied to soft and hard tissues and organs, such as orthopaedic biomechanics and cardiovascular biomechanics. Prerequisites: (CPB 219 or MME 312) and MTH 245.

**CPB 426/CPB 526. Fundamentals of Tissue Engineering. (3)**

Tissue engineering and regenerative medicine involve the integration of biology, physiology, medicine, and engineering/applied science for the design of constructs to replace tissues and organs damaged by age, disease, or traumatic injury. Man-made or natural materials (primarily polymeric materials) will be studied in terms of fabrication, characterization, and application. The course will then investigate fundamental structure-functional relationships in cells, tissues and organs and consider techniques to achieve physiological and anatomical requirements of engineered tissues. Cell-material interactions, stem cells, and cell/tissue physiology will be discussed in the context of general and specific tissue engineering and regenerative medicine applications including those already in the clinic and those that are expected to achieve clinical applications. Examples of physiological systems for which engineered tissues will be considered are some combination of the following (to vary each time course is offered): cardiovascular, respiratory, renal, nervous, skin, vision, musculoskeletal, and endocrine systems. Prerequisite: BIO 203, CHM 231 or CHM 241, PHY 191.

**CPB 441/CPB 541. Pollution Prevention in Environmental Management. (3)**

Provides understanding of how corporations respond to governmental regulation by setting up environmental management systems which employ the principles of pollution prevention. Engineering concepts such as material balances, energy balances, risk assessment, and life cycle assessment have impacted new process designs. In this course a basis for evolution and maturation of pollution prevention as a fundamental methodology to ensure compliance and economic sustainability of industrial processes will be provided. The understanding of the concepts of pollution will be demonstrated by participation in a class project sponsored by industry at one of their facilities. Prerequisites: a grade of C or better in CPB 204 and junior standing.

**CPB 442/CPB 542. Air Pollution Control. (3)**

This course will introduce students to the formation and control of air pollutants, engineering theories and principles pertaining to the design of air pollution control operations, and environmental legislation. Solutions to environmental problems will be investigated, considering technical, economical and ethical aspects of engineering. Prerequisites: CPB/MME 313, CPB/MME 314, and a grade of C or better in CPB 204; recommended: CPB/MME 341.

**CPB 450/CPB 550. Special Topics. (1-5; maximum 20)****CPB 451/CPB 551. Unit Operations Laboratory II. (2)**

Laboratory course consisting of experiments and computer simulations in topics from the process industries involving heat, mass and momentum transfer, and process control. Both written and oral laboratory reports are required.

Prerequisites: (CPB/MME 403/MME 503) and CPB 414/CPB 514 and CPB 482/CPB 582.

**CPB 471. Engineering Design I. (2) (MPC)**

Involves application and synthesis of accumulated knowledge in a major, open-ended, industrial research/design project. Critical elements of the design process and real world constraints (economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability) are considered. Emphasis is placed on oral and written communication skills. Students from different academic backgrounds are assigned to multidisciplinary project teams in order to utilize their varied experiences, knowledge, learning styles, and skills to achieve a successful conclusion to each project.

Prerequisite: senior standing, or permission of instructor.

**CPB 472. Engineering Design II. (2) (MPC)**

Continuation of CPB 471.

Prerequisite: CPB 471.

**CPB 473/CPB 573. Chemical Process Design. (3)**

This is a project-based course in which chemical engineering technology, process simulation, and economic analyses are used to design chemical processes. The technical and economic aspects of equipment selection and design and alternative methods of operation will be covered.

Prerequisites: CPB/MME 403/MME 503 and CPB 414/CPB 514.

Prerequisite or Co-requisites: CPB/MME 341 and CPB 415/CPB 515.

**CPB 477. Independent Studies. (0-5)****CPB 482/CPB 582. Process Control. (3)**

Study of system dynamics and control schemes used for continuous processes. Block diagrams, steady-state and dynamic response, Laplace transforms, computer simulations and closed loop control. Stability, tuning, and controller synthesis.

Prerequisites: (CPB 318 or CPB 418/CPB 518 or CPB 403/CPB 503) and (CPB 204 with C or better) and (CPB 324 or MME 213 or CSE 271).

**CPB 483/CPB 583. Chemical Process Safety. (1)**

This course introduces students to chemical process safety. Specific topics of discussion will include management and risk assessment, toxicology, industrial hygiene, dispersion models, fire and explosion causes and prevention, relief systems, and various case studies. Emphasis will be given to the application of chemical engineering education to chemical process safety.

Prerequisites: CPB 204, CPB/MME 313, CPB/MME 314, (CPB/MME 403/MME 503 or CPB 414/CPB 514 or CPB418).

**CPB 490/CPB 590. Special Topics in Paper and Chemical Engineering. (1-5; maximum 5)**

Advanced special topics in paper and chemical engineering.

Prerequisite: either permission of instructor or as defined by topic.

**CPB 491. Introduction to Research. (1-3; maximum 3)**

Research problems in chemical engineering and paper science selected in consultation with a faculty advisor. Research methodology; design of laboratory experiments and computer simulations; critical analysis of results; technical reports; oral presentations. For grade only.

Prerequisite: permission of instructor, subject to approval of department chair.

## Chemistry & Biochemistry (CHM)

**CHM 109. Chemistry Fundamentals. (1)**

Introduction to vocabulary and symbols used in introductory chemistry courses. Enables students to make a smooth transition into CHM 111. A student may not receive credit for graduation for both this course and any chemistry course numbered 141 or above.

**CHM 111. Chemistry in Modern Society. (3) (MPF)**

For non-science majors. Considers both nature of basic chemical processes and ways that chemistry affects our society. Introduction to how scientists approach problems and make decisions. 3 Lec. IVB. CAS-QL.

**CHM 111L. Chemistry in Modern Society Laboratory. (1) (MPF)**

Laboratory course for non-science majors. Students will explore basic chemistry principles that are relevant in everyday life through experimentation and data analysis. Critical thinking will be emphasized through inquiry-based activities. Emphasis will be placed on activities that develop quantitative reasoning skills, including data handling in context of case studies, and on the communication of scientific information through writing. 1 Lab. IVB. CAS-D/LAB.

**CHM 121. Introduction to Forensic Chemistry. (4) (MPF)**

Integrated lecture and laboratory course for all majors that, by incorporating the exciting theme of forensic science, builds an appreciation for the underlying aspects of chemistry. The topics include paper chromatography of ink, soil analysis, synthetic and natural fibers, fingerprints, ions in urine, drug analysis, fire accelerants, blood alcohol determination, and microscopic hair analysis. Typically taught on the Middletown Campus. IVB. 3 Lec. 1 Lab.

**CHM 131. Chemistry of Life Processes. (4) (MPF)**

Integrated lecture and laboratory course for non-science majors that relate basic inorganic and organic chemical processes to those of biochemistry. Explores the nature of atoms and molecules in terms of simple structures and reactions, and the more complex structures of biochemical molecules and their interactions with living systems. IVB, LAB. CAS-D/LAB.

3 Lec. 1 Lab.

Prerequisite: introductory high school physical science and algebra or CHM 109.

**CHM 141. College Chemistry. (3) (MPF)**

General chemistry lecture course. Examines the fundamentals of atomic and molecular structure, chemical reactions and stoichiometry, properties of solutions, thermochemistry, gases, and chemical bonding. Students also develop ideas, experience, methodology, and skills used in the application of scientific methodology. Credit not given for both CHM 141R and 141. IVB, LAB. CAS-D.

Prerequisite: one year of high school chemistry and a math ACT score of 22 (or SAT math sub-score 520) or higher or completion of MTH 025, or permission of instructor.

Co-requisite: CHM 144.

**CHM 141H. College Chemistry. (3) (MPF)**

General chemistry lecture course. Examines the fundamentals of atomic and molecular structure, chemical reactions and stoichiometry, properties of solutions, thermochemistry, gases, and chemical bonding. Students also develop ideas, experience, methodology, and skills used in the application of scientific methodology. Credit not given for both CHM 141R and 141. IVB, LAB. Prerequisite: one year of high school chemistry and a math ACT score of 22 (or a SAT math sub-score 520) or higher or permission of instructor.

Co-requisite: CHM 144.

**CHM 141R. College Chemistry. (4) (MPF)**

Coordinated lecture and recitation to develop ideas, experience, methodology, and skills used in the application of scientific methodology. Framework is consideration of fundamental principles of atomic and molecular structure, chemical bonding, properties of solutions, and chemical reactions. Gain skills in developing hypotheses, observing chemical phenomena, collecting data, and evaluating results critically. Credit not given for both CHM 141 and 141R. IVB, LAB. CAS-D/LAB.

Prerequisite: Placement into MTH 125 or higher, or successful completion of MTH 102, or Math Emporium level 19 or MTH 025, or permission of the instructor.

Co-requisite: CHM 144.

**CHM 142. College Chemistry. (3) (MPT)**

In this follow-up to CHM 141, students will continue their study of the properties of solutions, thermodynamics, and acids and basis. The course also explores chemical kinetics, chemical equilibrium, coordination chemistry and electrochemistry.

Prerequisite: CHM 141.

Co-requisite: CHM 145.

**CHM 142H. College Chemistry. (3) (MPT)**

In this follow-up to CHM 141, students will continue their study of the properties of solutions, thermodynamics, and acids and basis. The course also explores chemical kinetics, chemical equilibrium, coordination chemistry and electrochemistry.

Prerequisite: CHM 141.

Co-requisite: CHM 145.

**CHM 142M. College Chemistry for Majors. (3) (MPT)**

Covers the same content as CHM 142, but assumes interest in chemistry as a major (See CHM 142). Credit not given for both 142M and 142.

Prerequisite: CHM 141.

Co-requisite: CHM 145M.

**CHM 144. College Chemistry Laboratory. (2) (MPF)**

Presents laboratory exercises to illustrate the fundamental principles of chemistry. An emphasis will be placed on safety, laboratory skills, techniques for simple quantitative measurements and the use of modern instrumentation for data collection and analysis. Students will also gain skills in developing hypotheses, observing chemical phenomena, collecting and sharing data and evaluating results critically. IVB, LAB. CAS-D/LAB.

Co-requisite: CHM 141 required.

**CHM 144H. College Chemistry Laboratory. (2) (MPF)**

Presents laboratory exercises to illustrate the fundamental principles of chemistry. An emphasis will be placed on safety, laboratory skills, techniques for simple quantitative measurements and the use of modern instrumentation for data collection and analysis. Students will also gain skills in developing hypotheses, observing chemical phenomena, collecting and sharing data and evaluating results critically. IVB, LAB. CAS-D/LAB.  
Co-requisite: CHM 141.

**CHM 144M. College Chemistry Laboratory for Majors. (2) (MPF)**

Covers content similar to CHM 144. The focus of this laboratory course is for students with an interest in chemistry or biochemistry as a major. IVB, LAB. CAS-D/LAB.  
Prerequisite: high school chemistry or permission of instructor.  
Co-requisite: CHM 141.

**CHM 145. College Chemistry Laboratory. (2) (MPT)**

Presents laboratory exercises to illustrate the fundamental principles of chemistry. In this follow-up to CHM 144, students will continue working on their laboratory skills, using techniques for quantitative measurements and using modern instrumentation for data collection and analysis. Includes chemical kinetics, equilibrium, acids and bases, and electrochemistry. CAS-D/LAB.  
Prerequisite: CHM 144.  
Co-requisite: CHM 142 required.

**CHM 145H. College Chemistry Laboratory. (2) (MPT)**

Presents laboratory exercises to illustrate the fundamental principles of chemistry. In this follow-up to CHM 144, students will continue working on their laboratory skills, using techniques for quantitative measurements and using modern instrumentation for data collection and analysis. Includes chemical kinetics, equilibrium, acids and bases, and electrochemistry. CAS-D/LAB.  
Prerequisite: CHM 144.  
Co-requisite: CHM 142.

**CHM 145M. College Chemistry Laboratory. (2) (MPT)**

Covers content similar to CHM 145. The focus of this laboratory course is for students with an interest in chemistry or biochemistry as a major. CAS-D/LAB.  
Prerequisite: CHM 144M.  
Co-requisite: CHM 142M.

**CHM 147. Introductory Seminar-Chemistry/Biochemistry. (1)**

An introduction to the various Chemistry and Biochemistry programs. Conducted in a seminar/lecture format, the course will include professional orientation, an introduction to undergraduate research opportunities and career options for the various majors.

**CHM 177. Independent Studies. (0-5)****CHM 204. Organic Chemistry I Review. (1)**

Concentrated review of first semester organic chemistry concepts that will be important for understanding second semester organic chemistry material. The course will revisit topics such as: resonance, acid/base chemistry, stereochemistry, and substitution, elimination, and addition reactions and introduce their importance for further course work in chemistry.  
Prerequisite: CHM 241 or CHM 251, or permission of instructor.

**CHM 231. Fundamentals of Organic Chemistry. (4) (MPT)**

One-semester course covering organic structures and reactions with simple examples from living systems. Credit may not be received for both CHM 231 and 241, 242 or 251, 252. CAS-D/LAB.  
3 Lec. 1 Lab.  
Prerequisite: CHM 142 and 145.

**CHM 241. Organic Chemistry. (3) (MPT)**

Study of stereochemistry and the reaction mechanisms of various types of organic compounds with examples of chemical reactions in biological systems. For premedical and pre-dental students and science majors not planning to major in chemistry or biochemistry. Credit may not be received for both CHM 231 and 241, 242 or 251, 252.  
Prerequisites: CHM 142 or 142M.  
Co-requisites: CHM 244.

**CHM 242. Organic Chemistry. (3)**

Study of stereochemistry and the reaction mechanisms of various types of organic compounds with examples of chemical reactions in biological systems. For premedical and pre-dental students and science majors not planning to major in chemistry or biochemistry.  
Prerequisite: CHM 241.

**CHM 244. Organic Chemistry Laboratory. (2) (MPT)**

Introduction to experimental techniques involved in synthesis, purification, and chemical identification of organic molecules. CAS-D/LAB.  
Prerequisite: CHM 145.  
Co-requisite: CHM 241, 242.

**CHM 245. Organic Chemistry Laboratory. (2)**

Introduction to experimental techniques involved in synthesis, purification, and chemical identification of organic molecules. CAS-D/LAB.  
Prerequisite: CHM 244.  
Co-requisite: CHM 242.

**CHM 251. Organic Chemistry for Chemistry Majors. (3) (MPT)**

For those planning a career in chemistry or biochemistry. Modern concepts of molecular structure, mechanisms of organic reactions, and synthetic methods for organic compounds, including natural products.  
Prerequisite: CHM 142M.  
Co-requisite: CHM 254.

**CHM 252. Organic Chemistry for Chemistry Majors. (3)**

For those planning a career in chemistry or biochemistry. Modern concepts of molecular structure, mechanisms of organic reactions, and synthetic methods for organic compounds, including natural products.  
Prerequisite: CHM 251.  
Co-requisite: CHM 255.

**CHM 254. Organic Chemistry Laboratory for Chemistry Majors. (2) (MPT)**

Introduction to modern experimental techniques in organic chemistry as applied to synthesis, purification, and determination of the structure of organic molecules. CAS-D/LAB.  
Prerequisite: CHM 145 or equivalent.  
Co-requisite: CHM 251.

**CHM 255. Organic Chemistry Laboratory for Chemistry Majors. (2)**

Introduction to modern experimental techniques in organic chemistry as applied to synthesis, purification, and determination of the structure of organic molecules. CAS-D/LAB.

Prerequisite: CHM 254.

Co-requisite: CHM 252.

**CHM 277. Independent Studies. (0-5)****CHM 332. Outlines of Biochemistry. (3) (MPT)**

Overview of the major topics of biochemistry. Topics include: biological functions of proteins, carbohydrates, lipids and nucleic acids, central metabolic pathways and controls, and relevant examples in nutrition and health. 3 Lec. CAS-D.

Prerequisite: CHM 231, CHM 242, or CHM 252.

**CHM 332L. Outlines of Biochemistry Lab. (1)**

Laboratory course designed to enhance the learning experiences in CHM 332. Emphasis on problem solving and data analysis using basic biochemical experiments. Prerequisite/co-requisite: CHM 332.

**CHM 340. Internship. (0-20)****CHM 363. Analytical Chemistry. (3) (MPT)**

Fundamentals of analytical chemistry including classical and instrumental methods. Typically offered on Middletown Campus.

Prerequisite: CHM 142, CHM 145.

Co-requisite: CHM 364.

**CHM 364. Analytical Chemistry Laboratory. (2) (MPT)**

Analytical chemistry laboratory including classical and instrumental methods. CAS-D/LAB. Typically offered on Middletown Campus.

Prerequisites: CHM 142, CHM 145.

Co-requisite: CHM 363.

**CHM 375. Analytical Chemistry for Majors. (3)**

Instrumental methods of analysis including theory, problem solving, and laboratory experiments applied to real life samples. Instruction in writing and quantitative literacy. ADVW. CAS-Q. CAS-W. Recommended prerequisites: CHM 142 and CHM 145.

1 Lec. 2 Lab.

**CHM 377. Independent Studies. (0-5)****CHM 410. Topics in Chemistry Education. (3; maximum 6)**

Advanced coverage of selected topics in chemistry education.

Prerequisite: STA 261 or STA 301.

Co-requisite: CHM 451/CHM 551 or CHM 471/CHM 571.

**CHM 411/CHM 511. Learning Theories in Chemistry. (3)**

Students are introduced to the learning theories that inform chemistry education research and the methods therein. Students will focus on how the applications of research findings on how humans learn chemistry can be used to improve teaching and learning.

Additionally, the course introduces students to chemistry education research as a field and an essential source of scholarship on learning chemistry.

Prerequisite: CHM 242 or 252.

**CHM 415/CHM 515. Misconceptions in Chemistry. (3)**

Students explore chemistry education research on common misconceptions about advanced topics in undergraduate chemistry such as thermodynamics, kinetics, and electrochemistry. Students probe learners' prior ideas and consider the role of assessment in emphasizing deeper understanding over memorization while investigating methods that help learners construct scientifically adequate models of chemical behavior. Additionally, the course introduces students to chemistry education research as a field and an essential source of scholarship on learning chemistry.

Prerequisite: CHM 242 or 252.

**CHM 417/CHM 517. Advanced Inorganic Chemistry. (3)**

Survey of fundamental principles of contemporary inorganic chemistry.

Prerequisites: CHM 142 and CHM 452/CHM 552 or CHM 472/CHM 572.

**CHM 419. Synthesis Lab. (2)**

Designed to introduce undergraduate students in chemistry/biochemistry to advanced synthetic methods. Students will synthesize and characterize organic and inorganic molecules, and characterize the products using NMR, EPR, and other modern instrumentation.

Prerequisites: CHM 242 and CHM 245; or CHM 252 and CHM 255.

**CHM 421. Forensic Trace Analysis. (2)**

Lecture portion of an integrated lecture/laboratory sequence for forensic science majors that addresses trace analysis as pertaining to forensic scenarios. The topics include sample storage, evidence logging and chain-of-custody, analysis of ink, paper, fiber, blood, glass, hair, bullets, fingerprints, alcohol, drugs (presumptive and confirmatory), fire accelerants.

Prerequisite: CHM 363 and CHM 364.

Co-requisite: CHM 421L.

**CHM 421L. Forensic Trace Analysis Laboratory. (3)**

Lab portion of an integrated lecture/laboratory sequence for forensic science majors that addresses trace analysis as pertaining to forensic scenarios. The topics include sample storage, evidence logging and chain-of-custody, analysis of ink, paper, fiber, blood, glass, hair, bullets, fingerprints, alcohol, drugs (presumptive and confirmatory), fire accelerants. The course will be run as a functioning crime lab with scenarios, samples, and deadlines.

Prerequisite: CHM 363 and CHM 364.

Co-requisite: CHM 421.

**CHM 424/CHM 524. Advanced Experimental Techniques in Structural and Functional Genomics. (4)**

Theory and application of modern biological instrumentation and techniques such as spectrophotometers, pH meters, thermocyclers, and DNA sequencers. Basic and advanced skills including the use, maintenance and calibration of biological instruments.

Prerequisites: BIO/MBI 115 or BIO/MBI 116 or BIO 191 or MBI 201 or equivalent, CHM 141 and CHM 142 or equivalent, or permission of instructor.

Cross-listed with BIO/MBI.

**CHM 426/CHM 526. Spectroscopic Identification of Structure. (3)**

Application of infrared, ultraviolet, nuclear magnetic resonance, and mass spectrometry to the solution of structural problems in organic chemistry.

Prerequisite: CHM 242 or CHM 252.

**CHM 429/CHM 529. Polymer Chemistry. (2)**

Comprehensive overview and examination of the methods used to synthesize and characterize macromolecules. Both descriptive and mechanistic organic chemistry, as it relates to polymer synthesis, is discussed. The relationship between molecular structure and material properties will be another focus of the course. CAS-D.

**CHM 430. Topics in Biochemistry. (1-3; maximum 8)**

Advanced coverage of selected topics in biochemistry.  
Prerequisite: CHM 432/CHM 532.

**CHM 432/CHM 532. Fundamentals of Biochemistry. (4) (MPT)**

Principles of biochemistry with emphasis on structure of biological molecules and metabolic processes.  
Prerequisite: CHM 242 or equivalent.

**CHM 438. Biochemistry Laboratory. (2)**

Laboratory course utilizing modern biochemical techniques. Emphasis on logic, design, and execution of biochemical experimentation.  
Prerequisite: CHM 432/CHM 532 with a grade of C- or higher or permission of instructor.

**CHM 450. Topics in Organic Chemistry. (3; maximum 6)**

Advanced coverage of selected topics in organic chemistry.  
Prerequisites: CHM 252, CHM 255.

**CHM 451/CHM 551. Physical Chemistry for Chemistry Majors. (3)**

Fundamentals of physical chemistry including thermodynamics, kinetics, quantum chemistry, statistical thermodynamics, and spectroscopy. Note: Credit may not be received for both CHM 451/CHM 551 and CHM 471/CHM 571.  
Prerequisites: MTH 251 or equivalent and PHY 192.

**CHM 452/CHM 552. Physical Chemistry for Chemistry Majors. (3)**

Fundamentals of physical chemistry including thermodynamics, kinetics, quantum chemistry, statistical thermodynamics, and spectroscopy. Note: Credit may not be received for both CHM 452/CHM 552 and CHM 472/CHM 572.  
Prerequisite: CHM 451/CHM 551 or equivalent.

**CHM 454/CHM 554. Instrumental Analysis. (3)**

Lecture course emphasizing spectroscopic, electrochemical, and chromatographic methods to determine chemical composition of samples with principles of chemical equilibrium presented to assist in data interpretation. Typically offered on Middletown Campus.  
Prerequisite: CHM 451/CHM 551 or CHM 471/CHM 571.

**CHM 456. Chemical Measurements II. (2)**

Laboratory course emphasizing instrumental methods of chemical analysis and methods of measuring physical-chemical properties. CAS-D/LAB. Recommended prerequisite: CHM 454/CHM 554.  
Prerequisite: CHM 452/CHM 552 or CHM 454/CHM 554.

**CHM 460. Topics in Analytical Chemistry. (1-3; maximum 12)**

Advanced coverage of selected topics in the area of analytical chemistry. Typically offered on Middletown Campus.

**CHM 466/CHM 566. Bioinformatics Computing Skills. (3)**

Study of the core computational and biological concepts in bioinformatics, with programming in Python, MySQL and Ubuntu OS. You will gain hands-on experience in popular bioinformatics applications, including BLAST, sequence alignment, genome browser, and gene annotation, among others.  
Prerequisites: BIO 256; or CSE 174; or permission of instructor.  
Cross-listed with BIO/CSE/MBI.

**CHM 470. Topics in Physical Chemistry. (1-3; maximum 12)**

Advanced coverage of selected topics in the area of physical chemistry.  
Co-requisite: CHM 451/CHM 551 or CHM 471/CHM 571.

**CHM 471/CHM 571. Biophysical Chemistry I. (3)**

Fundamentals of physical biochemistry including thermodynamics, macromolecular structure, kinetics, enzyme kinetics, quantum chemistry, and biophysical spectroscopy. Note: Credit may not be received for both CHM 451/CHM 551 and CHM 471/CHM 571.  
Prerequisites: MTH 251 or equivalent and PHY 192.

**CHM 472/CHM 572. Biophysical Chemistry II. (3)**

Fundamentals of physical biochemistry including thermodynamics, macromolecular structure, kinetics, enzyme kinetics, quantum chemistry, and biophysical spectroscopy. Note: Credit may not be received for both CHM 452/CHM 552 and CHM 472/CHM 572.  
Prerequisite: CHM 451/CHM 551 or CHM 471/CHM 571.

**CHM 477. Independent Studies. (0-5)****CHM 480. Departmental Honors. (1-6; maximum 6)**

Prerequisite: permission of department chair.

**CHM 491. Chemistry in Societal Issues. (3) (MPC)**

Chemistry is involved in many of the societal issues facing this nation. In order to protect the environment, create new energy sources, improve health, and increase consumer product safety, understanding chemistry is critical to the problem-solving process. It is important for students in technical fields to understand the interface between the known chemistry and government regulations, public perception, and legal interpretations. Students critically evaluate and form positions on current issues of national interest.  
Prerequisite: any 300-level chemistry course.

**CHM 492. Independent Research Capstone in Chemistry. (3) (MPC)**

Students work intensively with instructor to identify a suitable research question; perform research necessary to resolve the question; write a detailed report of the research, results, and the broader scientific and social implications of the overall research project; and communicate the research results to other students and professionals by participation in departmental research presentations and/or participation in a recognized professional meeting.  
Prerequisite: permission of instructor and department chair, and one semester of CHM 377, 477, 480, or 490 Independent Study.

**CHM 600. Seminar in Chemistry. (1; maximum 12)**

Required of all chemistry graduate students in residence.  
Prerequisite: graduate standing.

**CHM 641. Organic Principles and Theory. (3)**

Advanced molecular orbital calculations and experimental methods for elucidation of organic reaction mechanisms.  
Prerequisite: CHM 242 or 252 and 452 or 472.

**CHM 642. Organic Synthetic Methods. (3)**

Scope and limitations of synthetically useful reactions and techniques. Overall strategy and problems in multistep synthesis of natural products emphasized.  
Prerequisite: CHM 242 or 252.

**CHM 650. Seminar in Molecular Biology. (1)**

Discussion of current literature in molecular biology.  
Prerequisite: graduate standing.  
Cross-listed with BIO/MBI.

**CHM 655. Theory and Practice of Chemical Laboratory Instruction. (2)**

Evaluation and examination of current practices for the teaching of laboratory components of chemistry courses. Emphasis placed on safety, technique, and evaluation. The proper use of reference material and library search techniques is also emphasized.

**CHM 662. Modern Experimental Atomic and Molecular Spectroscopy. (3)**

The course will present the theoretical basis for both atomic and molecular spectroscopy, the fundamentals of the instrumentation employed and the use of the associated methods for problem solving in industry and forensic investigations. Specific methods to be covered include atomic absorption and emission spectroscopy, x-ray fluorescence, infrared, Raman and fluorescence spectroscopy and microspectroscopy.

**CHM 664. Separation Science. (2)**

Fundamental principles of separation science emphasizing chromatographic theory, gas and liquid chromatography, and capillary electrophoresis.

Prerequisite: CHM 554 or permission of instructor.

**CHM 677. Independent Studies. (0-5)****CHM 700. Research for Master's Thesis. (1-12; maximum 12)**

Prerequisite: graduate standing.

**CHM 704. Non-Thesis Project. (0-12)**

This repeatable course is for non-thesis culminating experiences. Permission of the instructor is required.

**CHM 710. Topics in Chemistry Education. (1-3; maximum 10)**

Advanced coverage of selected topics in chemistry education.

**CHM 720. Seminar in Organic and Biochemistry. (1; maximum 9)**

Discussion of recent research findings in areas of organic and biochemistry.

Prerequisite: permission of instructor.

**CHM 725. Biological Chemistry Seminar. (1)**

Discussion of recent research findings in biological chemistry.

**CHM 730. Seminar in Chemistry Education. (1; maximum 9)**

Discussion of current literature in chemistry education.

Prerequisite: Permission of instructor.

**CHM 740. Topics in Organic and Biochemistry. (1-3; maximum 10)**

Advanced coverage of selected topics in organic and biochemistry.

Prerequisite: permission of instructor.

**CHM 750. First Year Graduate Seminar. (1)**

Presentation and discussion of research activities being carried out by the research faculty in Chemistry and Biochemistry. Designed to facilitate selection of a research adviser by the end of the term.

**CHM 760. Selected Topics in Inorganic and Analytical Chemistry. (1-3; maximum 10)**

Advanced coverage of selected topics in inorganic and analytical chemistry.

Prerequisite: permission of instructor.

**CHM 760P. Protein X-Ray Crystallography. (3)****CHM 770. Topics in Physical Chemistry. (1-3; maximum 10)**

Advanced coverage of selected topics in area of physical chemistry.

Prerequisite: permission of instructor.

**CHM 780. Seminar in Analytical, Inorganic, and Physical Chemistry. (1; maximum 9)**

Discussion of recent developments in the areas of analytical, inorganic, and physical chemistry.

Prerequisite: permission of instructor.

**CHM 790. Research. (1-15; maximum 20)**

Prerequisite: graduate standing.

**CHM 850. Research for Doctoral Dissertation. (1-16; maximum 60)**

Prerequisite: admission to Ph.D. program.

## Chinese (CHI)

**CHI 101. Elementary Chinese. (4)**

Introduction to modern Mandarin Chinese. Focuses on basic communication skills.

**CHI 102. Elementary Chinese. (4)**

Introduction to modern Mandarin Chinese. Focuses on basic communication skills.

Prerequisite: CHI 101 or equivalent.

**CHI 177. Independent Studies. (0-5)****CHI 201. Second Year Chinese. (3) (MPT)**

Continue to develop skills in speaking, listening, reading, and writing.

Prerequisite: CHI 102 or equivalent.

**CHI 202. Second Year Chinese. (3) (MPT)**

Continue to develop skills in speaking, listening, reading, and writing. CAS-A.

Prerequisite: CHI 201 or equivalent.

**CHI 251. Traditional Chinese Literature in English Translation. (3) (MPF)**

Chinese literature up to the end of the Qing Dynasty (1911).

Introduction of unique features of Chinese literature, society and culture. Study selected classics in Taoism, Confucianism, and Buddhism, and masterpieces in fiction, poetry, and drama. IIB. CAS-B-LIT.

**CHI 252. Modern Chinese Literature in English Translation. (3) (MPF)**

Read selected representative works from mainland China, Taiwan, and Hong Kong, including fiction, poetry, criticism, and film. Lectures furnish the socio-cultural background to establish a framework for understanding and interpretation. IIB. CAS-B-LIT.

**CHI 253. Three Kingdoms. (3)**

Study the great classic Chinese novel Three Kingdoms (San guo yan yi) (abridged version), supplemented by the Analects of Confucius, the Daodejing and Machiavelli's The Prince. Develops an understanding of character, authority and strategy in traditional Chinese society. In translation. CAS-B-LIT.

**CHI 254. Modern Chinese Autobiography. (3)**

Introduces modern Chinese history and culture through several book-length autobiographies and memoirs. Analyzes modern Chinese self-authored life writing. A series of documentary videos provide surveys of important events in modern China as a complement. Taught in English. CAS-B-LIT.

**CHI 255. Drama in China and Japan in Translation. (3) (MPF)**

Provides historical overview of major traditional dramatic art forms of China and Japan: Zaju, Kunqu, Beijing Opera, Noh, Kyogen, Bunraku, and Kabuki. Critically treats and interprets theatrical conventions in each and attempts to clarify aesthetic significance. IIB. CAS-B-LIT. Cross-listed with JPN.

**CHI 257. Chinese Satire. (3) (MPF)**

This course examines several significant works of satire in twentieth-century Chinese literature. Through class discussions, weekly writings and longer essays we will analyze techniques of satire in modern Chinese fiction, identify and assess the ways satirical works shed light on Chinese history, culture and society, and identify and explain the similarities and differences between Chinese and Western satire. Taught in English. IIB, IIIB. CAS-B-LIT.

**CHI 264. Chinese Cinema and Culture. (3)**

Study of selected films. Introduces Chinese cinema and, through films, Chinese culture. Works are from mainland China, Taiwan, and Hong Kong. Subject matter is both historical and modern. Knowledge of Chinese is not required. Cross-listed with FST 264.

**CHI 271. Chinese Culture Live. (1-3)**

Offered for study abroad programs in China, the course consists of lectures, trips and practice on topics ranging from history and cultural customs to local cuisine and taiji. Knowledge of Chinese is not required.

**CHI 272. Experience Traditional Chinese Culture. (3)**

Explores traditional Chinese culture in central China and early evolution of the Chinese language through lectures, visits to historical sites and museums, cultural activities and interactions with local people. Prior knowledge of Chinese is not required. Offered for Study Abroad Program in China for summer or winter term.

**CHI 273. Experience Traditional Chinese Culture 2. (3)**

This course continues the study of CHI272, and it explores additional aspects of traditional Chinese culture by visiting different parts of China and conducting comparative analyses. It consists of lectures, visits to historical sites and museums, cultural activities and interactions with local people. Prior knowledge of Chinese is not required. Offered for study abroad program in China for winter or summer term.

Co-requisite: CHI 272.

**CHI 277. Independent Studies. (0-5)****CHI 301. Third Year Chinese. (3) (MPT)**

Develop advanced skills in communication. Expand vocabulary and learn additional, more complicated grammatical structures. Read relatively difficult original materials. Prerequisite: CHI 202 or equivalent.

**CHI 302. Third Year Chinese. (3)**

Develop advanced skills in communication. Expand vocabulary and learn additional, more complicated grammatical structures. Read relatively difficult original materials. Prerequisite: CHI 301 or equivalent.

**CHI 311. Business Chinese I. (3)**

Introduces business terms and expressions with the goal of developing communicative skills in the business related situations. In addition, instruction includes information and knowledge about business practice, etiquette, interpersonal relationship and other social, political and cultural aspects of Chinese business world. The course is on the same level of difficulty as CHI 301, and that is why both have the same prerequisite: Chinese 202. Its main difference from CHI 301 is that its content is much more specialized, as it solely focuses on the Chinese used in business.

Prerequisite: CHI 202.

**CHI 312. Business Chinese II. (3)**

Continues the study of business Chinese after CHI 311. It expands students' vocabulary by teaching them an additional 200 business terms and expressions, and introduces them to longer and more difficult sentences so their communicative skills in business related situations will develop further. In addition, it provides information and knowledge about business practice, etiquette, interpersonal relationships, and other social, political and cultural aspects of the Chinese business world not covered in CHI 311. Recommended prerequisite: CHI 311.

**CHI 330. Chinese Verbal Theatre Performance. (3; maximum 12)**

Introduces and provides students with an opportunity to practice various Chinese verbal arts via multiple performance modalities. These include Peking opera, tongue-twisters, comedic dialogue, clapper talk, and poetry recitations. Develops language skills through performance. Recommended prerequisite: CHI 202 or equivalent.

**CHI 377. Independent Studies. (0-5)****CHI 401. Fourth Year Chinese I. (3)**

Continuing advanced study of Chinese after CHI 302. While the course further develops students' listening and speaking skills, it will place more emphasis on reading and writing than third year Chinese class does. Longer and more challenging authentic materials will be introduced to develop students' overall ability to handle tasks of relatively complex nature. Recommended prerequisite: CHI 302 or equivalent.

**CHI 402. Fourth Year Chinese II. (3)**

This course continues advanced study of Chinese after CHI 401. While the course maintains an emphasis on developing students' oral communication ability, it will also introduce more difficult reading and audio-visual materials in class. Through exposure to these authentic materials, students will further build their vocabulary and increase their comprehension of the target language. In addition the course will help students to gain insights about Chinese society and culture. Recommended prerequisite: CHI 401 or equivalent.

**CHI 477. Independent Studies. (0-5)****CHI 480. Independent Reading for Departmental Honors. (1-6)**

Departmental honors may be taken for a minimum of three semester hours and a maximum total of six semester hours in senior year. Prerequisite: permission of instructor and department.

**CHI 677. Independent Studies. (0-5)**

## Classics (CLS)

### **CLS 101. Greek Civilization in its Mediterranean Context. (3) (MPF, MPT)**

Exploration of ancient Greek civilization, from pre-Homeric to Hellenistic times, presented within a broad framework of cultures with which Greece interacted in the Mediterranean basin. Various aspects of Greek civilization are highlighted including history, politics, economics, society, art, science, philosophy, and literature. IIB. CAS-B-HST.

### **CLS 102. Roman Civilization. (3) (MPF, MPT)**

Exploration of the legacy of ancient Roman civilization from its legendary beginning through the Republic to the Empire at its greatest extent. Various aspects of Roman civilization highlight the Roman experience including history, literature, philosophy, political and social institutions, religion, art, and the unique ability of Rome to assimilate Greek and other cultures. IIB. CAS-B-HST.

### **CLS 121. Introduction to Classical Mythology. (3) (MPF, MPT)**

Introduction to Greek mythology. Presentation, explanation, and interpretation of myths within representations of mythology, as well as comparative study of non-Greco-Roman myth. IIB. CAS-B-LIT.

### **CLS 177. Independent Studies. (0-5)**

### **CLS 210. Topics in Classics. (1-3; maximum 12)**

Examination of an author, work, topic, or new critical perspective on classical civilization not usually given substantial treatment in regular course offerings. May be repeated three times if topic changes.

### **CLS 210L. Ancient Religions. (3)**

Explores the nature of religious practices and beliefs in ancient Greek and Roman societies, how ancient peoples communicated with their gods through sacrifice, prayers, and festivals, and how they believed their gods communicated with them by means of oracles and omens. Students will develop an understanding of topics like divine justice, rites of passage, beliefs and customs associated with death and the afterlife. Though these investigations, students will deepen their knowledge of the ancient cultures while interrogating the concept of religion itself.

### **CLS 210S. Roman Spectacle. (3)**

Examines the great spectacle entertainments around which much of Roman society was organized and that filled the public areas of the city: gladiators, chariot races, animal hunts, triumphs, and martyrdoms. Students will explore their types, forms and meanings and engage questions of cultural values, identity and projection of power in a world where death was the common motif in popular entertainment.

### **CLS 211. Greek and Roman Epic. (3) (MPT)**

Study of the epic as genre including examination of conventions and techniques of oral and written epic, a discussion of the kind of society which produces such a work, and a study of the epic hero. Works of Homer and Vergil will be read supplemented by readings from other ancient and post-classical authors. CAS-B-LIT.

### **CLS 212. Greek and Roman Tragedy. (3) (MPT)**

Study of the origin and development of Greek drama will highlight unique aspects of its fifth century form and dramatic presentation while exploring the reasons for perennial relevance of the extant plays. Selected dramas by Aeschylus, Sophocles, and Euripides supplemented with some comparative material from Roman post-classical drama. CAS-B-LIT.

### **CLS 213. Greek and Roman Comedy. (3) (MPT)**

Examination of the origin and development of comedy, the particularities of ancient dramatic presentation, and the changing role of comedy in ancient society. Readings from plays of Aristophanes, Menander, Plautus, and Terence supplemented by some comparative material from postclassical drama. CAS-B-LIT.

### **CLS 215. Greek and Roman Historians. (3)**

Introduces students to the works of ancient historians, including Herodotus, Thucydides, Livy and Tacitus. Reading the original historians of Greece and Rome as opposed to modern histories will allow students to engage ancient notions of history, historical writing, and the literary efforts that created the histories; students will learn to read history critically, aware of the perspectives and political and social context of the historian and the effect those have on the final work. CAS-B.

### **CLS 216. Greek and Roman Cities. (3)**

A visually-oriented course that examines ancient Greek and Roman cities, including Athens, Sparta, and Corinth; Rome, Herculaneum, and Pompeii. Intends to recreate, as much as possible, the experience of living in these cities in order to understand life in the Classical world.

### **CLS 218. Greek and Roman Erotic Poetry. (3) (MPT)**

Aims at fostering an understanding of how Greco-Roman poetic forms shaped societal values and visions, especially notions of eroticism and sexuality as they are expressed in ancient poetry. The Greeks developed numerous literary lyric genres, which influenced and even conditioned most of the Western poetic discourse and preceded the ideas of Romanticism. The Romans added to all the Greek genres love elegy and satire, the only genres not inherited from the Greeks, and equally influential for the future generations. Examines a variety of forms and poetic expressions in ancient lyric poetry. The course also aims at understanding the process by which we read different literary genres.

### **CLS 222. Race and Ethnicity in Antiquity. (3) (MPT)**

Relies on a variety of primary evidence to study how the Greeks and Romans defined race and ethnicity and how they defined themselves as individual peoples when they confronted cultures and peoples distinctly different from themselves. Examination of the relationship between current theories of race and ethnicity and the theories and practices of the Greeks and Romans.  
Cross-listed with BWS.

### **CLS 235. Women in Antiquity. (3) (MPT)**

Study of the status of women in the Greek and Roman world from Bronze age through early centuries of Christianity conducted in light of literary, artistic, and archaeological evidence in order to increase knowledge and understanding of Greek and Roman family and social life and of our own society as well.  
Cross-listed with WGS 235.

### **CLS 254. Introduction to Russian and Eurasian Studies. (3) (MPF)**

Examines the major developments that have shaped Russian and Eurasian culture, society and politics over the last millenium. The course incorporates perspectives from the social sciences, humanities and the fine arts. Taught in English. IIB. ADVW. CAS-B.  
Cross-listed with ATH/HST/ITS/POL/REL/RUS.

### **CLS 277. Independent Studies. (0-5)**

### **CLS 310. Advanced Topics in Classics. (1-3; maximum 6)**

Examination of an author, work, topic, or new critical perspective on classical civilization not usually given substantial treatment in regular course offerings. May be repeated once if topic changes.

**CLS 317. Greek and Roman Philosophical Writers. (3) (MPT)**

An examination of the philosophy, personalities, and backgrounds of the principal philosophers. Discussions of problems of being and becoming, monism and pluralism, knowledge, value and society. Readings from the pre-Socratics, Plato, Aristotle, Epicurus, Lucretius, Seneca, and Boethius. CAS-B.

**CLS 321. Justice and the Law in Antiquity. (3) (MPT)**

History and development of constitutional and civil law in antiquity with special emphasis on Roman law. Examines ancient jurisprudence and development of the concept of justice. Some comparisons made between ancient and modern legal systems.

**CLS 323. Discoveries of Archaeology. (3)**

Introductory survey of monumental discoveries (ancient and modern) that have changed and influenced the course of history, intellectual thought, and artistic taste and enlarged and transformed our knowledge of the ancient world. Specific discoveries from selected archaeological sites direct the focus of the course: e.g. Egypt, Troy, Crete, Athena, Delphi, Pompeii, Herculaneum, and Rome.

**CLS 325. Russian Reception of Classical Culture. (3)**

Examines a variety of forms and poetic expressions in both modern (Russian) and ancient poetry. Introduces students to the way in which Russian literature and especially poetry responded to Greco-Roman antiquity. Analyzes how the study of classical antiquity, with its rich mythological tradition and history, represented to the Russian literary elite a window into the West and an opportunity to establish a Russian literary heritage within Western literary canon. All readings in English translation.

Cross-listed with RUS 325.

**CLS 331. From Epic to Romance. (3) (MPT)**

Critical survey of novelistic narrative literature in the ancient world, focusing on the so-called ancient novels or ancient romances written in the late hellenistic and imperial period. Begins with the epic ancestors of these works and goes on to modern versions of romance in print and film. CAS-B-LIT.

**CLS 332. Classical Mythology and the Arts. (3)**

Designed to explore the role of arts in the classical world in transmitting the narratives and values inherent in Greek and Roman myths. Will consist of case studies in the use of myth from public and private spheres: the Parthenon sculptures, Herakles and Athenian tyrants of the 6th century, the Niobids, Danaids and Augustan Rome, the reliefs from the Roman amphitheater at Capua, etc. Major topics will be subject selection, composition, context and narrative moment.

**CLS 333. The Greeks in the Near East and Central Asia. (3)**

Studies the impact and the character of intercultural exchange between the Greeks and their eastern neighbors, from Anatolia to Central Asia, paying special attention to the representations of those neighbors in literature. Looks at examples of "orientalist" discourse in epic, tragedy, history, geography, poetry, and the novel, providing an opportunity to reflect on contemporary east/west conflicts.

**CLS 334. Egypt in Greco-Roman History and Fiction. (3)**

Studies Greek and Roman literary texts that represent Egypt: its geography, its customs, its history and its religion, investigating how representations of the Other function to confirm or construct one's own identity, and how those constructions function in various types of literary discourse. Studies numerous genres of writing from antiquity (history, philosophy, drama, poetry, epic, Roman satire, and the novel) to explore the way representations come to substitute for reality, and the consequences of such substitutions.

**CLS 336. Ancient Sexualities. (3)**

Examines the written and visual evidence for ancient sexual practices, as well as ancient attitudes towards these practices as found in ancient law, philosophy, love poetry, novels, and other texts. Our reading of primary sources will be informed by modern writings on gender and sexuality. We will also engage with recent debates about the ideologies reflected in ancient codes of sexual conduct. Through a close reading of a variety of ancient Greek and Roman texts and images, together with contemporary interpretive readings, we will attempt to reach not only a fuller understanding of some central features of the cultures of Greece and Rome, but also, by holding up the mirror of antiquity to our own beliefs and practices, to arrive at a more critical consideration of how we think about sex and gender today.

Cross-listed with WGS.

**CLS 340. Internship. (0-20)****CLS 361. Antiquity Through a Lens. (3)**

Introduces students to filmic projections of classical myths and historical crises. Heightens students' awareness of the ways films construct our images of classical antiquity in the service of contemporary ideological agendas.

**CLS 377. Independent Studies. (0-5)****CLS 401. The Age of Pericles. (3) (MPC)**

Comprehensive study of Athenian civilization from 480 to 429 BC. This is neither a history nor a literature course, but a search for global understanding; attempts to look at a complex period from a variety of angles (political, social, literary, artistic, intellectual) and to find a basis for relating its specific subject matter to other bodies of knowledge and other modes of inquiry.

Prerequisite: permission of instructor.

**CLS 402. The Age of Augustus. (3) (MPC)**

Comprehensive study of Roman civilization from 63 BC to AD 14, a period that is perhaps the most significant and exciting era in Roman civilization, the culmination of seven centuries of Roman growth and expansion and the prediction of the five centuries of Rome's future. Focus is the concept of leadership in a Roman society that was being transformed from a republic to an empire. Emphasis is not only on the ways in which a leader shapes a society but also on the ways in which a leader is shaped by a many-faceted society.

Prerequisite: permission of instructor.

**CLS 431/CLS 531. Archaeology of Power. (3) (MPT)**

Examines social and political power in the past, from small scale societies to states and global systems. Explores theoretical approaches to diversity and inequality with case studies from around the world and throughout history that include authority, gender, race, religion, class, colonialism and empire. IC.

Cross-listed with CLS 431/CLS 531.

**CLS 436. Havighurst Colloquium. (3)**

Exploration of significant issues related to Russian and post communist affairs. Each semester focuses on a central theme or topic that is examined through presentations, readings, research, discussion, and writing. May be repeated once for credit with only 3 hours counting towards the history major.

Cross-listed with ATH/HST/RUS 436/RUS 536; POL 440/POL 540 and REL 470A.

**CLS 477. Independent Studies. (0-5)****CLS 480. Independent Reading for Departmental Honors. (1-6)**

Individually arranged program of study concentrating on a particular author, major work, or significant aspect of ancient culture and society, normally culminating in a substantial research essay and comprehensive examination.

Prerequisite: superior performance in course work within department as well as good general academic standing.

## Commerce (CMR)

**Note:** There are some restrictions in applying CMR credits toward the Miami Bachelor of Science in Business degree. CMR courses do not satisfy any specific course requirements and a maximum of 12 CMR credit hours may be applied toward that degree. These restrictions do not apply to other Miami degrees such as the Bachelor of Integrative Studies (BIS).

**CMR 101. Introduction to Accounting I. (3)**

Introduction to double-entry accounting systems, journals, subsidiary ledgers, and the general ledger. Preparation of financial statements for service and merchandising concerns emphasized. Basic payroll procedures, cash account reconciliation, and completion of detailed practice set.

**CMR 102. Introduction to Accounting II. (3)**

Continuation of CMR 101 with more in-depth coverage of asset, liability, and equity concepts. Includes inventory valuation methods, fixed asset accounting, notes, statement of cash flows, analyzing and interpreting financial statements. Communication of accounting information through writing skills.

Prerequisite: CMR 101.

**CMR 105. Introduction to Marketing. (3) (MPT)**

General survey of the field of marketing including the marketing concept, management of the marketing-mix, analysis of the marketing environment, use of marketing information, understanding of buyer behavior, and selection of target markets.

**CMR 106. Introduction to Business and the Economy. (3) (MPF)**

Introduction to various functional areas of business and everyday business and economic principles and problems including consumer choice, supply and demand, money, banking system, investment, growth, inflation, government policy, taxes, and employment. IIC.

**CMR 108. Introduction to Business Law. (3)**

Survey of business law including the legal system and environment in which business operates. Problems and solutions are investigated in areas of contracts, sales, bailments, commercial paper, agency and employment, partnerships and corporations, risk bearing devices, and property.

**CMR 111. Introduction to Management I. (3)**

Introduction to principles and practices of managing organizations. Exposure to contemporary management issues, functions of management, and the interrelationship between business organizations and the environment. Emphasis on development of supervisory skills.

**CMR 112. Introduction to Human Resources Management. (3)**

Emphasis on personnel function, management-worker relations, union and government regulation of the work place.

Prerequisite: CMR 111 or permission of instructor.

**CMR 117. Personal Finance, An Introduction. (3) (MPF)**

An introductory course in managing your money to become more knowledgeable about personal finance, thereby enabling you to make wiser financial decisions. Topics include: career planning, financial tools, budgets, income taxes, checking and savings accounts, building good credit, credit cards and loans, vehicles, homes and other major purchases, managing health expenses, insurance, investments, retirement and estate planning. IIC.

**CMR 125. Medical Office Simulation. (3)**

Specialized simulation package for the student preparing for a position in the field of medical office administration. Emphasizes methods and procedures encountered when processing medical documents.

**CMR 177. Independent Studies. (0-5)****CMR 181. Computers and Business. (3)**

Hands-on course emphasizing role of computers in business, business information systems, and use of business software. Develop skill in using word processing, business graphics, electronic spreadsheets, database, and the Internet. Software utilized is regularly updated. Windows and Microsoft Office Professional currently used. Credit not given for both CMR 181 and CIT 154.

**CMR 201. Federal Income Tax Procedures I. (3)**

Detailed coverage of federal income tax rules, regulations, and procedures. Preparation of federal income tax returns for individuals. Introduction to corporate tax. Includes a computerized tax program. Ethics component included.

Prerequisite: CMR 101.

**CMR 202. Payroll Records and Accounting. (3)**

Methods of computing wages and salaries, maintaining payroll records and preparing government reports and transmittal forms for federal, state and local payroll taxes. Computerized practice set included.

Prerequisite: CMR 101.

**CMR 203. Computerized Accounting. (3)**

Fundamentals of computerized accounting systems, including receivable, payable, payroll, inventory, and general ledger modules for a service or merchandising concerns. Conversion from a manual accounting system to an automated system. Course is exclusively hands-on with extensive use of practice sets and exercises.

Prerequisite: CMR 101.

**CMR 207. Management Planning and Control. (3)**

Exploration of how accounting data is used by management to make decisions. Emphasizes budgeting, cash flow analysis, breakeven analysis, and "what-if" probability analysis. Computerized applications are an integral part of course.

Prerequisite: CMR 101.

**CMR 211. Economics for Commerce. (3)**

This course covers basic microeconomics terms and concepts, including scarcity and choice, equilibrium, efficiency and equity, comparative advantage, allocating scarce resources, opportunity cost and the production possibility frontier and supply and demand, the function of prices in markets, and how markets work and sometimes don't work. It also covers production and cost structures and firms' behavior in perfect and imperfect competition markets.

**CMR 220. Professional Practice. (0-2; maximum 6)**

Students participating in associate's degree co-op program register for this course during semesters when they are on work assignment. Prerequisite: permission of instructor. Cross-listed with CIT 220 and ENT 220.

**CMR 221. Professional Development. (1-3)**

For students approaching the major career transition from college to work, either as a graduating student or as a co-op student. Focuses on clarifying plans, preparing resumes, improving interviewing skills, the job search process, assessing employment trends, and identifying and using career development resources.

**CMR 224. Medical Terminology. (3)**

Covers medical terms including definitions, spelling, and pronunciation along with their use in a workplace setting.

**CMR 241. Management of Business Operations. (3)**

Explore management approaches, philosophies and techniques to effectively and efficiently operate a business. Includes contemporary topics of e-service, technology management, process re-engineering and quality management.

Prerequisite: CMR 111 or permission of instructor.

**CMR 242. Management of Small Business Operations. (3)**

Introduction to management concepts and procedures in starting, developing, and operating small businesses. Methods of planning, organizing, operating, and controlling small businesses are discussed. Prerequisite: CMR 101, CMR 111 or permission of instructor.

**CMR 243. Management of Worker Relations. (3)**

Examines theories, skills, and coping mechanisms necessary to understand and manage human behavior in the organization. Focuses on ways organizations and members affect one another and instructs students on how to diagnose and deal with problems in an organizational setting. Areas of emphasis include development of human relation skills, group facilitation, communication, time management, business ethics, diversity, and managing work place conflicts in union and nonunion settings.

Prerequisite: CMR 111.

**CMR 244. Introduction to Global Business. (3) (MPF)**

The globalization of the U.S. economy significantly impacts both organizations and their employees. Business opportunities and career paths that once seemed assured, no longer are. This course analyzes how businesses and individuals compete in the new global economy. IC, IIIB.

**CMR 261. Customer Service & Satisfaction. (3) (MPT)**

Examines the importance of meeting and exceeding customers' expectations after the sale. Identify and explore issues related to developing long-term, loyal customers including the correction of minor problems and delivery and the generation of repeat business based on performance.

Prerequisite: CMR 105 or permission of instructor.

**CMR 263. Sales and Promotions. (3) (MPT)**

Understand how advertising and other promotional techniques may be used to communicate with consumers. Learn how effective sales processes and promotional activities function as important aspects of a balanced marketing plan.

Prerequisite: CMR 105 or permission of instructor.

**CMR 266. Consumer Behavior. (3)**

Explores the factors that drive consumers to make specific product and/or service selections in the marketplace. Understand the complexities of the product/service purchasing process as viewed through the eyes of the consumer.

Prerequisites: CMR 105 or permission of instructor.

**CMR 277. Independent Studies. (0-5)****CMR 281. Business Communication Software. (3)**

Practical hands-on experience for learning fundamentals of word processing and other publication software to produce various business documents, reports, newsletters, brochures and catalogs. Software utilized is regularly updated.

Prerequisite: CMR 181.

**CMR 282. Computer-Based Business Analysis. (3) (MPF)**

Practical application of analytical tools for managerial decision making using Microsoft Excel. Advanced formatting, charting, functions, formulas, and data organization are covered. Emphasis on presentation and analysis of data. V.

**CMR 284. Emerging Digital Technologies for Business. (3)**

This technology-focused course covers current and emerging digital technologies that drive productivity and inform decisions in today's organizations. Key topics include online collaboration, document and resource management, content management systems, and information systems. Online privacy and security issues are also addressed from both user and organizational perspectives.

**CMR 285. Business Information Management. (3)**

Focuses on understanding, from an end-user perspective, how databases provide the information necessary to run businesses. Develop a good understanding as to the steps necessary to deploy/transition into a new information system.

Prerequisite: CMR 181 or permission of instructor.

**CMR 286. Digital Commerce. (3)**

The course focuses on the tools and practices used to engage in digital commerce. Topics include an introduction to online business models, online security and privacy, web site planning, and introductory site design and administration. Web development and administration tools are utilized.

Prerequisite: CMR 181 or permission of instructor.

**CMR 290. Special Topics in Business Technology. (1-3)****CMR 301. Personal Organizational Skills. (3)**

The course focuses on personal development of skills vital to leadership with topics such as developing self-awareness, handling stress, managing conflict, building effective teams, making oral & written presentations, and conducting meetings. Individual skills are assessed using various measures.

**CMR 302. Financial Information for Managers. (3)**

The view of the non-financial manager/user of financial information is taken. Key concepts are reviewed with an emphasis on their managerial use and interpretation versus their construction. Accounting terms are presented with an emphasis on the non-financial manager/user of information.

**CMR 340. Internship. (0-20)****CMR 361. Marketing for the Small Business. (3)**

This course provides an overview of the marketing process as it relates to small business management. It covers fundamental marketing concepts, the marketing mix, competitive analysis, target markets, buyer behaviors, advertising and promotion. It also explores the use of a marketing strategy, local and global opportunities in the economy as well as the incorporation of social media marketing tools, franchising and ethics.

Prerequisite: CMR 105.

**CMR 401. Leadership Decision Skills. (4)**

The belief of this course is leadership can occur at any level of the organization and that everyone can improve their leadership skills. This course will develop leadership decision making skills required for effective leadership through the study of leadership approaches/theories and applications.

**CMR 402. Cross Cultural Leadership Skills. (3) (MPF)**

Today's global business environment makes cross-cultural leadership a critical skill. This course will help you foster international awareness, appreciate global diversity and adapt to different business and social settings. It will explore business practices, communication and decision-making styles across countries. The course will focus on effective leadership skills of business development, negotiation, and motivation. This is a hands-on course that will include case studies, self-reflection papers and an in-depth country report. IC, IIIB.

Prerequisite: CMR 244.

**CMR 441. Social Media and Career Development. (3) (MPF)**

In today's workplaces, the use of social media allows working professionals to become more visible and "connected." In CMR 441, the relationship between social media and career development will be studied as students learn about self-marketing, professional networking, and a variety of career search strategies. As active participants in Web 2.0 experiential activities, students will learn new skills in critical thinking, oral and written communications, interpersonal relationship-building, teamwork building, cross-functional training, and problem-solving approaches. Creativity and innovation in ideation, along with increased technological expertise in the use of a variety of social media platforms, is anticipated. Social media tools have the potential to create rich opportunities in self-directed learning, thought leadership, and professional networking, provided that the boundaries between casual and professional use are understood and respected. With this in mind, searching for a real-world career position using multiple research methodologies and several avenues of networking will be undertaken. IIC.

**CMR 442. Current Issues and Innovation in Small Business. (3)**

Exploration and analysis of issues and opportunities that currently face small and new businesses. Emphasis on developing short and long term strategies to address changing market, economic, and technological conditions. Address the need of innovation for business development and growth.

Prerequisite: CMR 242.

**CMR 495. Strategic Management for Commerce. (3) (MPC)**

This capstone course provides students the opportunity to integrate and apply what they have learned throughout the bachelor of commerce program. Students will apply strategic planning and implementation practices that underlie a well-structured organizational strategy. Concepts will include present and future states of a business, resource allocation, and achieving competitive advantage. Using a combination of simulations and studies of real-world organizations, students will learn how to make strategies actionable under conditions of actual use.

Prerequisite: senior status in a business-related degree program.

## Engineering & Computing (CEC)

**CEC 101. Computing, Engineering & Society. (1)**

This course is designed for first-year students with majors in the College of Engineering and Computing. Its goal is to facilitate student transition to college by introducing key information, resources, and skills needed to succeed. It will also introduce students to the curriculum and fields in engineering and computing and provide opportunities to connect with faculty, staff, and other students. This course facilitates opportunities for open discussion and individual advising; addresses issues including information literacy, academic integrity, personal responsibility and career development; and identifies key campus resources to enhance academic success.

**CEC 102. Problem Solving and Design. (3)**

This course introduces an approach to problem solving for engineering students. The students will learn systematic approaches to problem solving. Topics covered include: problem identification, requirement analysis, research on existing and alternative solutions, and quantitative analysis of solutions, synthesis and evaluation of data, prototyping, and testing. Students will also develop their oral and written communication skills as well as team work skills.

**CEC 130. Special Topics and Student Projects I. (1-3; maximum 6)**

Introductory level course focused on a special topic and/or interdisciplinary student project.

Cross-listed with ESP.

**CEC 140. Grand Challenge Scholars Experience. (0)**

This course is restricted to students in the Grand Challenge Scholars program. It will ensure that students meet particular non-course requirements such as submission of progress reports, submission of reflections, participation in the Grand Challenge Scholar in Residence program, and participation in the peer mentor program. Students are required to enroll in this course each semester (fall and spring) that they participate in the Grand Challenge Scholars program with a minimum of three semesters of participation.

Prerequisite: admission to the Grand Challenge Scholars Program.

**CEC 150. CEC Scholars Seminar. (0)**

This seminar for Engineering and Computing Scholars will bring in weekly guest speakers from across Miami to introduce the Scholars to valuable people, centers, and opportunities. It will also help the students build a core community for future networking.

**CEC 177. Independent Studies. (0-5)****CEC 205. Agile Launchpad I. (3)**

Agile is a term for a set of values, principles, and practices that have been shown to improve the efficiency, productivity, and quality of software development and delivery. The key objectives are to deliver working software that meets the needs of a customer while mitigating risk in the development process. This set of courses addresses the theory and practice of Agile in the context of globally dispersed teams. Students will learn and apply the values, principles, and practices of Agile while working in multi-disciplinary international teams. The course includes a significant practicum experience in which students collaborate with developers in other countries such as Australia, India, or China to develop working software using the Agile approach. Students will need to collaborate across time zones, cultural differences, and communication barriers.

Prerequisite: permission of instructor.

Cross-listed with CIT 205.

**CEC 206. Agile Launchpad II. (3)**

Continuation of CEC 205.

Prerequisite: permission of instructor.

**CEC 230. Special Topics and Student Projects II. (1-3; maximum 6)**

Fundamental activities in the research and implementation of a special topic and/or interdisciplinary student project.

Prerequisite: permission of instructor.

Cross-listed with ESP.

**CEC 241. Leadership in the Real World Seminar. (1)**

Students will interact with seasoned leaders from business, industry, government, and other organizations to expand and enhance their understanding of current leadership challenges in today's world. Students will participate in a series of professional seminars, typically with executives and leaders of organizations who are external to Miami University and many of whom started their careers in engineering and applied science fields. In addition to the seminars, students will research aspects of leadership and the seminar speakers, produce several reflection papers, and a final presentation synthesizing information from the course to create their personal leadership philosophy. This course is only open to majors in the College of Engineering and Computing. The course is designed as a tier-1 honors experience, but is open to other students.

Prerequisite: CEC 101 and sophomore standing; or permission of instructor.

**CEC 255. CEC Preparation - Study Abroad. (2; maximum 4)**

The purpose of this course is to prepare students for an international cultural immersion experience where they will work on projects that are appropriate to the culture and communities of the host country. This seminar will introduce students to the country and its cultural basics, provide an overview of logistical details, living conditions, and other country-specific information. Students will research possible projects focusing on planning, technical constraints, and accessing appropriate resources. Topics concerning goals for working with communities in other countries and effective strategies will also be included. Intercultural competence will be discussed and students will identify areas for improvement.

Prerequisite: Permission of instructor.

**CEC 258. Reflection on CEC Study Abroad Projects. (1; maximum 2)**

This seminar will provide a review and reflection on the cultural immersion and project experience in an international setting. Students will evaluate the effectiveness of project work done in the host country and the cultural impact on their project designs, solutions, and implementations. Students will re-assess their Intercultural competence and evaluate the results in the context of the study abroad experience.

Prerequisite: CEC 255.

**CEC 266. Metal on Metal: Engineering and Globalization in Heavy Metal Music. (3) (MPF)**

This course addresses the linkages among heavy metal music, global culture and engineering developments. Heavy metal is a truly global popular music with major impacts from Europe, Asia, the Americas and beyond. Advances in various technologies have extensively influenced heavy metal, enabling some of its most defining characteristics. This course explores the interplays of technology, music and culture by integrating the powerful history of metal with an overview of the engineering impacts. Students will engage in demonstrations and discussions of the musical breadth along with the engineering technologies. IC, IIIB, V.

**CEC 277. Independent Studies. (0-5)****CEC 291. Personal Leadership I. (2)**

The 200 level courses are designed for the CEC Leadership Institute sophomore cohort. They introduce the various dimensions of personal leadership to assist students in understanding the traits for becoming a better leader in their professional and personal lives. These courses span an academic year and serve as a dynamic, integrative and practical introduction to a leadership development program. Students will explore emotional intelligence, teamwork, crucial conversations and group dynamics. The activities in these courses will help students define individual personality preferences, strengths and areas of development and understand how to utilize the self-awareness to become a more effective leader. With the guidance of advisors, students will create their individual leadership plans. Students will also interact with a variety of executives and professionals from diverse industries.

Prerequisite: CEC 101.

**CEC 292. Personal Leadership II. (2)**

Continuation of CEC 291.

Prerequisite: CEC 291.

**CEC 330. Special Topics and Student Projects III. (1-3; maximum 6)**

Intermediate-level activities in the research, management and implementation of a special topic or project in engineering and computing with a focus on innovation.

Prerequisite: CEC 230.

**CEC 340. Internship. (0-20)****CEC 377. Independent Studies. (0-5)****CEC 391. People Leadership I. (2)**

The 300 level courses are designed for the CEC Leadership Institute junior cohort. They focus on various dimensions of leading others, and assist students in becoming better leaders in their professional and personal lives. These courses span the second year of a dynamic, integrative and practical leadership development program for the selective cohort of majors in the College of Engineering and Computing. The students will explore creativity (brainstorming, creative conflict, storyboarding) negotiation, listening and speaking skills, conducting meetings, diversity (cultural, gender, age awareness), how others perceive them (360 reviews), and related topics. Students will continue to implement and revise their personal leadership development plan created in their first year, and deepen their relationships with their executive mentor and their peers. Prerequisite: CEC 292.

**CEC 392. People Leadership II. (2)**

Continuation of CEC 391.  
Prerequisite: CEC 391.

**CEC 399A. Community Project in Guatemala. (3)**

This course will be offered in Guatemala where students will have a cultural immersion experience living with a host family, practicing lessons learned about cultural awareness and social entrepreneurship, and working on projects suitable for host communities in Guatemala.

**CEC 460. Special Topics in Engineering and Computing. (1,3; maximum 6)**

Topics in engineering and/or computing beyond the technical requirements of a major. These topics and activities may be of an interdisciplinary nature, not restricted to a specific department. Prerequisite: permission of instructor.

**CEC 477. Independent Studies. (0-5)****CEC 488. Senior Design-Special Projects. (4) (MPC)**

Student teams conduct major open-ended design projects. Elements of the design process are considered as well as real-world constraints, such as economic and societal factors, marketability, ergonomics, safety, aesthetics, and ethics. Feasibility and design studies are performed and are followed by implementation/prototyping, testing and analysis of the final design will be completed. This course is designed to support SEEC initiatives in CEC and is primarily for students conducting projects under SEEC initiatives. The projects must have approved elements of SEEC to be part of this special capstone.

**CEC 491. Strategic Leadership I. (1-2; maximum 2)**

The 400 level courses are designed for the CEC Leadership Institute junior cohort. These courses span the third and final year of a dynamic, integrative and practical leadership development program and focus on various dimensions of strategic leadership and the transition from college to future careers. Topics to be explored include strategic planning, customer focus, decision analysis, ethics/values, global and diversity perspectives, innovation, and the language of business. Prerequisite: CEC 392.

**CEC 492. Strategic Leadership II. (2)**

Continuation of CEC 491.  
Prerequisite: CEC 491.

## Arts and Science (CAS)

**CAS 131. Practical English Grammar for English Language Learners. (3)**

Designed to help students develop competence in using the English grammatical structures necessary to succeed in oral and written communication in both the university setting and everyday life. It will approach grammar as a system for "meaning-making," rather than as an abstract set of rules. As much as possible, assignments and activities will be anchored to functions and communicative situations based on authentic academic interactions. Course enrollment is restricted to non-native speakers of English.

**CAS 133. Advanced Communication Strategies II: Speaking and Listening for Academic Contexts. (3)**

For students for whom English is not their first language. Intensive practice in English speaking and listening skills for academic contexts including understanding lectures, note-taking, class discussion, formal and informal presentation, and pronunciation. Open only to non-native speakers of English.

**CAS 134. Critical Reading & Discussion in Academic Contexts for English Language Learners. (2)**

Designed to offer international students intensive reading and discussion practices necessary for the American university setting. Essential reading strategies learned and developed in the course will prepare students for various discipline-focused courses. A systematic approach to the reading will be utilized, starting from standard reading skills to higher-order analytical and critical response skills. Finally, students will develop and deliver their own arguments by analyzing written and visual texts. This course is only open to non-native speakers of English.

**CAS 277. Independent Studies. (0-5)****CAS 301. Professional Pathways for Arts and Science Students. (1)**

Students will explore and more fully understand the critical links between a strong liberal arts undergraduate education and diverse career paths including choices in business, government, and the private non-profit sector. Through selected readings, facilitated discussions, and experiential exercises students will examine a variety of foundational skills that are all grounded in experiences within majors and minors in the College of Arts and Science, including: critical, strategic and analytic thinking; writing competence; quantitative literary, transformative leadership; and professional ethics and integrity. Students will also explore practical applications of those skills and dispositions in diverse careers.

**CAS 340. Internship. (0-20)****CAS 377. Independent Studies. (0-5)****CAS 477. Independent Studies. (0-5)**

## Creative Arts (CCA)

### **CCA 111. Innovation, Creativity and Design Thinking. (3) (MPF)**

This course will explore the roots of original thought and its role in the evolution of different areas of human endeavor. Students will explore the many facets of creativity and innovation, which are purely human traits at the heart of our ability to grow, change and adapt as individuals, and ultimately to survive as a species. The course will present scientific and scholarly ways of understanding creativity, but will also engage students in a series of exercises to experience processes through a diverse range of media and project types. Learning the roles and processes of innovation and design thinking will be central to this exploration. Team work, problem-solving and leadership skills will also be addressed, and students will both self-author and collaboratively author original concepts. IIA, V.

### **CCA 121. Introduction to the Integrated Arts and Culture. (3) (MPF)**

This course will focus on learning basic arts vocabulary, concepts and principles, with an emphasis on those words and ideas that are common to all the arts. (e.g.: syncopation, rhythm, pattern, etc.) Students will be exposed to the fundamental steps of the creative process that are integral to various artforms. This vocabulary and process will be examined in context through the historical and cultural study of a particular urban location. IIA.  
Co-requisites: CCA 221 and 321.

### **CCA 177. Independent Studies. (0-5)**

### **CCA 182. Experiencing the Arts. (1-2)**

Introduction to various arts. Attendance at art events required.

### **CCA 201. Introduction to Arts Management. (3)**

Introductory seminar to the field of arts management as a profession. The successful arts manager applies business principles in an arts context utilizing field specific skills in creating programming, stimulating public access, generating income, managing boards, and sustaining the mission and vision of the enterprise.

### **CCA 221. Immersion in the Integrated Arts and Culture. (3)**

Students will learn about various forms of art (architecture, theatre, design, music, etc.), simultaneously gaining an understanding of their unique characteristics, while learning how they are interconnected, integrated, and sit in a specific cultural context. By studying how architecture and interior space design affects the theatrical/musical performances in an opera house, for instance, students will gain a stronger understanding of how individual arts disciplines enrich one another. Learning would take place in the classroom, as well as in an experiential fashion.

Co-requisites: CCA 121 and 321.

### **CCA 222. Museums and Collections: Beyond the Curio Cabinet. (3)**

This course explores the evolution of public and private museums, providing a historical perspective on the global significance of object-based collections and institutions and how they have contributed to a deeper understanding of cultural practices. Students explore the societal value and meaning of collections to gain insights into collective memory and the shared human experience.

### **CCA 231. Dance for the Musical Stage. (3)**

Introduction to the fundamentals of dance for the musical stage. Open to the students enrolled in the Music Theatre Minor only. Recommended prerequisite: KNH110A Beginning Ballet.

### **CCA 232. Museums Today: Content, Practices and Audiences. (3)**

This course examines the ethical and professional framework of contemporary administrative practices, collections management, exhibitions development, and the creation of educational programs and outreach. Attention will be given to how museums and related institutions provide a forum for personal and collective dialogue through diverse methods of interpretation and presentation of historical, cultural, aesthetic, scientific and natural history materials.

### **CCA 256. Arts Management Practicum. (1; maximum 3)**

The studio is an opportunity for practical work experience in the field of Arts Management. Under the supervision of a faculty member, students complete experiential on-campus arts management projects in order to understand the role of arts managers in different contexts. Prerequisite: CCA 201.

### **CCA 277. Independent Studies. (0-5)**

### **CCA 299T. Theatre NYC - Producing. (3)**

Introduces the field of producing at in nonprofit and commercial theatre. The student will gain experience in the all aspects of production including operating, programming, financing, and marketing theatre productions.

### **CCA 302. Arts Marketing. (1.5)**

Effective marketing is essential in developing sustainable arts enterprises. This course introduces students to the fundamentals of marketing the arts and the tools utilized by arts marketers to communicate with the audience.

Prerequisite: CCA 201.

### **CCA 303. Arts Engagement. (1.5)**

The boundaries between arts and audiences are changing. The emerging field of Arts Engagement is creating dynamic new ways to connect with audiences. This course examines the changing relationship between the arts and audiences and the plans and strategies used to increase connectivity with the audience.

Prerequisite: CCA 201.

### **CCA 304. Financial Management in the Arts. (1.5)**

Understanding and applying sound financial management tools are fundamental in creating and maintaining sustainable arts enterprises. This course focuses on understanding the financial challenges faced by the arts and the necessary tools to plan, control, interpret and communicate the financial position of the arts enterprise.

Prerequisite: CCA 201.

### **CCA 305. Development and Fundraising in the Arts. (1.5)**

An introduction to field of development in the arts focusing on contributed income, donor management and development plan strategies.

Prerequisite: CCA 201.

### **CCA 306. Arts Entrepreneurship. (1.5)**

In this course students will engage in the practice of arts entrepreneurship and develop the ability to recognize and create opportunities for arts enterprises.

Prerequisite: CCA 201.

### **CCA 307. Arts Venture Creation. (1.5)**

Students will engage in the entrepreneurial process to create a new arts venture. Students will develop skills in business models, market analysis, attracting funding and business structures.

Prerequisites: CCA 201 and CCA 306 or permission of instructor.

**CCA 321. Application in the Integrated Arts and Culture. (3)**

This course focuses on the application of knowledge regarding the integrated arts. A team-based project will put students in multidisciplinary groups that collaboratively research, create and present a particularly important site that demonstrates arts integration. In addition, there will be an individual project that chronicles the student's learnings and asks them to reflect upon the connection of the creative process to their personal experience/environment.

Co-requisites: CCA 121 and 221.

**CCA 331. Acting for the Musical Stage. (3)**

This course will focus on the integration of acting, singing and dancing to prepare a song for public performance. Open to students enrolled in the Music Theatre Minor only.

Prerequisites: THE 131, MUS 119, CCA 231, one semester of MUS 216.

**CCA 340. Internship. (0-20)****CCA 377. Independent Studies. (0-5)****CCA 401. Strategic Planning for the Arts. (3)**

Strategic planning is fundamental to organizational success. Planning, based on the mission statement, details both artistic and business strategies in order to fulfill the goals of the enterprise. Planning should be entrepreneurial, organized and ongoing. In this course, we will study elements used in planning and create plans for an arts enterprise.

Prerequisite: CCA 201 and at least 9 additional credit hours in Arts Management course work.

**CCA 410. Advanced Topics in the Creative Arts. (1-4)**

Topics focus on a range of contemporary arts subjects, themes, or issues related to arts management, ethics and leadership; museum studies and practices; creative enterprise and entrepreneurship; among others as extensions of ideas presented in College of Creative Arts courses and programs.

Prerequisites: CCA 201, CCA 340 or permission of the instructor.

**CCA 422/CCA 522. International Fashion Workshop. (6)**

Study abroad studio experience in fashion design for clothing, shoe, millinery, jewelry, or accessories. Explores and develops concepts, techniques, materials and critical aesthetic thinking applied to the process of creating and making wearables for the body in an immersive global context.

Prerequisite: one of the following - ART 111, 121; THE 251; ARC 101, 102 113 or 114.

**CCA 443/CCA 543. Study Abroad: Arts and Culture. (6)**

Rome-Florence: Arts & Culture is a field-based study abroad course in Italy designed to increase students' knowledge of the seeds of western culture by learning about the history, art, music and culture of Italy, specifically, Rome and Florence. It blends the highlights of masterworks in art and civilization. In the classroom learning is limited; students will spend their course time exploring Roman ruins such as the Colosseum and the Pantheon, in world's most famous museums, such as the Vatican Museums, Capitoline Museums and, the Uffizi and Accademia, home to Michelangelo's David. Concerts of classical music, opera and 21st century Italian film music are included. Italian food, fashion and cooking classes highlight the course. Since art is a product of society, a history of western culture will be pursued as it affected the development of art and culture. Trips to the island of Capri and the Tuscan city of Siena are included.

**CCA 477. Independent Studies. (0-5)****CCA 677. Independent Study. (0-5)**

## Community Arts (CMA)

**CMA 101. Introduction to Community Arts. (1)**

This course will explore various definitions of community arts and how it can enhance, inspire, change, and activate the world. Students will explore the various relationships of artists within their communities, the history of such roles, and begin to identify ways in which they can become more involved. Students will be exposed to diverse forms of art and will be encouraged to experiment and broaden their experiences. The course will also connect students to the curriculum of the CMA major.

**CMA 277. Independent Studies. (0-5)****CMA 301. Community Arts Practicum. (3)**

Placement with an arts facility or organization where students apply their skills and learn new ones. Preparatory classroom component, regular reading and writing assignments, final class presentation, and community project required. Open only to students in the Community Arts major. EL.

Prerequisite: NCS 202 and Junior standing.

**CMA 340. Internship. (0-20)****CMA 377. Independent Studies. (0-5)****CMA 401. Capstone in Community Arts. (3) (MPC)**

A culminating experience for CMA seniors focused on the supervised development of individual, professional-level projects. This may involve participation in a group or solo gallery exhibition, creative theatrical or musical performance, and/or writing project connected to such events.

Prerequisite: senior standing.

## Computer and Information Technology (CIT)

**CIT 101. Computing Skills. (1)**

Hands-on introduction to the use of current popular software and information retrieval tools. Self-paced and traditional instruction methods are used. A headnote specifies the instructional method and particular software tool. Note: a maximum of nine credit hours of CIT 101, CSE 141, and CIT 154 can be used toward degree requirements. A maximum of three credit hours will be awarded among CIT 101W, 101S, and 101D, and CIT 154. A maximum of three credit hours will be awarded among CIT 101F, 101G, and 101V, and CIT 173. Credit/no credit only. Not open to CSE majors.

**CIT 102. Digital Media and Design Tools. (2; maximum 6)**

Practical and applied approach to digital media and design tools using industry standard software. The type of software studied will vary, and the course may be repeated for different software tools. The particular software used for the course will be specified as a note on the schedule. Up to six hours of credit may be applied toward graduation.

**CIT 154. Personal Computer Concepts and Applications. (3)**

Survey course for students who wish to become computer literate and make practical use of microcomputers. Survey of various hardware components and software systems used by current microcomputers. Includes hands-on experience with various software packages including word processing, spreadsheet, database management, and graphics. Not open to CSA baccalaureate majors. Credit awarded for only one of these: CMR 181 or CIT 154.

**CIT 167. Information Technology People and Practices. (2)**

This course is designed for new Miami students who also have declared or would like more information about the IT major. First, through reflection, self-assessment and group discussions, students gain a sense of belonging at Miami, plan how to make the most of their time at Miami, and establish a foundation for academic and co-curricular success. Second, students are introduced to computer and information technology and its role in society and the work place. Students will explore careers available to technology professionals and the use of technology in various domains, with an emphasis on technical problem solving, technical infrastructure, teamwork, and communication. Note: This course meets the requirements for UNV 101.

**CIT 168. Information Technology Tools and Techniques for Organizations. (4)**

An introduction to fundamental IT tools and techniques to solve technological problems for organizations. Students will use software and/or hardware tools to explore network fundamentals, web programming, data management and storage, and operating systems. 3 Lec. 1 Lab.

**CIT 177. Independent Studies. (0-5)****CIT 201. Advanced Spreadsheets and Analytics. (3)**

Hands-on instruction in advanced spreadsheet techniques using current popular software and information retrieval tools. Additionally, students will be introduced to basic analytic methods. Prerequisites: CIT 101S or CIT 154 or CMR 181 or CSE 148.

**CIT 205. Agile Launchpad I. (3)**

Agile is a term for a set of values, principles, and practices that have been shown to improve the efficiency, productivity, and quality of software development and delivery. The key objectives are to deliver working software that meets the needs of a customer while mitigating risk in the development process. This set of courses addresses the theory and practice of Agile in the context of globally dispersed teams. Students will learn and apply the values, principles, and practices of Agile while working in multi-disciplinary international teams. The course includes a significant practicum experience in which students collaborate with developers in other countries such as Australia, India, or China to develop working software using the Agile approach. Students will need to collaborate across time zones, cultural differences, and communication barriers. Prerequisite: permission of instructor. Cross-listed with CEC 205.

**CIT 214. Database Design and Development. (3)**

Practical and applied approach to database management design and development. Introduction to database planning, design and management, data modeling and representation, and fundamental concepts of database access. Includes the study of design models with a focus on the relational model and includes the commonly used database systems. Will include hands-on experiences. Prerequisite: CIT 168.

**CIT 253. Contemporary Programming Languages. (3)**

Presents syntax and semantics of a particular programming language currently popular in industrial or academic settings. Addresses fundamental program construction, good software design and programming style, and development of applications focused on the strengths and special features of the language. Covers fundamental and advanced topics in the language. Course may present languages such as C++ (in 253.C), Perl (in 253.P), and others as they may emerge. Prerequisite: CSE 163 or CSE 174, or permission of the instructor.

**CIT 262. Technology, Ethics, and Global Society. (3) (MPF)**

Inquiry into a wide range of information technology issues, from moral responsibilities affecting professionals to wider ethical concerns associated with information technology in day-to-day living. Topics include general aspects of ethics; common ethical theories; professional codes of ethics in IT; privacy, security and reliability in using computer systems and the internet; issues and responsibilities in internet usage; legal issues in IT; global perspectives of computing issues; and general problems related to ethical and responsible computing. IIB, IIC. Prerequisites: ENG 111 and a minimum of 20 credit hours earned. Cross-listed with CSE.

**CIT 263. Advanced Topics in Visual BASIC. (3)**

Topics include using multiple file formats including databases, creating menus, multiple form projects, using ActiveX controls, modules, executable files, VBScripting, and VBA. Work with mouse events and OLE. Additional concentration on debugging, error detection, and testing programs for robustness. Prerequisite: CSE 163.

**CIT 268. Introduction to Human-Computer Interaction. (3)**

Inquiry into a wide range of Human Computer Interaction (HCI) issues ranging from the understanding and advocacy of the user in the development of IT applications and systems, to the technical components of design. Topics include foundations of HCI, the nature of the HCI design process, technical aspects and limitations of selected 'technologies' related to HCI, user-centered methodologies for development and deployment, task analysis, ergonomics, accessibility standards, emerging technologies, and principles and methodologies of effective interface design and evaluation. This course will also address appropriate communication skills for effective human-to-human interaction as the foundation for developing effective, user-centered designs. Prerequisite: CIT 168.

**CIT 270. Special Topics in Computer and Information Technology. (1-3; maximum 6)**

In-depth study and analysis of a topic of special or emerging interest in Computer and Information Technology. Prerequisite: sophomore standing or permission of instructor.

**CIT 273. Web Application Development. (3)**

This course addresses the development of interactive web applications using both client and server side technologies. Topics include client-side scripting, server-side scripting, persistence, connectivity issues and their implementation, access and updating of databases via web interfaces, and the use of embedded multimedia. Current technologies will be used to program and implement the web applications. Prerequisite: CIT 214 or permission of instructor.

**CIT 276. IT Systems Design and Lifecycle Management. (3)**

Review of systems development and project management fundamentals for IT. Topics include current project lifecycle development frameworks, tools and techniques used to support requirements gathering, systems analysis, project management, testing, maintenance, and support. Not open to CSE or ISA majors. Prerequisite: CIT 214 or permission of instructor.

**CIT 277. Independent Studies. (0-5)****CIT 281. Enterprise Network Infrastructure. (3)**

Introduces the design and implementation of enterprise networks using industry-standard infrastructure operating systems. Topics will include selection of routing protocols, router configuration, advanced topics in network addressing, LAN switch configuration, VLAN configuration, inter-VLAN routing, port security, and enterprise wireless design.

Prerequisite: CIT 168.

**CIT 284. Enterprise Server Installation and Configuration. (3)**

Covers the installation and configuration of industry-standard server solutions. Students will use virtual machines, and explore virtual networking. Topics will include client and server operating system selection, installation, management and troubleshooting; design and implementation of a directory services model; user-creation and management; and implementation of a variety of server-based applications and services.

Prerequisite: CIT 168.

**CIT 286. Designing and Deploying Secure Enterprise Networks. (3)**

Integrates clients, servers and infrastructure components into a secure network design. Students will learn about common network-based vulnerabilities, corresponding mitigation solutions, and structured testing methods. Topics will include infrastructure security concepts, protocols, and devices. Students will learn about device hardening, configuration of server and router-based ACLs, and firewall configuration concepts.

Prerequisite: CIT 281.

**CIT 306. Agile: Business Value Analysis. (3)**

Agile is a term for a set of values, principles, and practices that have been shown to improve the efficiency, productivity, and quality of software development and delivery. This course focuses on value-driven project delivery, the accompanying mindset, and key agile practices designed to emphasize customer value. Additionally, the course explores creating organizational and team environments conducive to frequent and transparent collaboration between the business and development teams. Students who complete this course earn the ICAgile Business Value Analysis certification. This certification provides an excellent foundation in value-based agile solutions delivery.

Prerequisite: CIT 205.

**CIT 307. Agile: ICP-Project Management. (3)**

The key objectives of this course focus on core components of agile project management as distinct from traditional project management, and on equipping course participants with strategies and techniques for successful Lean and Agile project implementation. Agile is a term for a set of values, principles, and practices that have been shown to improve the efficiency, productivity, and quality of software development and delivery. A servant leadership mindset and approach is critical to empowering agile teams to produce great results. Students will practice the role of an agile project manager and a facilitator of agile practices towards achieving desired outcomes. Students who complete this course will earn the ICAgile Project Management certification. This certification also takes a much more in-depth look at the fundamental agile concepts of adaptive planning, customer collaboration, and value-driven delivery in dynamic and sometimes highly constrained environments. In addition, the learning outcomes address agile approaches to standard project management processes such as metrics, reporting, and contract management.

Prerequisite: CIT 205.

**CIT 338. Business Intelligence Tools. (3)**

This course is designed as an exploration of the business intelligence tools used by organizations in decision making. Students will be introduced to a variety of analytic tools. These tools will be used to employ a variety of techniques to discover and analyze small and large data sets.

Prerequisite: CIT 201.

**CIT 340. Internship. (0-20)****CIT 348. Information Management and Retrieval. (3)**

This course will apply information technology to databases to support decision making. It will address information technology techniques as they apply to information lifecycle issues in a variety of domains. This course will include hands-on use of current information technology for organizational needs analysis, data acquisition and storage through data contextualization, and information retrieval effective use. Participants will analyze new tools and techniques for suitability to specific information management and retrieval objectives. Topics include data storage and retrieval techniques, data transformation, tool analysis and evaluation, information presentation, data mining, and organizational information need analysis.

Prerequisites: CIT 214 and STA 261 or STA 368 or ISA 205.

**CIT 357. Current Practices in Information Technology. (3)**

Investigation of current practices, tools, and applications of Information Technology. Emphasis is on structured research techniques, critical analysis, and presentation of technical materials.

Prerequisite: CIT 276 and junior standing.

**CIT 358. Information Technology Assurance and Security. (3)**

This course provides a foundational knowledge of the key issues associated with protecting information assets by addressing current issues and techniques in information security and information assurance. Topics will include the impact of security in the system development life cycle methodology, security threats, risks, and assets, incident response, cryptography, disaster recovery, data and information protection tools, information privacy, and regulatory compliance.

Prerequisite: CIT 168.

**CIT 370. Special Topics in Computer and Information Technology. (1-3; maximum 6)**

In-depth study and analysis of a topic of special or emerging interest in Computer and Information Technology.

Prerequisite: permission of instructor.

**CIT 376. IT for Organizations. (3)**

This course explores the management of the many aspects of an IT organization. It further examines the relationship and alignment between the IT functions and its' support of the overall strategic goals of the organization.

Prerequisite: CIT 276 or permission of instructor.

**CIT 377. Independent Studies. (0-5)****CIT 431. Health Information Technology I. (3)**

Examination of information technology and related systems in healthcare settings, particularly as they pertain to clinical systems. Emphasis is on the analysis of data needs, interpretation of workflow analysis, and investigation into interoperability requirements and standards.

Prerequisite: NSG 321.

**CIT 432. Health Information Technology II. (3)**

Continued examination of information technology and related systems in healthcare settings, particularly as they pertain to non-clinical systems such as healthcare administration and financial systems. Emphasis is on the analysis of data needs, security analysis, data reporting, and the design and development of HIT projects. Prerequisite: CIT 431.

**CIT 448. Global and Strategic Issues in Information Technology. (3) (MPF)**

While information technologies remain the same across national borders, their usage and context change according to country cultures and national laws. Features such as information infrastructure, languages, business practice, intellectual property protection, and tariffs impact the adoption of IT in a transnational organization. In this course, students will define global technology issues and their impact, understand cultural differences and their effect on standards for the use of technology, develop resources to make informed decisions personally and professionally, and generally raise global awareness within an IT context. IIIB, IC.

Prerequisite: CIT 262/CSE 262 or permission of instructor.

**CIT 457. IT Project Lifecycle I: Requirements and Design. (3) (MPC)**

Students undertake all phases of information technology (IT) systems design and implementation, conducting a major IT project, working singly or in collaboration with other students under the direction of a faculty or external project sponsor. With instructor permission, students may elect to pursue a co-curricular activity. All elements of the IT project lifecycle are considered including analysis, requirements, design, user and feasibility studies, ethical considerations, implementation, testing, documentation, and system rollout. In CIT 457, students work through pre-implementation to produce a detailed requirements and design proposal (and potentially prototype systems). In CIT 458, students implement, test, and rollout their systems.

Prerequisites: CIT 357 and senior standing.

**CIT 458. IT Project Lifecycle II: Implementation and Deployment. (4)**

Students undertake all phases of information technology (IT) systems design and implementation, conducting a major IT project, working singly or in collaboration with other students under the direction of a faculty or external project sponsor. With instructor permission, students may elect to pursue a co-curricular activity. All elements of the IT project lifecycle are considered including analysis, requirements, design, user and feasibility studies, ethical considerations, implementation, testing, documentation, and system rollout. In CIT 457, students work through pre-implementation to produce a detailed requirements and design proposal (and potentially prototype systems). In CIT 458, students implement, test, and rollout their systems.

Prerequisite: CIT 457.

**CIT 468. Health Information Technology Project Lifecycle. (4) (MPC)**

This course is designed for Health Information Technology majors. Students design and implement an information technology (IT) solution to a healthcare problem, working singly or in collaboration with other students under the direction of a faculty or external project sponsor. With instructor permission, students may elect to pursue a co-curricular activity. Prerequisite: CIT 357.

## Computer Science & Software Engineering (CSE)

**CSE 102. Introduction to Computer Science and Software Engineering. (3)**

This course introduces students to the computer science and software engineering disciplines. The course focuses on various computing and software design principles and tools used in the profession. Students will be able to model, implement, and test these principles via projects required throughout the course. This course is open to all majors.

**CSE 148. Business Computing. (3)**

An introduction to business-oriented computer skills. Extensive hands-on use of electronic spreadsheets and database software. Examples and exercises will stress problem-solving in a business context. Credit not awarded for both CSE 148 and CSE 243.

**CSE 151. Computers, Computer Science, and Society. (3) (MPF)**

Perspective on the potential and limitations of computing technology. Topics include problem-solving in computing, computers as thinking machines, and the impact of computing on societies. Exposes students to programming languages and various computer tools. Not open to CSE and ISA majors. V.

**CSE 153. Introduction to C/C++ Programming. (3) (MPT)**

Introduction to use of C/C++ programming language as an aid to solving mathematical and scientific problems. Students design, write, and implement programs.

**CSE 163. Introduction to Computer Concepts and Programming. (3) (MPF, MPT)**

Introduction to computers in data processing, survey of various hardware and software concepts, and analysis and solution of problems by computer programming. Lecture/laboratory, project-oriented course to provide numerous opportunities to analyze problems, formulate alternative solutions, implement solutions, and assess their effectiveness. No prior knowledge of computer concepts or programming assumed. V.

Prerequisite: ACT Math score of 19 or higher, OR SAT Math Score of 510 or higher, or permission of instructor.

**CSE 174. Fundamentals of Programming and Problem Solving. (3) (MPT)**

Algorithm development and refinement in problem solving. Modular programming using sequence, selection, and repetition control structures. Program debugging and testing. Formatted input/output. Data files. Fundamental data types. User-defined data types: structured and enumerated. Arrays and arrays of structures. Simple sorting and searching algorithms. Character data and string processing. Algorithm efficiency considerations. Classes, objects, and introduction to object-oriented programming.

2 Lec. 1 Lab.

Prerequisite: ACT Math score of 22 or higher, or SAT Math score of 520 or higher, or score of at least 8 on the Miami International Math Placement Test.

Prerequisite or Co-requisite: MTH 104 or MTH 123 or MTH 125 or MTH 151 or MTH 249 or MTH 251.

**CSE 177. Independent Studies. (0-5)****CSE 201. Introduction to Software Engineering. (3)**

Principles of software engineering: Introduction to all phases of the software development life cycle and associated tools and engineering methods including the unified modeling language (UML).

Prerequisite: CSE 274.

**CSE 211. Software Construction. (3)**

General principles and techniques for disciplined detailed software design. Basic theory of grammars and parsing. State-transition and table-based design. Formal specification languages and program derivation. Techniques for handling concurrency and inter-process communication. Tools for model-driven construction.

Prerequisites: CSE 201, CSE 274 and MTH 231.

**CSE 212. Software Engineering for User Interface and User Experience Design. (3)**

Principles of user interfaces (UI) and user experiences (UX) for software engineering. Psychological principles; Design methods such as task analysis and user-centered design. Projects demonstrating window, menu, and command design; voice and natural language I/O; response time and feedback; color, icons, sound.

Prerequisite: CSE 271.

**CSE 220. Professional Practice. (0)**

Students participating in computer technology associate's degree co-op program register for this course during semesters when they are on work assignment. This enables students to maintain continuing student status with the university.

**CSE 243. Problem Analysis Using Computer Tools. (3) (MPF)**

Students will learn to use personal computer productivity tools to analyze data, work with others in conducting analyses, develop conclusions and effectively communicate results. Students will utilize spreadsheet tools to analyze data and will be challenged to evaluate data from multiple perspectives in order to develop conclusions supported by their analysis. Students will use word processing tools to integrate text and graphical information that clearly and concisely communicates their conclusions. While an important part of the course is learning to use the software tools, the emphasis of the course is learning to use these tools to solve problems and communicate results. Credit not awarded for both CSE 243 and CSE 148. V.

**CSE 251. Introduction to Game Programming. (3)**

Introduction to computer programming techniques used in games and visual simulations. Simple data and control structures, mathematical foundations, transformations, rendering algorithms, and interfaces. This course is not open to CSE students without permission of instructor.

Prerequisite: high school algebra and trigonometry.

**CSE 252. Web Application Programming. (3) (MPT)**

An introduction to programming concepts and practices for creating applications which use the web as the delivery platform. Students will learn technologies including HTML, Javascript, AJAX, client side programming and server side scripting to create interactive web applications. Not an elective for computer science and systems analysis majors.

Prerequisite: CSE 153 or CSE 163 or CSE 174.

**CSE 253. Programming Languages. (1-2)**

Presents syntax and semantics of a particular programming language currently popular in industrial or academic settings. Addresses construction of programs in the language. Applications of the language presented. Coverage of good programming style and software engineering concepts addressed in context of the language. Not applicable to CSE electives requirement for a CSE major.

**CSE 256. Introduction to Programming for the Life Sciences. (3)**

Introduction to programming for majors in the life sciences. The ability to write programs to perform tasks related to the organization and analysis of biological data has become a highly-valued skill for researchers in the life sciences, allowing wet-lab researchers to quickly process and sort through large amounts of data to find information relative to their own work. This course serves as an introduction to programming designed specifically for life science majors, targeting the specific skills and techniques commonly needed and explaining the fundamental methods of working with biological data while centering programming assignments around topics of interest to those studying the life sciences. Topics covered include basic programming techniques, representation and manipulation of genomic and protein sequence data, and the automated interface with BLAST and the NCBI GenBank database. Cross-listed with BIO/MBI.

**CSE 262. Technology, Ethics, and Global Society. (3) (MPF)**

Inquiry into a wide range of information technology issues, from moral responsibilities affecting professionals to wider ethical concerns associated with information technology in day-to-day living. Topics include general aspects of ethics; common ethical theories; professional codes of ethics in IT; privacy, security and reliability in using computer systems and the internet; issues and responsibilities in internet usage; legal issues in IT; global perspectives of computing issues; and general problems related to ethical and responsible computing. IIB, IIC.

Prerequisites: ENG 111 and a minimum of 20 credit hours earned.

Cross-listed with CIT.

**CSE 270. Special Topics. (3)**

Special topics in computer science, computer information systems, or operations research.

Prerequisite: permission of instructor.

**CSE 271. Object-Oriented Programming. (3) (MPT)**

The design and implementation of software using object-oriented programming techniques including inheritance, polymorphism, object persistence, and operator overloading. Students will analyze program specifications and identify appropriate objects and classes. Additional programming topics include dynamic memory recursion, using existing object libraries, and binary/ASCII file processing. Prerequisite: CSE 174 with a grade of C- or better or equivalent.

**CSE 273. Optimization Modeling. (3) (MPT)**

Use of deterministic models and computers to study and optimize systems. Includes an introduction to modeling, calculus-based models, financial models, spreadsheet models, and linear-programming models.

Prerequisite: MTH 251 or equivalent.

**CSE 274. Data Abstraction and Data Structures. (3) (MPT)**

Abstract data types and their implementation as data structures using object-oriented programming. Use of object-oriented principles in the selection and analysis of various ADT implementations. Sequential and linked storage representations: lists, stacks, queues, and tables. Nonlinear data structures: trees and graphs. Recursion, sorting, searching, and algorithm complexity.  
Prerequisites: C- or higher in CSE 271.

**CSE 277. Independent Studies. (0-5)****CSE 278. Systems I: Introduction to Systems Programming. (3)**

Principles of Von Neumann computer architecture through the C/C++ programming language. Data representation and computer arithmetic. Memory hierarchy. CPU structure and instruction sets. Network programming including use of sockets. Database programming through SQL.  
Prerequisite: CSE 271, and CSE 102 (or ECE/MME/CPB/CEC 102).

**CSE 283. Data Communication and Networks. (3)**

Introduction to data communications, computer networks, protocols, and distributed processing as well as relevant standards and underlying theory. Topics include communication codes, transmission methods, interfacing, error detection, communication protocols, communications architectures, switching methods, and network types. Local area network and internetwork technologies are studied. The client/server model of distributed processing addressed. Students design and implement data communications and network-based software.  
Prerequisite: CSE 271.

**CSE 287. Foundations of Computer Graphics and Games. (3)**

This course is an introduction to techniques used to create images on the computer. The course covers the algorithms and mathematical theory behind three dimensional image generation with an emphasis on 3D geometry, 3D transformations, and the graphics pipeline. Programming required.  
Prerequisites: CSE 278 and MTH 151.

**CSE 310. Undergraduate Research Seminar. (1; maximum 3)**

Seminar or workshop on topics in computer science, software engineering, or related fields.

**CSE 311. Software Architecture and Design. (3)**

An in-depth look at software design. Study of software architecture, design patterns and software product lines. Designing for quality attributes such as performance, safety, security, reusability, reliability, etc. Measuring internal qualities and complexity of software designs. Evolution of designs. Basics of software evolution, reengineering, and reverse engineering. Application of formal methods to specify and evaluate designs.  
Prerequisite: CSE 201.

**CSE 320. Professional Practice. (0)**

Students participating in the computer science and systems analysis co-op program register for this course during semesters when they are away from Oxford on work assignment. This enables students to maintain continuing student status with the university.

**CSE 321. Software Quality Assurance and Testing. (3)**

Quality: how to assure it and verify it, and the need for a culture of quality. Avoidance of errors and other quality problems. Inspections and reviews. Testing, verification, and validation techniques. Product and process assurance. Formal verification. Statistical testing.  
Prerequisite: CSE 201.

**CSE 322. Software Requirements. (3)**

Domain engineering. Techniques for discovering and eliciting requirements. Languages and models for representing requirements. Analysis and validation techniques, including need, goal, and use case analysis. Specifying and measuring external qualities. Traceability. Agile approaches.  
Prerequisite: CSE 201.

**CSE 340. Internship. (0-20)****CSE 340U. Undergraduate Summer Scholars Program. (1-12)****CSE 372. Stochastic Modeling. (3) (MPT)**

Survey of methods of stochastic operations research including reliability, Markov processes, queuing theory, and decision theory. Computer used for modeling and solving problems.  
Prerequisite: STA 301 or STA 368.  
Prerequisite or Co-requisite: STA 401/STA 501.

**CSE 374. Algorithms I. (3)**

Design, analysis and implementation of algorithms and data structures. Dynamic programming, brute force algorithms, divide and conquer algorithms, greedy algorithms, graph algorithms, and red-black trees. Other topics include: string matching and computational geometry.  
Prerequisites: CSE 274 and MTH 231.

**CSE 377. Independent Studies. (0-5)****CSE 381. Systems 2: OS, Currency, Virtualization, and Security. (3)**

Introduction to operating systems concepts. The operating system as a resource manager. The principles for the design and implementation of operating systems. Process scheduling and deadlock prevention. Memory management, virtual memory, paging, and segmentation. Interrupt processing. Device management, I/O systems and I/O processing. Concurrency and multithreading. Virtualization and cloud services. Security and protection.  
Prerequisite: CSE 278.

**CSE 383. Web Application Programming. (3)**

An introduction to the software, concepts and methodologies necessary to design and implement web applications. Students will design and construct web applications utilizing remote servers on multiple platforms. Projects will be used to enable the students to apply the principles and techniques presented in class.  
Prerequisite: CSE 278.

**CSE 385. Database Systems. (3)**

Overview of database management, database system architecture, and database modeling principles. Logical database design. The relational database model, relational integrity constraints, and relational algebra. Relational commercial database management systems and languages. Interactive database processing, view processing, and database application programming. Database integrity. Relational database design by normalization. File structures for database systems.  
Prerequisite or Co-requisite: CSE 274.

**CSE 386. Foundations of Computer Graphics and Games. (3)**

An introduction to techniques used to create images on the computer. The course covers the algorithms and mathematical theory behind three-dimensional image generation with an emphasis on 3D geometry, 3D transformations, and the graphics pipeline. Programming required.  
Prerequisite: CSE 278 and MTH 151.

**CSE 387. Advanced Graphics and Game Engine Design. (3)**

The course covers graphics hardware, game engine architectures, and the mathematics and algorithms used to create digital games. Topics will include shader based rendering and programming. Students will implement portions of a game engine which incorporates animation, collision detection, and simulated physics. Programming required. Prerequisite: CSE 287 or CSE 386.

**CSE 441/CSE 541. Applications of Technical Computing Environments. (1)**

This course provides engineering and science students with knowledge of technical computing environments, such as MATLAB or Mathematica, to solve a wide range of engineering and science problems. The emphasis is on the numerical solution of problems in linear algebra, differential equations, and optimization. Several toolboxes or libraries, such as those for signal processing, bioinformatics, and symbolic manipulation will be covered. Prerequisites: CEC 102 or equivalent, MTH 245 or MTH 347, and STA 368 (or equivalent). Co-requisites: CSE 153 and 174, or 603, or equivalent. Cross-listed with MME 441/MME 541.

**CSE 443/CSE 543. High Performance Computing & Parallel Programming. (3)**

Introduction to practical use of multi-processor workstations and supercomputing clusters. Developing and using parallel programs for solving computationally intensive problems. The course builds on basic concepts of programming and problem solving. Prerequisite: CSE 381.

**CSE 448. Senior Design Project. (2) (MPC)**

Student teams, with varied academic backgrounds, conduct major open-ended research/design projects. Elements of the design process are considered as well as real-world constraints, such as economic and societal factors, marketability, ergonomics, safety, aesthetics, and ethics; feasibility and design studies performed. Prerequisites: CSE 201 and CSE 274 and senior standing in student's major.

**CSE 449. Senior Design Project. (1-2) (MPC)**

Continuation of CSE 448. Student teams, with varied academic backgrounds, conduct major open-ended research/design projects; implementation, testing, and production of design. Nonmajors can register for 1-2 credits. Prerequisite: CSE 448.

**CSE 451/CSE 551. Web Services and Service Oriented Architectures. (3)**

Intro to service-oriented architectures; examine purposes and differences between different web service technologies; analyze shortcomings and strengths of integration techniques; development of cross-platform applications using standard interchange languages. Prerequisites: CSE 383.

**CSE 456/CSE 556. Bioinformatic Principles. (3)**

Concepts and basic computational techniques for mainstream bioinformatics problems. Emphasis placed on transforming biological problems into computable ones and seeking solutions. Cross-listed BIO/MBI 485/MBI 585/585. Prerequisites: any one of these courses: BIO/MBI 116, MBI 201, BIO 342, CHM 332, CHM 433; or permission of instructor.

**CSE 464/CSE 564. Algorithms. (3)**

Review of basic data structures and algorithms. Analysis of algorithms. Problem assessment and algorithm design techniques. Algorithm implementation considerations. Concept of NP-completeness. Analysis of algorithms selected from topics relevant to computer science and software engineering (sorting, searching, string processing, graph theory, parallel algorithms, NP-complete problems, etc.) Prerequisite: MTH 231 or discrete math and CSE 274 or equivalent.

**CSE 465/CSE 565. Comparative Programming Languages. (3)**

Survey of programming languages and their accompanying paradigms. Basic principles of syntax, semantics, implementation, and pragmatics are addressed. The survey will include representatives from the families of imperative languages, functional languages, logic languages, and hybrid languages. Formal methods of definition and specification are introduced. Prerequisite: CSE 274 or equivalent.

**CSE 466/CSE 566. Bioinformatics Computing Skills. (3)**

Study of the core computational and biological concepts in bioinformatics, with programming in Python, MySQL and Ubuntu OS. You will gain hands-on experience in popular bioinformatics applications, including BLAST, sequence alignment, genome browser, and gene annotation, among others. Prerequisites: BIO 256; or CSE 174; or permission of instructor. Cross-listed with BIO/CHM/MBI.

**CSE 467/CSE 567. Computer and Network Security. (3)**

Fundamentals of network, operating system and application security. Students will study and implement a variety of security techniques including defense, response and forensics. Extensive analysis, reading and writing will be integral to this course. Prerequisite: CSE 383.

**CSE 470/CSE 570. Special Topics In CSE. (3)**

Advanced special topics in computer science, computer information systems, or operations research. Prerequisite: permission of instructor.

**CSE 471/CSE 571. Simulation. (3) (MPT)**

Use of digital computer program to simulate operating characteristics of stochastic dynamic system. Topics: problems encountered in construction of simulation programs, random number generation, random variate sampling, programming in simulation compiler languages, problems in design of successful simulation investigations, design of simulation experiments, interpretations of simulated output, and verification and validation. Case studies and projects used. Prerequisites: CSE 174 or equivalent; and STA 368 or 401.

**CSE 473/CSE 573. Automata, Formal Languages, and Computability. (3)**

Regular expressions. Closure properties. Sequential machines and finite state transducers. State minimization. Chomsky hierarchy grammars, pushdown acceptors and linear bounded automata. Closure properties of algorithms on grammars. Turing machine as acceptor and transducer. Universal machine. Computable and noncomputable functions. Halting problem. Prerequisite: CSE 274 or equivalent and MTH 231 or discrete math.

**CSE 474/CSE 574. Compiler Design. (3)**

Examination of the nature of programming languages and programs which implement them. Compiler and interpreter design and implementation techniques. Review of grammars and languages (context free, context sensitive, regular). Design of interactive interfaces. Parsing of context free languages. Lexical analysis. Semantic analysis and code optimization.

Prerequisite: CSE 274 or equivalent.

**CSE 476. Math for Software Engineering. (1-2; maximum 2)**

This course focuses on the essential mathematics that software engineers will find useful in creating large software systems. This includes various types of discrete mathematics used for specification of requirements, for modeling of designs, and for static and dynamic analysis and testing. The topics vary somewhat depending on student needs and faculty interests. The course topics may overlap topics for the algorithms course that computer science students typically take, but approach them from a Software Engineering perspective.

Prerequisites: MTH 231, CSE 201, and CSE 274.

**CSE 477. Independent Studies. (0-5)****CSE 480/CSE 580. Special Problems. (1-4; maximum 12)**

Special systems problems decided by students in consultation with instructor. For students in departmental or university honors program.

Prerequisite: permission of department chair prior to registration.

**CSE 484/CSE 584. Algorithms II. (3)**

Study problems in computer science for which we have no known efficient solutions, and the methods used to recognize intractable problems as well as the current approaches taken to cope with those problems. Concept of NP-completeness and poly-time reductions; an introduction to randomized algorithms and the randomized complexity classes PP, RP, and BPP; an introduction to approximation algorithms for solving NP-Hard problems; polynomial-space algorithms and the classes PSPACE and the poly-time hierarchy; Poly-time approximation schemes and approximation algorithms via linear-program rounding.

Prerequisite: CSE 374.

**CSE 485/CSE 585. Advanced Database Systems. (3)**

Relational calculus. Query processing and optimization. Transaction processing: failure, recovery, and concurrency. Database security. Logic-based systems. Parallel, distributed, and client/server systems. Object-oriented database systems. Emerging database technologies.

Prerequisite: CSE 385 or equivalent and MTH 231.

**CSE 486/CSE 586. Introduction to Artificial Intelligence. (3)**

Basic concepts of artificial intelligence (AI) including problem solving, search knowledge representation, and rule-based systems covered with symbolic AI language such as PROLOG or LISP. Application areas (natural language understanding, pattern recognition, learning and expert systems) are explored.

Prerequisite: CSE 274 or equivalent and MTH 231.

**CSE 487/CSE 587. Game Design and Implementation. (3)**

Study of architectures, algorithms, and software design patterns used in computer games. Students work with a game engine to design and implement several kinds of games. Topics include animation techniques, physics simulation, user controls, graphical methods, and intelligent behaviors.

Prerequisite: CSE 287 or CSE 386, for 587: graduate standing or permission of instructor.

**CSE 491. Undergraduate Research. (1-4; maximum 10)**

Research problems in computer science, systems analysis, or operations research, chosen in consultation with a faculty advisor. Requires a public presentation of completed work. For grade only. Prerequisites: Permission of instructor and approval of department chair.

**CSE 600. Independent Studies. (1-3; maximum 3)**

Special problems in computer science, computer information systems, or operations research requiring reading and research, decided in consultation with the instructor and the student's graduate adviser. Does not apply toward fulfillment of the requirements of the graduate program. Credit/no-credit only.

Prerequisite: permission of instructor and department chair.

**CSE 601. Computer Science Research Methods. (3)**

An introduction to conducting research in computer science and software engineering. Students will develop basic skills required of a graduate student in CSE including writing scientific papers, performing literature reviews, preparing and delivering presentations, research methods, and participating in academic discussions.

**CSE 609. Programming for Engineers and Scientists. (3)**

This course addresses programming skills at an intermediate level and focuses specifically on scientific and engineering computing skills. This course will emphasize topics commonly encountered in scientific computing/computational science. It primarily addresses non-parallel (serial) computing competencies and is a prerequisite to the high performance computing area. The course will focus on an appropriate programming language currently used in research. Recommended prerequisite: a programming course in any language.

**CSE 610. Seminar in Computer Science. (1-3)**

Seminar topics in computer science, computer information systems, or operations research. Does not apply toward fulfillment of the requirements of the Master of Systems Analysis. Credit/no-credit only. Prerequisite: permission of instructor.

**CSE 611. Computer Science Seminar Attendance Requirement. (0; maximum 0)**

Required seminar attendance for graduate students in all tracks during each fall and spring semester in which they are enrolled as fulltime students. Attendance must be verified at a designated number of approved events each semester. Approved events include proposal and defense presentations, oral exams associated with the Coursework Only track, and presentations by faculty search candidates.

Prerequisite: graduate standing.

**CSE 615. Mathematical Modeling. (3)**

Use of deterministic and stochastic mathematical models to study and optimize systems. This course includes an introduction to mathematical modeling and the study of linear programming, network models, Markov processes and queuing theory. Students will use computer software for model construction and problem solving. Prerequisites: credit in calculus, probability, statistics, or permission of instructor.

**CSE 616. Simulation of Physical Systems. (3)**

This course is an introduction to the principles and use of simulation, and suitable software tools, to model the behavior of physical systems in the sciences and engineering. Concepts related to discrete event simulation including random number generation, scheduling and processing are addressed. Concepts related to continuous simulation including linear, nonlinear, and dynamic systems are studied. Students will design and implement simulations using suitable modeling and simulation software tools.

**CSE 617. Advanced Networks. (3)**

Study of advanced networking techniques, client/ server programming, and distributed processing. Critical analysis of these areas develops as students learn the strengths and weaknesses of these technologies through assigned programming projects.

**CSE 618. Graphics for Simulation and Virtual Environments. (3)**

Study of hardware, software, and algorithms used in computer graphics. Instruction emphasizes the use of a scene graph-based API. Topics will include lighting, blending, texture mapping, non real-time rendering techniques such as radiosity and ray tracing.

**CSE 620. Special Topics in Computer Science Applications. (3)**

Special topics in computer science, computer information systems, or operations research.

Prerequisite: permission of instructor.

**CSE 620K. A Survey of Computational Tools in Bioinformatics. (3)****CSE 621. Foundations of Software Engineering. (3)**

Foundational theories for software engineering. Topics include project management, modeling notations, refinements processes, verification and validation, and evolution.

**CSE 627. Machine Learning. (3)**

Concepts and algorithms of machine learning including version-spaces, decision trees, instance-based learning, networks, evolutionary computation, Bayesian learning and reinforcement learning.

**CSE 630. Graduate Professional Practice. (0)**

Students participating in the masters of computer science program may register for this course during semesters when they are away from Oxford working in an internship or co-op work experience related to the degree. This enables students to maintain continuing student status with the university.

Prerequisite: permission of instructor.

**CSE 631. Ontologies for Semantic Web. (3)**

Principles, practice and current research underlying the use of ontologies for the Semantic Web. Key concepts including: ontology representation and reasoning, ontological engineering, software tools, ontology visualization, and applications.

Prerequisite: CSE 486/CSE 586 or permission of instructor.

**CSE 640. Internship. (0-12; maximum 12)****CSE 650. Special Topics in Computer Science Theory. (3; maximum 18)**

This course covers special topics in theory within Computer Science. Understanding theory is fundamental in any Computational Science venture as it is the foundation on which all work and applications are built upon. Faculty will be covering a variety of new and emerging theory areas.

**CSE 664. Advanced Algorithms. (3)**

A review of NP-Completeness and poly-time reductions; an introduction to randomized algorithms and the randomized complexity classes PP, RP, and BPP; an introduction to approximation algorithms for solving NP-Hard problems; polynomial-space algorithms and the classes PSPACE and the poly-time hierarchy; Poly-time approximation schemes and approximation algorithms via linear-program rounding.

**CSE 667. Cryptography. (3)**

This course presents the techniques and tools used in modern cryptography. The course covers common cryptographic assumptions and tools, including: pseudorandomness, symmetric key cryptography, and asymmetric key cryptography. Recommended co-requisite: CSE 464/CSE 564/564.

Prerequisite: graduate standing or permission of instructor.

**CSE 690. Graduate Research. (3)**

Research problems in computer science, computer information systems, or operations research, decided upon in consultation with the instructor and student's graduate adviser. Requires a public presentation of completed work. For grade only.

Prerequisite: permission of instructor, student's graduate adviser, and graduate director.

**CSE 700. Research for Master's Thesis. (0-9; maximum 6)**

Study under graduate faculty supervision of a research problem related to computer science or software engineering. Approval and public presentation of a project proposal is expected within the first three hours of research. Upon completion of research, the results must be defended before the advisory committee for approval. A minimum of two semesters of research can be counted toward fulfillment of the research requirement.

**CSE 704. Non-Thesis Project. (0-12; maximum 12)**

This repeatable course is for non-thesis culminating experiences. Permission of the instructor is required.

## Comparative Media Studies (CMS)

**CMS 101. The Smartphone and Society. (3) (MPF)**

Explores the impact of media and communication technologies on our individual lives as well as wider political, economic, and cultural practices. This course will help students to think critically about the tools they use in their everyday lives and the ways in which technology and society mutually shape each other. IIB. CAS-B.

**CMS 225. Linking Film and New Media. (3)**

This course will consider the challenge new media present to cinema's primacy, but also the ways in which cinema survives and thrives in a digital age. While acknowledging what is unique to different new media forms, we will also identify the aspects of new media that are not fully "new" by examining their dependence on styles, structures, narratives, and even actual footage from cinema and other "old" media. Conversely, we will uncover how new media have reshaped cinema through influences such as CGI, video games, and digital editing.

Prerequisite: CMS 201 or FST 201.

**CMS 301. Comparative Approaches to Media Studies. (3)**

Introduces students to aesthetic, cultural, historical, political economic, and media effects approaches in media studies, and describes how these various approaches pose problems related to the interrelationships between media texts, audiences, technologies and industries, and the wider social worlds in which they are embedded. Students are exposed to the basic methodologies associated with these approaches - semiotics, ethnography, historical method, grounded theory and quantitative analysis - and learn how these methods are used to investigate questions about human engagements with media.

**CMS 350. Special Topics in Comparative Media Studies. (3)**

Students will build upon and apply key concepts in the comparative study of media to a special topic.

**CMS 377. Independent Studies. (0-5)****CMS 401. Senior Seminar in Comparative Media Studies. (3)**

Advanced exploration of topics in comparative media studies. Prerequisite: CMS 301.

**CMS 477. Independent Studies. (0-5)**

## Criminal Justice Studies (CJS)

**CJS 101. Introduction to the Criminal Justice Studies. (3) (MPF)**

Offers an overview of America's criminal justice system, with an emphasis on the development, functions, and current issues/problems facing the current criminal justice system. Course specifically focuses on the history, roles, and present state of the police, courts, and corrections. IIC.

**CJS 125. Law and the Courts. (3)**

Provides a critical examination of the American judicial system and legal processes. Focuses on the contextual meaning of law and justice to society and will encourage critical thinking from political, sociological, historical, and philosophical perspectives.

**CJS 177. Independent Studies. (0-5)****CJS 211. Policing in America. (3)**

Provides students with an in-depth analysis of America's system of law enforcement. Policing course which covers: eras of law enforcement, law enforcement styles and patrols, entering and working in the police subculture, police ethics/civil liability, and the future of American law enforcement.

**CJS 220. Criminal Justice Field Experience. (3)**

Students will contract with an appropriate independent agency for 120 hours of internship work. Hands-on experience within the students' chosen component of the criminal justice system, personal reflection, and opportunity for career direction will occur.

Prerequisites: CJS 101, 125, 211 and 281.

**CJS 231. Law and Individual Rights. (3)**

Investigates the development and evolution of constitutional protections for American civil rights and liberties. Provides a thorough examination of U.S. Supreme Court cases and supplemental readings, with attention to the legal, historical and political influences that have shaped constitutional liberties.

**CJS 232. Criminal Defense and Adjudication. (3)**

Examines substantive criminal law, including: elements that comprise offenses and defenses in criminal law, the process of adjudication, and primary constitutional restrictions on criminal law.

**CJS 235. Forensic Science Survey. (3)**

This survey course examines the many facets of forensic science. Students will become aware of the diversity of disciplines in which it is practiced and be introduced to typical forensic science specialties.

**CJS 245. Human Trafficking and Contemporary Slavery. (3)**

Overview of the trafficking and enslavement of human beings in our globalized world, including forced prostitution, child soldiers, bonded labor, and hereditary slavery. Explores the contributing roles of states, organized crime, culture (corruption, discrimination, inequality, poverty), and the media in domestic and global contexts.

**CJS 251. Global and Comparative Justice Exploration. (1-3; maximum 6)**

Offers academic and social interactions with people of a different culture. Social activities, global and comparative research, and discussion of comparative and global criminal and civil justice issues culminate in short research reports, reflection papers, and presentations. Some of these activities occur outside of the scheduled class times. Global Justice Exploration is intended for international students who are interested in learning about the U.S. justice system and engaging in a comparison to the justice system of his or her home nation and other nations, and who are interested in having social experiences with domestic students.

**CJS 256. Police Organization, Administration, and Management. (3)**

Examines the structures, processes, and behaviors specific to police administration including: politics behind governing a police department, leadership and communication issues specific to the law enforcement field, and legal aspects of police administration. Prerequisite: CJS 211.

**CJS 270. Special Topics. (1-3; maximum 6)**

An examination of a contemporary problem/issue in criminal justice through some combination of research, reading, discussion, and experiential learning. Topics will vary according to need and interest. This class may be repeated for credit provided different topics are studied.

**CJS 271. Criminal Behavior. (3)**

Focuses on theories of criminal behavior and activity. Provides criminal justice students with a micro level, law enforcement approach to criminal behavior. Students will be expected to learn and apply criminological theory, criminal typologies, and appropriate agency responses.

**CJS 272. Forensic and Crime Scene Evidence. (3)**

Focuses on crime scene evidence collection and analysis. Provides students with the definition, scope, and utilization of forensic science within the criminal justice system. Students will be expected to learn and apply crime scene processing, differentiate and analyze crime scene evidence, and understand special services provided by forensic agencies.

**CJS 276. Homeland Security and Critical Incident Management. (3)**

Focuses on the role of law enforcement within Homeland Security and critical incident response/management. Students are expected to critically analyze the conflict between civil liberties and civil defense within the context of Homeland Security, understand the sequence and importance of critical incident management, and learn how to effectively implement law enforcement response and prevention tactics.

**CJS 277. Independent Studies. (0-5)****CJS 281. Corrections. (3)**

Focuses on the historical perspectives of corrections in America, institutional corrections, and the demographics of correctional clients. Provides an overview of correctional law, ethical and moral dilemmas and key issues in corrections.

**CJS 282. Writing in Criminal Justice. (3)**

Focuses on developing the writing skills of students who plan to pursue a criminal justice related career and/or continued education in the field. Students are instructed on writing an academic literature review and on grant writing which can be used to help secure funding for their future agencies. ADVW.

**CJS 311. Punishment and Social Control. (3)**

Offers an in depth discussion of social policy; including social ethics, social inequality, and social deviance. Focuses on how race, class, and gender affect the concept of punishment in America.

**CJS 312. Community Corrections. (3)**

Focuses on the history and development of community based corrections, the utilization of probation, parole, and intermediate sanctions, and issues related to special populations under correctional supervision. Provides a discussion of appropriate offender classification mechanisms, theories of offender treatment, and recidivism considerations used throughout the process of sentencing.

**CJS 313. Alternatives to Corrections. (3)**

Investigates the current state of incarceration and corrections policy in America. Focuses on alternative methods of crime control, including methods utilized in other countries and cultures. Provides criminal justice students knowledge of ethical and moral components of correctional counseling, rehabilitation, reentry, and reintegration.

**CJS 321. Criminal Justice Administration. (3)**

This course will provide a critical examination of how the different agencies within the criminal judicial system (police, courts, and corrections) function and interact. Discussion will include the principles of management and administration, and their application to CJ agencies. Topics include: management, organizational theory, leadership, communication, the rights of public and private employers and employees, and the decisions making process.

**CJS 331. Juvenile Law. (3)**

Provides a critical examination of the major Supreme Court cases on juvenile law and society's concerns on how the law impacts youth. Discussions will include the history of juvenile system as well as the legal rights of youth within the juvenile justice process and at school.

**CJS 340. Internship. (0-20)****CJS 356. Crime Prevention and Problem Solving. (3)**

This course examines the theoretical bases and application of crime prevention techniques, with emphases on situational crime prevention and problem solving. Relevant theories and principles to be discussed include routine activity theory, rational choice, problem oriented policing, crime patterns, and crime prevention through environmental design. Students will complete a range of field assignments and projects, including documenting signs of disorder, and creating a photography journal featuring examples of situational crime prevention efforts in the community. Finally, the strengths, weaknesses, practicality, policy challenges, and ethics of crime prevention approaches will be assessed.

**CJS 377. Independent Studies. (0-5)****CJS 401. Race and Criminal Justice. (3)**

This course investigates the critical role that race plays in our criminal justice system. The course will provide a sociohistorical framework of the criminal justice system, the inequalities that are inherently part of its structure, as well as the effects those inequalities have on different racial/ethnic groups in the United States. This course will encourage debate on exactly how just is the U.S. criminal justice system for minority groups and people of color. The course will also employ a life course perspective to investigate criminal behavior from juvenile delinquents through adulthood. Students in this class should objectively view the racial differences in the criminal justice system and be encouraged to reduce the racialized justice system.

Prerequisites: CRE 151 and either CJS 211 or 281.

Cross-listed with BWS.

**CJS 411/CJS 511. Evidence Law and Expert Testimony. (3)**

This course examines pretrial discovery, the basic rules that govern the admissibility of evidence at trial, and in greater detail, the law that applies to scientific evidence and to expert witnesses. Practical advice and simulations intended to prepare the student to be an effective witness are included.

**CJS 445/CJS 545. Geographic Information Systems for Criminal Justice. (3)**

Collect, organize, analyze, and display spatial data used in criminal justice and emergency management. Part of the course will be a GIS Crime Analysis Product. Taught on Regional Campuses.

Cross-listed with GEO.

**CJS 451/CJS 551. Comparative Justice Systems. (3) (MPF)**

A survey of the major legal traditions in world, as well as an examination of rule of law, civil rights, policing, and punishment & corrections in specific jurisdictions for the purpose of understanding how law and justice systems develop, how systems interact and converge, and how peoples from around the world approach justice. Comparisons between the United States and other nations/systems will occur with the intention of better understanding, critically assessing, and improving systems in the United States. IIC, IIIB. Prerequisite: junior or senior standing.

**CJS 461. Applied Research Methods in Criminal Justice. (3)**

Presents the philosophical and theoretical foundations of applied research, issues specific to research in the criminal justice system, and quantitative and qualitative data analysis. Course will culminate in the completion of an applied research project.

**CJS 470. Special Topics in Criminal Justice. (1-6; maximum 9)**

An examination of a contemporary problem/issue in criminal justice through some combination of research, readings, discussion, and experiential learning. Topics will vary according to need and interest. This class may be repeated for credit provided different topics are studied.

**CJS 477. Independent Studies. (0-5)****CJS 485. Capstone: Seminar in Criminal Justice. (3) (MPC)**

This course synthesizes the student's learning through reading, research, and discussion of issues in the criminal justice system. Students will conduct research on a topic of their choice, will learn how to present in a professional manner, and will engage in critical analysis and interaction with other learners. All students will complete a Service-Learning project who have not done so previously.

**CJS 611. Criminal Justice Theory. (3)**

This course provides an overview of the research on criminal justice theory and decision making in the American criminal justice system. In particular, the course examines theories that attempt to explain formal and informal actions taken by criminal justice actors, and investigates the empirical evidence on the correlates of criminal justice actor decisions.

Prerequisite: admission to the MS in Criminal Justice or permission of instructor.

**CJS 612. Criminal Justice Systems: Practice. (3)**

Focuses on the current state of criminal justice policy, program assessment and evaluation, the impact of public policy, and the necessity for future domestic criminal justice policy. Provides an overview of current policy within police, courts, and community and institutional based agencies. S. in Criminal Justice or permission of instructor.

Prerequisite: admission to the M.

**CJS 615. Statistics for Criminal Justice. (3)**

This course provides an expedited instruction of statistical analyses used in the social sciences. Additionally, students will learn statistical analytic techniques applicable in a wide variety of criminal justice agency settings.

Prerequisite: admission to the MS in Criminal Justice or permission of instructor.

Cross-listed with STA.

**CJS 631. Law, Liberty, and Criminal Justice. (3)**

An in depth examination of the major constitutional rights that impact criminal law, including the First, Fourth, Fifth, Sixth, Eighth, and Fourteenth Amendments. Evaluate the law in its historical, political, and social context. Special attention will be given to technology and privacy and other contemporary issues. S. in Criminal Justice or permission of instructor.

Prerequisite: admission to the M.

**CJS 632. Legal Aspects of Justice Administration. (3)**

This course provides a thorough examination of selected legal issues that arise in the administration of police organizations and corrections programs. Drawing from several scholarly literatures, CJS 632 exposes students to techniques of legal research, writing and analysis; it also equips students with extensive knowledge of the case and statutory law that governs police supervisors and corrections administrators in their day-to-day work. Major topics include tort liability of police and corrections personnel, federal civil rights law and litigation, the legal duty to train and supervise, legal restrictions on the use of force, procedural due process, collective bargaining law, constitutional rights of officers and public access to information. All students in CJS 632 complete an individualized research assignment focused on a relevant legal issue chosen in consultation with the instructor.

Prerequisite: admission to the MS in Criminal Justice or permission of instructor.

**CJS 641. Crime and Place. (3)**

This online course provides the theoretical framework, research findings, and policy implications relating to the occurrence of crime across time and space. Topics include measures of crime, social disorganization theory, rational choice theories of crime, the role of communities, crime prevention through environmental design (CPTED), situational crime prevention, crime analysis, crime mapping, and directions for future research. The course will culminate in the completion of a policy white paper.

**CJS 670. Special Topics in Justice. (1-6; maximum 6)**

An examination of a contemporary problem/issue in criminal justice through some combination of research, readings, discussion, and experiential learning. Topics will vary according to need and interest. This class may be repeated for credit provided different topics are studied. Permission of instructor required.

**CJS 677. Independent Studies. (0-5)****CJS 685. Advanced Research Methods. (3)**

This course provides the methodological framework upon which criminal justice research is constructed, including how to conduct basic social science research and to be informed consumers of research. Topics include the role of research in criminal justice, ethics, measurement and concepts, sampling, research designs, survey research, qualitative research, the use of secondary data, evaluation and policy analysis, and data analysis and report writing. The course will culminate in the completion of a research proposal.

**CJS 691. Project. (3; maximum 6)**

Directed research and writing of professional report on a subject to be determined in consultation with student's faculty supervisor and defended before a faculty committee. Open to criminal justice graduate students who have completed at least 15 hours of coursework and have the permission of the instructor.

## Critical Race and Ethnic Studies (CRE)

**CRE 151. Introduction to Critical Race and Ethnic Studies. (3) (MPF, MPT)**

This course will introduce students to the core concepts and theories used in the critical study of race and ethnicity. It will examine historical and contemporary formations of race, ethnicity, and indigeneity to provide an understanding of how social difference is made, reinforced, and challenged in local, national, and global contexts. Topics include: theories of race and ethnicity; settler colonialism and slavery; citizenship and inequality; immigration and segregation; multiculturalism and colorblindness; decolonial and anti-racist struggles; and globalization and new racisms. IIB, IIC, IC. CAS-B, CAS-C.

## Disability Studies (DST)

**DST 101. Beginning ASL I. (4)**

This course will introduce conversationally relevant signs, fingerspelling, grammatical sign principles and background information related to deaf culture with the objective of teaching students to sign and understand ASL with increasing ability. Cross-listed with SPA.

**DST 102. Beginning ASL II. (4)**

The Beginning II course is a continuation of the Beginning ASL I course. This course will continue to introduce conversationally relevant signs, grammatical principles, and background information related to the Deaf culture with the objective of teaching students to sign and understand ASL with an increasing ability at the ACTFL proficiency intermediate low-mid level (Swender, Conrad, & Vicars, 2012). Swender, E., Conrad, D. J., & Vicars, R. (2012). ACTFL proficiency guidelines 2012. ACTFL, INC.

Prerequisite: DST/SPA 101 or SPA 248.

**DST 169. Disability and Literature. (3) (MPF)**

This course studies the construction of disability identity in literature, personal memoir, and popular culture by investigating how texts that feature disability question notions of "normalcy" and "deviancy." It emphasizes interdisciplinary understandings of disability in historical and contemporary frameworks. IC, IIB. CAS-B.  
Cross-listed with ENG 169.

**DST 177. Independent Studies. (0-5)****DST 201. Intermediate ASL I. (3)**

The Intermediate ASL I course is a continuation of the Beginning ASL II course. This course will continue to address conversationally relevant signs, grammatical principles, and background information related to the Deaf culture with the objective of teaching students to proficiently sign and understand ASL with an increasing ability dictated by the American Council on the Teaching of Foreign Languages' proficiency intermediate mid-high level.  
Prerequisite: DST/SPA 102.  
Cross-listed with SPA.

**DST 202. Intermediate American Sign Language II. (3)**

Intermediate ASL II is the fourth course in the American Sign Language curriculum. Students will continue to develop ASL communication skills receptively and expressively through continued vocabulary and grammar instruction. Deaf culture concepts will be expanded upon with course instruction presented primarily in ASL. In addition, students will partake in service learning opportunities so the student can partake in mastery of ASL and to become assimilated with Deaf culture values.  
Prerequisite: DST/SPA 201 or equivalent.  
Cross-listed with SPA.

**DST 272. Introduction to Disability Studies. (3) (MPF, MPT)**

Explores the link between the social construction of disability and that of race, class, gender, ethnicity, and sexual orientation as they pertain to social justice in a multicultural and democratic society. Promotes critical analysis of dominant and nondominant perspectives on disability. IC, IIC. CAS-C.  
Cross-listed with EDP/SOC.

**DST 277. Independent Studies. (0-5)****DST 278. Women and (Dis)ability: Fictions and Contaminations of Identity. (3)**

Provides a critical analysis of the historical, sociological, cultural, media and educational images and representations of women with disabilities. Current research and theories from Disabilities Studies and Womens Studies will serve as the lenses for the exploration of disability as a social construct. The course will focus on exploration of oppressive social forces embedded in the re/presentations of and by women with disabilities which transform and complicate such images.  
Cross-listed with EDP/WGS.

**DST 312. Deaf Culture: Global, National and Local Issues. (3) (MPF)**

This course is intended to provide a comprehensive orientation to the Deaf and hard-of-hearing communities in continents around the globe. Students will learn the basic vocabulary and grammar of American Sign Language. Consideration will also be given to sign systems in Europe and the U.S. The students will be introduced to the sociolinguistic aspects of educational, political and environmental impacts on Deaf culture, identity, and language. IC, IIC, IIIB.  
Cross-listed with SPA.

**DST 315. Disability History in America. (3)**

An introduction to the history of disabilities in America, providing an overview of major themes, events, individuals, policy developments and political and social activism of, by, and for people with disabilities, as well as an introduction to the historical subfield of history of disabilities.  
Cross-listed with EDL.

**DST 329. Disability Poetics and Narrative Theory. (3)**

Studies in poetic and narrative theory emerging from literature about disability, with readings from ancient Greece to Shakespeare and contemporary literature.  
Cross-listed with ENG.

**DST 335. Disability and Aging. (3) (MPT)**

This course examines the experiences of disability and aging from a life course perspective, with an emphasis on the social construction of both disability and aging and their interaction. Identifies and examines issues of disability definition and measurement; individual and societal responses to disability and aging; and the outcomes of these responses for individuals, families, communities and society.  
Prerequisite: GTY 154.  
Cross-listed with GTY.

**DST 375. (Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice. (3)**

Explores what it means to be ally to/in/with the disability community in America. The course emphasizes identity formation and how that formation can inform the construction of the ally identity. Through deconstructing learned values, knowledge, and images of disability that mitigate ally behavior, students discover the micro and macro structures that support ally behavior. By exploring how social control and social change have worked in other civil rights movements, students understand the necessity of identifying and including allies in the disability movement for civil rights. IC. CAS-C.  
Cross-listed with EDP/SOC/WGS.

**DST 377. Independent Studies. (0-5)****DST 378. Media Illusions: Creations of "The Disabled" Identity. (3)**

Provides a critical analysis of past and present media constructions of persons with disabilities. Through exploring theory and research from diverse disciplines (communication, sociology, gerontology, educational psychology and others), students explore how perceptions of persons with disability are formed and analyze how the media is implicated in creating, distorting, and reflecting stereotypical and fictionalized images of disability. The course analyzes how these images shape public perception and reproduce the unequal power and privilege relationships that maintain the status quo while providing resources and techniques for the provision of alternative images of disability in various media genres.  
Cross-listed with EDP.

**DST 470. Social/Political Activism. (3) (MPC)**

Provides students with the opportunity to explore how indigenous groups effect change in their communities.  
Prerequisite: SOC 151 or SOC 153, or SOC/SJS 165, or CRE 151.  
Cross-listed with BWS/SJS/SOC.

**DST 477. Independent Studies. (0-5)****DST 494. Disability in Global and Local Contexts. (3) (MPC)**

Examines contemporary disability issues and policies and the lived experiences of persons with disabilities in international and local contexts, with emphasis on understanding disability within particular communities, both locally and in other countries, and on learning multiple research methods. IC.

Prerequisite: Permission of instructor.

Cross-listed with ENG 494 and EDP 489.

## Economics (ECO)

**Note:** ECO 201 and ECO 202 are a course sequence of basic economic principles and their applications aimed to develop an analytic framework for interpreting economic events, trends, institutions, and public policies. The two semesters are conceived as a year course; the recommended sequence is ECO 201, ECO 202.

**Advanced Economic Courses:** prerequisites for advanced courses are ECO 201 and ECO 202 unless otherwise stated. For ECO 311, ECO 315, and ECO 317 a grade of at least a "C" in all prerequisite courses or permission of the instructor is required.

**ECO 131. Economic Perspectives on Inequality in America. (3) (MPF)**

Introduction to economic perspectives on inequality in the United States, particularly the relationship between inequality and population diversity. The role of the market and of public policy in generating, transmitting, and ameliorating inequality. Dimensions of inequality include earning inequality, poverty, and unequal access to education and health care. Dimensions of diversity include race, ethnicity, gender, age, socioeconomic class, immigration status, and sexual orientation. IC, IIC. CAS-C.

**ECO 177. Independent Studies. (0-5)****ECO 201. Principles of Microeconomics. (3) (MPF, MPT)**

Nature and scope of microeconomics, including the role of the market in resource allocation, the role of competition, market forces, the forces governing the distribution of income, and the role of foreign trade in economic welfare. IIC. CAS-C.

**ECO 202. Principles of Macroeconomics. (3) (MPF, MPT)**

Analysis of the determinants of output, prices, employment, and interest rates. Includes long run behavior of the economy, business cycle theory, monetary system, stabilization policy, and international finance. IIC. CAS-C.

**ECO 277. Independent Studies. (0-5)****ECO 301. Money and Banking. (3)**

Nature of money and its role in the functioning of a modern monetary economy; the institutional framework of the U.S. monetary system; and aims, potentialities, and limitations of monetary policy.

Prerequisites: ECO 201 and ECO 202.

**ECO 311. Examining Economic Data and Models. (3)**

Introduction to the use of linear regression techniques for examining economic data and evaluating economic models. Topics may include hypothesis testing, dummy variables, forecasting, and limited dependent variable models. Sources of economic data are explored. Applications to topics in economics are stressed. CAS-C, CAS-Q, CAS-QL, CAS-W.

Prerequisites: earn a grade of at least a C in ECO 201, ECO 202, and ISA 125 or STA 125 or STA 261 or STA 301 or STA 368, and MTH 151; or permission of the instructor.

**ECO 315. Intermediate Microeconomic Theory. (3) (MPT)**

Analysis of the theory of consumer behavior and theory of the firm. Emphasis on logic of rational choice, model building, and economic efficiency. Other topics may include general equilibrium analysis, decision making under uncertainty, and applications of game theory in understanding strategic behavior in imperfect competition. CAS-C, CAS-W.

Prerequisites: earn a grade of at least a C in ECO 201, and 202, and MTH 151 or 153; or permission of the instructor.

**ECO 317. Intermediate Macroeconomic Theory. (3) (MPT)**

National income, as a measure of economic activity, including examination of theories of consumption and investment spending, monetary demand and supply, and implications of alternative models for level and stability of output, employment and prices, and economic growth. CAS-C, CAS-W.

Prerequisites: earn a grade of at least a C in ECO 201, 202, and MTH 151 or 153; or permission of instructor.

**ECO 320. Special Topics in Economics. (2-3; maximum 9)**

Examination of special topics in theoretical or applied economics not treated in the existing economics curriculum. Specific topics and hours to be determined by instructor.

**ECO 321. American Industries and Issues. (3) (MPT)**

The course examines major American industries, their history, and the economic and public policy issues they pose.

Prerequisites: ECO 201 and ECO 202.

**ECO 325. Economic Analysis of Law. (3) (MPT)**

Survey of the use of microeconomics in the analysis of law by looking at selected issues in law and economics such as property rights, contracts, torts, crime, enforcement, litigation, and precedents.

Emphasis on use of microeconomic analysis to understand implications of existing and proposed legal mechanisms.

Prerequisites: ECO 201 and ECO 202.

**ECO 331. Public Sector Economics. (3) (MPT)**

Discussion of the rationale for government expenditures and taxation and how they affect resource allocation, efficiency, and equity in the distribution of income. Other topics may include the role of voters, special interests and government bureaucracy in determining government policy, other current tax and expenditure issues.

Prerequisites: ECO 201 and ECO 202.

**ECO 332. Health Economics. (3) (MPT)**

Investigation of the markets for health care and related sectors of the economy with attention to institutions and data for the U.S. health care sector. Emphasizes the presence of moral hazard and asymmetric information in various health care markets. Topics may include proposals for reform, malpractice, drug regulation, Medicare and Medicaid, problems of access to care for the uninsured, and cross country comparisons.

Prerequisite: ECO 201.

**ECO 340. Internship. (0-20)**

Available to Farmer School of Business (FSB) majors and minors. Available for 0 credit hour during spring, summer and fall terms. Available for 1 credit hour during summer terms only. For one hour of credit, student must secure a sponsoring FSB faculty member within his/her major or minor to supervise the internship and accompanying required internship reflection paper. ECO 340 is not available during winter term. Students are to work through their respective academic departments to enroll in the course. Credit/no credit only. Note: FSB students may earn a maximum 2 credit hours toward graduation for BLS/BUS/ECO/ESP/FIN/ISA/MGT/MKT 340. Prerequisite: 55 earned hours and permission of department.

**ECO 342. Comparative Economic Systems. (3) (MPT)**

Investigation into theoretical underpinnings of the "pure" systems of competitive capitalism, market socialism, and command socialism, with this analysis forming the background against which to assess the "real world" functioning of these systems of economic organization. Prerequisites: ECO 201 and ECO 202.

**ECO 344. International Economic Relations. (3) (MPT)**

Comparative advantage as basis for gains from specialization and trade examined in some detail. Supply and demand analysis used to study the effects of barriers to trade (tariffs, quotas, etc.). Study of monetary aspects of international economic relations, including: alternative forms of international monetary organization, balance of payments, exchange rates, and mechanisms of balance of payments adjustment. Prerequisites: ECO 201 and ECO 202.

**ECO 347. Economic Development. (3) (MPT)**

Analysis of current problems of developing countries in Asia, Africa, and Latin America. Emphasis on the role of economic theory in devising policies to achieve improvements in the level and distribution of economic welfare in these countries. Prerequisites: ECO 201 and ECO 202.

**ECO 356. Poverty and Income Distribution. (3) (MPT)**

Application of economic analysis to poverty, income inequality, and factor shares. Discussion of determinants of earnings, including education, ability, and discrimination. Analysis of efficiency and costs of programs to reduce poverty, such as minimum wages, cash transfers, and in-kind transfers. IC. CASC. Prerequisites: ECO 201 and ECO 202.

**ECO 361. Labor Economics. (3) (MPT)**

Survey of the field of labor with emphasis on supply and derived demand for labor. Includes analysis of labor force participation, hours of work, wage determination and market structure, trade unions, and an examination of how government programs influence the labor market (which may include social transfer programs, social security and unemployment insurance). Other labor market issues that may be considered include discrimination, the structure of compensation and the consequences of various labor laws. Prerequisite: ECO 201.

**ECO 373. Economic Growth. (3)**

Investigates the sources of economic growth within a country and the factors that affect relative growth across countries. The course addresses issues of income convergence and the role of policy in determining the long-run rate of growth. Prerequisites: ECO 201 and ECO 202.

**ECO 377. Independent Studies. (0-5)****ECO 385. Government and Business. (3) (MPT)**

Public policy in the field of government regulation of business. Methods of social control, constitutional background, problems of competition, moderating competition, regulatory commissions, direct controls, and problems of public ownership. Prerequisites: ECO 201 and ECO 202.

**ECO 405. Economics of Strategy. (3) (MPC)**

Uses microeconomic models to apply concepts from the FSB core areas to solve problems and make decisions that managers of firms may face daily. Class time is allocated to the development of economic models that integrate the core areas, problem solving to apply the models in typical business settings, and the analysis of cases. Gives students opportunity to present as a team an analysis of cases using skills and concepts from the core courses. Prerequisite: available only to students with senior standing who have completed the common core of business courses; students who have not completed all of these courses must have permission of the instructor to enroll. Prerequisites: ECO 201 and ECO 202.

**ECO 406/ECO 506. Environmental Economics. (3) (MPT)**

Economic analysis of environmental quality. Strategies for collective environmental action. Benefit-cost analysis. Economic growth and environmental quality. Prerequisites: ECO 201 and ECO 202.

**ECO 411/ECO 511. Advanced Empirical Methods. (3)**

Examination of the use of estimation techniques for analyzing economic data and evaluating economic models. Topics may include properties of estimators, hypothesis testing, serial correlation and heteroscedasticity, and simultaneous equations. Applications to topics in economics are stressed. Prerequisites: ECO 311 and ECO 315.

**ECO 414/ECO 514. Mathematical Economics. (3-4)**

Development of mathematical techniques essential for understanding economic theory and performing economic research. Topics include calculus of several variables; linear algebra; classical, nonlinear, and convex programming; comparative statics; and dynamic programming. Prerequisite: MTH 151 and ECO 315 and one of the following: MTH 222, 231, or 251 or permission of instructor.

**ECO 418/ECO 518. Monetary Theory and Policy. (3) (MPT)**

Study of the behavior of financial institutions and their respective roles in transmission of monetary policy. Elements of monetary theory including quantity theory of money and its restatements, theory of interest, and inflation. Prerequisite: ECO 317.

**ECO 420. Seminar on Economic Problems. (1-3; maximum 9)**

Selected topics in economics. Prerequisite: permission of instructor.

**ECO 423/ECO 523. History of Economic Analysis. (3)**

Development of economic analysis as it evolved over the years since 1750. Schools of thought covered are preclassical and classical; socialists and Marx, Neoclassical; and heterodoxy-historist, institutional and imperfectly competitive. Prerequisite: ECO 315 or permission of instructor.

**ECO 427. The Great Depression Revisited. (3) (MPC)**

The Great Depression of the 1930s was a traumatic period in our history, still widely discussed and analyzed by economists, and its specter has influenced our leaders and their policies to this day. Vigorous debate continues over the cause(s) of its unprecedented severity, and therefore, what its lessons are. A wide range of competing theories have been proposed, each involving different assumptions based upon opposing ideological foundations, about the way our macroeconomic system functions. In this team-taught course, students read original literature that offers opposing views of the causes. Competing theories are applied in a computer simulation program, which allows students to capture the relationships implied by the institutional framework of the period and the economic literature in order to judge the degree to which opposing views can be supported.

Prerequisite: ECO 317 and senior standing or permission of instructor.

**ECO 441/ECO 541. International Trade and Commercial Policy. (3)**

Examination of underlying causes of international trade, determinants of trade, effects of trade on income, relationship between trade and international factor movements, and theory and practice of restrictions on trade.

Prerequisite: ECO 315 or 603.

**ECO 442/ECO 542. International Monetary Relations. (3)**

Monetary aspects of international economic relations. Alternative forms of international monetary organization, balance of payments, exchange rates, and mechanism of balance of payments adjustment.

Prerequisite: ECO 317 or permission of instructor.

**ECO 451/ECO 551. Economic History. (3)**

Primarily American economic history as studied from the point of view of economic theory and quantitative methods. Qualitative determinants of long-run economic growth and structural change investigated.

Prerequisite: ECO 315 and 317, or permission of instructor.

**ECO 461/ECO 561. Industrial Organization and Public Policy. (3)**

Effects of structure, conduct, and performance of imperfectly competitive firms upon social welfare. Includes social costs of imperfect competition, determinants of market structure, mergers, barriers to entry, advertising, and research and development.

Prerequisite: ECO 315 or 603.

**ECO 462. Economics of Compensation. (3) (MPT)**

Survey of the economics of human resources. Topics may include rationale for and effects of alternative forms of compensation and contracting; theory and measurement of discrimination against minorities and women; and causes and consequences of unionism.

Prerequisite: ECO 315.

**ECO 465. Game Theory with Economic Applications. (3)**

Topics from the field of game theory applied to numerous economic problems. Equilibrium concepts are derived to determine the outcome of economic agents pursuing individual self-interest in a "non-cooperative" environment. Specific tools included: multi-person decision trees, expected utility theory, Bayes Theorem, and several classes of games. Economic applications may include: wage bargaining, strategic trade policy, adverse selection and credit rationing, strikes, cartel enforcement, insurance, patents, and product variety.

Prerequisite: ECO 315.

**ECO 477. Independent Studies. (0-5)****ECO 480. Independent Reading. (1-6)**

Seminar leading to a qualifying written report for graduation with departmental honors.

Prerequisite: approval of honors coordinator (see current class schedule).

**ECO 482. Independent Reading. (3)**

Seminar leading to a qualifying written report for graduation with departmental honors.

Prerequisite: approval of honors coordinator (see current class schedule).

**ECO 615. Advanced Microeconomic Theory. (3)**

Exposition of the general principles and analytical tools of microeconomic theory. Includes theory of consumer choice, production and cost, pricing in various market structures, distribution theory, general equilibrium analysis, and welfare economics.

Prerequisite: ECO 315 or 603.

**ECO 616. Microeconomic Analysis for Managerial Decisions. (3)**

Focuses on microeconomic analysis of consumers, firms, and market organization. Topics may include analysis of antitrust and regulatory issues.

**ECO 617. Advanced Macroeconomic Theory. (3)**

Development of an aggregative model of output, employment, interest rates, and prices. Analysis of the effect of government policy on these variables. Implications of alternative specifications of the model are also examined.

Prerequisite: ECO 317 or equivalent.

**ECO 640. Internship. (0-12; maximum 12)****ECO 650. Topics in Macroeconomics. (3)**

Advanced selected topics in theoretical and applied macroeconomics.

Prerequisite: ECO 617 or permission of instructor.

**ECO 663. Econometrics. (3)**

Theoretical and applied regression analysis under ideal and non-ideal conditions. Includes simultaneous equation models and time series techniques.

Prerequisite: STA 301 and STA 401/STA 501 or equivalent.

**ECO 671. Topics in Applied Econometrics. (3)**

Topics include simultaneous equations bias, omitted variable problems, estimation with limited dependent variables, differences-in-differences models, quantile regressions, event studies in finance and the Fama-French model.

**ECO 672. Applied Time Series Analysis. (3)**

Topics include autoregressive and moving average models, unit root topics, co-integration, autoregressive conditional heteroscedasticity, and applications to financial economics and other applied areas of economics.

**ECO 677. Independent Studies. (0-5)****ECO 685. Economic Research Methods. (3)**

Consideration of alternative economic methodologies; selection and specification of critical hypotheses; model construction; sources of data; model verification, evaluation, and revision. Summer only.

Prerequisite: graduate standing in economics.

**ECO 690. Master's Research. (1-12)**

In-depth research paper written with supervision of at least two members of graduate faculty.

**ECO 704. Non-Thesis Project. (0-12; maximum 12)**

## Education, Health and Society (EHS)

### **EHS 195. Leadership in Healthy Communities. (1)**

Seminar designed for EHS Leadership Scholars to promote personal growth, professional development and positive commitment to ones academic field. Focus will be placed on establishing leadership characteristics and playing a critical role in the various communities that we serve.

### **EHS 649. Action Research for Educators. (3)**

Engages educators in action research as a way to study and improve, through informed decision-making, the dynamics of one's own practice. Culminates with a major action research project.

### **EHS 667. Behavior Statistics. (3)**

The basic concepts of descriptive and inferential statistics are discussed. This course stresses the logical interpretation of results.

### **EHS 668. Behavior Statistics II. (3)**

Advanced concepts of descriptive and inferential statistics are discussed. This course stresses the logical interpretation of results.

### **EHS 710. Interdisciplinary Doctoral Lab. (1-6; maximum 6)**

This course will introduce the student to doctoral study focusing primarily on interdisciplinary and global issues that both cross and connect the domains of the school, family, health, and society. The course will be taught by a team of professors from different academic departments who are qualified to work with the doctoral students and also may include relevant field/research experiences. Topics for the doctoral labs may vary depending on the emphases of the students and the faculty facilitating the labs. Curriculum and faculty for the doctoral lab will be designated and monitored by the Educational Leadership Interdisciplinary Option Doctoral Committee in EHS.

Prerequisite: acceptance into the Educational Leadership interdisciplinary option doctoral program in EDL.

## Educational Leadership (EDL)

### **EDL 100. Career Development for College Students. (2)**

This course is designed to take students through the process of clarifying career and/or academic goals. Students will do research assignments and activities designed to help them to learn about themselves and how to apply this information to career decision making.

### **EDL 110. The University and the Student. (1)**

Helps students understand how the university operates and how its resources can be used to develop their educational goals. Taught in seminar style; designed to help develop personal relationships among students and instructor. For freshmen only. Credit/no-credit only.

### **EDL 115. Miami Tribe Contemporary Issues I. (1)**

Introduce and explore the major issues that the Miami Tribe of Oklahoma faces today as a sovereign Nation. These issues will be contextualized within Indian Country as a whole as well as within the broader global indigenous community. Focus is on the issues of sovereignty, self-determination, governance, leadership, economic development, and education.

### **EDL 141. Mentoring Diverse Students. (2; maximum 2)**

This course is the required training seminar for the Office of Diversity Affairs Connection Coach Peer Mentor Program. Only students accepted into the Connection Coach program through the Office of Diversity Affairs are permitted registration into this course. This course illuminates the connection between student development theory and peer mentoring and peer coaching. It is intended that through the study of student development theory and cultural competency standards, as well as exercises around identity development, peer mentors will become more self-reflective. Furthering this understanding of self will result in a better-equipped mentor.

### **EDL 151. The American University. (2)**

This course is intended to acclimate and acculturate first year International students to the U.S. educational culture and in particular to the Miami University culture. Through this highly experiential course, International students begin to build intercultural competencies, including the cultural intelligence necessary to succeed in an American university, and in the broader U.S. cultural context; are introduced to resources and offices on campus to assist in transition and adjustment; develop, adjust, and use academic skills needed to understand and navigate study load, test culture, academic integrity, class participation, residence hall life, advising, classroom technology, counseling and health issues, and extracurricular activities, among others.

### **EDL 177. Independent Studies. (0-5)**

### **EDL 195. Team Building Development - Facilitation & Group Dynamics. (2)**

This course is an introduction to group facilitation and group management. This course will focus on the building and development of community. Students will think critically, process & debrief experiences within a community of people, and establish skills towards a Challenge Course Level 1 certification. Content will explore sequencing, planning and presenting activities. Student will have several opportunities to practice their skills in group facilitation and experience team building activities that they can then use in their professional life later on.

### **EDL 203. Introduction to Critical Youth Studies. (3) (MPF)**

An overview of Critical Youth Studies which allows class participants to explore and appreciate their identities, to develop an awareness of issues affecting different populations of youth, and to learn a variety of tools for self-expression and activism. This curriculum draws from key fields in youth studies such as Educational Studies, Cultural Studies, Ethnic Studies, Gender Studies, Sexuality Studies, Performance Studies, Literary Studies, and Art Criticism to provide students with a multidisciplinary and layered understanding of youth. EDL 203 foregrounds underrepresented voices and bodies that have been invisible and/or marginalized within the study of youth, specifically, and U.S. society, generally. The primary aims of this course are to: 1) Introduce students to the area of critical youth studies, 2) Alert students to existing programs, initiatives, and movements connected to this area of study, 3) Expose students to multidisciplinary ways of engendering self-expression as youth and working with youth. IIC. IC.

### **EDL 204. Sociocultural Studies in Education. (3) (MPF, MPT)**

Introduction to the field of social foundation of education using humanities and cultural studies approaches to investigate education in a diverse and democratic nation. IIB, IC.

**EDL 215. Miami Tribe Contemporary Issues 2. (1)**

In this course we will introduce and explore the major issues that the Miami Tribe of Oklahoma faces today as a sovereign Nation. These issues will be contextualized with comparisons to Indian Country as a whole as well as to broader global indigenous experiences. In this second semester of the course, we will specifically focus on the global manifestations of nationhood, sovereignty, and self-determination in classic governmental structures, like constitutions, and in locations or activities that are not normally associated with issues of political or economic sovereignty, like art. Through this exploration, we will attempt to develop a framework of comparative indigenous nationhood.

Prerequisite: EDL 115.

**EDL 216. Myaamia Ecology & History 1. (1)**

In this course we will introduce, explore, and weave together various perspectives of Myaamia (Miami) ecology and history. The ecological observations of this first course will be heavily influenced by the seasonal transition from summer into winter that occurs during the fall semester. From these observations, the class will create a shared understanding of the web of relationships that links humans, animals, plants, landscapes, other-than-human beings, and the stories that one particular group of humans "the Myaamiaki" have told about these interactions over time. Through an exploration of some of the general aspects of Myaamia ecology and history, each individual participant of the class will begin develop their own personalized understanding of this complex web of relationships. Half of the class meetings will be dedicated to discussing historical topics, i.e. focused on the past, but one of our explicit goals is to discuss how historical understandings and ecological practices are a part of, or can be made a part of, our contemporary lives.

**EDL 218. Leadership Identity Development. (3)**

This course provides students with an intentional and guided examination of their leadership identity. Over the course of the year, students will participate in leadership development and reflection activities grouped within four domains of exploration: Self, Others, Knowledge and Experiential. Students will draw from these domains to develop a personal leadership philosophy that can help guide their future leadership activities. The course activities are completed in a self-paced format and complemented by monthly seminar meetings.

**EDL 224. Introduction to Education Policy. (3)**

This course provides an introduction to educational policy in the United States. We will examine both the broader political context within which education policy is made as well as the policy making process. The course will introduce students to a range of current topics that define the current debates in education, including, but not limited to, test based accountability, equity and adequacy for special populations, and school choice. In analyzing these debates, students will use the various disciplinary perspectives to understand the complexity of current issues in American K-12 education.

**EDL 232. Introduction to Community-Based Leadership. (3) (MPF)**

Introduction to Community-Based Leadership explores theories and practices of leadership in public institutions and communities. Students critically examine three concepts central to community-based leadership: public, leadership, and democracy. Using the scholarship of leadership studies and civic engagement, students explore what it means to work in public life and lead for the public good in local, national, and international contexts. Students accomplish these goals through readings, class discussions, analytical and reflective writing, and community-based learning experiences connecting theory with practice. The course will help students develop their own vision and plan for participating in community-based leadership as Miami students and as engaged citizens. IIC.

**EDL 260. Undergraduate Research: Special Topics. (1; maximum 4)**

Using the discovery learning model and inquiry-based learning, this course is designed to push students beyond their desire to gain information from external authorities. This course will be offered to students who are engaged in undergraduate research. This is a special topics course that may include experience and discuss library research techniques; research ethics and human subjects; organizational strategies for college researchers; literature reviews, research annotations and abstracts; leadership and communication skills; quantitative and qualitative research techniques; statistical software; research careers and professional development; learning plans, personal mission statements and goal setting; proposal writing and poster development and presentation.

**EDL 277. Independent Studies. (0-5)****EDL 281. Outdoor Leadership Study Away/Study Abroad. (3)**

This course examines the role of an outdoor leader through study and work at off-campus sites. Students explore theoretical and practical implications of this type of leadership in a study-away context. Pre-trip preparation will include learning about group dynamics, trip planning models, expedition behavior, risk management, and environmental stewardship in the context of outdoor leadership. The course will include a variety of location-based outdoor adventure activities and experiences to enable students to put theory to practice in an outdoor setting. EL.

**EDL 290. The Nature of Group Leadership. (2; maximum 6)**

A two-credit course for students interested in exploring multiple approaches to leadership and building capacity for socially responsible leadership. The course involves engaged learning through community action work, skill building, reading, writing, case analysis, and dialogue.

**EDL 301. Student Development in Residence Halls. (1)**

Practical study of theories and techniques used in creating and maintaining learning environments that foster student growth and development in college residence halls. Includes student development theories, community development techniques, personal and environmental assessment, and strategies for influencing group living and behavior.

Prerequisite: current resident assistant or permission of instructor.

**EDL 302. Career Entry Skills and Post-College Planning. (2)**

Designed to assist students in making the transition from college to the world-of-work, service, self-employment, and/or graduate or professional school. Gain awareness of self and how skills, interests, and values impact career satisfaction and success, clarify career options and/or post-college opportunities, develop necessary job search correspondence and interview techniques and prepare for the transition from student life to professional life.

**EDL 310. College Student Development and Group Process for Peer Educators. (1)**

An interactive course providing a theoretical and applied examination of college student development and group process as they relate to peer education. Major content areas include: models of college student development, communication and helping skills, workshop design, and multicultural considerations in programming.

**EDL 312. Foundations of Education in Global Contexts. (3)**

This class will focus on the theoretical foundations of education in global contexts, as well as issues influencing the field. Topics will include: globalization; education reforms, political, cultural, and religious influences, centralization and decentralization policies, colonialism and its legacies, and access to education among others. The goal of this class is to uncover why education is the way it is in other contexts, determine the limitations of understanding other contexts, and evaluate the extent to which elements of education are transferable between contexts.

**EDL 315. Disability History in America. (3)**

An introduction to the history of disabilities in America, providing an overview of major themes, events, individuals, policy developments and political and social activism of, by, and for people with disabilities, as well as an introduction to the historical subfield of history of disabilities.

Cross-listed with DST.

**EDL 316. Myaamia Ecology & History 2. (1)**

In this course we will continue to weave together the various perspectives of Myaamia (Miami) ecology and history, which were introduced in the first semester. The ecological observations of the second course will be heavily influenced by the seasonal transition from winter into summer that occurs during the spring semester. From these observations, the class will create a shared understanding of the web of relationships that links humans, animals, plants, landscapes, other-than-human beings, and the stories that one particular group of humans "the Myaamiaki" have told about these interactions over time. Through an exploration of some of the general aspects of Myaamia ecology and history, each individual participant of the class will begin develop their own personalized understanding of this complex web of relationships. Half of the class meetings will be dedicated to discussing historical topics, i.e. focused on the past, but one of our explicit goals is to discuss how historical understandings and ecological practices are a part of, or can be made a part of, our contemporary lives. The second semester of this course will more explicitly focus on traditional stories and historical narratives. These oral and textual sources will be used to contextualize the ecological knowledge that students began developing in the first semester of the course.

**EDL 317. Myaamiaatawenki: Myaamia Language & Culture 1. (1)**

This course is the first of a two-course series that introduces the Myaamia language and culture. The goal of this class is to expose students to Myaamia language and culture and create thoughtful discussions about why maintaining the Myaamia heritage language and culture is important. This course will build off of the experiences, knowledge, and skills acquired in EDL 316 by adding greater linguistic and cultural complexities to students' knowledge of contemporary issues and historical and ecological contexts. The course will advance each student's use of the Myaamia language towards a more functional level. Students will be exposed to more immersive language environments and will demonstrate an ability to express simple wants and needs in the Myaamia language.

Prerequisite: EDL 316.

**EDL 318A. Teacher Leadership and School Organization. (3)**

This course is designed to challenge and shape students' conceptions of educational organizations and cultures; their professional development as teachers and/or educational staff members; as well as the acts of teaching, curriculum development, teaming and leadership. The course encourages the development of personal and professional theoretical frameworks and practical tools for enhancing awareness of and action in educational roles as decision-maker, curriculum-creator, inquirer, community member/builder, democratic citizen, team member, teacher and leader.

**EDL 318E. Teacher Leadership and School Organization. (3)**

This course is designed to challenge and shape students' conceptions of educational organizations and cultures; their professional development as teachers and/or educational staff members; as well as the acts of teaching, curriculum development, teaming and leadership. The course encourages the development of personal and professional theoretical frameworks and practical tools for enhancing awareness of and action in educational roles as decision-maker, curriculum-creator, inquirer, community member/builder, democratic citizen, team member, teacher and leader.

**EDL 318M. Teacher Leadership and School Organization. (3)**

This course is designed to challenge and shape students' conceptions of educational organizations and cultures; their professional development as teachers and/or educational staff members; as well as the acts of teaching, curriculum development, teaming and leadership. The course encourages the development of personal and professional theoretical frameworks and practical tools for enhancing awareness of and action in educational roles as decision-maker, curriculum-creator, inquirer, community member/builder, democratic citizen, team member, teacher and leader.

**EDL 333. Youth, Media & Pop Culture. (3)**

This course offers a critical analysis of role of media and pop culture in the lives youth. Students will examine how youth interact with and influence diverse forms of media. Course content will explore how cultural products such as media and pop culture shape societal views of youth and inform how youth view themselves.

**EDL 334. Transnational Youth Cultures. (3) (MPF, MPT)**

Using contemporary social and educational theory, this course introduces the student to the historical construction of adolescence and youth in global context. The course also explores cultural practices of transnational youths as a socio-historical construction that is affected by contemporary conditions of neo-liberalism, neo-colonialism and globalization. IIIB, IC.

Cross-listed with AAA.

**EDL 340. Internship. (0-20)****EDL 352. Teaching in International Contexts. (1)**

This course prepares students who have no background or experience in teaching and who plan to teach for a short time overseas, either individually or through a University program, such as Ambassadors for Children, the African School Advancement Program and other groups. The course introduces students to the cultural, historical, political and educational context in which the student plans to teach; preliminary skills of curriculum development, lesson planning, and instructional strategies; basic principles of teaching English as a Second Language; and basic preparation for international travel and immersion.

**EDL 369. Sexuality, Youth, Education. (3)**

This interdisciplinary course utilizes insights from a variety of areas - such as literature, sociology, popular culture, law, and medicine - to analyze how contemporary discourses of sexuality are viewed from multiple perspectives. The course investigates how discourses of sexuality co-mingle with discourses of youth with special attention to the intersections of race, ethnicity, class, gender, nationality and ability. Working from a Critical Youth Studies (CYS) framework and similar theoretical positions, the course privileges scholarship and community-based educational models which foreground issues of equity, social justice, and youth participatory activism. Central questions addressed throughout the course include: What is sexuality, and what does race have to do with it? How are notions of innocence, purity, risk and danger tied to particular bodies, identities and desires? How do the logics, structures and processes of late capitalism and globalization shape the cultural politics of sexuality?.

**EDL 377. Independent Studies. (0-5)****EDL 382. Community-Based Research & Learning in Education. (3)**

This course introduces students to community-based approaches to research, learning, and development with an emphasis on education issues. Working with local non-profits, schools, and community organizations students will use community-based participatory research (CBPR) as a research paradigm to explore and address a range of education issues at the community level. This course will familiarize participants with key principles of CBPR practice; community assessment; issue analysis; research planning; data gathering; and data sharing. The course will also develop student capacities in cultural competence; working with diverse populations; and ethical considerations in community-based work.

**EDL 383. Service in Urban Communities. (3)**

The purpose of this course is to afford students the opportunity to implement or be involved in a service project in or with a local urban community that will run over the duration of the semester. The course provides students the opportunity to further develop themselves as servant-leaders who are culturally proficient, critically aware of the race and class dynamics that shape life in urban communities, and thoughtful about how best to respond to challenges that hinder community wellbeing.

**EDL 390. A Comparative View of Student Affairs Practice II. (4)**

This study abroad course is an opportunity for students to delve more deeply into international perspectives on higher education and student affairs work. Enrollment in this course requires engagement in pre-departure sessions, travel abroad to gain a first-hand view of higher education systems and student affairs work in other countries, and participation in a post-travel class session debriefing the travel experiences and exploring the implications for a career in student affairs.

**EDL 416. Myaamiaataweenki: Myaamia Language & Culture 2. (1)**

This course is the second of a two-course series that introduces the Myaamia language and culture. The goal of this class is to expose students to intermediate concepts in the Myaamia language and culture and to develop thoughtful representations of the use of the Myaamia language and culture. This course will build off of the knowledge students gained in EDL 317 by adding greater linguistic and cultural complexities to students' knowledge of contemporary issues, historical contexts, and ecological changes. In this course, students will continue to practice the functional language skills developed in EDL 317. By the end of the course, students will have developed an ability to recount and understand short narrative speech in the Myaamia language.

Prerequisite: EDL 317.

**EDL 464. Community-Based Leadership and Change. (3)**

This course provides students with an opportunity to synthesize what they have learned about community-based leadership through their coursework in the CBL minor and demonstrate mastery of primary leadership competencies, concepts, principles and practices. Students will be guided in designing and developing a substantial research project that incorporates significant learning from their program. This course challenges each student to choose an aspect of community to impact, and to create and begin implementing an actual community engagement strategy. Readings and discussions focus on effective tools and strategies for creating lasting change, including the leader's role as a catalyst and convener.

Prerequisite: EDL 232.

**EDL 477. Independent Studies. (0-5)****EDL 600. Independent Reading. (1-3; maximum 9)**

Planned reading in a field of educational leadership with guidance of a department member.

Prerequisite: graduate standing and permission of department chair.

**EDL 601. Educational Leadership Theory. (3)**

Study of theory and practice of educational leadership. Instructional strategies include case study, simulations, and tutorials. Integrates theory with issues of field-based practice. First in a series of four required courses.

Prerequisite: graduate standing and permission of instructor.

**EDL 603. Organizational Change. (3)**

Advanced course in educational leadership that is field-based. Students are actively involved with practitioners. Mentor relationships are established between students and field-based education leaders. Instructional strategies are tutorials and field experience problem-solving.

Prerequisite: successful completion of EDL 602 or permission of instructor.

**EDL 606. Curriculum Innovation and Transformation through Understanding and Design. (3)**

This course is designed for educators interested in learning more about the curriculum in use in classrooms, schools, and community organizations, and the possibilities for shaping and transforming curriculum and teaching practices. The course will introduce students to important issues in curriculum theory and practice.

Cross-listed with EDT.

**EDL 607. School Law. (3)**

General study of public education law with particular emphasis on school law in Ohio. Major attention given to landmark cases and their effects upon public education.

**EDL 609. Politics In Education. (3)**

Provides broad understanding of the politics of school governance and management, including the analysis and ethics of educational policy at the local, state, and federal levels.

**EDL 614. Family-Community-School Partnerships. (3)**

Analysis of school-linked and community-based partnerships aimed at enhancing the well-being of children, youth, families and schools. Family-centered, culturally-responsive practice principles and empowerment strategies are emphasized. Cross-listed with FSW.

**EDL 621. Foundations of Multi-Cultural Education. (3)**

Using interdisciplinary approach, course investigates what multicultural education is and why and how it has become an integral part of public school education.

**EDL 624. Ethics and Values in Education. (3)**

An applied philosophy course focusing on the study and use of ethical frameworks for educational practice and decision-making for educators working in K-16 contexts. Theories and applications of moral education are also examined.

**EDL 629. History of Education in America. (3)**

Origin and development of educational thought and institutions in the United States.

Prerequisite: graduate standing or permission of instructor.

**EDL 630. Applied Studies in Educational Administration. (1-3; maximum 15)**

Practicum focusing on contemporary administrative and organizational issues in schools, including data analysis, effective professional communication, and special education policies and procedures.

Prerequisite: permission of instructor.

**EDL 630B. Connect Sch Ldshp to Standards. (2)****EDL 640. Internship. (0-12; maximum 12)****EDL 645. Supervision of Teaching. (3)**

Principles, methods, techniques, and problems of leadership in improving programs in elementary and secondary schools.

Prerequisite: graduate standing; elementary, middle, or secondary curriculum course; or permission of instructor.

**EDL 646. Curriculum Development for Instruction. (3)**

Curriculum organization procedures, evaluation and theory in preparation of educational leaders. A course blending theory and field experiences.

**EDL 647. Curriculum and Cultural Studies. (3)**

Students will be exposed to cultural studies' perspectives of education, including critical media literacy and the role of popular culture in American education.

Prerequisite: EDL 639.

**EDL 648. Data-Informed Decision Making in Education. (3)**

Students in this class learn contemporary educational research methods and develop skills to plan and complete a systematic action research inquiry into educational practice. The class introduces students to research design, review of relevant literature, implementation, and evaluation.

Cross-listed with EDT.

**EDL 654. Foundations of Educational Research in Higher Education. (3)**

Introduction to the diverse theoretical foundations of educational inquiry and exploration of the diverse approaches used in empirical educational research to enhance practice in student affairs/higher education contexts.

Prerequisite: enrolled in SAHE or permission of instructor.

**EDL 656. Professional Development and Field Experience in Student Affairs. (1-4)**

Supervised practice in student affairs and higher education contexts.

Prerequisite: enrolled in SAHE or permission of instructor.

**EDL 656G. Field Experience Exploration. (4)**

Supervised practice in student affairs and higher education contexts.

Prerequisite: enrolled in SAHE or permission of instructor.

**EDL 656I. Field Experience Synthesis. (3)**

Supervised practice in student affairs and higher education contexts.

Prerequisite: enrolled in SAHE or permission of instructor.

**EDL 657. Internships in Student Affairs. (1-7; maximum 7)**

Graduate students participating in a Student Affairs in Higher Education (SAHE) internship register for this course during the semester they are on work assignment.

Prerequisite: EDL 676.

**EDL 660. Seminar in Student Affairs/Higher Education. (1-3)**

Focuses on specialized topics in student affairs in higher education.

Prerequisite: enrolled in SAHE or permission of instructor.

**EDL 661. Quantitative Research in Higher Education. (3)**

Introduction to quantitative research in student affairs/higher education. Explores implications for disciplined inquiry in higher education (e.g., research, assessment, and evaluation).

Prerequisites: EDL 654 and SAHE major or permission of instructor.

**EDL 666. Student Cultures in the College Environment. (3)**

Overview of studies conducted on the formation and development of college student cultures. Particular emphasis upon understanding student cultures and their relationship to student affairs practice.

Prerequisite: EDL 676 and enrolled in SAHE or permission of instructor.

**EDL 667. Diversity, Equity, and Dialogue in Student Affairs. (3)**

Critically examines issues in higher education access and equity with special attention on race and social class. As a way to learn to have conversations about diversity, this course introduces students to Intergroup Dialogue, a facilitated strategy for engaging in dialogue across difference.

Prerequisite: enrollment in SAHE program or permission of instructor.

**EDL 671. Crisis Management & Educational Leadership. (3)**

This course merges literature on crisis management with that on campus leadership and organizational change. During the semester, we examine and discuss documented cases of campus leadership in times of crisis, as well as best practices in campus crisis management. Topics include defining and classifying types of crises, the development of a written emergency response plan and a crisis management team, communication with different audiences, identification of internal and external resources, and institutional change as a result of crisis. Students complete this course better prepared to successfully transition into positions as campus administrators with an understanding of the types of critical incidents they may encounter and how their own leadership style might influence their response in such situations.

Prerequisite: EDL 706.

**EDL 672. Intergroup Dialogue in Higher Education. (3)**

Provides students an opportunity to engage in Intergroup Dialogue, a facilitated approach to engaging in dialogue across identities, such as race, sexual orientation, social class, gender, and religion. Explores notions of privilege, oppression, and development as a social justice ally in education contexts.

Prerequisite: EDL 667 or permission of the instructor.

**EDL 675. Student Development Theory I. (3)**

Study of basic theoretical perspectives underlying college student development, assessment of development, and application of theory to student affairs practice. S. or Ph.D. in SAHE or permission of instructor.

Prerequisite: enrolled in M.

**EDL 676. Foundations of Student Affairs in Higher Education. (3)**

Focuses on the historical, philosophical and theoretical foundations of student affairs.

Prerequisite: enrolled in SAHE or permission of instructor.

**EDL 677. Independent Studies. (0-5)****EDL 678. Student Development Theory II. (3)**

In-depth study and critique of selected student and adult development theories, assessment of students' development of those theories, and application to student affairs practice.

Prerequisites: EDL 677 and enrolled in SAHE or permission of instructor.

**EDL 680. Special Topics in Equity, Diversity, and Culture: Theoretical Perspectives on Diverse College Student. (3)**

Explores the impact of different theoretical perspectives on an understanding of college students, student affairs, and higher education. Among the theoretical perspectives that may be included are critical race theory, feminist theory, critical theory, and queer theory. Theoretical perspectives covered in this course will differ by semester. Repeatable up to 6 credits.

Prerequisite: enrollment in SAHE or permission of instructor.

**EDL 681. Leadership Perspectives on Student Affairs and Higher Education. (3)**

Experiential approach to the study of administration in student affairs organizations. Case studies, workshops, and small group assignments used to develop skills in leadership, staff evaluation, supervision, and planning and management of change.

Prerequisite: enrolled in SAHE or permission of instructor.

**EDL 683. Qualitative Research in Education. (3)**

Introduction to the field of qualitative research in K-16 educational environments, including multiple interpretivist and critical traditions.

Prerequisites: EDL 654 and SAHE major or permission of instructor.

**EDL 685. Spirituality and Leadership in Education. (3)**

This course examines key literature and pertinent issues related to spirituality and educational leadership such as character development, servant and ethical-moral leadership, and culturally relevant faith traditions across multiple higher education contexts. These issues, among others, are closely linked to values-based personal development and are critical elements in learning about and promoting holistic leadership development. We will examine literature in this growing field of study, discuss the affect and significance of various key concepts, and mutually construct ways to connect theory to practice.

Prerequisite: enrollment in SAHE program or permission of instructor.

**EDL 690. International Perspectives on Student Affairs. (3)**

Through comparative study and site visits students will explore how different cultures shape and inform societies' systems of higher education and student services. The course emphasizes developing a global perspective on student affairs practice.

Prerequisite: enrollment in SAHE program or permission of instructor.

**EDL 696. Student Success in Higher Education. (3)**

Less than 60% of college students earn a bachelor's degree within six years in the United States. Creating and sustaining conditions that foster student success is essential to increasing access, persistence, and graduation rates in higher education. Despite the increased representation of first-generation, low-income, and racial/ethnic minority college students, these populations continue to be underrepresented and underserved at U.S. colleges and universities. This course will explore different theoretical perspectives to advance research, policies, and programs that increase student success in higher education.

Prerequisites: based on their concentration, students will need to take on the following courses: EDL 654, EDL 667, EDL 677 or EDL 706.

**EDL 706. Educational Leadership and Organizational Development. (3)**

Study of concepts, literature, and research in leadership and its relationship to the development and maintenance of the organization.

Prerequisite: EDL graduate program admission or permission of the instructor.

**EDL 710. Internship in Educational Leadership. (3; maximum 6)**

Planned program of leadership responsibilities in an educational institution or agency with major emphasis on participation in practical applications of roles associated with school administration. Enrollment only after contact with the internship director.

**EDL 721. Pupil Personnel Services. (1-3; maximum 3)**

Organization and analysis of pupil services offered to a school district. Current issues, especially legal and ethical, are examined.

**EDL 723. Public School Finance. (3)**

Local, state, and federal systems of financial support for education. Addresses basic revenue and allocation issues from a national and an Ohio perspective.

**EDL 725. School Staff Personnel Administration. (1-3)**

Basic course in school personnel sequence; emphasis on licensed staff; recruitment, supervision, evaluation, staff development, collective bargaining, and employer-employee relationships.

**EDL 727. School Business Affairs and Physical Resources. (3)**

Basic principles and procedures of business management as they relate to educational institutions and agencies, including budgeting, purchasing, maintenance, management of school facilities, educational specifications, enrollment projections, capacity and utilization, and auxiliary services.

**EDL 729. Board-Superintendent-Staff Relationships. (3)**

Case study and simulation approach to the identification and analysis of interrelationships, conflicts, and effects of employee organizations and pressure groups on educational decision making and policy formulation.

**EDL 730. New Literacies for Educational Leadership. (2)**

An orientation to mass media, social media, and online learning environments as they contextualize the practice of educational leadership in schools and districts. Emphasis on new technological literacies for engaging students, teachers, and parents/citizens through innovative, responsible uses of diverse media formats.

**EDL 731. Learning Partnerships & Transformational Learning. (3)**

Introduction to learning as personal transformation for social change and social justice. Interdisciplinary perspectives on learning in higher education: role of college student development, diversity, and culture in learning; role of higher education organizations and structures in learning; historical perspective on higher education learning; global implications for college learning.

Prerequisite: SAHE major or permission of instructor.

**EDL 741. Perspectives on College Learners' Experience. (3; maximum 6)**

Exploration of college learners' experience from multiple disciplinary perspectives including history, comparative education, anthropology, and developmental psychology. Each seminar offering will include two of these perspectives. Repeatable up to 6 credits.

Prerequisite: SAHE major or permission of instructor.

**EDL 745. Perspectives on Higher Education Learning Contexts. (3; maximum 9)**

Exploration of college learning contexts from multiple disciplinary perspectives including history, social foundations, comparative education, anthropology, organizational theory, and developmental psychology. Each seminar offering will include two of these perspectives. Repeatable up to 9 credits.

Prerequisite: SAHE major or permission of instructor.

**EDL 750. Advanced Independent Reading. (1-3; maximum 9)**

Independent readings appropriate for advanced graduate students. Cannot earn more than nine hours credit toward minimum requirements for any one degree with combination of EDL 600 and EDL 750 (see EDL 600).

Prerequisite: post-master's standing.

**EDL 751. Social & Political Engagement in Higher Education. (3)**

Explore philosophical theories and discourses to address moral and political questions regarding the ultimate aims of post-secondary education, focusing primarily on the United States 2- and 4-year college and university system. Opportunity to integrate and synthesize understanding of learning, learners, and learning contexts into a professional philosophy of education.

Prerequisite: EDL 731 and SAHE major or permission of instructor.

**EDL 761. Introduction to Doctoral Study in Educational Leadership. (3)**

An orientation to doctoral study in educational leadership, emphasizing goal setting, research skills, and studying in a diverse community.

Prerequisite: admission to EDL doctoral program.

**EDL 762. Culture and Leadership in Education. (3)**

This core introductory doctoral seminar is designed to explore various social theories that consider the relationship between culture and educational leadership. The course will focus on a few theories that provide promise for new ways of constructing a theory of culture-based leadership.

**EDL 763. Seminar in Advanced Qualitative Research Methodology. (3)**

This course prepares doctoral students to conduct independent dissertation research utilizing qualitative research methodologies including critical narrative analysis, ethnography and case study research. As an advanced interdisciplinary seminar, students should come with some experience involving the theory and practice of person-based or textual research.

Prerequisite: EDL 683 or permission of instructor.

**EDL 764. Education and Democratic Society. (3)**

This core doctoral seminar explores educational questions of democracy, justice, and cultural difference through disciplinary lenses of the social foundations of education, primarily philosophy and history of education. Students will study, compare, contrast and critique several different conceptual frameworks for understanding democratic theory and educational practice.

**EDL 765. Curriculum, Pedagogy and Diversity. (3)**

A core doctoral seminar providing students with a foundational understanding of the historical and contemporary issues, theories, and practices that make up the curriculum field.

**EDL 771. Educational Policy Analysis. (3)**

Provides broad understanding of educational policy considerations of formulation and implementation of decisions. Conceptual and methodological conclusions about the complex nature of educational governance and organizational analysis are examined.

**EDL 772. Quantitative Research Design in Education. (3)**

Introduction to Quantitative Research in education. Students identify a research problem and apply analytic and design skills necessary to develop a dissertation proposal.

Prerequisites: EDL 661 or EDL667/EHS 667.

**EDL 774. Scholarship of Practice. (2; maximum 4)**

To cultivate the knowledge, habits and skills associated with inquiry-driven leadership through exploring, designing, and executing research around problems of practice in educational contexts. Students will gain advanced knowledge and skills related to application of research-based knowledge in educational leadership to policy and practice, including applications that address the critical challenges of improving education for all learners in complex, multicultural environments.

**EDL 775. Capstone in Educational Inquiry. (1)**

Seminar to explore major theoretical foundations used in educational research. Examines different educational researchers conceive of the concepts of knowledge and social reality and how those concepts affect educational research.

Prerequisite: EDL 683 and EDL 772.

**EDL 776. Research/Inquiry Practicum in Student Affairs/Higher Education. (3; maximum 6)**

Conduct supervised research with faculty. Students will gain hands-on experience in all aspects of research process including: framing research questions, choosing methodology and methods appropriate to the research question, Institutional Review Board approval, data collection, data analysis and interpretation, and scholarly writing.

Prerequisite: EDL 654; SAHE major or permission of instructor.

**EDL 780. Advanced Seminar in Educational Administration. (1-5; maximum 15)**

Various topics of current interest.

Prerequisite: permission of instructor.

**EDL 781. Youth, Culture and Education. (3)**

Explores youth subcultures with implications for how educators develop a culturally-relevant, engaging curriculum and pedagogy. This course applies a cultural studies and youth studies research lens for considering how representations of youth that circulate in US culture impact the way educators imagine, engage, and regulate youth in and through educational ideology, policy and practice.

**EDL 782. Social Justice and Transformation. (3)**

This course introduces major theories of social justice and links these to the practice of social justice education in schools and communities through active school-community engagement in a field-based project.

**EDL 783. Curriculum, Politics, and Policy. (3)**

This course explores how curriculum is conceived in educational policy. Students engage in critical analysis of the politics and policies of formal and informal curriculum.

**EDL 784. Power, Knowledge and Difference. (3)**

This course examines the educational and curricular consequences of the epistemological foundations of western educational philosophy. In particular the course examines the challenges posed to these foundations by diverse standpoint epistemologies, including feminist theory, critical race theory, queer theory and post colonial theory.

**EDL 785. Theorizing Gender, Sexuality, and Education. (3)**

This course examines the multiple, changing meanings and political effects of gender and sexuality in various socio-cultural and educational contexts. It foregrounds analysis of how social institutions, such as education, the law, family and economy, and cultural representations, such as literary and popular media, shape competing concepts of gender and sexuality. The course readings and collective dialogue place particular attention on feminist scholarship on women, girls and sexual minorities. Cross-listed with WGS 785.

**EDL 786. Race, Ethnicity, Education. (3)**

This course introduces key theories, concepts and epistemologies in critical race studies and considers how they frame and address educational injustice.

**EDL 787. Leadership for the Public Good. (3)**

This course is an examination of emerging models of leadership, organizational change, and leadership strategies for linking schools, families and communities. The course focuses on theoretical frameworks related to leadership and social and organizational improvement in schools and communities.

**EDL 790. Seminar in Curriculum and Supervision. (1-3)**

Intensive study of an aspect of or problem in curriculum and supervision. D. or Ed.D. and permission of instructor. Prerequisite: advanced graduate student with a major or minor in curriculum and supervision, working toward Ph.

**EDL 850. Doctoral Dissertation. (1-16; maximum 60)**

Prerequisite: doctoral admission by department and permission of adviser.

## Educational Psychology (EDP)

**EDP 101. Psychology Of The Learner. (3) (MPF)**

Critical investigation of issues, theories, and principles related to the nature of the learner and learning process, including such topics as psychological methodology, perception, cognitive processing, personality, and social dynamics, within the context of historical, social diversity, and cross-cultural perspectives. Credit not granted to students who have earned credit in PSY 111. IIC. CAS-C.

**EDP 177. Independent Studies. (0-5)****EDP 201. Human Development and Learning in Social and Educational Contexts. (3) (MPF)**

In-depth examination of theoretical issues and principles of human development and learning, including developmental changes, motivational and learning processes, exceptionalities and other individual differences, and dynamics of social groups. The ways human development and learning can be fostered within diverse social and educational contexts and the interactive influences of contextual differences on direction and nature of these processes are a major focus for systematic inquiry. IIC. CAS-C.

**EDP 209. Development, Learning & Diversity. (3)**

A student-centered multicultural exploration of existing and mythical differences perceived within and between U.S. cultural groups that are significant for human development and education such as language, intelligence, cognition, aptitude, motivation, personality, values, and attitudes. IC.

**EDP 220. Field Experience in Special Education. (1)**

Structured experiences for students to visit special education settings and inclusive settings serving individuals with a variety of exceptionalities, including early childhood, middle childhood, and adolescence. Restricted to special education pre-majors. Pre or corequisite: EDP 256.

**EDP 256. Psychology of the Exceptional Learner. (3) (MPF, MPT)**

Critical analysis of human beings considered exceptional (outside the norm) in learning and behavior. Topics include inter- and intra-individual differences comprising exceptionalities, issues surrounding identification and classification of individuals, society's responses to exceptional individuals, and societal challenges to develop the human potential of all persons. IIC.

**EDP 256E. Psy/Learners With Exception. (3)****EDP 272. Introduction to Disability Studies. (3) (MPF, MPT)**

Explores the link between the social construction of disability and that of race, class, gender, ethnicity, and sexual orientation as they pertain to social justice in a multicultural and democratic society. Promotes critical analysis of dominant and nondominant perspectives on disability. IC, IIC. CAS-C. Cross-listed with DST/SOC.

**EDP 277. Independent Studies. (0-5)****EDP 278. Women and (Dis)ability: Fictions and Contaminations of Identity. (3)**

Provides a critical analysis of the historical, sociological, cultural, media and educational images and representations of women with disabilities. Current research and theories from Disabilities Studies and Womens Studies will serve as the lenses for the exploration of disability as a social construct. The course will focus on exploration of oppressive social forces embedded in the re/presentations of and by women with disabilities which transform and complicate such images. Cross-listed with DST/WGS.

**EDP 279. Technology + Media Literacy and Learning. (3) (MPF)**

Technology + Media Literacy and Learning is a 3 credit hour course to foster technology and media literacy for undergraduate students in teacher preparation programs. This course focuses fostering knowledge in skills and integration of technology tools, media and digital resources for teaching and learning. IIC.

**EDP 301. Assessment and Evaluation in Educational Settings. (3)**

Application of measurement principles in the assessment of individual differences and learning in educational environments. Includes: formative, summative and diagnostic testing, instructional objectives and classroom tests, judging complex performance, and social and political issues with administration and interpretation of evaluation instruments.

Prerequisite: EDP 101 or 201 and junior standing.

**EDP 301A. Assessment and Evaluation in Educational Settings. (3)**

Application of measurement principles in the assessment of individual differences and learning in educational environments. Includes: formative, summative and diagnostic testing, instructional objectives and classroom tests, judging complex performance, and social and political issues with administration and interpretation of evaluation instruments.

Prerequisite: EDP 101 or 201 and junior standing.

**EDP 301M. Assessment and Evaluation in Educational Settings. (3)**

Application of measurement principles in the assessment of individual differences and learning in educational environments. Includes: formative, summative and diagnostic testing, instructional objectives and classroom tests, judging complex performance, and social and political issues with administration and interpretation of evaluation instruments.

Prerequisite: EDP 101 or 201 and junior standing.

**EDP 324. Research and Applied Writing Across the Disciplines. (3) (MPT)**

This is a three-credit hour GMP Advanced Writing course that will provide the opportunity for students to be mentored through the development of a research proposal, a literature review, and/or develop a manuscript for publication and/or a poster presentation. The overall goal of this course is to guide students in learning to develop research in their chosen field of study and write effectively using APA style for general population. Writing exercises will take the form of assignments that require the student to develop successive sections of the research proposal or other writing project until it is complete. Students will learn to (a) identify the attributes of a well written proposal, paper or poster, (b) search and cite in proper APA formatting appropriate, relevant literature (c) develop an awareness of plagiarism and ethics in science writing, (d) understand the role of constructive, critical feedback and editing and revising their writing. ADVW.

**EDP 332. Instructional Design Theory and Models. (3)**

This course is designed for students interested in exploring formal models for the design of instruction. Most commonly, these models are applied to technology-based instruction. Major models of instructional design are surveyed with an emphasis on cognitive theory, instructional design as an area of research, and instructional design as procedural knowledge. The course features implementation activities, enabling students to apply the conceptual processes described in the course.

**EDP 333. Evaluation and Assessment for Instructional Design. (3)**

Evaluation and Assessment for Instructional Design provides students with theories and practice related to needs assessment, formative and summative evaluation. At the end of the semester students should be able to assess and evaluate instructional media.

**EDP 336. Diversity, Learning & Technology. (3)**

The purpose of this course is to explore the mutual impact of diverse learner populations and technology. The focus of this course is to explore instructional design of media and technology integration that supports learner diversity in all forms. Special attention is devoted to how instructional design can support and foster inclusion of traditionally underrepresented learner populations (ESOL, special education, non-traditional learners, and economic disadvantaged learners). The goals this course is to provide strategies for designing curriculum and instruction using technology for meeting the needs of diverse, multicultural, special needs, and at-risk learners in k-12 schools. Students will engage in global connections, exploration, and analysis of various technologies to differentiate and/or accommodate instruction for students with diverse learning styles and special needs. This course will emphasize Universal Design as an inclusive model for technology integration.

**EDP 351. Miami Connections Mentoring. (1)**

This course involves students in an on-campus mentoring experience working with local high school students enrolled in the Miami Connections (Oxford) or Miami Bridges (Middletown) program. It is open to students of any major who are interested in service learning. Background checks and a one-year commitment are required.

**EDP 357. Student Mental Health. (3)**

Student mental health examines the critical issues that education and community professionals as well as parents and the general public need to address in regards to the mental health of young people in the 21st century. Throughout this course, the Response to Intervention (RTI) model with tiered intervention is followed along with the necessity of intergrating therapeutic services and practices into the school setting. Essential mental health topics and practices such as screening for at-risk students, culturally sensitive practices, crisis intervention, suicide prevention/intervention, bullying, cyberbullying, drug/alcohol abuse, and physical/sexual abuse are covered.

**EDP 366. Cross-cultural Examination of the United States and China within an Educational Context. (3) (MPF)**

This course is designed for students to gain basic knowledge, including both similarities and differences, revolving about China and America, in an educational context. The goal of this course is to help students broaden their knowledge about varying cultures in order to better understand how teachers can best help students learn and grow. The students will gain a deeper understanding of China and America and what each country faces in the years to come. Students will focus on the challenges and opportunities each culture provides to individuals through examining similarities and differences. Students will explore different culture related topics and come to a conclusion regarding their pre and post conceptions of the topic. Students will explore and research one topic more in depth to prepare for a research paper.

Cross-listed with EDL.

**EDP 375. (Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice. (3)**

Explores what it means to be ally to/in/with the disability community in America. The course emphasizes identity formation and how that formation can inform the construction of the ally identity. Through deconstructing learned values, knowledge, and images of disability that mitigate ally behavior, students discover the micro and macro structures that support ally behavior. By exploring how social control and social change have worked in other civil rights movements, students understand the necessity of identifying and including allies in the disability movement for civil rights. IC. CAS-C. Cross-listed with DST/SOC/WGS.

**EDP 377. Independent Studies. (0-5)****EDP 378. Media Illusions: Creations of "The Disabled" Identity. (3)**

Provides a critical analysis of past and present media constructions of persons with disabilities. Through exploring theory and research from diverse disciplines (communication, sociology, gerontology, educational psychology and others), students explore how perceptions of persons with disability are formed and analyze how the media is implicated in creating, distorting, and reflecting stereotypical and fictionalized images of disability. The course analyzes how these images shape public perception and reproduce the unequal power and privilege relationships that maintain the status quo while providing resources and techniques for the provision of alternative images of disability in various media genres. Cross-listed with DST.

**EDP 387. Chinese Education through Culture, Customs, History, and Development. (3)**

This course is designed for students to gain basic knowledge about the history and culture of China. The goal of this workshop is to help students gain international experiences and global perspectives on history (the past, present, and future) of China, the culture, and any related issues in order to build and enhance students' ability to work successfully in a global setting. Students will be paired with Chinese students from two universities in a large city and a small or medium sized city, respectively. Students may travel and visit different types of organizations, historical and cultural sites, as well as Chinese families in China. Travels will either be completed in actuality or virtually through the internet and other technological sources. Students will also attend lectures by carefully selected company executives and professors from both the US and China if actually traveling to China. Small group meetings and informal interviews during the travel in China will be conducted to enhance student's understanding of the observations and lectures. Cross-listed with EDP.

**EDP 405/EDP 505. Advanced Issues: Moderate/Intensive Special Education. (3)**

The course examines critical issues in educating students with moderate and intensive disabilities. Students will learn key issues and challenges in person centered planning, effective collaboration, community and wraparound supports, and advocacy that promote fully inclusive lives across school and community environments for individuals with moderate and intensive disabilities. Prerequisite: EDP 256.

**EDP 419F. Supervised Teaching in Programs for Mild/Moderate Intervention Specialist Licensure. (15)**

Includes regularly scheduled seminars with university supervisor. Frequent conferences held with cooperating teacher. Prerequisite: all EDP and required EDT methods classes.

**EDP 432/EDP 532. Assessment and Educational Planning for Children Age 3 to 8. (3)**

Discusses development and use of formal and informal assessment instruments and procedures, including observational, authentic, performance-based, classroom test, and standardized methods to plan curriculum and teaching practices with attention to interaction of individual differences with learning environments for young children who are developing typically, have disabilities, or are at biological or environment risk for developmental delay. Emphasizes interdisciplinary, transdisciplinary, and multifaceted approaches to assessment, developing individualized educational plans, and planning curriculum objectives based on assessment information. Early childhood undergraduates must take with junior field block. Prerequisite: EDP 201.

**EDP 443/EDP 543. Audiovisual Instruction: Methods, Media, and Technology. (3)**

Develops media skills that aid communication. Stresses selection, use, and preparation of educational media in instructional planning. Includes laboratories in basic production processes and equipment operation. Because of greater content and additional projects, this course may be substituted for technology requirement.

**EDP 445. Curriculum & Technology. (3)**

This class is designed to support P-12 educators in (1) addressing the mutual impact of technology and curriculum and (2) integrating technology to enhance teaching and learning. The focus is to produce teacher-created, learner-centered materials for effective technology integration. Class participants will work both independently and collaboratively to develop curriculum and design a project that integrates technology for effective teaching or learning.

**EDP 446. Educational Interactive Design. (3)**

This course focuses on developing an understanding of theory and production of interactive technologies and media for teaching and learning. While the emphasis will be on educational and training application, this course will also look at how interactive media can be used in non-traditional educational environments.

**EDP 447/EDP 547. eLearning in K-12 Education. (3) (MPC)**

This course surveys models of eLearning in K-12 educational environments and focuses on developing an understanding of the current state of eLearning in K-12 schools ranging from classroom examples to fully online and distance learning environments. This course provides experience in (1) evaluating electronic resources for use in eLearning environments, (2) designing and developing eLearning instructional modules for online learning systems, (3) planning for use of eLearning tools in assessment. This course will provide both a broad overview of the emerging role of eLearning in K-12 education as well as opportunities to design eLearning materials for students' unique major/career emphasis.

**EDP 450/EDP 550. Special Problems. (1-4)**

Course in varying special topics areas.

**EDP 454/EDP 554. Mathematics Curriculum & Adaptations for Children with Mild/Moderate Disabilities. (3)**

Provides instruction on mathematics curriculum, methods, and materials for adapting instruction for individuals with mild/moderate exceptionalities in various educational settings, K-12. Emphasizes developmentally, culturally, and individually appropriate adaptations in mathematics with a goal toward giving students access to and success with general educational standards in the curriculum.

**EDP 456/EDP 556. Advanced Seminar in Evaluation with Evidence-Based Interventions. (3)**

Advanced seminar oriented toward the development of competencies in formative assessment and teaching using evidence-based interventions (EBIs). Students will learn to lesson plan with EBIs and to evaluate student performance and responsiveness to interventions using formative assessments, assessment systems, and reflective journaling. There is a service component required in this course involving the provision of interventions to children who are struggling learners and/or English Language Learners. Upon completion of the course, students will be able to evaluate EBIs, collect and make sense of instructional data, and have the necessary elements to write and/or contribute to a report on a student's responsiveness to intervention. Prerequisite: School Psychology Program Admission and/or Senior status as a Special Education Student for Capstone Course.

**EDP 458/EDP 558. Methods I: Learners with Moderate to Intensive Needs. (3)**

Focuses on curricular and instructional strategies for supporting learners aged 5-21 who have moderate to intensive needs in inclusive school settings. Emphasizes planning and implementing developmentally, culturally and individually appropriate practices and methods for successful learning, using principles of Universal Design for Learning, inclusive practice and evidence based practice in transition planning.

**EDP 459/EDP 559. Practicum in Special Education. (3; maximum 3)**

Provides guided field experiences in instructing children with mild/moderate disabilities. Focus is on application of theory and research in curriculum development, educational technology, applied behavior analysis, assessment, and the development of instructional skills. Prerequisite: EDP 256.

Co-requisite: EDP 495/EDP 595.

**EDP 459G. Practicum in Special Education: Moderate/Intensive. (3)**

Provides guided field experience in instructing children with moderate/intensive needs. Focus is on the application of theory and research in curriculum development, educational technology, applied behavior analysis, and the development of instructional skills.

Prerequisite: EDP 457.

Co-requisite: EDP 458/EDP 558/558.

**EDP 460. Action Research/Problem-Based Seminar in Exceptional Education/Developmental Differences. (3) (MPC)**

Provides opportunity to develop, implement, and evaluate an action research or action service project related to identification, psychology, education, and/or treatment of individuals whose development is exceptional. Provides intensive seminar; instructor and peers share the research/problem-solving process and prepare written and oral reports that describe the project and document the student's accomplishments.

Prerequisite: senior standing.

**EDP 468/EDP 568. Methods II for Learners with Moderate - Intensive Needs. (3)**

The course is focused on student centered planning to examine curricular and instructional methods and strategies for supporting children and youth who have moderate/intensive needs in inclusive settings. This course emphasizes planning and implementing individually appropriate methods, assessments, goals, adaptations and accommodations in inclusive settings.

Prerequisites: EDP 256 and EDP 458/EDP 558.

**EDP 471/EDP 571. Literacy Seminar: Clinical. (3; maximum 6) (MPC)**

Problem-based seminar designed to provide opportunities for students to learn, practice, and evaluate instructional approaches to teaching literacy skills (reading, writing, and spelling) to school-age children with written language disabilities. Students receive intensive training in literacy and work in tutorial settings. Seminar discussions focus on issues of literacy skills, and approaches for working with these children.

**EDP 472/EDP 572. Literacy Seminar: Practicum. (3; maximum 6)**

Explores reading methods and strategies outside of the standard for learners with exceptionalities; explores technology as a means to accessible literacy.

Prerequisite: EDP 256 and EDP 494/EDP 594.

**EDP 477. Independent Studies. (0-5)****EDP 478/EDP 578. Effective Social Skills Development, Collaboration and Transition Planning in Special Education. (3)**

Examines impact of exceptionality on families. Emphasizes home-school relationships, resource development, and collaboration between professionals and parents. Emphasizes communication, collaboration and conflict resolution skills. Explores the legal mandates for transition planning and need for community resources. Examines methods for developing social and affective skills in children and youth with exceptionalities.

**EDP 479/EDP 579. Autism: Introduction and Current Research. (3)**

This course provides an overview of autism spectrum disorders (ASD). The course content examines the psychological, social, and educational characteristics of individuals who have been identified as having ASD. Prevalence rates, recent changes in definition/diagnostic criteria (e.g., DSM-5) and controversial issues will be reviewed.

**EDP 482/EDP 582. Autism Spectrum Disorder: Best Practice in Teaching Strategies. (3)**

This course will focus on evidence-based teaching strategies for the children with Autism Spectrum Disorder in the inclusive classroom. Students will learn best practice in classroom instruction, including integrating technology and visual supports into the classroom for students with Autism Spectrum Disorder.

**EDP 483/EDP 583. Game-based Learning Design. (3)**

This course offers students the opportunity to explore the use of games and simulated environments for teaching and learning. The three main topics investigated in this course are: (a) the integration of popular games for teaching and learning, (b) serious and educational games, and (c) the integration of game design elements for teaching and learning. In addition, this course aids students in understanding how learning theories can inform the design of serious and educational games for instructional design.

Prerequisite: junior/senior or graduate standing.

**EDP 484/EDP 584. Autism Spectrum Disorder: Social and Communication Development. (3)**

This course provides an overview of the unique communication and social characteristics of individuals with autism spectrum disorders (ASD) and teaches an array of strategies and methods for developing social and communication skills. Appropriate supportive frameworks to enhance social and communication development will be explored.

**EDP 485/EDP 585. Autism Spectrum Disorder: Positive Behavior Supports and Interventions. (3)**

This course will focus on evidence-based behavioral supports & interventions for the inclusive classroom for students with Autism Spectrum Disorder. Students will learn best practices in behavior management, including components of Applied Behavior Analysis, positive reinforcement, contingency plans and token economy systems.

**EDP 486/EDP 586. Methods I: Learners with Mild/Moderate Disabilities. (3)**

The content of this course will examine the roles assessment, instructional framework, and implementation of evidenced based practice have on the development and progress towards the academic and behavioral goals of students with mild to moderate disabilities. A lifespan view of intervention models that will support inclusive practices that provide access to general education curriculum will be explored.

Prerequisites: EDP 201, EDP 220 and EDP 256.

**EDP 489. Disability in Global and Local Contexts. (3) (MPC)**

Examines contemporary disability issues and policies and the lived experiences of persons with disabilities in international and local contexts, with emphasis on understanding disability within particular communities-both locally and in other countries-and on learning multiple research methods. IC.

Prerequisite: permission of instructor.

Cross-listed with DST/ENG 494.

**EDP 491/EDP 591. Methods II: Learners with Mild to Moderate Disabilities. (3)**

The content of this course will examine the roles assessment, instructional framework, and implementation of evidenced based practice have on the development and progress towards the academic and behavioral goals of students with Learning Disabilities, Mild Cognitive Disabilities and Behavior disorder. A lifespan view of intervention models that will support inclusive practices that provide access to general education curriculum will be explored.

Prerequisites: EDP 256.

**EDP 494/EDP 594. Assessment, Evaluation, and Educational Planning for Learners with Exceptionalities. (3)**

Construction and use of formal, informal, and authentic assessment related to adapting content and teaching strategies in reading, spelling, writing, oral communication, mathematics, and other areas for children and youth with exceptionalities (including individuals with mild/moderate and moderate/intensive needs; gifted).

**EDP 495/EDP 595. Critical Inquiry in Special Education. (3)**

Critical inquiry in special education provides future teachers with the skills they need to become scholarly lifelong learners. Using methods for conducting systematic literature searches, the student will critically analyze an area of interest related to special education for further exploration and to advance depth of student understanding that will culminate into a written paper and public presentation. The student will also learn about methods for collecting data and develop competency in professional writing.

Co-requisite: EDP 459F/559F, 459G/559G, or 459H/559H.

**EDP 495E. Inclusion and Adaptations for Mild/Moderate and Gifted Needs: Early Childhood. (3)**

Provides instruction on adapting curriculum, methods, and materials for individuals with mild/moderate exceptionalities and/or giftedness in inclusive settings. Emphasizes adaptations in reading, math, social studies, science, and language arts as developmentally and culturally appropriate for early childhood (ages 3 to 8).

**EDP 496/EDP 596. Behavioral Interventions: Theory, Principles, and Techniques. (3)**

Emphasizes theoretical foundations of the behavioral model with supporting research. Presents a variety of proactive techniques for increasing appropriate behavior and for prevention and reduction of problematic behaviors. Emphasizes positive, proactive treatment approaches using the least restrictive treatment model for individual and group interventions. Addresses applications for individuals with exceptionalities mild/moderate, moderate/intensive, and gifted.

Co-requisite: specialist methods block (EDP 495/EDP 595).

**EDP 600. Independent Reading. (1-5; maximum 8)**

Planned reading in any field related to educational psychology with faculty guidance.

Prerequisite: regular standing in graduate school, eight hours in education including four hours graduate credit, and approval of plan by department chair.

**EDP 601. Advanced Educational Psychology. (3)**

Prepares student to critically evaluate existing educational practice and to innovate sound practices in light of theoretical and empirical findings of educational psychology.

Prerequisite: eight hours of education including educational psychology.

**EDP 603. Theories of Human Learning. (3)**

Examines major theoretical perspectives concerning the process of how human beings learn. Historical, as well as contemporary views of the biological, behavioral and cognitive bases of human learning are presented. Considers how cultures (ethnic, gender, and systemic) influence the process and mode of learning. Involves direct application of theoretical approaches to classroom instruction. Critical analysis of these theories and current research are emphasized to facilitate students' understanding of the complex process of learning.

**EDP 604. Role and Function of the School Psychologist. (3)**

Survey of current practices in the field of school psychology and examination of emerging models. Attention to school psychological service in the organization of schools, relationships with other pupil personnel workers, ethics, state standards, and various other related issues.

Prerequisite: admission to school psychology program or permission of instructor.

**EDP 605F. Supervised Field Experience: Mild/Moderate Intervention Specialist. (1-12)**

Full-time supervised field experience in student's area of specialization. Experience provided at early, middle, and/or adolescent levels within current program models and standards.

Prerequisite: admission to graduate program in special education and completion of all course work in the licensure area.

**EDP 607. Educational Measurement and Evaluation. (3)**

Principles of measurement and evaluation applied to educational contexts. Includes instructional objectives, construction of teacher-made tests, assessing complex performance, determining grades, standardized testing, measuring individual differences, and using test data for decision-making.

**EDP 611. Psychoeducational Assessment and Interventions I. (5)**

Provides foundation in a variety of assessment areas and methodologies that lead to development, implementation, and evaluation of interventions. The school psychologist is viewed as a scientist practitioner using a problem-solving orientation in working with students experiencing behavioral and/or academic problems. Emphasis on analyses of assessment information with the goal of developing successful interventions.

Prerequisite: admission to school psychology program.

**EDP 612. Psychoeducational Assessment and Interventions II. (5)**

Provides foundation in a variety of assessment areas and methodologies that lead to development, implementation, and evaluation of interventions. The school psychologist is viewed as a scientist practitioner using a problem-solving orientation in working with students experiencing behavioral and/or academic problems. Emphasis on analyses of assessment information with the goal of developing successful interventions.-

Prerequisite: admission to school psychology program.

**EDP 620. Research Project. (1-3)**

Individual research to satisfy research project requirement for master's degree.

Prerequisite: EDP 651, 667, and permission of department chair.

**EDP 631. Foundations of Instructional Design and Technology. (3)**

This course provides a foundation of Instructional Design and Technology (IDT) and an overview of the field a. Students will learn about the theoretical foundations of the field and of the program. Some software will be introduced.

**EDP 632. Instructional Design Theory and Models. (3)**

This course provides an opportunity for students to analyze, synthesize, and evaluate instructional design models based on learning theories and principles, while taking into account various situations and differences of learners. Students will acquire the knowledge, skills, and abilities necessary to provide leadership in the area of instructional design.

**EDP 633. Evaluation and Assessment for Instructional Design. (3)**

Evaluation and Assessment provides students with theories and practice related to needs assessment, formative and summative evaluation. At the end of the semester students should be able to assess and evaluate instructional media.

**EDP 635. Theories of Human Development. (3)**

Involves broad perspective of human development with primary focus upon theories as well as historically significant and contemporary research. Theoretical and research applications considered within the context of educational settings and in other areas of helping professions.

**EDP 636. Diversity, Learning & Technology. (3)**

The purpose of this course is to explore the mutual impact of diverse learner populations and technology. The focus of this course is to explore instructional design of media and technology integration that supports learner diversity in all forms. Special attention is devoted to how instructional design can support and foster inclusion of traditionally underrepresented learner populations (ESOL, special education, non-traditional learners, and economic disadvantaged learners). The goals of this course are to provide strategies for designing curriculum and instruction using technology for meeting the needs of diverse, multicultural, special needs, and at-risk learners in k-12 schools. Students will engage in global connections, exploration, and analysis of various technologies to differentiate and/or accommodate instruction for students with diverse learning styles and special needs. This course will emphasize Universal Design as an inclusive model for technology integration.

**EDP 637. Blended and Online Learning Design. (3)**

This course teaches concepts and design for blended and online learning. In addition, this course aids students, teachers and instructional designers in the development of distance education concepts: theory, administration, programs, methods, practice and curriculum development.

**EDP 639. Trends in Instructional Design and Learning Analytics. (3)**

The intent of the course is to acquaint instructional technologists, teachers and administrators with critical challenges posed as a result of the increasing infusion of technology and learning analytics into the school and training environments. Students will exchange ideas about issues and trends with others through reports and leading discussions.

**EDP 641. Visual Design for Instruction. (3)**

This course is designed to provide participants with a sense of how visual images can be employed in the instructional design process. Digital imagery, visual design, motion design and imaging software are vehicles for studying the use of visual images in training and education.

**EDP 643. Interactive Design. (3)**

This course focuses on developing an understanding of theory and production of interactive design primarily for teaching and learning. While the emphasis will be on educational and training application, this course will also look at how interactive media can be used in non-traditional educational environments.

**EDP 645. Curriculum and Technology. (3)**

This class is designed to support P-12 educators in addressing the mutual impact of technology and curriculum and integrating technology to enhance teaching and learning. The focus is to produce teacher-created, learner-centered materials for effective technology integration. Class participants will work both independently and collaboratively to develop curriculum and to design a project that integrates technology for effective teaching or learning.

**EDP 648. Capstone Project. (3-6; maximum 6)**

Each student in the MA in Instructional Design & Technology or the MEd in Educational Technology are required to complete an experiential learning capstone project. Students will be guided to initiate a proposed topic. Each student in tandem with her/his faculty advisor will determine negotiate the scope, scale, criteria, and evaluation of the project.

Prerequisites: Completion of at least eight of the program courses.

**EDP 650. Seminar in Special Education. (3; maximum 9)**

In-depth study of specific topics in education of exceptional children and youth. Maximum hours toward graduate degree in special education are 16. Topics will be announced.

Prerequisite: permission of instructor.

**EDP 651. Educational Research. (3)**

Introduction to and critical study of research practices and reporting processes.

**EDP 652. Educational Research Practicum. (3)**

Practicum in research.

Prerequisite: EDP 651.

**EDP 654. Counseling Practicum. (4; maximum 4)**

Supervised counseling experience.

Prerequisite: EDP 672 and permission of instructor.

**EDP 655. Theory and Problems in Educational Measurement. (3)**

General concepts of reliability and validity and their implications in educational measurement are discussed. Interpretations and misinterpretations are presented with regard to standardized testing as well as seminar approaches to current issues and problems in educational measurement.

Prerequisite: EDP 667.

**EDP 656. Education of Individuals with Exceptionalities. (3)**

Advanced analysis of each exceptionality from an educational point of view. Topics include inclusion, inter- and intra-individual differences comprising exceptionalities, issues surrounding identification, classification of individuals, society's responses to exceptional individuals, and societal changes to develop the human potential of all persons.

**EDP 660. Practicum in School Psychology Practice. (4; maximum 4)**

Supervised practice using a variety of diagnostic/consultative procedures to discover nature and underlying causes of school difficulties and familiarization with current school psychology practice.

Prerequisite: at least 10 hours credit in study of individual psychological tests and approval of instructor.

**EDP 662. Social, Emotional, and Behavioral Assessment. (3)**

Discussion of normal and abnormal personality with emphasis on personality structure and dynamics of school aged children. Introduction to certain personality measures/techniques and implications for their use are examined.

Prerequisite: permission of instructor.

**EDP 666. Educational Consultation, Collaboration, and Community Psychology. (3)**

Application of consultation and collaboration processes to the school setting. Utilization of community and school resources in the prevention and resolution of child and adolescent behavior and learning problems. Methods, techniques, and skills in interviewing, consultation, collaboration, and mental health practices.

Prerequisite: graduate standing and approval of the instructor.

**EDP 667. Behavioral Statistics I. (3)**

Basic concepts of descriptive and inferential statistics. Stresses logical interpretation of results.

**EDP 669. Qualitative Research in Educational Psychology. (3)**

Offers a case study approach (as opposed to ethnography or action research) to qualitative research consistent with educational psychology research methods.

Prerequisite: graduate standing.

**EDP 672. Counseling Theories and Issues. (3)**

Developing understanding of the nature of the counseling relationship.

Prerequisite: graduate standing.

**EDP 677. Independent Studies. (0-5)****EDP 688. SPSS Series I. (3)**

The goal of this course series is to prepare students with enough working knowledge to use SPSS Statistical Software to start research analyses for their graduate research projects, theses, and dissertations. This is the basic introduction course that deals with data management including creating a SPSS data file, entering data and defining all components and descriptive statistics including creating new variables and conducting analyses and presenting the results. Students will learn the materials and practice in a computer lab and review as well as practice on-line for a week before coming back to the computer lab for the summary and questions and answers section. Students will take web-based tests, and conduct a major project and a few minor projects. Students will post their projects on the web site for the corresponding section. Each student is also required to review other students' projects and provide on-line comments and feedback to at least two other students' projects.

**EDP 689. SPSS Series II. (3)**

The goal of this course series is to prepare students with enough working knowledge to use SPSS Statistical Software to conduct research analyses for their graduate research projects, theses, and dissertations. This is a more sophisticated course dealing with more complicated, inferential statistics including conducting basic and more difficult inferential statistical analyses, basic and more difficult inferential statistical output file reading, conducting simple path analyses and creating and examining structural relation models using AMOS. Students will learn the materials and practice in a computer lab and review as well as practice on-line for a week before coming back to the computer lab for the summary and questions and answers section for each one-hour workshop in this series. Students will take web-based tests, and to conduct a major project and a few minor projects. Students will post their projects on the web site for the corresponding section. Each student is also required to review other students' projects and provide on-line comments and feedback to at least two other students' projects.

**EDP 690. Seminar in Educational Psychology. (1-3)**

Varying topics in educational psychology.

Prerequisite: EDP 601 or permission of instructor.

**EDP 695. Supervised Public School Experience for School Psychology Students. (2; maximum 4)**

Thirty clock hours of on-site observation/participation per credit hour in public schools at a variety of grade levels, including various cultural/ethnic settings and special education classes.

Prerequisite: permission of instructor.

**EDP 700. Research for Master's Thesis. (1-12)**

Required for MA program.

Prerequisite: permission of instructor.

**EDP 795. Internship for Educational Specialist Degree in School Psychology. (7)**

Full-time experience with supervision of university faculty and qualified school psychologists in selected school districts.

Prerequisite: completion of all regular courses in the educational specialist curriculum and permission of department chair.

**EDP 796. Internship for Educational Specialist Degree in School Psychology. (7)**

Full-time experience with supervision of university faculty and qualified school psychologists in selected school districts.

Prerequisite: completion of all regular courses in the educational specialist curriculum and permission of department chair.

**EDP 800. Specialist Degree. (1-10)**

## Electrical & Computer Engineering (ECE)

**ECE 102. Introduction to Electrical and Computer Engineering. (3)**

This course introduces students to electrical and computer engineering. The course focuses on various computing and engineering tools used in the profession. Students will apply these tools to complete homework assignments and labs required throughout the course. This course is open to all majors.

**ECE 177. Independent Studies. (0-5)****ECE 205. Electric Circuit Analysis I. (4)**

Study of electric circuits and networks. Includes resistive circuits, first-order transients, sinusoidal steady-state analysis, and frequency response. Emphasis on basic principles and their application to circuit analysis using linear algebra and calculus. Laboratory component included. 3 Lec 1 Lab.

Prerequisite: PHY 192.

Prerequisite or Co-requisite: MTH 251 or equivalent.

**ECE 248. Introduction to Electrical System Design Methods and Practice. (3)**

This course will introduce students to the study and practice of design methods for teams of engineers creating systems. The course will focus on introducing students to modern design methodologies used in the electrical and computer industry to create products including requirements analysis and conception, design, production, testing, and maintenance. Topics include estimating tasks, feature additions and cuts, alpha cuts, beta tests, and team organization and management. Students, in small teams, will practice what they have learned by creating a project using techniques from a particular design methodology (For example, agile development). Students will then reflect on how their chosen methodology impacted the success/failure of their project.

Prerequisite or Co-requisite: CEC/CPB/ECE/MME 102.

**ECE 277. Independent Studies. (0-5)****ECE 287. Digital Systems Design. (4)**

Topics include switching algebra and switching functions, logic design of combinational and sequential circuits using TTL, combinational logic design with MSI and LSI, busing, flip-flops, registers, counters, programmable logic devices, memory devices, register-level design, and microcomputer system organization. Students must show competency in the computer-aided design (CAD) and laboratory implementation of digital systems.

3 Lec. 1 Lab.

**ECE 289. Computer Organization. (3)**

Study of the design and interconnection of digital hardware to create computers. Includes principles of Von Neumann computer architecture, data representation, computer arithmetic, memory hierarchy, CPU structure and instruction sets, assembly language programming, performance considerations and alternative computer architectures.

Prerequisites: ECE 287 and either CSE 174 or CSE 153.

**ECE 291. Energy Systems Engineering. (3)**

This course studies power producing systems using fossil and renewable energy sources. The components and operations of power producing systems such as hydro, thermal power plant, nuclear reactor, solar panel, wind turbine, and bioreactor are investigated. Economic decisions and societal and environmental consequences of using various energy sources are emphasized.

Prerequisites: PHY 121, 162 or 192 or the instructor's permission.

**ECE 301. Advanced Circuits and Fundamentals of Renewable Energy. (3)**

This course addresses second order circuits, Laplace transforms, AC power analysis, poly-phase circuits, magnetically coupled circuits, rotating machines, and advanced topics in circuits and renewable energy. The course lectures expose students to the theories and concepts of electrical engineering as well as applying these concepts to solving problems relevant to real world applications.

Prerequisites: ECE 205, and MTH 245 or MTH 347.

**ECE 302. MATLAB and its engineering applications. (3)**

This course will introduce students to MATLAB programming and its applications in engineering problem solving. MATLAB topics include: programming fundamentals, display and visualization, and advanced topics. Mathematical concepts and theories essential to engineering disciplines will be reviewed and used as practice examples. Students will apply programming skills to solve practical problems, such as circuit analysis, mechanical vibrations and structure analysis, radar pulse compression, image processing, fractals, etc.

Prerequisites: PHY 192 and MTH 251, or permission of instructor.

**ECE 303. Computer-Aided Experimentation. (3)**

Study of theory and application of instrumentation and experimentation including: components and concepts of computer-machine interface systems; design of computer-controlled experimentation for real-time industrial measurement, monitoring, and control; AC power analysis; applications of the Laplace Transform. Laboratory component included.

2 Lec. 1 Lab.

Prerequisite: ECE 205.

Prerequisite or Co-requisite: MTH 245 or MTH 347.

Cross-listed with MME.

**ECE 304. Electronics. (3)**

Analysis and design of electronic circuits and subsystems; study of diodes, transistors, and operational amplifier characteristics; amplification, frequency response and feedback in small signal amplifiers; applications of electronic devices and circuits.

2 Lec. 1 Lab.

Prerequisite: ECE 205 and MTH 245 or MTH 347.

**ECE 306. Signals and Systems. (3)**

Study of the principles of signals and systems. The course combines lectures, simulation laboratory exercises, and/or design projects to expose students to the theories and concepts of both continuous-time and discrete time forms of signals and systems, as well as applications of the theories and concepts in communication systems, control systems, and signal processing.

Prerequisites: ECE 205 or PHY 292/294.

Prerequisite or Co-requisites: MTH 245 or MTH 347.

**ECE 314. Elements of Robotics. (3)**

Introduction to robotics, including: microprocessor, programming, image analysis, diodes, transistors, comparators, H-bridge, motors, active and passive sensors.

Prerequisites: ECE 205, and ECE 102 or CEC/CPB/CSE/MME102.

**ECE 320. Professional Practice. (0)**

Students participating in the ECE co-op program register for this course during semesters when they are away from Oxford on work assignment.

**ECE 325. Applied Electromagnetics. (3)**

Theories and applications of electromagnetic fields and waves; Including electrostatics, magnetostatics, Maxwell's Equations, plane wave propagation and reflection, transmission lines, and antennas.

Prerequisites: ECE 205 and MTH 252 and either MTH 245 or MTH 347.

**ECE 340. Internship. (0-20)****ECE 345. Applied Probability and Statistics for Engineers. (3) (MPT)**

Introduces probability and statistics, including applications relevant to electrical and computer engineering. Includes extensive coverage of random variables and introduces random processes.

Prerequisite: MTH 251 or equivalent.

**ECE 353. Software Defined Radio. (3)**

This course introduces concepts of software defined radio through lectures and experiments. Students will apply signal processing theories and techniques to build AM/FM radios and more advanced digital communication systems using software defined radio kits.

Prerequisites: ECE 102 (or equivalent), CSE 174 and ECE 306.

**ECE 370. Intermediate Special Topics. (1-3; maximum 6)**

Study of practical electrical and computer engineering technologies used in the industry, such as programming logic control, printed circuit board, universal software radio peripheral. Topics may vary.

Prerequisite: ECE 205.

**ECE 377. Independent Studies. (0-5)****ECE 387. Embedded Systems Design. (4)**

Fundamentals of computer systems design. Interfacing and basics of embedded computers (microprocessors). Laboratory projects will require students to successfully design, implement, debug, and document computer solutions requiring a mix of hardware and software. Models and methodologies for designing systems containing hardware and software. Models and methodologies for designing systems containing both hardware and software components, or co-design, will be introduced. Substantial design projects will be required of each student.

3 Lec. 1 Lab.

Prerequisites: ECE 287, CSE 153 or CSE 174.

**ECE 395. Undergraduate Research Immersion Project. (1-3; maximum 3)**

This course will introduce students to a special topic in an area of science and/or technology. Students will conduct an in-depth research project. Through carrying out the project, students will experience and reflect on the research process, including literature review, information evaluation, problem definition, data analysis, results interpretation, and potentially a peer-reviewed publication. This course is typically offered only for study-abroad or study-away workshops.

Prerequisites: PHY 192 and MTH 251, or permission of instructor.

**ECE 425/ECE 525. Digital Signal Processing. (3)**

This course investigates the relation between continuous-time and discrete-time signals and processing of discrete-time signals.

Topics include sampling theory, signal representation, quantization noise, transformation and manipulation of digital signals, digital filter structure and design.

Prerequisite: ECE 306.

Prerequisite or Co-requisite: ECE 345 or STA 301, or permission of instructor.

**ECE 426/ECE 526. Biomedical Signal Analysis. (3)**

Physiological origin, characterization, modeling, and analysis of biomedical signals, including EEG, MEG and ECG signals. Noise and artifact reduction; nonparametric and model-based spectral estimation; joint time-frequency analysis.

Prerequisites: ECE 306, and STA 301 or ECE 345.

**ECE 427/ECE 527. Radar Signal Processing. (3)**

Principles, theories and techniques of radar signal processing. Including: elements of radar systems; radar equation; sampling and quantization of pulse radar signals; radar waveforms; Doppler processing; target detections; and concepts of synthetic aperture imaging and beamforming.

Prerequisites: ECE 306, and either STA 301 or ECE 345.

**ECE 429/ECE 529. Digital Image Processing. (3)**

Study of digital image processing techniques, digital image fundamentals, digital image spatial filtering, digital image frequency filtering, image restoration, inverse filtering, Wiener filtering, and color image processing fundamentals.

Prerequisite: ECE 425/ECE 525 or ECE 426/ECE 526.

**ECE 430/ECE 530. Electromagnetics in Wireless Sensing and Communications. (3)**

Introduces electromagnetic aspects of modern wireless sensing and communications. Covers fundamentals of Electromagnetic (EM) wave propagation in various media, antenna design and wireless system analysis. Hands-on experience with computational modeling and contemporary EM software is provided.

Prerequisite: ECE 325.

Prerequisite or Co-requisite: STA 301 or ECE 345.

**ECE 436/ECE 536. Control of Dynamic Systems. (3)**

An in-depth study of the theory, design, and analysis of feedback control of dynamic systems. Integrate the problem-solving techniques and concepts of electric circuits and computer-aided experimentation into the design and construction of programmable-logic based control systems and its application in modern manufacturing systems. Design methodologies applied in lab exercises and short-term design projects.

2 Lec. 1 Lab.

Prerequisite: ECE 205 and (MTH 245 or MTH 347).

Prerequisite or Co-requisite: ECE/MME 303.

Cross-listed with MME.

**ECE 448. Senior Design Project. (2) (MPC)**

Student teams, with varied academic backgrounds, conduct major open-ended research/design projects. Elements of the design process are considered as well as real-world constraints, such as economic and societal factors, marketability, ergonomics, safety, aesthetics, and ethics; feasibility studies performed.

Prerequisite: ECE 306 or MME 312 or MME 314 and senior standing in student's major.

Cross-listed with MME.

**ECE 449. Senior Design Project. (2) (MPC)**

Continuation of ECE 448. Student teams, with varied academic backgrounds, conduct major open-ended research/design projects; implementation, testing, and production of design. Nonmajors can register for 1-2 credits.

Prerequisite: senior standing in student's major and (MME 448 or ECE 448).

Cross-listed with MME.

**ECE 453/ECE 553. Communication Systems. (3)**

This course introduces students to basic communication system principles and practice. Topics include modulation, demodulation and multiplexing techniques. System design and performance analysis will also be covered.

Prerequisite: ECE 306 and ECE 345 or STA 301; or permission of the instructor.

**ECE 461/ECE 561. Network Performance Analysis. (3)**

Modeling and performance analysis of computer and communication networks including delay and occupancy models in networks, architectures, transmission media, multiple access, switching, and protocols. Emphasis is on lower layer network performance.

Prerequisites: ECE 345 or STA 301; or permission of instructor.

**ECE 470/ECE 570. Special Topics. (3)**

Advanced special topics in electrical and computer engineering.

Prerequisite: Permission of instructor.

**ECE 477. Independent Studies. (1-5)****ECE 484. Embedded Systems Design. (3)**

Models and methodologies for designing systems containing both hardware and software components, or co-design, will be introduced. Computer engineering applications are emphasized. Design projects will be required of each student.

2 Lec. 1 Lab.

Prerequisites: ECE 287, CSE 174, ECE 314.

**ECE 487/ECE 587. Computer Aided Design Tools for Computer Engineering. (3)**

This course focuses on the understanding and creation of tools for design in related applications such as VLSI design, FPGA design, 3D printing, DSP design, and parallel and high-performance computation. This study will include focus on both advanced algorithms and structure/architecture of the target technologies. The course will include at least one major design project that will require students to extend (add features) to an existing software base.

Prerequisite: CSE 274 or ECE 289, or equivalent.

**ECE 491/ECE 591. Power Systems Engineering. (3)**

Study of electric power generation, utility load flow, fault analysis, system stability, surge protection, and the interconnection of the electrical grid system.

Prerequisite: ECE/MME 303.

**ECE 493/ECE 593. Power Electronics. (3)**

This course studies the analysis, design, and application of power electronic circuits. It covers the switching characteristics of power semiconductors, PWM (Pulse Width Modulation) techniques for voltage and frequency control, and the DC to DC, DC to AC, and AC to DC power converters.

Prerequisite: ECE/MME 303 and (ECE 304 or PHY 292 and PHY 294).

**ECE 495/ECE 595. Electric Machinery and Drives. (3)**

This course studies the principle, operation and control of electric machinery. The topics include DC generators and motors, induction machines, synchronous machines and the position, speed and torque control of these machines.

Prerequisites: ECE/MME 303 or ECE 305 or (PHY 292 and PHY 294).

**ECE 601. State Variables for Engineers. (3)**

This course provides a description of state variable theory as applied to engineering principles covering continuous and discrete systems and transform theory. Various methods to determine the fundamental matrix of a linear system will be investigated. Recommended prerequisites include signals and systems, differential equations, and linear algebra.

**ECE 610. Graduate Seminars. (1-3)**

Weekly presentations on current research topics in multi-disciplinary areas of electrical and computer engineering, computational science and engineering, and their applications in other disciplines by graduate students, faculty, and visiting scientists and researchers. Research methods, processes, and presentation skills are emphasized. Approved for credit/no-credit grading only. May be repeated.

**ECE 625. Advanced Digital Signal Processing. (3)**

After taking this class, students should be able to (1) model a stochastic process; (2) apply Wiener and Kalman filtering in different engineering applications; (3) design an adaptive filter with different updating algorithms and apply the adaptive filter in signal processing applications such as modeling and equalization; (4) apply multirate signal processing in engineering applications such as communications; and (5) estimate power spectrum of random signals.

**ECE 661. Advanced Optical Network Architectures. (3)**

This course covers advanced optical network architectures, algorithms, and protocols. Architectural aspects of the course include wavelength-division-multiplexing and elastic optical networks; optical circuit, burst, and packet switching; and optical data center networks. Algorithms and protocols will cover routing and spectrum allocation, survivable and secure network design, GMPLS- based and software-defined-networking-based control planes, application-based network operation, and statistical modeling of optical networks.  
Prerequisite: ECE 461/ECE 561 or permission of instructor.

**ECE 670. Advanced Topics in Electrical and Computer Engineering. (1-3; maximum 6)**

Advanced topics in electrical and computer engineering. Students may repeat the course if the contents offered are sufficiently different.  
Prerequisite: graduate standing and permission of course instructor or coordinator.

**ECE 677. Independent Studies. (0-5)****ECE 695. Graduate Research Project. (1-2; maximum 3)**

Individual research to satisfy the research project requirement for the MS in Computational Science and Engineering course intensive (non-thesis) option, Electrical and Computer Systems concentration. Maximum of three credits can be applied to graduation for the course intensive (non-thesis) option. Not open to Research (thesis) option students.  
Prerequisite: graduate standing and permission of instructor or academic adviser.

**ECE 700. Research for Master's Thesis. (0-9)**

Study under graduate faculty supervision of a research problem related to electrical and computer systems. Maximum of six credit hours of ECE 700 may be applied toward fulfillment of the thesis research requirement for the Master of Science in Computational Science and Engineering.  
Prerequisite: permission of student's graduate advisor.

**ECE 704. Non-Thesis Project. (0-12; maximum 12)**

This repeatable course is for non-thesis culminating experiences. Permission of the instructor is required.

## Engineering Management (EGM)

**EGM 177. Independent Studies. (0-5)****EGM 277. Independent Studies. (0-5)****EGM 377. Independent Studies. (0-5)****EGM 411/EGM 511. Leading and Managing Projects. (3)**

Addresses fundamental aspects of leading and managing complex projects including: organizational leadership, strategic planning and project selection, project life cycle planning, estimating project schedule and cost, planning, organizing, directing and monitoring resources, analyzing and managing risk, team building and conflict management, assessing progress and performance, project audit and closure, and related topics.  
Prerequisites: STA 301, ECE 345, ISA 205, or STA 261; or equivalent.

**EGM 477. Independent Studies. (0-5)**

## English Studies (EGS)

**EGS 177. Independent Studies. (0-5)****EGS 215. Workplace Writing. (3)**

Practice in varieties of workplace correspondence and communication with emphasis on writing clear, concise, and accurate informal and formal reports, including email, resumes, cover letters, incident reports, accident reports, sales reports, marketing plans, activity reports, progress reports, change controls, evaluation/performance reports, recommendation reports, and white papers. ADVW.

**EGS 277. Independent Studies. (0-5)****EGS 301. Writing and the Professions. (3)**

Immersive study of multimodal writing practices in various professional disciplines. Reading, research, discussion, and writing about the benefits of a liberal arts education in a complex, global work environment. ADVW, EL.

**EGS 305. Integrative Writing in Global Contexts. (3)**

Through this advanced composition course, students develop and exercise means to integrate multiple perspectives and disciplinary discourses through writing for global audiences. Readings focused on issues in diversity and intercultural communication, assignments involving various genres and disciplinary methodologies, and projects that analyze and integrate multiple forms of writing help students draw on their liberal learning to address real-world challenges in regard to diverse others and the interconnected global community. IC, ADVW.  
Cross-listed with BIS 305.

**EGS 319. Medical Writing. (3)**

Introduces students to a range of strategies used in medical writing for general and specialized audiences. The primary focus will be on audience, argument, style, and conventions, as well as different genres and contexts of medical writing. Students will evaluate the most common types of scientific writing, such as presentations, manuscripts and grant applications, both individually and in collaboration with others. Students will develop their own scientific research documents with attention to visual design and format as well as content. ADVW.

**EGS 320. Readings in Literatures and Cultures. (3; maximum 6)**

Readings and discussions may focus on various periods, movements, genres, authors, and/or national traditions. May be repeated once for credit when content changes.

Prerequisite: ENG 298 or permission of instructor.

**EGS 340. Internship. (0-20)****EGS 377. Independent Studies. (0-5)****EGS 390. Special Topics in English Studies. (3; maximum 6)**

Intensive study of a particular aspect of English studies, which may include special topics in literature, creative writing, professional writing, or linguistics. Topic determined by instructor. May be repeated once for credit when content changes.

Prerequisite: ENG 298 or permission of instructor.

**EGS 410. Readings in Multicultural Perspectives. (3; maximum 6)**

Specific study of diverse literary traditions and voices, emphasizing a global context for the study of literary texts. May be repeated once for credit when content changes.

Prerequisite: ENG 298 or permission of instructor.

**EGS 420. Topics in Writing. (3; maximum 6)**

ENG 420 develops students' critical thinking, reading, and writing skills in a variety of writing contexts. Particular focus on issues relevant to global workplace and everyday life. Topic determined by instructor. May be repeated once for credit when content changes.

**EGS 460. Issues in Literary and Cultural Studies. (3; maximum 6)**

Inquiry into topics informed by literary and cultural theory such as identity, authorship and performativity. May be repeated once for credit when content changes.  
Prerequisite: ENG 298 or permission of instructor.

**EGS 477. Independent Studies. (0-5)****EGS 495. Capstone in English Studies. (3)**

Intensive reading, research, writing, and discussion in selected topics. While specific requirements vary with topic and instructor, students will analyze texts within their various contexts, conduct and use research ethically, and communicate effectively both orally and in writing. Capstones in English are selected annually from faculty proposals.  
Prerequisite: ENG 298 or permission of instructor and senior standing.

## Engineering Technology (ENT)

**ENT 135. Computer-Aided Drafting. (3)**

Study of drafting as the graphic language of industry and application of computer-aided technology to two and three-dimensional engineering drawings. Microcomputers are used.  
1 Lec. 2 Lab.

**ENT 137. Introduction to Engineering Technology. (1)**

An introductory course for students entering Engineering Technology. This course covers broad elementary engineering concepts to include a definition of engineering technology, the distinction between the various areas of focus in engineering technology, introduction to engineering "terminology," and a survey of current issues (problems, research efforts, recent developments, etc.) in the engineering field.  
Prerequisite: high school algebra.

**ENT 151. Engineering Materials. (3)**

Study of basic engineering materials; metals, plastics, ceramics, and composites. Structure, properties, and applications emphasized. (Mechanical technology).  
2 Lec. 1 Lab.  
Prerequisite: two years of high school algebra.

**ENT 152. Computer-Aided Manufacturing I. (3)**

Introduction to manufacturing processes and the use of the computer as a tool in those processes. Students introduced to computer numerical control programming, statistical process and control, and topics related to automated factory. (Mechanical technology).  
2 Lec. 1 Lab.  
Prerequisite: two years of high school algebra.  
Co-requisite: MTH 125.

**ENT 177. Independent Studies. (0-5)****ENT 192. Circuit Analysis I. (3)**

A detailed study of d-c electric circuits and related bilateral devices. Conventional and computer circuit analysis will be used.  
Prerequisite: high school algebra.

**ENT 193. Circuit Analysis II. (3)**

A detailed study of analog a-c electric networks, including resistive, reactive, and combinational thereof. Analysis techniques include conventional and computerized modeling methodology. (Electrical technology)  
2 Lec. 1 Lab.  
Prerequisite: ENT 192, MTH 125.

**ENT 196. Electronics. (3)**

Detailed study of analog electronic circuits and devices. Emphasis placed on operating parameters of linear (analog) circuits; techniques of circuit analysis applied as an integral part of the course. Use of computerized data analysis encouraged. (Electrical technology).  
2 Lec. 1 Lab.  
Prerequisite: ENT 192.  
Co-requisite: ENT 193.

**ENT 202. Special Problems. (0.5-3; maximum 3)**

Intensive concentration of a problem or set of problems in an approved area of study in technology to be determined in consultation with instructor. May be used as an elective for ENT associate's degree programs.  
Prerequisite: sophomore standing and departmental approval.

**ENT 235. Computer-Aided Design. (3)**

Computerized graphic design study of industrial related engineering problems with emphasis on three-dimensional data base. Laboratory portion uses microcomputers. (Mechanical Technology)  
2 Lec. 1 Lab.  
Prerequisite: ENT 135, MTH 125.

**ENT 252. Computer-Aided Manufacturing II. (3)**

Covers topics related to the automated factory including: computer numerical control and computer-assisted part programming, distributive numerical control (DNC), computer-assisted process planning, flexible manufacturing systems, and robotics. (Mechanical technology).  
2 Lec. 1 Lab.  
Prerequisite: ENT 152, CSE 153, 163, or equivalent recommended.

**ENT 271. Mechanics I: Statics. (3)**

Introduction to the application of the equations of equilibrium to the solution of two- and three-dimensional problems involving rigid body structures and machines. Concept of friction and mechanical work introduced.  
Prerequisite: MTH 125.  
Co-requisite: PHY 161 or equivalent recommended.

**ENT 272. Mechanics II: Strength of Materials. (3)**

Elastic relationships between external forces acting on deformable bodies and resulting stresses and deformations are studied. Industrial applications of these relationships to the solution of engineering design problems are emphasized. (Mechanical technology).  
2 Lec. 1 Lab.  
Prerequisite: ENT 271.

**ENT 277. Independent Studies. (0-5)****ENT 278. Mechanics III: Analysis of Machine Components. (3)**

Introduction to the use of statics and strength of materials to the analysis of individual machine components. Application of these principles to overall machine analysis presented. (Mechanical technology).  
2 Lec. 1 Lab.  
Prerequisite: ENT 272.

**ENT 291. Industrial Electronics. (3)**

A study of the basic components and systems used in industrial electronics including operational amplifiers, linear integrated circuits, brushless and stepper dc motors, control devices, optoelectronics, pulse modulation, sequential process control and programmable logic controllers. (Electrical technology).

2 Lec. 1 Lab.

Prerequisite: ENT 196.

**ENT 293. Digital Systems. (3)**

Principles and applications of digital systems. Emphasis placed on the study of combinational and sequential logic from a systems approach. Actual ICs and Programmable logic devices (PLDs) are used as well as digital timing diagrams and waveforms.

2 Lec. 1 Lab.

Prerequisite: ENT 192.

Co-requisite: MTH 125.

**ENT 294. Local Area Networks. (3)**

Introductory coverage of the technology and administration of Local Area Networks. Various transmission mediums are covered including Ethernet, fiber optics, and wireless communication.

**ENT 295. Microprocessor Technology I. (3)**

Introductory study of architecture, operation, and application of microprocessors for commercial and industrial use. Emphasis on understanding internal architecture, segmentation, arithmetic instructions, and the role I/O ports, memory, and machine language play in putting the microprocessor to work. (Electrical technology).

2 Lec. 1 Lab.

Prerequisite: CSE 153.

**ENT 296. Programmable Logic Controllers. (3)**

Study of the principles and application of Programmable Logic Controllers including ladder logic, program control, data manipulation, math instructions, sequencers, shift registers, networking, PLC-mechanism interfacing and human-machine interfacing.

2 Lec. 1 Lab.

Prerequisite: ENT 192.

**ENT 298. Data Communications. (3)**

Introduction to data communications, computer networks, and media. Includes transmission basics, digital representations, data link concepts, and other networking issues. Networking data telecommunications project assigned as a significant part of the course requirement.

Prerequisite: CSE 153 or 174.

**ENT 301. Dynamics. (3)**

The basic concepts of force, mass, and acceleration; work and energy; and impulse and momentum are introduced and applied to problems involving particles and rigid bodies. Topics include displacement, velocity, and acceleration of a particle; relations between forces acting on a particle or rigid body; and the changes in motion produced.

2 Lec. 1 Lab.

Prerequisite: ENT 271 and MTH 151 or equivalent.

**ENT 303. Digital Signal Processing Technology. (3)**

Study of how digital signal processing is used in industry, including spectral analyzers, analog and digital filtering, Fourier series and transforms, data compression, image processing, and DSP hardware design issues.

2 Lec. 1 Lab.

Prerequisites: ENT 295, STA 301, MTH 151.

**ENT 310. Fluid Mechanics. (3)**

The application of fluid statics and fluid dynamics to the solution of fundamental engineering fluid problems. The one dimensional energy and momentum equations are introduced and applied to the solution of fluid flow problems.

2 Lec. 1 Lab.

Prerequisite: ENT 271 and MTH 151 or equivalent.

**ENT 311. Process Control Interface Design. (3)**

Introduction to data acquisition and control with a graphical user interface (GUI). Topics include parallel, serial, and network access. Data transfer technology such as Object Linking and Embedding and Dynamic Data Exchange also covered.

2 Lec. 1 Lab.

Prerequisite: CSE 153, ENT 193 or equivalent and completion of an engineering technology associate's degree or permission of instructor.

**ENT 312. Thermodynamics and Heat Power. (3)**

Fundamental concepts of energy transformation and transport are introduced. The First and Second Laws of thermodynamics are applied to process and cycle analysis. Heat conduction, convection, and radiation modes are introduced and applied to simple heat balance problems.

Prerequisite: PHY 162, MTH 151 or equivalent, and completion of an engineering technology associate's degree or permission of instructor.

**ENT 314. Mechanisms for Machine Design. (3)**

Rigid body kinematics is applied to the analysis and design of mechanisms used in machines. The course includes motion and force transference from power source, motion characteristics of real-world machinery, and analysis and design concepts to facilitate optimization of the machine arrangement.

Prerequisite: ENT 301.

**ENT 316. Project Management. (3)**

A course for upper-level students in Engineering Technology. This course covers background, techniques, and case studies in project management particularly focused on engineering technology applications. The student will develop a fundamental understanding of the concepts for managing both small and large projects. Discussion, evaluation, and presentation skills will be enhanced. Some of the specific topics to be covered include: Gantt charts, PERT charts, project life-cycle, budgeting, cost analysis, breakeven analysis, conflict resolution, organization tools, project planning, statistical process control, and other selected quality improvement tools. Microsoft Project and Microsoft Excel will be used as software tools throughout the course.

Prerequisite: ECO 201 or 202 or permission of instructor.

Co-requisite: STA 301, 368, or equivalent.

**ENT 333. Computational Methods for Engineering Technology. (4)**

An in-depth study of engineering analysis techniques with emphasis on mathematical analysis of mechanical and electrical subsystems. Detailed study of a variety of situations using techniques based on state-variable analysis and state transition matrix; convolution and circuit response in the time domain; system function and response in the frequency domain; and time shift and periodic functions.

3 Lec. 1 Lab.

Co-requisite: MTH 251 or equivalent.

**ENT 340. Internship. (0-20)****ENT 355. Introduction to Finite Element Analysis. (3)**

An application of the basic concepts of finite element modeling and analysis to various types of engineering technology problems including structural and machine component analysis, conduction and convection heat-transfer analysis, and fluid mechanics analysis. Selected analytical aspects of finite element analysis are introduced throughout the course without becoming too theoretical. ANSYS computer software is an integral part of the course and is used within the laboratory portion.

2 Lec. 1 Lab.

Prerequisite: ENT 333.

**ENT 377. Independent Studies. (0-5)****ENT 387. Embedded Systems Technology. (3)**

This course focuses on utilization of microcontroller/microprocessor architecture in system design. It covers understanding of interfacing standard protocols associated with common microcontroller based embedded systems, implementation on hardware platform, and associated debug software requirements.

Prerequisites: CSE 153 and ENT 295.

**ENT 401. Computerized Instrumentation. (3)**

Overview of the requirements for the design of servo-mechanisms including stability, transfer functions, loop dynamics, and digital signal processing. Covers digital and analog signal conditioning, transducers, and controllers.

2 Lec. 1 Lab.

Prerequisite: ENT 311 and MTH 151 or equivalent.

**ENT 402. Industrial Automation Lab. (3)**

This course uses lab based experiences to investigate common electrical and mechanical instrumentation including hydraulic and pneumatic equipment, programmable logic controllers (PLC), microcontrollers, and industrial SQL databases. Prerequisite: ENT 311.

**ENT 403. Wireless Communication and Networks. (3)**

Fundamental techniques of wireless communication, signal transmission, encoding, propagation theory, cellular wireless networks, Wireless LANs, Wireless Access Protocol (WAP), Wi-Fi, Bluetooth and IEEE 802.15.4 ZigBee protocols, security in wireless networks.

2 Lec. 1 Lab.

Prerequisite: ENT 303.

**ENT 404. Experimentation Techniques. (3)**

Coverage of experimentation techniques pertaining to mechanical engineering technology measurement methods and performance testing. Emphasis is on basic principles involved in measurement techniques. Topics range from mechanical systems to air pollution measurement techniques.

2 Lec. 1 Lab.

Prerequisite: MTH 251.

**ENT 407. Modern Manufacturing Systems. (3)**

Coverage of topics related to the manufacturing environment including metal deflection and tolerance, robotics, programmable controller applications, and manufacturing cells.

Prerequisites: ENT 151 and ENT 272.

**ENT 415. Heat Transfer with Applications. (3)**

Concepts of the three modes of heat transfer, conduction, convection, and radiation, discussed separately and in combination. Each mode of heat transfer is presented by relating fundamental principles and computational methods to practical, real-world thermal systems and applications. Practical application projects from such industries as aerospace, automotive, and chemical processing are assigned to reinforce these principles.

Prerequisite: ENT 312.

**ENT 416. Topics in Mechanical Vibrations. (3)**

This course provides a study of mechanical vibrations topics with emphasis on mathematical analysis methods that may be applied to the solution of industrial engineering technology problems. Computer analysis software and experimental methods are introduced within the laboratory portion of the course.

2 Lec. 1 Lab.

Prerequisite: ENT 301, ENT 333.

**ENT 418. Electro-Mechanical Control Systems. (3)**

Covers advanced control topics including state variable models, higher order system response, transient response, and stability analysis.

Prerequisite: ENT 311 and MTH 245 or ENT 333.

**ENT 477. Independent Studies. (0-5)****ENT 497. Senior Design Project. (2) (MPC)**

Student teams conduct major open-ended research and design projects. Elements of the design process including establishment of objectives, synthesis, analysis, and evaluation are integral parts. Real-world constraints such as economical and societal factors, marketability, ergonomics, safety, aesthetics, and ethics are also integral parts. Feasibility studies performed. Includes guest lecturers, team presentations, team building sessions, team meetings, and guided discussions relating to design. Continuous interaction with faculty and outside professionals.

Prerequisite: senior standing, ENT 316, and 9 credit hours of 300 and 400 ENT/ECE level courses or permission of instructor.

**ENT 498. Senior Design Project. (2) (MPC)**

Student teams conduct major open-ended research and design projects. Elements of the design process including establishment of objectives, synthesis, analysis, and evaluation are integral parts. Real-world constraints such as economical and societal factors, marketability, ergonomics, safety, aesthetics, and ethics are also integral parts. Implementation, testing, and production of design. Includes guest lecturers, team presentations, team building sessions, team meetings, and guided discussions relating to design. Continuous interaction with faculty and outside professionals.

Prerequisite: senior standing, ENT 316, and 9 credit hours of 300 and 400 ENT/ECE level courses or permission of instructor.

## English (ENG)

**ENG 007. Fundamentals Of Writing. (1-3)**

Developmental work in grammar, mechanics, diction, and the writing process. Focuses on both form and content in preparation for ENG 111.

**ENG 104. Writing Studio. (1)**

A lab that supports students in their writing across the curriculum. Small group interaction provides intensified engagement with essentials of college writing such as invention, peer response, revision, critical thinking, research, documentation, editing, and delivery. Students reflect upon specific guidelines, goals, and contexts of writing assignments they encounter in courses in which they are enrolled across the curriculum.

**ENG 105. Writing Studio. (1)**

A lab that supports students in their writing across the curriculum. Small group interaction provides intensified engagement with essentials of college writing such as invention, peer response, revision, critical thinking, research, documentation, editing, and delivery. Students reflect upon specific guidelines, goals, and contexts of writing assignments they encounter in courses in which they are enrolled across the curriculum.

**ENG 107. Reading & Writing in Academic Contexts. (4)**

For non-native, English speaking students, an intensive reading and writing course focusing on reading comprehension, textual analysis, vocabulary, composing, and rhetoric. Students learn critical skills needed for success in academic writing.

Prerequisites: Direct placement assessment or permission of the department.

**ENG 108. U.S. Cultures & Composition for Second-Language Writers. (4) (MPF)**

For students who need further work in English before enrolling in college composition. Course is restricted to non-native speakers of English. First-time registration for ENG 108 is limited to students who have not taken ENG 109, 111, or 112. At most 10 credit hours toward graduation can be earned from any combination of ENG 108, ENG 109, ENG 111, and ENG 112. IIB.

Prerequisite: EWPI 108000 or B- or better in ACE 113 or ENG 107.

**ENG 109. Composition and Rhetoric for Second-Language Writers. (4) (MPF)**

Adaptation of ENG 111 for non-native speakers; satisfies iMPF Foundation I. I. At most 10 credit hours toward graduation can be earned from any combination of ENG 108, ENG 109, ENG 111, and ENG 112.

Prerequisite: EWPI 109000 or a passing grade in ENG 108.

**ENG 111. Composition and Rhetoric. (3) (MPF)**

Study and practice of effective explanatory, expressive, and persuasive writing. At most 10 credit hours toward graduation can be earned from any combination of ENG 108, ENG 109, ENG 111, and ENG 112. I.

**ENG 112. Composition and Literature. (3)**

Study and practice of effective explanatory, expressive, and persuasive writing in the context of an introduction to critical study of literature. At most 10 credit hours toward graduation can be earned from any combination of ENG 108, ENG 109, ENG 111, and ENG 112. Prerequisite: ENG 111.

**ENG 119. English for International Graduate Students. (3)**

This course is for international graduate students at Miami University who are assigned to the course based on their TOEFL scores and the English Department placement exams. The course serves as an American academic orientation with a reading and writing focus and helps graduate students develop advanced skills in academic writing and research, with opportunities to focus on the resources and expectations of their graduate majors. Assignments in research and in English grammar complement the aims of the writing assignments; all course work is intended to increase student awareness and mastery of the organizational and grammatical patterns of a successful academic writing. As much as the course is reading and writing-oriented, the course also provides students opportunities to practice their spoken and listening skills through class discussions, peer reviews, and presentations.

**ENG 121. Literature for ESL Learners. (3)**

Designed to introduce second-language speakers to literatures in English and structured around the analysis of three literary forms (drama, poetry, and prose). Readings are accompanied by a discussion of historical and cultural contexts; special attention is given to critical thinking and analysis. Students will learn to recognize and apply various modes of literary criticism through both class discussion and written assignments. IIB. CAS-B.

**ENG 122. Popular Literature. (3) (MPF)**

Exploration in detail of one genre of popular literature. Possible subjects include detective fiction, science fiction, western, and romance novel. Special attention given to why a culture invests in popular genres. IIB. CAS-B-LIT.

**ENG 123. Introduction to Poetry. (3) (MPF)**

Exploration of the wide range of literature and oral performance called poetry. Study of critical terms used to discuss and write about poetic conventions, forms, and sub-genres. IIB. CAS-B-LIT.

**ENG 124. Introduction to Fiction. (3) (MPF)**

Study of basic characteristics (narrative design, character, point of view, style, and tone) and essential forms (short-short story, story, novella, and novel) of the genre of literary fiction. IIB. CAS-B-LIT.

**ENG 125. Introduction to Drama. (3) (MPF)**

Critical analysis of dramatic literature from the ancient Greeks to modern performance art, using dramatic structure and theory to read play texts as productions of their cultural contexts. IIB. CAS-B-LIT.

**ENG 129. Books You Need To Read. (3) (MPF)**

Introduction to Literature through formal analysis of major works by authors such as William Shakespeare, Jane Austen, Mark Twain, and Toni Morrison. Designed for non-majors. Texts and authors vary. IIB. CAS-B.

**ENG 134. Introduction to Shakespeare. (3) (MPF)**

Introduction to Shakespeare's works. Gives students who are new to collegiate-level literary studies an overview of the range of Shakespeare's works and the variety of approaches to those works. IIB. CAS-B-LIT.

**ENG 163. Literature and Travel. (3) (MPF)**

Study of travel literature from a range of periods and genres. Includes the relation of individual and national identity, imperialism and cultural relativity, the invention of geography, and the politics of tourism. IIB, IIB. IC. CAS-B-LIT.

**ENG 169. Disability and Literature. (3) (MPF)**

This course studies the construction of disability identity in literature, personal memoir, and popular culture by investigating how texts that feature disability question notions of "normalcy" and "deviancy." It emphasizes interdisciplinary understandings of disability in historical and contemporary frameworks. IC, IIB. CAS-B.  
Cross-listed with DST 169.

**ENG 171. Humanities and Technology. (3) (MPF, MPT)**

Introduction to methods of thinking used in humanities disciplines (literature, history, philosophy, classics, etc.), computer technologies, and their relationship. Practical skills (web page making; research on the Internet) and analytical skills (how to tell good information from bad) combined with theories about the Information Society. IIB. CAS-B.  
Cross-listed with IMS 171.

**ENG 177. Independent Studies. (0-5)****ENG 198. Literary London Program Orientation. (1)**

Part of the Literary London summer program, this orientation course prepares students to live abroad and study on-site in London. On the Oxford campus, students are given extensive pre-departure information about the study location and course preparation. During orientation week in London, students learn to navigate the study site and are introduced to the cultural history, institutions, and sites relevant to literary study through field trips, excursions, and guided tours.

Co-requisites: two ENG courses offered in conjunction with the Literary London summer program.

**ENG 201. Special Topics in Language Awareness. (3; maximum 9) (MPF)**

Introduces various ways of looking at language: sociological, psychological, and formal. Students study how language plays a role in every human activity, from gender and racial stereotyping to the development of automata. May be taken three times, with different topics. IIC.  
Cross-listed with STC.

**ENG 202. Varieties of English: Dialect Diversity and Language Change. (3) (MPF)**

This interactive course focuses on varieties of English within the context of diverse cultures in the United States. Primary topics include: linguistic diversity, language change, gender differences in language use, language (use) and social class, attitudes toward language as well as examination of specific varieties of English such as African American English, Appalachian English, Native American English, Vietnamese American English, English spoken by persons of Latin American descent, Hawaiian Pidgin English, Gullah, Louisiana Creole, and others. IC, IIB. CAS-B-Other.

**ENG 213. Writing for Media. (3)**

Basic course in writing for radio and television, and new media, with emphasis on scriptwriting for feature film and narrative for television; treatment of documentary subjects; introduction to narrative forms in new media.

Prerequisite: MAC 146, or permission of instructor.

Cross-listed with MAC.

**ENG 219. Introduction to Linguistics. (3) (MPF)**

Scope of linguistics: fundamental concepts and methods of linguistic science (phonetics, phonology, morphology, syntax, semantics, and pragmatics) in its descriptive and historical aspects. V. CAS-E.  
Cross-listed with ATH/GER.

**ENG 220. Literature and Film. (3; maximum 6) (MPF, MPT)**

Study of the relationship between film and genres of literature, focusing on a comparison of techniques of rhetoric, fiction, and drama and those of film. Primary consideration given to film adaptations of works of fiction and drama. Extensive screenings of films. May be repeated once when topic changes. IIB. CAS-B-LIT.  
Cross-listed with FST.

**ENG 221. Shakespeare and Film. (3) (MPF, MPT)**

Study of selected plays of Shakespeare that have been filmed. Students read plays and view one or more versions of each play. IIB. CAS-B-LIT.

Cross-listed with FST 221.

**ENG 222. The Rhetoric of Information and Data Visualization. (3)**

Methods, principles, and techniques for creating and critiquing verbal and visual arguments using information and quantitative data. Emphasizes a rhetorical and ethical perspective toward data representation and visualization, considering how to develop and design quantitative arguments and visual representations. Students will work with a variety of tools and techniques for presenting visual data in print and digital media. CAS-QL.

**ENG 223. Rhetorical Strategies for Writers. (3)**

Principles and practices of classical, modern, and visual rhetorics. Designed for students who want more intensive practice in developing arguments in academic, public, and professional contexts.

**ENG 224. Digital Writing and Rhetoric: Composing with Words, Images and Sounds. (3) (MPT)**

Students will analyze and produce digital multimodal compositions that integrate words, images, and sounds. No prior web or digital writing experience required. ADVW. Cross-listed IMS.

**ENG 225. Advanced Composition. (3)**

Practice in various types of expository and narrative writing. ADVW.  
Prerequisite: ENG 109 or ENG 111 (or AP and other placement credit).

**ENG 226. Introduction to Creative Writing: Short Fiction and Poetry. (3)**

Techniques and principles of creative writing with application to fiction, creative nonfiction, poetry, and hybrid forms. ADVW.  
Prerequisites: ENG 109 or ENG 111 (or AP and other placement credit).

**ENG 230. Studies in Themes and Genres. (3; maximum 6)**

Study of traditional literature, mainly English and American, organized according to themes and genres rather than by chronology. May be repeated once when topic changes. Does not count toward the English major. CAS-B-LIT.

**ENG 231. The Short Story. (3)**

Study of the short story as a literary genre with its own unique conventions. Examples from both early and present-day masters. CAS-B-LIT.

**ENG 232. Women Writers. (3) (MPT)**

Introduction to women's writing in English. Readings may include poetry, drama, fiction and non-fiction by women writers from various historical periods and national traditions. IC. CAS-B-LIT.

Cross-listed with WGS 232.

**ENG 235. Classical Hollywood Cinema. (3)**

This course examines the production of the so-called classical period of Hollywood cinema, beginning in the 1930s with the emergence of early sound and ending in the 1960s with the demise of the studio system. We will utilize an industry-studies approach, but will also explore the principal narrative and stylistic trends associated with the classical era, as well as its key creative figures- directors, producers, cinematographers, actors, etc. Weekly Screenings Required. Cross-listed with FST.

**ENG 236. Experimental Film. (3) (MPT)**

This course examines influential works and movements in experimental film, emphasizing filmmakers for whom the conventional entertainment narrative is an object of radical investigation. Working outside the traditions of commercial film, experimental filmmakers take alternative approaches not only to narrative but also to visual representation, sound production, and editing, often exploiting new or unconventional technologies to achieve their effects. The course will also consider critical and theoretical perspectives, situating the unconventional techniques of experimental film in relation to broader aesthetic, cultural, historical, and political contexts.

Cross-listed with FST 236.

**ENG 237. GLBTQ Literature. (3) (MPF)**

Study of literature by and about sexual minorities, including gay, lesbian, bisexual, transgender and queer identities, cultural contexts, and social movements. IIB, IC. CAS-B-LIT.

Cross-listed with WGS.

**ENG 238. Narrative and Digital Technology. (3) (MPF, MPT)**

Applies to digital games those notions about narrative structure and character development that have evolved in literature. Students will explore digital art as literary critics, asking whether games are art and analyzing how postmodern literary/digital art participates in globalization. Students compose narratives in writing as well as 3D graphics. IIB. CAS-B-Other.

Cross-listed with IMS.

**ENG 246. Native American Literature. (3) (MPF)**

Survey of published Native American fiction, poetry, memoir, drama, and non-fiction from the mid-19th century to the present. Explores cultural contexts and emphasizes an interdisciplinary approach that includes historical, sociological, and anthropological as well as literary perspectives. IC, IIB. CAS-B-LIT.

Cross-listed with AMS 246.

**ENG 248. Asian American Literature. (3) (MPF)**

Survey of Asian American writing (including the novel, poetry, drama, nonfiction, etc.) from the early 20th century to the present. Addresses immigration experiences, growing up in America, and writing as cultural expression. Course uses an interdisciplinary approach to the study of literature, drawing on history, sociology, ethnic studies, and current trends in American literary studies. IC, IIB, IIB. CAS-B-LIT.

Cross-listed with AAA/AMS.

**ENG 249. Asian & Asian American Cinema. (3) (MPF)**

Explores films in the contexts of Western colonial influences and legacies in Asia and Asian America. Students will learn how mainstream notions of nation, gender, sexuality, family values, social hierarchies and social change are constructed at the intersection of the audience, visual imagery, political, and economic contexts. We will also explore the role alternative cinema plays in challenging mainstream forms of knowledge production with the overall goal of critically evaluating how cinema creates, recreates, perpetuates and reproduces "Asian" cultures for global and local audiences. IC, IIB, IIB. CAS-B-Humanities.

Cross-listed with ENG/FST.

**ENG 251. Introduction to European Literature. (3) (MPF)**

Introduction to the masterpieces of European literature, its creation stories, its epic heroes and heroines, its infamous loves and equally infamous deaths. From these literary works, you will gain a sense of the variety of human experiences across time and cultures and broaden your understanding of literary purpose. IIB, IIB. CAS-B-LIT.

**ENG 254. Latino/a Literature and the Americas. (3) (MPF)**

Study of fiction, poetry, and non-fiction by Chicano/a, Cuban-American, Puerto Rican, and Central American writers, with an emphasis on the various cultural and historical contexts that influence and are represented in the writings. Specific study of writing in transnational communities situated in more than one part of the Americas. IC, IIB, IIB. CAS-B-LIT.

Cross-listed with LAS 254.

**ENG 255. Russian Literature in English Translation From Pushkin to Dostoevsky. (3)**

MFP, MPT Examines works by Pushkin, Lermontov, Gogol, Turgenev, and Dostoevsky and a number of critical essays representative of a variety of viewpoints. Uses interdisciplinary approach that takes into account social, historical, political, religious, as well as literary factors. IIB, IIB. CAS-B-LIT.

Cross-listed with RUS.

**ENG 256. Russian Literature in English Translation: From Tolstoy to Nabokov. (3) (MPF, MPT)**

Treatment of selected works of Russian literature (realism, modernism, post-modernism) with attention to Tolstoy, Chekhov, Bunin, Sologub Bulgakov, Babel, Solzhenitsyn, and Nabokov. IIB, IIB. CAS-B-LIT.

Cross-listed with RUS.

**ENG 262. Children's Literature. (3)**

Broad study of children's books, with emphasis on acquiring skill to evaluate children's literature. Practice in the literary analysis of prose and poetry with emphasis on the impact of good literature for children. CAS-B-LIT.

**ENG 267. Russian Literature in English Translation: From Pasternak to the Present. (3) (MPF, MPT)**

Treatment of major trends in the development of Russian literature since 1953. Examines works by Pasternak, Solzhenitsyn, Rasputin, Trifonov, and others. IIB, IIB. CAS-B-LIT.

Cross-listed with RUS 257.

**ENG 269. Colonial & Postcolonial Literature. (3) (MPF)**

Introduction to postcolonial literature and theories of colonial and postcolonial identity. IIB, IIB. CAS-B-LIT.

Cross-listed with AAA 269.

**ENG 272. English Literature to 1660. (3)**

Introduction to British English Literature and culture from the beginning to 1660, with attention to multiple historical, social, religious, philosophical and political contexts. IIB. CAS-B-LIT.

**ENG 273. English Literature 1660-1900. (3) (MPF)**

British literature from 1660 to 1901, with attention to issues of class, race, gender, and empire in the context of accelerating economic, social, environmental, and political change; to developments in philosophy, science, and technology; and to relations with other arts. Considers major literary movements as well as major genres, including both poetry and fiction. IIB. CAS-B-LIT.

**ENG 274. English Literature 1901 to Present. (3) (MPF)**

Selected British and Anglophone fiction, nonfiction, poetry, and drama from 1900 to present with special attention to the impact on literary imagination of global conflicts and loss of Empire in the context of cultural and political change. IIB. CAS-B-LIT.

**ENG 275. American Literature to 1900. (3) (MPF)**

Introduction to American Literature written from the colonial period through 1900. The course considers a multiplicity of voices as expressed in literary texts. IIB. CAS-B-LIT.

**ENG 276. American Literature 1900 to the Present. (3) (MPF)**

Introduction to American Literature and its cultural contexts written from 1900 to the present. IIB. CAS-B-LIT.

**ENG 277. Independent Studies. (0-5)****ENG 284. Professional Communication for Business. (3)**

As part of the Farmer School of Business's core curriculum, this course develops advanced rhetoric knowledge and skills needed to write and present effectively in local and global business contexts, including working in intercultural teams and digital networks. Prerequisites: ENG 109 or ENG 111 and BUS 101, BUS 102 BUS 104 and ESP 103. Cross-listed with BUS.

**ENG 293. Contemporary American Fiction. (3) (MPT)**

Study of new trends and movements in American fiction of the last 10 to 15 years, focusing upon such issues as vision of society, experiments in narrative form and content, mode of humor, treatment of reality, and changing images of the self. CAS-B-LIT.

**ENG 298. Introduction to Literary and Cultural Studies. (3)**

Introductory skill-based course to be taken within one semester after declaring literature major. Covers critical and interpretive terms and basic concepts of literary genre; develops skills of close reading, interpretation, and critical analysis; provides instructions in techniques of research and citation; and introduces various critical methods and approaches. ADVW. CAS-B-LIT.

**ENG 301. History of the English Language. (3) (MPT)**

Linguistic and cultural history of British and American English, and other varieties of English around the world.

**ENG 302. Structure of Modern English. (3) (MPT)**

Linguistic structure of American English with specific reference to application in teaching.

**ENG 304. Backgrounds to Composition Theory and Research. (3) (MPT)**

Theoretical foundation of composition theory and research, emphasizing structure of writing, composing process, contemporary rhetoric, and linguistic based theories of composition.

**ENG 310. Special Topics in Rhetoric and Persuasion. (3; maximum 6)**

Intensive study of one or more specialized areas or elements of rhetoric and/or persuasion--such as ethnic/comparative, feminist, rhetoric of the public sphere, rhetoric of science, or rhetorical theories of delivery. Recommended prerequisite: ENG 223.

**ENG 311. Reading for Creative Writing: Contemporary Literature. (3)**

In-depth study of contemporary literature for creative writing majors. Works studied come from both the United States and abroad, with emphasis on works published within the last 25 years, usually within the last decade. CAS-B-LIT.

**ENG 313. Technical Writing. (3)**

Introduction to the principles of technical writing. Attention to defining purpose, analyzing audience, developing document structure, creating visual design, drafting and revising communications. Practice in varieties of technical communication. ADVW.

Prerequisite: ENG 109 or ENG 111 (or AP and other placement credit).

**ENG 315. Business Writing. (3)**

Study of writing techniques used in business environments and practice in applying them. ADVW.

**ENG 316. Legal Writing and Reasoning. (3)**

Students in this course will learn strategies for effective and persuasive legal writing, including the appropriate methodologies for legal reading, research and analysis. Students will gain experience writing in a number of genres, including case briefs, memoranda of law, and professional correspondence.

Prerequisite: ENG 111/112 or waiver of the 111/112 requirement (through AP credit, honors program, etc); sophomore standing or above.

Cross-listed with BLS.

**ENG 317. Writing for Games. (3)**

Writing for Games offers students an opportunity to learn the genres and professional standards of writing for games and the gaming industry, including instructions, proposals, design documents, publicity documents, and in-game scripts. ADVW.

Prerequisite: ENG 111.

Cross-listed with IMS.

**ENG 320. Intermediate Creative Writing: Fiction. (3; maximum 6)**

Techniques and principles of narrative writing with special application to the short story. May be taken twice, but not with same instructor. Prerequisite: ENG 226.

**ENG 321. The Literary Marketplace. (3)**

Provides creative writing students with an introduction to the literary marketplace. Designed for students interested in careers as editors or reviewers, or for anyone interested in how books are produced, marketed, reviewed, and remaindered.

**ENG 323. Intermediate Creative Writing: Creative Nonfiction. (3)**

Intermediate workshop in creative nonfiction. Reading and analysis of published creative nonfiction books and essays, as well as class discussion of student writing in this genre. May be taken twice, but not with the same instructor.

Prerequisite: ENG 226, JRN majors may take JRN 280 instead.

**ENG 327. Medieval Literature. (3) (MPT)**

Study of English literature from Beowulf to the poetry of Dunbar, especially in translation. CAS-B-LIT.

**ENG 328. Sixteenth-Century English Literature. (3)**

This course addresses the literary culture of sixteenth-century England. Amidst clashes between Protestants and Catholics, literary texts engaged the political, religious, and poetic debates of the age, defining the meaning of tradition and innovation, imitation and originality. CAS-B-LIT.

**ENG 330. Intermediate Creative Writing: Poetry. (3; maximum 6)**

Intermediate course in theory and practice of poetry writing with seminar study of relevant contemporary materials and criticism of student work in class and conference. Assigned exercises in techniques and forms. An average of 10 to 15 poems due each semester. May be taken twice, but not with same instructor. Prerequisite: ENG 226.

**ENG 331. Seventeenth-Century English Literature. (3)**

A sustained inquiry into the wide variety of writings that emerged from the tumultuous times of 17th-century Britain. The course may cover plays, poetry, court masques, visions, new world explorations and utopias, short romance, early novels, and popular pamphlets produced by proliferating printing presses. It may include works by Donne and the metaphysical poets; Jonson and the Cavalier poets; radicals such as Milton, Marvell, the Levellers, the Ranters, and the Diggers; and women writers such as Lanyer, Wroth, Cavendish, Hutchinson, Trapnel, and Behn. CAS-B-LIT.

**ENG 332. Early British Women Writers. (3)**

Survey of women writers from the beginnings of English to 1800. Includes writers such as Margery Kempe, Julian of Norwich, Elizabeth Carey, Aemelia Lanyer, Mary Wroth, Margaret Cavendish, Lucy Hutchinson, Aphra Behn, Frances Burney, and Anne Radcliffe. IC. CAS-B-Lit.

**ENG 335. English Literature of the 18th Century. (3)**

British prose and poetry of the 18th century. CAS-B-LIT.

**ENG 336. African American Writing, 1746-1877. (3) (MPT)**

Focuses on eighteenth- and nineteenth-century African American writings, especially the slave's narrative, a unique form of autobiographical writing that sought to expose the horrors of slavery in America, to end this institution, and to contest ideas about the inhumanity of African Americans. Pre and post Civil War African American novels continue to address problems of race, injustice, and demands for equal rights for African Americans. Attention to the traditions of black writing established by slave narratives, which laid the foundation for African American literature and cultural and artistic production. IC.

Cross-listed with BWS.

**ENG 337. African American Writing, 1878-1945. (3) (MPT)**

Despite the optimism occasioned by the fall of slavery, the years covered in this course are known as the era of Jim Crow, which was not characterized by the triumphs of a newly freed people welcomed by a repentant nation. Instead, black experience at this time is marked by the rise of the KKK, the epidemic of lynching, and the introduction of segregation into American society. This course considers the issues faced by these new American citizens—former slaves historically understood to be chattel and only three-fifths human—and how they strove, in their writing, to express and shape their identity and destiny. IC. CAS-B-LIT.

**ENG 338. African American Writing, 1946-Present. (3) (MPT)**

Considers the relationship among literature, freedom, and racial identity as a major preoccupation of black intellectuals and writers, from slave narratives to current post-modern and hip-hop narratives. Black writers give special attention to the significance of race in literature, but does racial identity give a writer a special task as well as perspective? Is a black writer one who happens to be black or does his/her blackness obligate and/or empower this writer to write from a black perspective? And, is this perspective inevitable given the writer's racial experiences in this country? IC. CAS-B-LIT.

**ENG 339. British Romanticism, 1789-1837. (3) (MPT)**

During the age of revolutions, the literary movement we know as Romanticism played a crucial role in representing and shaping the major cultural shifts of the times. With special attention to poetry, the course may consider works by Blake, Byron, Coleridge, Hemans, Keats, Shelley, Smith, and Wordsworth alongside fiction and prose by Austen, Burke, Edgeworth, Hazlitt, Paine, and Scott, with an eye to defining and interrogating the meanings of Romanticism. CAS-B-LIT.

**ENG 340. Internship. (0-20)****ENG 343. Victorian Literature, 1837-1901. (3) (MPT)**

During the heyday of the British Empire, Victorian writers responded to and shaped their times. With attention to both poetry and prose, the course will consider major movements in literature in the context of the changing role of women; the emergence of class conflict; the evolution of imperial power; and other major changes in culture and society. CAS-B-LIT.

**ENG 345. British Modernism, 1890-1945. (3) (MPT)**

Study of British culture and literature at the end of the Empire; readings include Joseph Conrad, James Joyce, Virginia Woolf, and their contemporaries. CAS-B-LIT.

**ENG 347. Postwar/Postcolonial British Literature, 1945-Present. (3)**

Study of British culture and literature in the years when the United Kingdom was relinquishing its colonial possessions and relocating itself in changed global politics; readings by such writers as Julian Barnes, Samuel Beckett, Graham Greene, Jean Rhys, Fay Weldon, and their contemporaries. CAS-B-LIT.

**ENG 348. Ethnic American Literatures. (3)**

Intensive introduction to theories of race, ethnicity, and identity through the study of American literature by ethnic minorities. IC. CAS-B-LIT.

Cross-listed with AMS.

**ENG 349. Early American Literature. (3)**

Intensive study of issues animating colonial and early national American culture from the period of discovery to the early 19th century, as articulated in selected texts from a variety of literary forms. CAS-B-LIT.

**ENG 350. Topics in Film. (3)**

In-depth and concentrated studies in film. Focuses on specific topics in film such as national film traditions (American, Japanese, French, etc.), genres (science fiction, western, detective, etc.), and themes (film and society, women in film, political conspiracy, etc.). May be repeated once when topic changes.

Cross-listed with FST.

**ENG 351. Cultural Politics of Gender and Sexuality in Asian/America. (3)**

Intensive interdisciplinary study of imaginative representations of the encounters between "Asia" and "America," broadly conceived, particularly the entangled relations among their diverse constituencies in the contexts of colonialism and globalization. Key topics include feminist critique of gendered violence and human rights issues; Euro-American militarism and sex tourism; the emergence of new categories of sex, gender, and kinship as lived experiences mediated by transnational consumer culture and institutional structures; masculinity and Asian diasporic nationalisms; pan-Asian movements against racism, colonialism, and neoliberalism both in Asia and the U.S.; and the emergence of new critical, artistic and aesthetic practices. IC. Cross-listed with AAA/WGS.

**ENG 352. Antebellum American Literature. (3)**

Intensive study of issues animating American culture from the early 19th century to the end of the Civil War, as articulated in selected texts from a variety of literary forms. CAS-B-LIT.

**ENG 353. American Realism and Naturalism. (3)**

Intensive study of issues animating American culture and literature from the Civil War to World War I, as articulated in selected texts from a variety of literary forms. Engages with American realism and naturalism. CAS-B-LIT.

**ENG 354. American Modernism. (3) (MPT)**

Intensive study of issues animating American culture between 1914 and 1945, as articulated in selected texts from a variety of literary forms and traditions. Particular focus on American modernism. CAS-B-LIT.

**ENG 355. Contemporary American Literature. (3) (MPT)**

Intensive study of issues animating American culture from 1945 to the present as articulated in selected texts from a variety of literary forms and traditions. CAS-B-LIT.

**ENG 356. Women and Gender in Film. (3) (MPF)**

This course explores the construction of gender and representations of women in film in two contexts: in mainstream Hollywood cinema and in experimental and independent films. While not providing an extensive history of women in film, the course provides a sampling of iconic films—from early cinema to the present—to critically examine how women are portrayed throughout the twentieth century and in various genres, in films made by both men and women. Course readings engage theoretical and practical points of contact within cinema, including feminist film theory, postcolonial theory, psychoanalysis, queer theory, and critical race theory. IIB, IC. CAS-B. Cross-listed with FST/WGS.

**ENG 360. Interdisciplinary Special Topics. (1-4; maximum 8)**

Study of a selected topic examined from the perspective of two or more disciplines. CAS-B-LIT.

**ENG 364. From Marco Polo to Machiavelli. (3) (MPT)**

Examination of Classical and Asian influences in Italian culture from the Middle Ages through the Renaissance. Works of Marco Polo, Dante, Petrarca, Boccaccio, the Italian Humanists, and Renaissance artists and writers, such as Leonardo da Vinci, Michelangelo, Ariosto, Castiglione, and Machiavelli, including women poets, such as Vittoria Colonna, Gaspara Stampa, and Veronica Franco, are read and discussed against the historical background of Mediterranean trade and culture from the 13th through the 16th century, when the Italian peninsula was a crossroads between Europe, Africa, and Asia. Taught in English. CAS-B-LIT. Cross-listed with ITL.

**ENG 370. Introduction to Literary and Cultural Theory. (3; maximum 6)**

Surveys significant movements in recent critical theory, such as formalism, structuralism and poststructuralism, psychoanalysis, Marxism and historicism, feminism, race and ethnic studies, gay and lesbian studies, and cultural studies. Attention also given to applying particular methods to one or to several literary texts. May be repeated once for credit when content changes. CAS-B-LIT.

**ENG 372. Shakespeare's Principal Plays: Early Works. (3)**

Intensive study of Shakespeare's early-career plays, primarily focused on the comedies, histories, and early tragedies, with some attention to stage performance during the golden age of early modern English theater in London. CAS-B-LIT.

**ENG 373. Shakespeare's Principal Plays: Late Works. (3)**

Intensive study of Shakespeare's late-career plays, primarily focused on the "problem plays," late tragedies, and romances, with some attention to stage performance during the golden age of early modern English theater in London. CAS-B-LIT.

**ENG 374. English Renaissance Drama. (3)**

Survey of drama from the sixteenth and seventeenth centuries; includes plays by Christopher Marlowe, Ben Jonson, Thomas Middleton, Thomas Dekker, Francis Beaumont, John Fletcher, John Marston, John Ford, and others.

**ENG 377. Independent Studies. (0-5)****ENG 381. Afro-Brazilian Diaspora Through Film and Arts. (3)**

A focus on questions of gender, race, class and stereotypes in the African Lusophone countries. Taught in English. Prerequisite: any literature course. Cross-listed with POR/BWS/FST.

**ENG 383. Brazilian Women through Literature and Film. (3) (MPF)**

Addresses questions about gender, race, class and stereotype of women's bodies in 20th-century Brazil. IIB, IIB. CAS-B. Cross-listed with BWS/POR/WGS/FST.

**ENG 386. Studies in Drama and Performance. (3)**

Examine conventions and traditions in a variety of dramatic forms, such as tragedy, naturalism, expressionism, comedy, the musical, performance art, and the performance of everyday life. Studies also include performance practices such as realism, minstrelsy, drag, distanciation, or devised theatre, with attention to trends and evolving and contested definitions of the genres and the stakes of embodiment and theatrical staging. Course topic varies by section. IC. CAS-B.

**ENG 387. Studies in Poetry. (3)**

Examines conventions and traditions in a variety of poetry. Course topic varies by section. CAS-B-LIT.

**ENG 388. Studies in Prose. (3)**

Examines conventions and traditions in a variety of prose forms, such as the novel, short story, flash fiction, magic realism, creative nonfiction, the lyric essay, and the collage essay, with attention to trends and evolving and contested definitions of the genres. Course topic varies by section. CAS-B.

**ENG 390. Studies in American Regionalism. (3; maximum 6) (MPT)**

Literature of the West: imaginative treatments of the American frontier and the postfrontier West, Cooper to the present; major Southern American writers from Byrd to the present. CAS-B-LIT. Cross-listed with AMS.

**ENG 399E. Niche Publish & London Indep. (3)**

Live, work, and study in London for a full 6 weeks with Miami's own Literary London! Our program offers a selection of Literature and Creative Writing courses designed especially to be taught in London by our own Miami faculty. Classes are different every year to take advantage of everything London has to offer. Internships are also available at London-based businesses, including publishing, and many other fields: Add international work experience to your resume while you live and study abroad with us in London.

**ENG 401. Dante's Divine Comedy. (3) (MPT)**

Intensive examination of Dante's major work, *The Divine Comedy*, read in a bilingual edition. Lectures and discussion in English. No prerequisites. CAS-B-LIT. Cross-listed with ITL.

**ENG 405. Advanced Linguistics: The Research Program of Noam Chomsky. (3) (MPC)**

In this Capstone course, students examine the evolving linguistic subfield of generative grammar, pioneered by Noam Chomsky, which revolutionized the study of language and was a primary contributor to the development of the field of cognitive science. Students have the experience of collecting data and identifying patterns within that data, with a goal of forming and testing various hypotheses concerning syntactic rules that allow for construction of a descriptively adequate grammar of a given language and, in a broader sense, construction of a model of the general mental representation of language. Prerequisite: ENG/ATH/GER 219 or equivalent.

**ENG 406. Discourse Analysis: Speech Acts in Context. (3) (MPC)**

Students work on projects to discover how linguists observe, collect, and analyze language data. Students learn to apply linguistics methodologies to problems about how language shapes our perceptions, how language mediates between people and institutions, or how to develop formal systems that enable computers to parse human sentences. Projects often touch upon concerns of other disciplines.

**ENG 407/ENG 507. Interactive Business Communication. (3)**

Writing and communicating effectively within business contexts, with an emphasis on researching, reporting, proposing, and maintaining relationships using digitally networked interactive technologies. Cross-listed with IMS.

**ENG 408/ENG 508. Second Language Acquisition. (3)**

Topics covered in this course include a historical overview of second language learning and teaching, similarities and differences between childhood and adult language acquisition, the sociocultural and psycholinguistic aspects of learning a new language, and current research in second language acquisition. This course focuses on the adult acquisition of English.

**ENG 410. Selected Topics in Linguistics. (3; maximum 6)**

Focus on a single topic per term, such as field methods, the structure of a specific language, linguistic geography, sociolinguistics or ethno-linguistics.

Prerequisite: ENG/ATH/GER 219 or equivalent.

**ENG 411/ENG 511. Visual Rhetoric. (3) (MPT)**

Provides an introduction to the theory and techniques of visual rhetoric used by professional communicators. Covers elements of layout, design, and typography, giving students practice with short and longer print texts and non-print media.

Cross-listed with IMS.

**ENG 412/ENG 512. Print and Digital Editing. (3) (MPT)**

Examines principles and practices of editors. Preparing communications for publication emphasized. Students edit their own and other students' work, and that of outside clients.

**ENG 413/ENG 513. Grant and Proposal Writing. (3) (MPT)**

Intensive study of the principles and processes involved with preparing grants and proposals.

**ENG 414/ENG 514. Usability and User Experience. (3) (MPT)**

Advanced study of theories and practices of usability connected with the production of documentation in print and digital media.

**ENG 415. Capstone in Professional Writing. (3) (MPC)**

Practicum in theory and practice of project management specifically designed to provide professional writing majors with community-based writing experience and teach communicator/client relationships, problem-solving, and professionalism in conduct and product. Prerequisite: ENG 223.

**ENG 416/ENG 516. Writing for Global Audiences. (3)**

This course focuses on how to write effectively in print and digital media for global audiences. Students will research cross-cultural written communication, including networked communication, and they will develop intercultural literacy skills necessary for writing to global audiences. Through frequent writing assignments, students will learn and enact the theories and strategies for targeting print and digital communications to international and culturally diverse audiences.

Cross-listed with IMS.

**ENG 417/ENG 517. Second Language Writing and Reading: Teaching & Theory. (3)**

This course will offer an overview of the growing scope and complexity of scholarship in second language writing over the past half century, and how that scholarship has influenced the development of writing instruction. Reading in a second language and its interactions with writing will also be explored. Students will write about relevant literature, conduct research on teaching practices, and develop a full L2 writing curriculum throughout the semester.

**ENG 418/ENG 518. Playwriting. (3)**

Applied theory, technique, and practice of playwriting.

Prerequisite: (THE 418/THE 518 only) THE 101 or permission of instructor.

Cross-listed with THE.

**ENG 420. Advanced Creative Writing: Fiction Workshop. (3; maximum 6)**

Study and practice in various forms of creative and imaginative writing with emphasis upon the problems and the craft of fiction.

Analysis of examples from contemporary literature accompanies class criticism and discussion.

Prerequisite: ENG 320 and permission of instructor.

**ENG 422. Advanced Creative Writing: Screenwriting Workshop. (3)**

Advanced workshop in feature film screenwriting. Analysis of examples of contemporary screenplays, with emphasis on the craft of writing screenplays. Class discussion and sharing of student-written screenplays.

Prerequisite: MAC 213 or ENG 320 or permission of instructor.  
Cross-listed with MAC.

**ENG 423. Advanced Creative Writing: Nonfiction Workshop. (3; maximum 6)**

Study and practice in forms of creative nonfiction with emphasis upon advanced craft issues in the genre. Analysis of examples from contemporary literature accompanies feedback sessions and critical discussion.

Prerequisites: ENG 226 and ENG 323.

**ENG 424/ENG 524. Ethics and Digital Media. (3)**

Students will focus on key ethical issues related to online writing, communication, and visual design. Course will introduce key ethical principles, including principles of rhetoric, communication, and design ethics, as well as key principles of professional ethics as articulated in fields like professional writing, technical communication, and graphic design. Topics include intellectual property, access and universal design, privacy and surveillance, visual representation and manipulation, global communication and cultural difference, economic issues of justice and equity, and professional rhetorics. Cross-listed with JRN/IMS.

**ENG 426/ENG 526. Developing & Publishing Digital Books. (3)**

Digital Publishing offers students opportunities to design, edit, and distribute electronic books. Students will learn theories and processes for digital publishing and work with a number of tools and platforms. They will also learn the genres, standards, and literacies required for web-based and ebook production. Students will gain real-world, client-based experience by assisting a non-profit academic press with the development of new ebooks and the digitization of earlier titles. Cross-listed with IMS.

**ENG 429/ENG 529. Environmental Communication. (3)**

Examines theories, principles, and methods for communicating environmental concepts and scientific information verbally, textually and visually to a range of audiences and stakeholders. Students will work with scientists, peer communities, clients, and focus groups to develop effective and appropriate environmental communications across mediums. Projects may include producing scientific posters, writing reviews of research projects on an environmental problem, preparing oral presentations, creating visual story of scientific work, interviewing scientists for a general news story, writing environmental proposals, and facilitating focus groups.

Cross-listed with IES/JRN.

**ENG 430. Advanced Creative Writing: Poetry Workshop. (3; maximum 6)**

Practice in writing poetry with emphasis on development of style. Advanced course in the theory and practice of poetry writing with seminar study of relevant contemporary materials and criticism of student work in class and conference.

Prerequisite: ENG 330 and permission of instructor.

**ENG 432. Feminism and the Diaspora: U.S. Women of Color. (3)**

Concerns issues of language, history, geography, social-psychology, and culture for U.S. women of color (black, Asian-American, Latina, American Indian, and others). Includes works by and about women on gender, ethnicity, class, sexuality, and other differences. IC.

Cross-listed with BWS/WGS.

**ENG 435/ENG 535. Queer Theory. (3)**

Analysis of how gender and sexuality have informed our understandings of cultural texts and contexts. Emphasizes how discourses of gender and sexuality function within a variety of historical, cultural, and/or aesthetic traditions. IC.

Cross-listed with WGS.

**ENG 437. Black Feminist Theory. (3)**

This course examines critical and theoretical issues in black feminism from slavery to the present. One of the central goals of the course is to interrogate race, gender, class, and sexuality in the context of black women's thoughts and experiences. The class will read, discuss and analyze a wide variety of texts including critical essays, films, selected fiction, print and visual media. IC.

Cross-listed with BWS/WGS.

**ENG 440. Major English and American Writers. (3; maximum 6) (MPT)**

Intensive study of individual major writers in the British and American literary traditions. May be repeated once for credit when content changes. CAS-B-LIT.

**ENG 450. Studies in Genre. (3; maximum 6)**

Focused study of issues related to one or more literary genres. Consult the English department course supplement for additional information. May be repeated once for credit when content changes. CAS-B-LIT.

**ENG 460. Issues in Creative Writing. (3) (MPC)**

Integrates creative writing in all genres at the highest levels. The issue or problem organizing the course is applicable to all genres; readings illustrate, problematize and/or offer solutions to the issue under discussion. Students read and think as writers and respond to the issue or problem in both an analytic and creative manner. Specific requirements vary according to instructor and topic.

Prerequisite: ENG 226, at least two of the required upper-level writing courses, and senior standing.

**ENG 470. Studies in Literary Theory. (3; maximum 6)**

Intensive examination of one or more schools, methods, or significant writers of literary and cultural theory, such as structuralism, poststructuralism, Marxism, and feminism. May be repeated once for credit when content changes. CAS-B-LIT.

**ENG 477. Independent Studies. (0-5)****ENG 480. English Honors. (1-6)**

Students interested in earning honors in English must confer with associate chair.

**ENG 481/ENG 581. Writing Center Theory and Practice. (3)**

In this intensive course, students study existing scholarship on the theories and practices of writing center work as well as practice various approaches to one-on-one and small-group consultations for multiple and diverse student writers.

Prerequisite: permission of instructor.

**ENG 490. Special Topics in Literary Study. (3; maximum 6)**

Intensive study of some aspect of contemporary literary study, including such topics as American regional writing, literature of war, or writing by women of color. May be repeated once for credit when content changes. CAS-BLIT.

**ENG 494. Disability in Global and Local Contexts. (3) (MPC)**

Examines contemporary disability issues and policies and the lived experiences of persons with disabilities in international and local contexts, with emphasis on understanding disability within particular communities—both locally and in other countries—and on learning multiple research methods. IC.

Prerequisite: permission of instructor.

Cross-listed with DST 494 and EDP 489.

**ENG 495. Capstone in Literature. (3) (MPC)**

Intensive study, including reading and independent research. Specific course requirements vary according to instructor and topic, but all Capstones include extensive reading, writing, and discussion. Students read and think as informed readers and respond to issues or problems in an analytic and creative manner. Capstones in literature are selected annually from proposals submitted by faculty.

Prerequisite: senior standing.

**ENG 600. Special Topics in Literature. (2-4; maximum 4)**

Study of individual works and types of literature which fall outside traditional areas of study.

**ENG 601. Introduction to Language and Linguistics. (4)**

Basic concepts of language and its use from both historical and contemporary perspectives, with special attention to occasions of use.

**ENG 603. Literary Theories and Their Histories. (4)**

Study of the fundamental perspectives in literary criticism and their application to literary texts.

**ENG 604. OWP/Howe Writing Center Development Workshop. (1)**

Specialized workshop on the theory, development and sustaining of writing center programs in K-12 environments.

**ENG 605. Issues in the Profession. (2)**

Colloquium designed to introduce beginning graduate students to the academic profession, and especially to contemporary debates about the status and variety of literary history.

Prerequisite: admission to the graduate program.

**ENG 606. Teaching of College Composition Practicum I. (2)**

Weekly guidance in the teaching of English 111, College Composition, for first-time instructors. Topics include developing writing and group activities, facilitating class discussion of reading, holding effective student-teacher conferences, writing syllabi, and benefitting from observation of one's teaching.

**ENG 607. Teaching Advanced Writing. (2)**

Weekly guidance in the teaching of advanced writing courses for first-time instructors. Topics include creating syllabi and assignments, developing writing and group activities, facilitating class discussions, holding effective student-teacher conferences and peer review/writing workshops, and benefitting from observation of one's teaching.

**ENG 610. Topics in Literary and Cultural Studies. (4; maximum 8)**

Examination of aesthetic, historical, theoretical issues in literary/cultural studies. Detailed description of topics available from the Director of Graduate Studies.

**ENG 615. TESOL Methods, Materials & Assessment. (3)**

Provides teachers of adult English as a Second Language with the pedagogical tools needed to be effective instructors. Topics covered include a historical overview of TESOL pedagogy, second language learning strategies, choosing materials and designing courses for all four basic language skills, classroom management, and current research in second language assessment.

**ENG 616. TESOL Practicum. (3)**

This course will provide students with the opportunity to observe adult TESOL courses, consult with cooperating ESL teachers, and student-teach ESL classes under the guided supervision of their cooperating teachers. This course may be completed at any of Miami University's campuses which offers adult ESL training.

**ENG 620. Studies in Renaissance Literature. (4; maximum 12)**

Intensive study of selected Renaissance writers such as More, Sidney, Spenser, Marlowe, Jonson, Webster, Bacon, Donne, Milton, and Shakespeare; or of a particular theme such as the courtesy tradition; or of a poetic type such as the Renaissance sonnet or the Renaissance pastoral.

**ENG 622. The Teaching of Writing. (6)**

For certified teachers who wish to learn improved methods of teaching writing in their K-12 classrooms.

**ENG 624. Presenting Teacher Research. (2)**

The course seeks to improve teachers' knowledge and skills regarding the design and delivery of professional presentations.

Prerequisite: ENG 622.

**ENG 630. Studies in the Restoration and the 18th Century, 1660-1789. (4; maximum 12)**

Intensive study of selected authors such as Dryden, Pope, Swift, Johnson, Fielding, Goldsmith, and Sheridan, or of a literary group, genre, or style.

**ENG 631. Writing in the Genres: Residential Workshop. (4; maximum 16)**

Study and practice in creative writing, with attention to formal and conceptual concerns. Genre to depend on instructor. Attendance at visiting writers' talks and readings is expected as part of the course. Emphasis on peer and mentor critiques of student work and on revision of a manuscript, with the goal of producing a portfolio of professional quality creative writing.

**ENG 632. First Non-Residential Semester Low-Residency MFA in Creative Writing. (5)**

Involves an exchange of four writing packets of original work with an on-line mentor. Mentors will respond with detailed critiques of the submitted packets, and students will revise in response to those critiques. In addition, students will read and write responses to 6-8 contemporary and/or canonical texts in their genre.

Co-requisite: ENG 631.

**ENG 633. Second Non-Residential Semester in Low-Residency MFA in Creative Writing. (5)**

Involves an exchange of four writing packets of original work with an on-line mentor. Mentors will respond with detailed critiques of the submitted packets, and students will revise in response to those critiques. In addition, students will read and write responses to 6-8 contemporary and/or canonical texts in their genre.

Prerequisite: ENG 632.

Co-requisite: ENG 631.

**ENG 634. Third Non-Residential Semester Low-Residency MFA in Creative Writing. (5)**

Involves an exchange of four writing packets of original work with an on-line mentor. Mentors will respond with detailed critiques of the submitted packets, and students will revise in response to those critiques.

Prerequisite: ENG 632 and ENG 633.

Co-requisite: ENG 631 and ENG 635.

**ENG 635. Reading for Writing: Literary Forms. (4)**

Analyzing and interpreting literary texts with a focus on issues important for writers, especially craft. Focus changes each term. Criticism as well as creative compositions are produced.

**ENG 636. Fourth Non-Residential Semester in Low-Residency MFA in Creative Writing. (5)**

ENG 636 will be devoted to completing a book-length final project, based upon work begun during the previous three non-residential semesters. During ENG 636, students will work closely with their final project director. Once the final project has been approved by their director and a second faculty member, students will be allowed to conclude their course of study by attending a required fifth 10-day residency, ENG 637, at which time students will give a public reading from their completed final project and help lead a workshop.

Prerequisite: ENG 633 and 634.

Co-requisite: ENG 631.

**ENG 637. Low-Residency MFA Final Residency. (0)**

An intensive residency required for matriculated members of the Low-Residency MFA program in Creative Writing who have completed all other coursework and whose Final Project has been approved. Highlights include writing workshops focused on student writing, as well as craft lectures and readings by faculty members and distinguished visiting writers. In addition, students in ENG 637 will give a public reading from their Final Project.

Prerequisites: ENG 631 and ENG 632.

**ENG 640. Internship. (0-12; maximum 12)****ENG 641. Classroom Research I. (2)**

An introduction to classroom research methodology and application. Prerequisite: ENG 622.

**ENG 643. Classroom Research II. (2)**

An introduction to classroom observation methodology and action research.

Prerequisite: credited participation in the Teaching of Writing Workshop and Classroom Research I is required for this course.

**ENG 647. Classroom Research III. (2)**

Preparation for classroom observation methodology and action research.

Prerequisite: Credited participation in the Teaching of Writing Workshop, Classroom Research I and Classroom Research II are required for this course.

**ENG 649. Classroom Research IV. (3)**

Application of classroom observation methodology and action research.

Prerequisite: credited participation in the Teaching of Writing Workshop, Classroom Research I, Classroom Research II, and Classroom Research III are required for this course.

**ENG 650. Studies in 19th-Century English Literature. (4; maximum 12)**

Intensive study of selected 19th century authors such as Wordsworth, Coleridge, Byron, Keats, Thackeray, Dickens, George Eliot, Conrad, Arnold, Browning, and Tennyson, or of a literary group, a genre, or theme.

**ENG 651. Graduate Poetry Workshop. (4; maximum 16)**

Study and practice in writing poetry with attention to the advanced, preprofessional poet's aesthetic, formal and conceptual concerns. Emphasis on group critiquing student work and on revising manuscripts, with the goal of producing a portfolio of professional quality contemporary poetry.

Prerequisite: admission to the graduate creative writing program.

**ENG 652. Issues in Creative Writing. (4)**

Analytical and practical approach to selected topics in creative writing. Focus changes each term. Criticism as well as creative compositions are produced.

Prerequisite: admission to the graduate creative writing program.

**ENG 660. Studies in 20th-Century Literature. (4; maximum 12)**

Intensive study of selected 20th century writers such as Auden, Eliot, Huxley, Joyce, Lawrence, O'Casey, Shaw, Spender, Synge, Woolf, Yeats, or of a literary group, a genre, or a tradition.

**ENG 670. Studies in American Literature, 1800-1865. (4; maximum 12)**

Intensive study of selected pre-Civil War American writers such as Dickinson, Emerson, Hawthorne, Melville, Poe, Thoreau, and Whitman.

**ENG 677. Independent Studies. (0-5)****ENG 680. Studies in American Literature, 1865-1919. (4; maximum 12)**

Intensive study of selected post-Civil War major American writers such as Stephen Crane, Dreiser, Howells, James, Robinson, and Twain.

**ENG 690. Studies in Modern American Literature, 1919 to Present. (4; maximum 12)**

Intensive study of selected modern major American writers such as Anderson, Hart, Crane, Dos Passos, Eliot, Faulkner, Fitzgerald, Frost, Hemingway, O'Neill, Pound, Steinbeck, and Stevens.

**ENG 700. Research for Master's Thesis. (1-12; maximum 12)****ENG 704. Non-Thesis Project. (0-12; maximum 12)**

This repeatable course is for non-thesis culminating experiences. Permission of the instructor is required.

**ENG 710. Intra-disciplinary Seminar in English Studies. (4; maximum 8)**

Advanced study of a topic, integrating approaches from the sub-disciplines of English, including composition/rhetoric, creative writing, and literary studies.

**ENG 720. Issues in Digital Composition. (4; maximum 12)**

Study in one or more of the histories, theories, and practices of composition from the 19th to the 21st centuries.

Prerequisite: ENG 731 or equivalent.

**ENG 730. Studies in Composition Research and Pedagogy. (4; maximum 12)**

Intensive study of one or more areas of composition research, theory, or pedagogy such as design, testing and evaluation, discourse theory, history of composition, invention, syntax, style, and composing process.

**ENG 731. The Theory and Practice of Teaching Composition. (4)**

Examination and evaluation of current methods and strategies for teaching college writing with emphasis on classroom application of composition theory and research. Major topics include composing process, invention, argumentation, the sentence and the paragraph, testing and evaluation, recent research in composition, reading and writing, and composition and literature. Summer only.

Prerequisite: graduate standing.

**ENG 732. Histories and Theories of Composition. (4)**

Study in one or more of the histories, theories, and practices of composition from the 19th to the 21st centuries.

**ENG 733. Histories and Theories of Rhetoric. (4)**

Historical review of major figures and theories of rhetoric up to the late 20th century.

**ENG 735. Empirical Research Methods in Composition. (4)**

Introduction to methods of qualitative and quantitative research in the study of writing.

Prerequisite: ENG 731 or equivalent.

**ENG 737. Contemporary Theories of Rhetoric. (4)**

Focus on major figures and theories of rhetoric in the 20th and 21st centuries.

**ENG 750. Histories and Methodologies in Literary and Cultural Studies. (4; maximum 8)**

Practicum centering on an area of contemporary theory/critical practice that students integrate with their interests. Required for literature doctoral students, who may take the course again when topic changes; suggested for Masters' students intending to pursue doctoral work. Detailed description of scheduled topics available from the Director for Graduate Studies.

Prerequisite: ENG 603 or equivalent.

**ENG 751. Special Problems. (1-6; maximum 6)**

Special research study in a topic not covered in a regular course, usually culminating in an essay of the kind found in literary journals. Application for this course must be made by the 14th week of the previous semester or by the end of the first week of new semester, and approved by departmental committee.

**ENG 760. Special Topics in Rhetoric. (4; maximum 12)**

Intensive study of one or more specialized areas or elements of rhetoric--such as ethnic/comparative, feminist, religious, or disability rhetorics; rhetoric of the public sphere; or ancient and modern rhetorical theories of invention.

**ENG 770. Issues in Professional Writing. (4; maximum 12)**

Intensive study of one or more elements of professional or technical communication, intellectual property, the production and analysis of print and digital genres, usability and other writing research methodologies, and workplace, global, and mobile communication. Emphasis on theory, research, and practice.

**ENG 780. Internship in English Studies. (1-4; maximum 12)**

Internship in practical applications of English Studies, such as editing, digital design, digital curation, and technical writing.

Prerequisite: permission of instructor.

**ENG 850. Research for Doctoral Dissertation. (1-16)**

## Entrepreneurship (ESP)

**ESP 101. Entrepreneurship Foundations. (1)**

This sprint course will provide a hands-on approach to understanding entrepreneurship in start-up, social, and corporate settings.

The course will analyze and investigate the current trends and opportunities in entrepreneurship. Students will meet with and learn from successful entrepreneurs about their lives and work as entrepreneurs. The course will focus on the skills and tactics necessary to succeed in various entrepreneurial settings, and discuss how students can apply these skills to their personal and professional passions and interests. By collaborating with like-minded peers and award winning faculty, students will learn what it takes to turn "possibilities" into "probabilities". Credit/no credit only.

**ESP 102. Entrepreneurial Immersion: From Idea to Opportunity. (1)**

This hands-on experience immerses students in the early stages of the entrepreneurial process. In a one weekend fast-paced environment, students develop ideas, build teams and discover insights. Over the course of the weekend, students pitch their concepts, ideas and solutions to real investors and practitioners who will provide mentorship, coaching and feedback. The course is designed to integrate creative thinking, critical thinking, problem solving and leadership skills in an environment similar to the business world. Students get a real world understanding of how to succeed in any venture.

**ESP 103. Creativity, Innovation and Entrepreneurial Thinking. (2)**

This course prepares students to understand and address two pressing issues in business today: how to recognize and create new business opportunities and how to think more creatively within business environments. Students will be introduced to a number of tools, concepts and approaches including human-centered design, ideation techniques, the importance of embracing ambiguity, personal responsibility and the place of risk and fail in entrepreneurship, creativity and life. The class is highly interactive and experiential. EL.

Co-requisites: BUS 101, BUS 102, and BUS 104.

**ESP 130. Special Topics and Student Projects I. (1-3)**

Introductory level course focused on a special topic and/or interdisciplinary student project.

Cross-listed with CEC.

**ESP 177. Independent Studies. (0-5)****ESP 201. Introduction to Entrepreneurship and Business Models. (3)**

Topics include requirements and challenges of successful entrepreneurship, characteristics of successful entrepreneurs, the life cycle stages of a business, careers and opportunities for entrepreneurship. Pre-/Co-requisite: ESP 101.

**ESP 230. Special Topics and Student Projects II. (1-3)**

Fundamental activities in the research and implementation of a special topic and/or interdisciplinary student project.

Prerequisite: permission of instructor.

Cross-listed with CEC.

**ESP 251. Entrepreneurial Value Creation and Capture. (3)**

In this class, students will focus on the marketing and financial issues confronting entrepreneurial venture. This course looks at the challenges entrepreneurs face in attempting to start, grow and build ventures, specifically aspects related to customer acquisition, customer retention, and capital resources. Students are exposed to tools, concepts, and approaches related to marketing and financial operations of entrepreneurial ventures with emphasis on the application of this material using a series of real-world cases and examples. Class environment is highly interactive and experiential. Prerequisite or Co-requisite: ESP 101.

**ESP 252. Entrepreneurial Mindset: Creativity and Organization. (3)**

In this class, students will learn concepts of leadership and creativity as it relates to the organization of entrepreneurial ventures. Students will learn the role of creative thinking and leadership models in the growth of entrepreneurial organizations. In both parts of the class, the environment is highly interactive and experiential. Prerequisite or Co-requisite: ESP 101.

**ESP 277. Independent Studies. (0-5)****ESP 321. Startup Entrepreneurship. (3)**

This course is structured using an agile scrum project management approach favored by many high-tech startups in which tasks are completed in short "sprints.". In this course students will learn digital marketing and analytics strategies and techniques including landing page development, A/B testing and Google analytics. Be prepared to learn on the fly, test and iterate, and spend out-of-class time completing project sprints. Prerequisite: ESP 201 or approval from academic advisor.

**ESP 331. Social Entrepreneurship. (3)**

This course introduces students to the opportunities and challenges associated with building and growing enterprises that are both self-sustaining and focused on a social mission. Students will engage in an experiential learning process with others to develop a better understanding of the domain of social entrepreneurship including the development, measurement and assessment of various social enterprises.

**ESP 340. Internship. (0-20)**

Available to Farmer School of Business (FSB) majors and minors. Available for 0 credit hour during spring, summer and fall terms. Available for 1 credit hour during summer terms only. For one hour of credit, student must secure a sponsoring FSB faculty member within his/her major or minor to supervise the internship and accompanying required internship reflection paper. ESP 340 is not available during winter term. Students are to work through their respective academic departments to enroll in the course. Credit/no credit only. Note: FSB students may earn a maximum 2 credit hours toward graduation for BLS/BUS/ECO/ESP/FIN/ISA/MGT/MKT 340. Prerequisite: 55 earned hours and permission of department.

**ESP 341. Corporate Entrepreneurship. (3)**

This course focuses on the value and use of entrepreneurial thinking and behavior in large, corporate and/or public organizations. Students will examine both the benefits and challenges of acting like an entrepreneur when they may not be the owner or CEO of the organization, or be a part of a much larger, complex organization. These concepts are introduced through research, cases and conversations with successful intrapreneurs.

**ESP 351. Creativity in Entrepreneurship. (3)**

This course will explore the application of creative thinking in addressing business opportunities and problems, especially within an entrepreneurial context. The course takes a systematic approach to creating, evaluating, refining and selling breakthrough ideas. Students will be exposed to a number of techniques, concepts and methods useful in managing the creative process in individual and group contexts with emphasis on accountability for creative quality. Class is highly interactive and experiential. This is the first of three courses as part of the Creativity Track within the Entrepreneurship Curriculum.

**ESP 377. Independent Studies. (0-5)****ESP 394. Applied Entrepreneurship: Workforce Preparation. (3)**

This course immerses students in the mindsets and practices of workplace excellence. The class focuses on three entrepreneurial concepts: critical workplace soft skills, how to use the creative/innovative mindset as an entry level employee and important technical skills. The course is designed to improve decision making, critical thinking, problem solving and leadership skills in preparation for The Altman Internship Summer Experience. Prerequisites: ESP 321, ESP 331, ESP 341, or ESP 351. Prerequisite or Co-requisite: ESP 101, ESP 102, ESP 251, and ESP 252.

**ESP 399A. Women in Entrepreneurship Program. (3)**

A workshop that explores women's entrepreneurial possibilities and provides tools to prototype and re-frame alternative visions for their future. Students will travel to an array of female ventures in Cincinnati and San Francisco to meet with female business executives, entrepreneurs, and consultants who have paved the way for Women in Entrepreneurship.

**ESP 401/ESP 501. Entrepreneurship: New Ventures. (3)**

This course examines the venture creation process within a startup ecosystem. ESP 401/ESP 501 explores a variety of issues surrounding new venture creation, including how to recognize and assess an opportunity, the process and steps in starting a new venture, the financials of the new business, determining and acquiring resource needs, marketing requirements, deal structure and exit strategy, technology issues, legal and ethical issues and creating a written business plan in support of the new venture. Small teams are formed to work on a new business venture, which is presented in an oral presentation and written business model.

**ESP 444. Entrepreneurship: Venture Capital Immersion. (3)**

The Venture Capital Immersion course is designed to provide you with a realistic understanding of the methods and approaches used by institutional investors to evaluate new businesses (startups) and high growth companies and to develop and negotiate investment terms. The prospect of raising outside capital is a consideration for many new business ventures at some point in order to grow and scale the company. The Venture Capital Immersion course focuses specifically on one such sources of outside capital: institutional investment from venture capital firms (angel group, venture capital, or private equity). It simulates what venture investors experience as a member of an institutional investment firm.

**ESP 461. Entrepreneurial Consulting. (3) (MPC)**

Student teams apply a problem-solving methodology by consulting with selected entrepreneurial organizations that have requested assistance. Each selected company will have a wide range of entrepreneurial challenges crossing the fields of finance, marketing, accounting, production, human resources, information systems, strategic and tactical planning, growth or down-sizing problems, procurement issues, inventory control, quality control and forecasting. Through this consulting experience, students learn to integrate and apply their business knowledge to "real-world" settings and to test their analytical skills by solving complex entrepreneurial business problems.

**ESP 477. Independent Studies. (0-5)****ESP 481. Technology, Products & Ventures. (3)**

An interdisciplinary perspective on the interfaces between new product development, innovation, and technology. Examines product development capability as an essential element of successful business strategy and a key component of an "entrepreneurial mindset." Students develop a working prototype for a new product and a comprehensive new product plan.

**ESP 490. Special Topics in Entrepreneurship. (1-3; maximum 6)**

Issue oriented seminar for juniors or seniors focusing on a contemporary topic related to the rewards, requirements and challenges associated with entrepreneurship in different environments.

Prerequisite: permission of instructor.

**ESP 670. Introduction to Entrepreneurship and Business Models in the Field of Aging. (3)**

Introduction to Entrepreneurship will explore entrepreneurship, its importance to our society, and its role in bringing new ideas to the market both product-based ideas and service-based ideas.

Prerequisites: GTY 610 and enrolled in Gerontology Certificate program.

**ESP 677. Independent Studies. (0-5)**

## Environmental Sciences (IES)

**IES 175. First Year Seminar on the Environment and Sustainability. (1)**

Introduces students to interdisciplinary approaches in environmental science and the sustainability of natural and human systems.

**IES 177. Independent Studies. (0-5)****IES 211. Energy and Policy. (3)**

Study of the relationships between energy technology and energy policy, with considerations of how policy and economic incentives influence the production and use of fossil fuels and renewable energy sources. Emphasis is on the regional and global impacts of different energy sources to natural resources and environmental quality.

**IES 274. Introduction to Environment and Sustainability. (3)**

Introduction to environmental and sustainability principles from social science and natural science perspectives. Critical analysis of environment and sustainability-related problems and resolution strategies. Review of foundational concepts and case studies, which may include environmental history, biotic and natural resources, energy and climate, planning and design, organizational management and policy, and sustainable development.

**IES 275. Principles of Environmental Science. (3)**

Topics include causes and consequences of climate change; contamination of earth systems and pollution mitigation; use, abuse, and conservation of natural resources; agroecosystems, land use, conservation and preservation, planning and management and the value of biodiversity and wilderness. Emphasis is on the multidisciplinary nature of environmental problems and their solutions.

Prerequisites: at least one course from each of the following three categories is either pre- or co-requisite: 1) BIO 121, 131, 176, or 191 or BIO/MBI 115; and 2) CHM 111 or CHM 142 or CPB 244 or GLG 211; and 3) GLG 111, 121, or 141 or GEO 121 or 122.

**IES 277. Independent Studies. (0-5)****IES 278. Introduction to Food Systems. (3) (MPF)**

Introduces students to food from an interdisciplinary perspective building on the concepts underlying food systems and food studies. Course materials focus on food from a systems-based perspective, examining the origins, implications, and practices of our current food system, and exploring new approaches to sustainable agriculture and resilient food systems. IVA. CAS-D.

**IES 278L. Understanding Food Systems Laboratory. (1) (MPF)**

Laboratory course exploring the interrelationships between soil, water, plant resources, and other biotic components of agricultural ecosystems. IVA. CAS-D.

Co-requisite: IES 278.

**IES 340. Internship. (0-20)****IES 377. Independent Studies. (0-5)****IES 411/IES 511. Environmental Protocols. (4)**

Lecture/field laboratory course will integrate the collection, analysis, management, evaluation and presentation of environmental measurements. One lab and two lectures per week. Appropriate for all environmental practitioners.

**IES 412/IES 512. Tropical Ecosystems of Costa Rica. (5)**

Introduces students to the structure and function of neotropical ecosystems, as well as to geological, biological, cultural, and economic forces affecting biodiversity in the tropics. This course is taught on-site in Costa Rica. There are additional costs beyond tuition.

Cross-listed with LAS.

**IES 419/IES 519. Environment, Society & Justice. (3)**

Interdisciplinary studies of the underlying social aspects of environmental problems and issues. Topics include the unequal distribution of hazardous waste sites, the environmental impacts of war, vulnerability to disaster, the social construction of the environment, population growth, environmental movements, the political economy of the environment, and ecological modernization. Cross-listed with SJS.

**IES 423/IES 523. Tropical Marine Ecology. (5)**

Investigates aquatic systems (estuaries, mangroves, coral reefs, seagrass beds, lagoons, beaches, intertidal zones, taxonomy of vertebrates and invertebrates of coral reefs, lagoons and tidal flats) paleobiology and global climate change (paleo-reconstruction of past lagoon environments, fossil coral reefs, and land use). Student research questions concerning biological and physical analyses of a select marine habitat are required. The course is taught on-site in the Florida Keys and the Bahamas. There are additional costs beyond tuition.

Cross-listed with GEO 413/GEO 513/GLG 413/GLG 513/LAS 413.

**IES 429/IES 529. Environmental Communication. (3)**

Examines theories, principles, and methods for communicating environmental concepts and scientific information verbally, textually and visually to a range of audiences and stakeholders. Students will work with scientists, peer communities, clients, and focus groups to develop effective and appropriate environmental communications across mediums. Projects may include producing scientific posters, writing reviews of research projects on an environmental problem, preparing oral presentations, creating visual story of scientific work, interviewing scientists for a general news story, writing environmental proposals, and facilitating focus groups.  
Cross-listed with ENG/JRN.

**IES 431/IES 531. Principles and Applications of Environmental Science. (3) (MPT)**

Analysis of the relationship of human beings to the environment, specifically assessment of their impact on the environment as a whole. Attempts to outline the evolution and present status of many environmental problems, presents possible solutions, and attempts to predict our future relationship with nature.  
Prerequisite: IES 275.

**IES 440/IES 540. Contemporary Topics in Environmental Sciences. (1-3; maximum 3)**

An examination of historical and current world environmental conditions.

**IES 441/IES 541. Environmental Public Health. (3)**

This course is a study of the effects of human-made and natural physical, biological, and chemical agents on human health. The course explores the interaction of population health, demographics, and environmental determinants of disease. The course covers the basic principles of epidemiology, exposure, risk characterization, disease pathogenesis, and diagnostic testing, as well as the public works and regulatory controls used to limit exposure. CAS-D.  
Cross-listed with KNH 441/KNH 541.

**IES 450/IES 550. Environmental Law. (3)**

Introduction to the origins of environmental law; discussion of regulatory agencies; regulation of water pollution, hazardous substances, solid waste, land use, and air pollution.  
Prerequisite: upper-level undergraduate or graduate status.

**IES 474. Sustainability in Practice. (3)**

Application of sustainability principles to social and environmental problem solving, in an inter-disciplinary and project-based setting. Collaborative design of innovative strategies for addressing and resolving environmental concerns. Reflection on practical challenges of implementing sustainability principles in practice.  
Prerequisite: IES 274 or permission of instructor.

**IES 477. Independent Studies. (0-5)****IES 494/IES 594. Sustainability Perspectives in Resources and Business. (3) (MPC)**

Provides students with interdisciplinary perspectives of sustainability in business and resource management through consideration of the economic, social, and environmental value of organizations. The course covers principles, case studies, and best practices used by organizations in several areas of sustainability, such as energy efficiency and alternatives, waste management and recycling, ecosystem services, product redesign and life cycle management, resource management, and sustainability planning and reporting.  
Cross-listed with BUS.

**IES 598. IES Orientation Field Trips. (1)**

The environmental orientation field trips are an important part of the IES program. They provide an opportunity for the incoming graduate students to see and experience things of environmental relevance that would be difficult without the field trips which extend over a three day period.

Prerequisite: Admission to IES.

**IES 605. Introduction to the Professional Service Project. (0)**

Major environmental project of concern to a local government, nonprofit organization or other entity in southwest Ohio is assigned to a group of students working as a team. Students begin the problem-solving process and lay out their study design for spring semester.

Prerequisite: IES 611.

**IES 610. Professional Service Project. (4)**

Major environmental project of concern to a local government or nonprofit organization in southwest Ohio is assigned to a group of students working as a team. The team is expected to develop solutions to the problem during two semesters.

Prerequisite: IES 605 and IES 611.

**IES 611. Environmental Problem Solving and Analysis. (1)**

Interdisciplinary methodologies employed in solving environmental problems, with emphasis on problem definition and scoping, stakeholder involvement, developing and analyzing alternatives, and implementation of solutions.

Prerequisite: admission to IES or permission of instructor.

**IES 620. Topic Seminar. (1)**

Seminar on environmental topics of current importance such as environmental impact and risk assessment.

Prerequisite: admission to IES or permission of instructor.

**IES 640. Internship. (0-12; maximum 12)****IES 641. Earth Expeditions: Advanced Field. (5)**

The Earth Expeditions: Advanced Field course allows students to more fully and deeply explore community-based conservation, participatory education, and inquiry at an international conservation site they have previously visited during a past Earth Expeditions course. Possible field sites for the Advanced Field course include Baja, Belize, Borneo, Costa Rica, Guyana, Hawai'i, Kenya, Mongolia, Namibia, and Thailand (see EarthExpeditions.org for detailed descriptions of each field site). Prior to and following the field experience, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with BIO.

**IES 642. Amazon: Avian & Tropical Ecology. (5)**

In the Amazonian Neotropical regions of Peru, reality has attained mythic proportions: more than 400 species of mammal, 1,300 bird species, 3,000 fish, 40,000 plants, and 2.5 million insect species. And still counting. Why is this area of South America the most diverse on the planet? How have the varied human groups that inhabit this region adapted to their unique environments? And perhaps the most relevant question for life on Earth, what is the future of the Amazon? Students travel to the Peruvian Amazon rainforest and work with educators, researchers, and local communities to better understand the evolution and maintenance of biodiversity in this region, and to experience firsthand the effects of human interventions in the Amazon, from deforestation and urbanization to restoration efforts by local groups. Prior to and following the field experience in the Amazon, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with BIO.

**IES 643. Australia: Great Barrier Reef. (5)**

One of the seven wonders of the natural world, the Great Barrier Reef lies in the clear blue waters off the northeast coast of Australia. This complex reef system is not only the world's greatest expanse of coral, it is the Earth's largest living structure, a massive, beautiful, and ancient biological phenomenon of bewildering diversity and immense ecological significance. This graduate course is offered jointly with Reef HQ Aquarium, Australia's National Education Centre for the Great Barrier Reef. We sleep near the corals in the aquarium itself, venturing forth on several excursions for direct research on the Great Barrier Reef, and hiking in some of Australia's unique terrestrial habitats. Discussion topics include marine science issues, citizen engagement in marine science and environmental stewardship. Prior to and following the field experience in Australia, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with BIO.

**IES 644. Baja: Field Methods. (5)**

Students discover the rich waters and terrestrial ecosystems of Baja's UNESCO World Heritage site and biosphere reserve on the Sea of Cortez. Bahia de los Angeles is a unique ecoregion with remarkable marine and terrestrial environments. Students also explore Rancho San Gregorio, a family-owned ranch located in a small canyon where its isolation and climate make it a hotspot for desert investigations. Students gain proficiency in applying field methods to ecological questions and conservation practice. A premise of this course is that field methods are not only essential for ecological research, they can serve as the basis for participatory education, public engagement in science, and community-based environmental stewardship. Many groups, from teachers leading schoolyard ecology to parataxonomists involved in ethnobotanical research, share a need for reliable information obtained through robust field methods to build understanding and to promote informed action. Prior to and following the field experience in Baja, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with BIO.

**IES 645. Belize: Approaches to Environmental Stewardship. (5)**

Students join our partner, the Belize Zoo, and explore diverse terrestrial, coastal, and coral reef communities of Belize, while learning about conservation programs on such species as harpy eagles, jaguars, manatees, and howler monkeys. Possible investigations include monitoring manatee population dynamics, human influence on coral reefs, aquatic mangrove species sampling, and species behavior studies at the Belize Zoo. Discover the power of inquiry to generate knowledge and inspire conservation. All students will have the chance to conduct an investigation of the local ecosystem, asking their own questions, collecting data, and presenting conclusions. Prior to and following the field experience in Belize, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with BIO.

**IES 646. Borneo: Primate Conservation. (5)**

Borneo's primate community is exceptionally rich, including proboscis monkeys, which occur only in Borneo, leaf monkey, macaque, gibbons, tarsier and slow loris. Of greatest conservation concern is the orangutan, which occurs naturally on only two islands in the world, Borneo and Sumatra, and is under increasingly severe pressure, primarily from habitat loss. The orangutan, the only great ape in Asia, may completely vanish from the wild within two decades. Partnered with the Woodland Park Zoo, we will join researchers from the NGO Hutan and the Danau Girang Field Centre, and villagers of the Kinabatangan region who are responsible for model community-based efforts to preserve orangutans, Bornean pygmy elephants, and other species. In addition to exploring primatological field methods, students will work with local groups and develop new ways to engage communities worldwide in saving orangutans and other wildlife. Prior to and following the field experience in Borneo, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with BIO.

**IES 647. Guyana: Local Wisdom & Conservation. (5)**

Guyana's rain forests are part of the Guiana Shield considered one of the last four Frontier Forests in the world. Guyana is famous for its relative abundance of iconic Amazonian species such as jaguars, arapaima (a "living fossil" and one of the largest freshwater fishes in the world), harpy eagles, giant anteaters, giant river otter, and the giant water lily. Guyana is also culturally and ethnically diverse. We will spend most of our time with the Makushi, an indigenous group that has lived in these forests and savannas for thousands of years. The Makushi and their lands face a striking transition as the forces of development provide new opportunities and challenges, the greatest perhaps being the rapid extinction of traditional knowledge. Conscious of the value of indigenous and non-indigenous knowledge, Guyana's Makushi people are becoming masters of straddling both worlds. Prior to and following the field experience in Guyana, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions.

Cross-listed with BIO.

**IES 648. Hawai'i: Saving Species. (5)**

The extraordinary island ecosystems of Hawai'i evolved in isolation over millions of years, and the islands have long been home to species that occur nowhere else on the planet. However, since the arrival of humans, native species have been under tremendous threat, and by many measures Hawai'i is becoming one of the United States' most profound conservation failures. Habitat destruction, environmental degradation, introduced species, and other forces have made Hawai'i a global center for extinction. Students in this course will join with San Diego Zoo Global (SDZG), Project Dragonfly, and Hawaiian partners to explore what it takes to save species in the wild. We will focus especially on the inspirational work of SDZG's Institute for Conservation Research, which uses science, education, and community programs to rescue species from the brink of extinction. We expect Earth Expedition's Hawai'i program to immerse graduate students and local partners in developing and testing site-specific methods of community engagement to sustain ecological and social health. Prior to and following the field experience in Hawai'i, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions. Cross-listed with BIO.

**IES 649. Kenya: Wildlife & People in Integrated Landscapes. (5)**

The South Rift Valley of Kenya is one of the most spectacular wildlife areas on the planet. Project Dragonfly has partnered with the Cincinnati Zoo & Botanical Garden and the African Conservation Centre to advance community-based conservation in this dynamic landscape. This effort builds on the decades-long research of Dr. David Western, former head of the Kenya Wildlife Service, and the centuries-long research of the Maasai pastoralists, who have long co-existed with wildlife in an open grassland ecosystem populated by elephants, lions, giraffes, zebra, wildebeests, and a remarkable diversity of other species. With the rise of nontraditional lifestyles, private ranches, and fenced lands that prevent needed wildlife migrations, communities of the South Rift have recognized the need to understand the impact of these changes and to work together for a better future. Join Kenyan conservationists, educators, community leaders, and youth to study sustainable approaches to human-wildlife coexistence. Prior to and following the field experience in Kenya, students will complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions. Cross-listed with BIO.

**IES 651. Mongolia: Steppe Ecology & Civic Media. (5)**

Students travel to Mongolia, the "Land of Blue Sky." The birthplace of the Mongol Empire, the largest contiguous empire in human history, Mongolia is now a vibrant democracy and home to an open wilderness that has few parallels in the modern world. We will explore the great steppes, and especially engage in the conservation story of two key steppe species: Pallas' cats and Przewalski's horse. Pallas' cats are important steppe predators whose conservation provides insights into the challenges facing the survival of small wild cats worldwide. Przewalski's horse, also called takhi, are considered to be the only true wild horse left in the world. We will join research on an ambitious reintroduction project based in Mongolia that has returned this remarkable species to its former homeland after being driven to extinction in the wild. Prior to and following the field experience in Mongolia, students will complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions. Cross-listed with BIO.

**IES 652. Thailand: Buddhism & Conservation. (5)**

Students travel to Thailand to investigate this country's astonishing Old World rain forests and diverse cultural environments. This course will address key topics in ecology while exploring emerging models of conservation and education. Possible research projects include Buddhism and the environment, indigenous ecological knowledge, spiritual connections to nature, and community forests. Discover the power of inquiry to generate knowledge and inspire conservation. All students conduct an investigation of the local ecosystem, asking their own questions, collecting data, and presenting conclusions. Prior to and following the field experience in Thailand, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions. Cross-listed with BIO.

**IES 653. India: Species, Deities & Communities. (5)**

Students journey to India through the rich ecological, cultural, and spiritual landscapes of the Western Ghats, exploring sacred groves and forest temples where the fate of wildlife, people, and deities meet. The Western Ghats region is well known to conservationists as a biodiversity hotspot, home to diverse local ecosystems with an abundance of plant and animal species found nowhere else. The existence of sacred groves in the Western Ghats predates recorded history. For social scientists, sacred groves are valued as centers for community life. For the spiritually inclined, sacred groves transcend earthly bounds, allowing people to commune with gods and other powerful beings that offer protection, enlightenment, absolution, or guidance. In this course, we seek to better understand the multifaceted relationship between people and nature, and we address specific questions about a sustainable future. Prior to and following the field experience in India, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions. Cross-listed with BIO.

**IES 665. IES Internship or Practicum Development. (1)**

Students explore career options and develop a plan for satisfying the professional experience requirements for the IES Master's of Environmental Science. Students will develop and write an internship or practicum proposal. Students pursuing an internship will also search for opportunities, develop application materials and apply for opportunities. Prerequisite: Admission to the IES MEn program.

**IES 670. Environmental Practicum. (1-12; maximum 12)**

Provides advanced graduate student with opportunity to apply acquired knowledge to the solution of an environmental problem. Prerequisite: satisfactory completion of comprehensive examination.

**IES 677. Independent Studies. (0-5)****IES 680. Environmental Internship. (1-12; maximum 12)**

Provides advanced graduate student with opportunity to apply acquired knowledge while working for approximately six months with an appropriate sponsoring organization actively involved in interdisciplinary environmental activities. Prerequisite: satisfactory completion of comprehensive examination.

**IES 685. Internship/Practicum Final Report Writing. (1)**

This course guides IES master's students through the process of writing their final reports for their internship experiences or practica.En. program. Prerequisites: Part of the IES M.

**IES 690. Special Problems in Environmental Science. (1-4; maximum 6)**

Independent or team research on a current environmental problem.

**IES 691. Costa Rica: Neotropical Ecology. (5)**

Students join a summer field course in Costa Rica to explore Neotropical systems, including lowland rain forest and cloud forest; engage in inquiry and action projects on vital issues in education and conservation. Prior to and following the field experience in Costa Rica, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions. Cross-listed with BIO.

**IES 692. Namibia: Great Cat Conservation. (5)**

Students join a summer field course in Namibia, Africa, to connect with the Cheetah Conservation Fund, the global center of cheetah conservation worldwide; engage in inquiry and action projects on vital issues in education and conservation. Prior to and following the field experience in Namibia, students complete coursework via Dragonfly's Web-Based Learning Community as they apply experiences to their home institutions. Cross-listed with BIO.

**IES 694. Habitats, Adaptations, & Evolution. (3)**

Students will complete a semester-long research project to explore habitats, evolutionary theory and adaptation; create research questions which can also cover individual classroom goals or district goals or state or national standards. This is a hybrid course with interaction on-site and in Dragonfly's web-based learning community. Cross-listed with BIO/GLG.

**IES 700. Research for Master's Thesis. (1-12; maximum 12)**

Prerequisite: satisfactory completion of comprehensive examination.

## Family Science and Social Work (FSW)

**FSW 142. Exploring Helping Professions. (3) (MPF)**

The course provides an introduction to various helping professions. Students will explore the history of helping relationships, the professionalization of helping, and current influences of technology, managed care, and models of service delivery on professional helping. Students will examine characteristics of a helping professional, two major approaches to helping, and techniques for self-care and managing interpersonal relationships. IIC.

**FSW 177. Independent Studies. (0-5)****FSW 201. Introduction to Social Work. (3)**

Provides an introductory understanding of human needs, social values, ideologies and institutional structures that have shaped the evolution of social welfare values and responses in America. The development of social work as a profession closely parallels the development of the social welfare system as we know it today. Traces the development of social welfare needs and the response of the social work profession.

**FSW 206. Social Welfare: Impact on Diverse Groups. (4) (MPF)**

Critical analysis of historical and current interactions of social welfare policies, programs, and services with diverse recipient populations. Attention given to contexts in which social welfare has been developed and provided. IC, IIC.

**FSW 207. Serving and Supporting Children, Youth, and Families I. (4) (MPT)**

Introductory analysis of relationships among the conditions, characteristics, and capacities of children, youth, and families (especially those labeled "at risk") and the institutional services and supports intended to improve their well-being. Emphasis placed upon question-finding in different contexts, especially the ways in which the knowledge we claim and the solutions we offer are dependent upon our analytical frames and language. Offered on regional campuses only.

Cross-listed with KNH 207.

**FSW 208. Serving and Supporting Children, Youth, and Families II. (5) (MPT)**

Focuses upon children, youth, and families experiencing needs, problems, and crises. Today's institutional services and supports are analyzed and evaluated both in class and in educational, health, and social service agencies. Students shadow helping professionals in these agencies during directed field experiences. Offered on regional campuses only.

Cross-listed with KNH.

**FSW 221. Sexualities. (3)**

Introduction to the study of human sexual behavior with particular attention paid to the issues of gender development; premarital, marital, and post-marital sexual patterns; birth control; sexual dysfunction; cross-cultural sexual patterns; and alternative sexual lifestyles.

Cross-listed with SOC/WGS.

**FSW 225. Family School and Community Connections. (3)**

This course focuses on the theory and practice of joining families, communities, and schools to support student learning, development and success in education. Strategies to improve communication and collaboration are emphasized with a focus on family types, cultures, economic conditions, school systems, community services, political forces, advocacy groups, and other factors that impact children and their families. IC.

Cross-listed with EDT 225.

**FSW 242. Family Decision-Making and Resource Management. (3)**

Explores individual and family/household decision-making behaviors throughout the lifespan related to the acquisition and allocation of resources in socially responsible ways. Examines the relationships between human needs, values, attitudes, and family/household characteristics and dynamics in individual and family decision-making. Emphasis is placed on families/households, as producing and consuming units, and their efforts to achieve their goals in global and environmental contexts. Attention is given to the roles of family life educators and other helping professionals in guiding individuals and families/households toward optimal well-being and quality of life as it relates to families' management of resources.

**FSW 245. Children and Families: Ages Conception - 12. (3) (MPF, MPT)**

Students in this course will examine the developmental contexts and theoretical perspectives of working with children and families. They will conduct in-depth analyses of the complex relationships between school, community and family resources in an educational setting. IIC.

**FSW 261. Diverse Family Systems Across the Life Cycle. (3) (MPF, MPT)**

Introduction to and survey of the diversity of family systems. Emphasizes the North American experience while drawing upon global understandings. Covers the nature of family systems and how these may vary by social class, ethnicity, urban-rural residence, and other aspects of sociocultural context. Stresses how family systems change across their life span, as well as how individuals experience different family systems in their life spans. IIC.

**FSW 277. Independent Studies. (0-5)****FSW 283. Introduction to Child Care Administration. (3)**

This course is intended for persons intending to work with young children and their families in a variety of child care settings and will focus on the development of knowledge and skills in understanding various aspects of child care administration and management. Offered on regional campuses only.

**FSW 293. Field Placement: Infant/Toddler Setting. (3)**

Course designed for students who are assuming teaching responsibilities for an extended period of time under guided supervision in an infant/toddler program. Offered on regional campuses only.

Prerequisites: FSW 382; C- in EDT 273 & 274, EDP 201, & FSW 245.

Prerequisite or Co-requisite: EDT 246 and EDT 272.

**FSW 294. Field Placement - Preschool Setting. (3)**

Course designed for students who are assuming teaching responsibilities for an extended period of time under guided supervision in a preschool program. Offered on regional campuses only.

Prerequisites: C-or better in EDT 273 & 274, EDP 201, & FSW 245.

Prerequisite or Co-requisite: EDT 246 and EDT 272E.

**FSW 295. Research and Evaluation Methods. (3)**

Techniques needed to understand and evaluate research within social work and family studies are explained. Quantitative and qualitative approaches to gathering and interpreting data are addressed.

Cross-listed with KNH 295.

**FSW 306. Social Work Practice I. (4)**

Prepares students for generalist baccalaureate-level social work practice. Built on a foundation of liberal education courses and introductory-level social work courses in human behavior in the social environment and social welfare. Focuses on the knowledge and skills of the social work process. Specific attention given to microlevel systems, emphasizing the interactions of micro systems with mezzo- and macro-level systems.

Prerequisite: social work major status.

**FSW 309. Social Welfare Policy II. (3)**

Promotes knowledge of the nature and impact of policy decisions on the social welfare of diverse groups. Special attention given to disenfranchised, oppressed, and impoverished groups. Students acquire beginning skills in policy practice and value-driven advocacy.

Prerequisite: FSW 206.

**FSW 312. Human Behavior in the Social Environment. (3)**

Examines diverse human behavior through an integration of various theoretical perspectives using a social systems approach. A social systems approach provides a framework to view individuals in the context of the family, groups, organizations, communities, and institutions. Integrates knowledge and develops a foundation necessary for social work practice and social work field experience.

**FSW 318. Child Life Theory and Practice. (3)**

Application of knowledge of child and adolescent development to educate, prepare, and support children and their families in healthcare settings and the changes in family dynamics related to illness they experience. This course is taught by a Certified Child Life Specialist and meets one of the requirements of the Child Life Council to become a Certified Child Life Specialist.

Prerequisite: FSW 245.

**FSW 333. Writing For Helping Professions. (3)**

This course assists students in recognizing the difference between academic writing and writing in helping professions such as psychology, social work, and family science and in mastering skills needed in a variety of practices (e.g., clinical work, research, program evaluation, grant writing, case notes, treatment plans, assessments and administration). This writing intensive course is designed to improve critical thinking and skills in various forms of communication; prepares the student to write professionally for audiences within and outside a corporation or nonprofit enterprise; proofreading skills are stressed; students create artifacts such as case notes, article reviews, and policy briefs. The course emphasizes developing ideas, pursuing knowledge, and conveying one's thoughts through oral and written media for advanced communication. Strong writing skills with the ability to adapt writing to different tasks and audiences is critical for a helping professions competency and career advancement. ADVW.

**FSW 345. Empowerment Skills in Family Development. (3)**

This introductory practice course provides students with opportunities to learn and develop foundational skills aimed at empowering families in their quest for healthy self-reliance. Using the national curriculum of the Family Development Credential™, students will apply research-driven practices in engagement and communication skills with diverse populations while exploring the importance of self-care in helping professions. Upon successful completion of FSW 345 and FSW 346, students are eligible to apply for formal credentialing through the University of Connecticut for an additional fee.

**FSW 346. Advanced Practice Skills in Family Development. (3)**

Following the national curriculum of the Family Development Credential™, students will have opportunities to learn and practice advanced skills designed to empower families throughout the lifespan. Using a strength-based focus, students will learn how to apply ethical practices in setting goals with families, communication and engagement skills, and collaborating with other professionals in order to support families as they reach their ambitions for healthy-self-reliance. Students must successfully complete FSW 345: Empowerment Skills in Family Development prior to enrolling in this course. Upon successful completion of FSW 345 and FSW 346, students are eligible to apply for formal credentialing through the University of Connecticut for an additional fee.

Prerequisite: FSW 345.

**FSW 361. Couple Relationships: Diversity and Change. (3)**

Investigation of intimate couple relationships in their many diverse forms. Focuses on social and psychological factors influencing development and maintenance of such couple relationships as dating, cohabitation, and marriage. General principles are discussed as well as factors that are more specific to certain age groups, relationship types, or sociocultural settings. IC.

Prerequisite: three hours of social science.

Cross-listed with WGS 361.

**FSW 362. Family Poverty. (3)**

Examines definitions, theories, causes and consequences of family poverty in the U.S. Identifies the extent and degree of U.S. poverty and demographic characteristics of those who are poor or likely to become poor. Consideration given to programs that reduce poverty and/or its negative effects, including those practiced in the past, those now practiced, and those that offer promise for improving the economic and social status of those who are poor. Costs and benefits of welfare and welfare reform and strategies for preventing poverty among future generations also discussed and evaluated. IC. Cross-listed with BWS 362 and SOC 362.

**FSW 363. Sociology of Families. (3)**

Analysis of the impact of social change on family systems and patterns, structures, dynamics, and social policy, with emphasis on differences by social strata and culture. Cross-listed with SOC 363.

**FSW 365. Family Life Sexuality Education Across Cultures. (3) (MPT)**

Addresses cultural issues related to sexuality education, sexual behavior, and sexual identity. Comprehensive overview of the biological and social aspects of human sexuality, specifically directed at training for family life educators. Differences in cultural background are examined and presented as powerful educational tools to be applied toward the improvement of communication about sexuality. Presents a variety of teaching strategies for different age groups, which will meet licensure requirements for family life educators.

**FSW 375. Perspectives on Child Maltreatment and Child Advocacy. (3)**

This course covers the history of child maltreatment and child advocacy in the United States and around the world, the current theoretical perspectives for understanding child maltreatment, the definitions of child maltreatment, an introduction to the professional responses to child maltreatment, an introduction to advocacy for children and contemporary issues in the fields of child maltreatment and child advocacy.

**FSW 377. Independent Studies. (0-5)****FSW 382. Infant and Toddler Caregiving and Supervision. (3) (MPT)**

For those who plan and provide care for infants and toddlers in families and in various types of child care settings. Concepts in care provided with activities to help students develop caregiving knowledge and skills. Offered on regional campuses only.

**FSW 385. Global Child Advocacy Issues. (3)**

The course is designed to increase student understanding of the lives of children growing up in various countries around the globe. The purpose of this course is to prepare students to recognize health, maltreatment, cultural, religious, political, and social advocacy issues in the child's country that affect the welfare and well-being of the child. The overall goal of this course is to increase understanding of the role of the advocate and be able to demonstrate advocacy skills for a chosen population.

**FSW 406. Social Work Practice II. (4)**

Prepares students for generalist baccalaureate-level social work practice. Built on a foundation of liberal education courses and introductory-level social work courses in human behavior in the social environment and social welfare. Focuses the knowledge and skills of the social work process with specific attention to groups and community. Prerequisite: FSW 306 and social work major status.

**FSW 411. Senior Field Experience I. (4)**

Provides social work majors with the opportunity to integrate and apply liberal education foundation and generalist social work knowledge and skills gained in the classroom by practicing with various sized systems, including individuals, families, groups, agencies, communities, and institutions. Prerequisite: Completion of FSW 306 and FSW 406, social work major status, and permission of the instructor. Co-requisite: FSW 412.

**FSW 412. Senior Seminar in Social Work I. (2)**

Provides opportunity to continue the integration of liberal education requirements and social work courses with field experiences. Co-requisite: FSW 411.

**FSW 413. Senior Seminar in Social Work II. (2)**

Provides opportunity to continue the integration of liberal education requirements and social work courses with field experiences. Focuses on experiences and knowledge regarding macro-level systems, however, students are expected to integrate and apply generalist social work knowledge and skills with multi-level, diverse systems. Co-requisite: FSW 411.

**FSW 414. Senior Field Experience II. (4)**

Provides social work majors with the opportunity to integrate and apply liberal education foundation and generalist social work knowledge and skills gained in the classroom by practicing with various sized systems, including individuals, families, groups, agencies, communities, and institutions. Prerequisite: Completion of FSW 306 and FSW 406, social work major status, and permission of the instructor. Co-requisite: FSW 413.

**FSW 418/FSW 518. The Family Life Education Process. (3) (MPC)**

In-depth examination of family life education process. Students gain understanding of educational principles to develop curricula for various family life education settings. Program design, delivery, and evaluation are covered. Prerequisite: FSW 295 or SOC 262.

**FSW 435. Death Studies. (3) (MPT)**

Examines social processes involved in the meaning, management, and experience of death and dying. Analyzes death as it relates to social structure, patterns of social interactions, and human experience. Prerequisite: SOC 151 or SOC 153; SOC/SJS 165; or GTY 154; or FSW 261. Cross-listed with SOC.

**FSW 442/FSW 542. Family Resource Management Education and Advocacy. (3)**

In this course students will engage in critical analysis while exploring individual and family-level goal setting and decision-making with regard to the identification, development, acquisition, and allocation of resources (e.g., time, energy, friends, neighbors, natural environment, money, material assets, and space). The processes by which families manage their resources are complex and often influenced by many factors including but not limited to, relationships with current and past family members; the political, economic, and social environment; interactions with available resources in their community; and patterns of interaction within and between family members and others outside the family. Prerequisite: FSW 261 or FSW 225.

**FSW 445/FSW 545. Therapeutic Play for Child Life Specialists. (3)**

This course introduces theories of play and outlines the relationship between theories of human development and theories of play. Students pursuing certification as child life specialists will examine elements of play, benefits of play, and various therapeutic play modalities for the clinical setting as a force for healing and enhancing the well-being of children and families. Opportunities to develop and practice therapeutic play skills will be provided.  
Prerequisite: FSW 245 for FSW 445/FSW 545.

**FSW 450/FSW 550. Special Problems. (1-4; maximum 8)**

Various topics offered across semesters, professors, or sections.  
Prerequisite: upperclass or graduate standing in family science and social work.

**FSW 451/FSW 551. Family Violence. (3) (MPC)**

Analysis of research and theory on family violence, physical abuse of children, sexual abuse, neglect, premarital abuse, wife abuse, gay/lesbian battering, elder abuse, prevention and intervention. Basic framework is ecological/feminist, emphasizing an examination of family dynamics as well as broader historical, social, and patriarchal contexts.  
Cross-listed with SOC451 and WGS 451/WGS 551.

**FSW 455. Professional and Systematic Responses to Child Maltreatment. (3)**

The purpose of this course is to prepare students to recognize the effects of child maltreatment and apply intervention strategies for children and their families. Multidisciplinary approaches to prevention, advocacy and treatment of child maltreatment survivors will be presented and discussed. The overall goal of this course is to improve outcomes related to child maltreatment through case management. This course involves an experiential lab designed around observation and interaction with children.  
Prerequisites: FSW 375 and FSW 385.

**FSW 462/FSW 562. Family Policy and Law. (3) (MPC)**

Examines family policies related to U.S. families' well-being using an ecological framework. Considers the impact of family policies/laws at state and federal levels including: policy development, implementation, and evaluation; and roles of professionals in building/influencing family policy.  
Prerequisite: FSW 295 or SOC 262.

**FSW 466/FSW 566. Interpersonal Perspectives on Adulthood and Aging. (3) (MPT)**

Examination of the central importance of close relationships in adulthood. Topics include long-term intimate relationships, sexuality/sexual behavior, dating, singlehood, divorce, widowhood, parent-adult child relationships, siblings' grandparenthood, friendships, retirement/financial concerns, caregiving, and policy issues impacting close relationships in adulthood.

**FSW 475/FSW 575. Family Theories. (3)**

Analysis of selected theories of the family. Emphasis placed on conceptual knowledge, understanding of the importance of family theories and in-depth analysis of several theoretical frameworks, such as family process, conflict, and symbolic interaction.  
Prerequisite: six hours of family sciences courses and upperclass or graduate standing, or by permission of instructor.

**FSW 477. Independent Studies. (0-5)****FSW 481/FSW 581. Adolescent Development in Diverse Families: Ages 13-25. (3) (MPT)**

Students will engage in an interdisciplinary examination of the fields of adolescent development and emerging adulthood from contextual and cross-cultural perspectives. The racial, ethnic, and cultural diversity of adolescents is considered while studying persons 13-25 years of age within family and social systems. Topics include identity development, peer relations, sexuality, gender norms, physical and emotional development, community resources and engagement, intimate relationships, parent-adolescent relationships, and other family and social influences during adolescence and emerging adulthood.

**FSW 490/FSW 590. Professional Issues in Family Science. (3)**

Seminar focusing on preparing family studies majors, minor, and graduate students for life (work or continued education) in the field. Topics and skill development that are covered include: family studies as a profession (e.g., what do I do with my degree?); applying for a job (e.g., resumes, cover letters, interviewing skills, job searching); professional ethics; applying for graduate school (e.g., choosing graduate programs; statements of professional goals, etc); developing a professional portfolio; and an introduction to the grant writing process.

**FSW 491/FSW 591. Seminar in Family and Child Studies. (1-4; maximum 4)**

Various topics offered across semesters, professors, or sections.  
Prerequisite: upperclass or graduate standing in family science and social work.

**FSW 494/FSW 594. Internship with Families and Children. (3-6; maximum 6)**

Students participate in a professional work environment, prepare written reports and journals, and complete a project. Students build upon previous knowledge and experience by working within, and critically appraising, a professional setting related to families and/or children. Focus is on professional development and the critical appraisal of career options. Students wishing to become Certified Family Life Educators must complete 125 clock hours and focus their internship experiences on the practice of family life education or prevention. Coursework is completed online. EL.

**FSW 498. Critical Thinking About Family Relationships. (4) (MPC)**

Each semester this Capstone addresses critical family issues and students develop position papers grounded on multiple sources of information (e.g., scholarly literature, interview, personal values). The topic of the course is determined by the instructor and may vary from semester to semester.

**FSW 585. Social Work in a Diverse World. (3)**

Enhances understanding and sensitizes students to our increasingly diverse society. Provides content about differences and similarities, needs and beliefs of minority groups and their relations to the majority group.

**FSW 600. Independent Reading. (1-4; maximum 4)**

Planned reading in any field in family studies with guidance of a department faculty member.  
Prerequisite: advanced standing, nine semester hours in family studies and social work, and approval of the plan by department chair.

**FSW 611. Social Welfare Policy I. (3)**

Social Welfare Policy I provides an overview of social welfare and social work as a profession. An overview of U.S. Social welfare services are provided in the context of social work values and ethics. This course includes a critical analysis of historical and current interactions of social welfare policies, programs, and services with diverse recipient populations.

Prerequisite: admission to the MASW Program.

**FSW 612. Social Welfare Policy II. (3)**

Social Welfare Policy II emphasizes issues such as racism, poverty, and community building. Policy analysis and development is taught from the point of view of agency management, community organizers/planners, and policy advocates. Attention is paid to policy development important to racial and ethnic groups and women as well as gay and lesbian persons. The historical development of major U.S. community policy initiatives is addressed as well as contemporary community policy issues at the federal, state and local levels. This course builds upon the policy analysis frameworks developed in Social Welfare Policy I to develop a higher level of critical thinking and competency used to address social welfare policy issues at all levels of the social welfare and social work systems.

Prerequisite: admission into the MASW program and Social Welfare Policy I.

**FSW 613. Social Work Ethics: Social Work Ethics, Professionalism and Self Care. (3)**

This course introduces graduate social work majors to the ethical practice of social work from a generalist perspective, including professional conduct and self care awareness and skills. Students will increase their understanding of the history and evolution of values and ethics in the social work profession, and develop skills in applying relevant ethical concepts and theories to social work practice. Students will also increase their ability to recognize ethical issues and to apply ethical decision-making frameworks and protocols through enhanced use of critical thinking skills. Lastly, students will learn self care awareness and skills needed to decrease incidents of vicarious trauma in social work settings.

Prerequisite: admitted to MASW Program.

**FSW 615. Cultural Competency. (3)**

The purpose of this course is to empower students to develop an appreciation for their own cultural identities and become critically self-reflective in their orientation toward differences in the cultural identities of others as defined by race, ethnicity, gender, class and sexual orientation. Students will acquire the knowledge, skills, and attitudes to increase their effectiveness in relating across cultural differences and in increasingly diverse domestic and international environments.

Prerequisite: admission into the MASW collaborative program.

**FSW 616. Graduate Social Work Research I. (3)**

This is the first of three research courses required in the Master of Arts in Social Work (MASW) Program. Students will learn basic skills of quantitative and qualitative social research methodology and techniques of gathering, analyzing and interpreting data. Students will evaluate research reports for relevance to practice with at-risk and underserved populations. Students will develop an initial research or evaluation design for social work practice.

**FSW 617. Human Behavior in the Social Environment I. (3)**

The course employs a social systems approach as the primary foundation for viewing families, groups, organizations, communities and social institutions. The course will utilize theories about human behavior to develop the foundation needed to learn effective social work practice.

Prerequisite: admission to the MASW Program.

**FSW 618. Human Behavior and the Social Environment II. (3)**

This course is designed to provide an understanding of human behavior and development throughout the life span within its social context. Specific theories from the biological, psychological, social and cultural theory base are presented throughout the course, concurrent with the presentation of life span development. Human behavior is analyzed in terms of intrapersonal, familial and sociocultural phenomena. The course includes theories and knowledge about the range of social systems in which individuals live, including families, groups, organizations, institutions, and communities. The ecological perspective provides a holistic basis for examining adaptive and maladaptive behavior, family processes and their effects on individual family members, and individual development and behavior in relationship to race, ethnicity, gender, social class, sexual orientation, and other aspects of diversity. The influences of prejudice, discrimination and oppression on individual, family and social functioning are addressed throughout the course. Theories are examined critically for their validity in recognizing human potential for growth and as a foundation for strengths-based social work practice, with an emphasis on empowerment. Attention is also given to ethics and social work values in evaluating theories and their application to practice.

Prerequisite: admission to the MSW program and Human Behavior and the Social Environment I.

**FSW 621. Social Work Practice I. (3)**

Social work practice I is designed to help students develop an understanding of the knowledge base and values of social work practice; acquire basic skills through the use of role-playing and simulated interviewing process. Specific attention is given to micro levels systems, emphasizing the interactions of micro systems with mezzo and macro level systems.

Prerequisite: admission to the MASW Program.

**FSW 622. Social Work Practice II. (3)**

This course will focus on the continued application of theories, concepts and principles in direct social work practice. A wide range of treatment modalities are presented including individual, family, and group as well as psycho-social educational approaches. Focus on deepening skills with each of these populations and knowledge about social work practice is presented. A particular focus is on empowerment, social and economic justice, groups, and communities.

Prerequisite: FSW 621 and admission to the MASW Program.

**FSW 641. Concentration Focus Area Families and Children: Practice. (3)**

This is a concentration focus area course related to families and children. This course provides the knowledge, skills, and values needed for advanced generalist social workers to engage, assess, intervene, and evaluate direct practice with children and families. This course will include use of the DSM and other diagnostic tools that apply to children and families. This course will discuss clinical interventions with children and families.

Prerequisite: admission into the MASW Program.

**FSW 642. Concentration Focus Area Macro: Families and Children. (3)**

This course focuses on U.S. social welfare policy with children and families. Particular attention is paid to social welfare policy analysis, the nature of social welfare system trends, and their impact on children and families. Completion of FSW 611 and FSW 612 is required. In addition, previous undergraduate course work in social welfare policy is strongly suggested, as well as a basic statistics course, taking such a course simultaneously is strongly suggested. Prerequisites: FSW 611 and FSW 612 and enrollment in MASW program or permission of instructor.

**FSW 645. Concentration Focus Area Older Adults: Practice. (3)**

This course is designed to provide students with an understanding of advanced generalist practice with older adults. A life course perspective that incorporates cultural, economic, historical and structural contexts that provides the framework for examining aging-related issues, particularly in regards to the impact on the quality of life of older adults. Topics to be explored include cross-cultural issues, health and mental health, social theories of aging, and resilience in older persons of color, among others.

**FSW 646. Older Adults: Macro Practice. (3)**

This course provides the knowledge, skills, and values needed for advanced generalist social workers to engage, assess, intervene, and evaluate policy practice with older adults. This course will include policies and programs that specifically target positive outcomes for older adults.

**FSW 661. Field Education I. (2)**

Field education is the signature pedagogy of social work education. Student in Social Work Field Education I must complete 300 hours of field education experience in the community. Field education provides the opportunity for the student to engage in selected and organized activities, with or on the behalf of clients, that apply the social work skills, knowledge, and values learned in the classroom. In field education, students meet a range of clients, encountering diversity, and growing in their self-awareness and abilities to help clients of various backgrounds and with different problems. Prerequisite: admission to MASW Program.

**FSW 664. SW Field Education Seminar I. (1)**

The seminar is specifically designed to integrate the Field Education I experience and coursework, and is offered to students admitted to the MASW Program.

**FSW 667. Policy and Politics of Aging. (3)**

Focuses on major policy areas including income security, health care, long-term care, housing, and social services. Cross-listed with GTY 667.

**FSW 677. Independent Studies. (0-5)****FSW 688. Clinical Interventions in Social Work. (3)**

This course is designed to give advanced generalist social workers an opportunity to examine, compare and evaluate a variety of evidenced-based clinical approaches and interventions used in social work practice. Students will gain knowledge and understanding of the main tenets of each therapeutic approaches and/or intervention and will be encouraged to use critical thinking and analytical skills to compare and differentiate these various approaches. The course will focus on evidenced-based clinical interventions used for depressive, anxious, trauma, personality, and other related disorders.

**FSW 700. Masters Thesis. (1-14)**

Prerequisite: approval of faculty member.

**FSW 700A. Thesis: Independent Research. (1-3; maximum 6)**

Prerequisite: approval of faculty member.

**FSW 716. Graduate Social Work Research II. (3)**

This second research course concerns the data analysis component of social science research and program evaluation. The course covers the procedures for the rigorous, valid, reliable, and credible collection and analysis of quantitative and qualitative data to arrive at decisions that improve interventions and contribute to knowledge. Students will continue to develop the research design for their culminating research project.

**FSW 717. Social Work Capstone. (3)**

In this third research course, students implement a culminating research project following a rigorous qualitative and/or quantitative design to collect and analyze data to inform agency practice and/or policy decisions. Students must successfully complete the culminating research project to graduate.

Prerequisite: FSW 616 and FSW 716 and admitted to the MASW Program.

**FSW 723. Social Work Assessment and the DSM. (0-3)**

Advanced social work practice builds on the foundation of social work practice I and social work practice II. Consistent with the field of social work, and the Family Studies and Social Work department, course content seeks to facilitate knowledge and competency in working with diverse populations. Content includes practice with individuals, children, families, communities and larger systems. Advanced social work practice will utilize an ecological systems framework and strengths perspective as contexts for the development of basic competencies. These skills are applied during the following stages of social work intervention: Engagement, Assessment, Intervention and Evaluation. Content will include the accurate application of DSM and other clinical assessment tools, an understanding of social deviance, and the application of clinical treatment models, such as cognitive, behavioral, strengths based, psychodynamic, psychoeducational and group approaches.

**FSW 724. Advanced Generalist Social Work II: Macro. (3)**

Advanced social work practice II teaches advanced generalist social work direct practice skills with communities and organizations. these skills are applied during the following stages of social work intervention: Engagement, Assessment, Intervention, and Evaluation. Content will include community organization, locality development, advocacy, and legislative policy change. Content will also include skills to write grants to support funding of social service organizations. Prerequisites: FSW 616 and FSW 717.

**FSW 761. Advanced Standing Field Seminar. (1)**

The seminar is specifically designed to serve as an introduction to the field education at the masters' level in social work for advanced practice students. We will discuss the knowledge expected of advanced practice students as well as the competencies and practice behaviors which are defined by the Council of Social Work Education (CSWE). The focus of the course will be burnout prevention and getting your life in order to be a successful graduate student and social work practitioner.

**FSW 762. Social Work Field Education II. (1-3)**

Field education is the signature pedagogy of social work education. Students in Social Work Field Education II must complete 300 hours of field education experience in the community. Field education provides the opportunity for the student to engage in selected and organized activities, with or on behalf of clients, that apply the social work skills, knowledge, and values learned in the classroom. In field education, students meet a range of clients, encountering diversity, and growing in their self-awareness and abilities to help clients of various backgrounds and with different problems.  
Prerequisite: admitted to the MASW Program.

**FSW 763. Social Work Field Education III. (1-3)**

Field education is the signature pedagogy of social work education. Students in Social Work Field Education III must complete 300 hours of field education experience in the community. Field education provides the opportunity for the student to engage in selected and organized activities, with or on behalf of clients that apply the social work skills, knowledge, and values learned in the classroom. In field education, students meet a range of clients, encountering diversity, and growing in their self-field awareness and abilities to help clients of various backgrounds and with different problems.  
Prerequisite: admitted to the MASW Program.

**FSW 765. Social Work Field Education Seminar II. (1-3)**

The seminar is specifically designed to integrate the Field Education II experiences and coursework, and is offered with social work advanced generalist fieldwork and competencies.  
Prerequisite: admitted to the MASW Program.

**FSW 766. Social Work Field Education Seminar III. (1-3)**

The seminar is specifically designed to integrate the Field Education III experiences and coursework, and is offered with social work advanced generalist fieldwork and competencies.  
Prerequisite: admitted to the MASW Program.

## Fashion (FAS)

**FAS 101. Introduction to the Fashion Industry. (3)**

Presentation of various aspects of the fashion and textile industry, jobs in the industry, fashion industry research, possible field trip to apparel manufacturing facility.

**FAS 150. Fashion Sprint Special Topics. (1.5-6; maximum 6)**

Various special introductory topics in Fashion will be offered with no prerequisites.

**FAS 201. Apparel Construction Techniques. (3)**

The basic principles of garment construction: cutting, sewing, fitting, pressing and finishing garments. This is a making course, with emphasis on professional design studio practices.

**FAS 211. Draping for Fashion Design. (3)**

Basic principles of three-dimensional designing and patternmaking.  
Prerequisites: FAS 201 or (ART 145 and ART 146), or permission of instructor.

**FAS 212. Flat Pattern Drafting for Fashion Design. (3)**

Basic principles of patternmaking, including: drafting a set of basic patterns, developing various styles, constructing and testing muslin samples, finalizing production-ready patterns, grading patterns into various sizes.  
Prerequisites: FAS 201 or (ART 145 and ART 146), or permission of instructor.

**FAS 221. Textiles for the Fashion Industry. (3)**

Identifying and analyzing apparel fabrics, yarns, and fibers, both man-made and natural, including construction, finishes, and other properties. Developing an understanding of the factors that influence the tactile qualities and performance of fabrics during garment design, manufacture, and wear.

**FAS 241. The Elements and Principles of Fashion Design, including Color Theory. (3)**

Presentation of the vocabulary of the elements of design, such as line, shape, color, etc, and the principles of design, such as unity, harmony, balance, proportion and rhythm. Practice of drawing designs using these elements and principles effectively.

**FAS 281. Contemporary Fashion History of 20th-21st Century. (3)**

Beginning at the Industrial Revolution and continuing to the present, this course is an in-depth study of prominent fashion designs and designers that represent each era, as well as the psychological, social, and economic events that shaped so many fashions. It includes hands-on examination of vintage garments and field trip(s) to museum collections.

**FAS 332. Fashion Illustration. (3)**

Fashion Illustration introduces the sketching techniques used to create the fashion figure and to illustrate fashion design silhouettes and fabric treatments.

**FAS 340. Internship. (0-20)****FAS 341. Junior Fashion Studio. (3)**

The Junior Fashion Studio will build upon the knowledge and skills acquired from FAS 201 Apparel Construction, FAS 211 Fashion Draping, and FAS 212 Flat Pattern Drafting. Students will design and create an original fashion design collection.  
Prerequisites: FAS 201, FAS 211, and FAS 212 or permission of instructor.

**FAS 360. Fashion and Digital Tools. (3)**

Fashion and Digital Tools will include instruction and practice in technical fashion drawing, both by hand and digitally.

**FAS 377. Independent Studies. (0-5)****FAS 441. Senior Fashion Studio. (3)**

The Senior Fashion Studio will build upon the knowledge and skills acquired from FAS 201 Apparel Construction, FAS 211 Fashion Draping, FAS 212 Flat Pattern Drafting, and FAS 341 Junior Fashion Studio. Students will design and create an advanced original fashion design collection suitable for fashion show presentation.  
Prerequisites: FAS 201, FAS 211, FAS 212 and FAS 341 or permission of instructor.

**FAS 442. Fashion Portfolio. (2)**

Development of a professional portfolio package, including documentation of student's original creative work in hard copy and digital format, and creation of a logo, resume, and cover letter. FAS 441 can be taken concurrently.  
Prerequisites: FAS 101, FAS 201, FAS 211, FAS 212, FAS 241 (or equivalent substitution), FAS 332, FAS 341, FAS 360, or by permission of instructor.

**FAS 450. Advanced Special Topics in Fashion. (3; maximum 6)**

Topical offerings for juniors and seniors focusing on emerging and/or established topics in fashion, such as fashion retail environments, fashion retail internationalization, or fashion business models.

**FAS 451. Fashion Retail Planning and Buying. (3)**

Retail buyer's role in merchandise management: decision making, planning, allocating, controlling, negotiating, buying, and pricing. Analysis and synthesis of merchandising management practices and problems in fashion and retail contexts.

**FAS 463. Fashion Trend Forecasting. (3)**

Fashion trend forecast development and use across all segments of the fashion industry; apply theories and forecasting methods to develop fashion forecast.

**FAS 477. Independent Studies. (0-5)**

## Film Studies (FST)

**FST 135. Film as Ethnography. (1) (MPF)**

Explores anthropological approaches to the study of human diversity and variation through the lens of ethnographic and documentary films. Exposes students to basic concepts in anthropology including cultural and linguistic relativity, globalization, and representational practices. IIIB. CAS-C.

Cross-listed with ATH.

**FST 177. Independent Studies. (0-5)****FST 201. Film History and Analysis. (3) (MPF, MPT)**

Introduction to basic principles of cinematic form and to major movements and issues in the history of cinema. Primary emphasis given to principal methods of critical thinking in film studies, from close analysis of formal and stylistic elements in a single film to more global ways of understanding and interpreting films within their aesthetic, social, historical, and political contexts. Includes screenings of representative films, lectures, discussions, group activities, papers, and exams. IIB. CAS-B.

**FST 204. Brazilian Culture Through Music and Film. (3) (MPF)**

Through music and film this course raises questions about national identity, history, social, religious, and ethnic diversity in Brazil. IIA, IIB, IIIB. CAS-B.

Cross-listed with MUS 204 and POR 204.

**FST 205. American Film as Communication. (3) (MPT)**

Introduction to the study of communication via American motion pictures. Focuses on analysis of technical and narrative elements found in motion pictures. Screening of films provides backdrop for discussing visual impact of motion pictures as significant form of mass communication.

Cross-listed with STC.

**FST 206. Diversity and Culture in American Film. (3) (MPF)**

Analysis of the representation of diversity and culture as portrayed in American motion pictures. IC, IIB. CAS-B.

Cross-listed with IDS.

**FST 220. Literature and Film. (3; maximum 6) (MPF, MPT)**

Study of the relationship between film and genres of literature, focusing on a comparison of techniques of rhetoric, fiction, and drama, and those of film. Primary consideration given to film adaptations of works of fiction and drama. Extensive screenings of film. May be repeated once when topic changes. IIB. CAS-B-LIT.

Cross-listed with ENG.

**FST 221. Shakespeare and Film. (3) (MPF, MPT)**

Study of selected plays of Shakespeare that have been filmed. Students read plays and view one or more versions of each play. IIB. CAS-B-LIT.

Cross-listed with ENG 221.

**FST 222. Italian American Culture. (3) (MPF)**

A survey and investigation of the history of Italian immigration in America, the development of Italian American communities across the land, and the contributions that Italian Americans have made to American society and culture. Taught in English. No prerequisites. IC, IIB. CAS-B.

Cross-listed with AMS/ITL.

**FST 235. Classical Hollywood Cinema. (3)**

This course examines the production of the so-called classical period of Hollywood cinema, beginning in the 1930s with the emergence of early sound and ending in the 1960s with the demise of the studio system. We will utilize an industry-studies approach, but will also explore the principal narrative and stylistic trends associated with the classical era, as well as its key creative figures- directors, producers, cinematographers, actors, etc. Weekly Screenings Required.

Cross-listed with ENG.

**FST 236. Experimental Film. (3) (MPT)**

This course examines influential works and movements in experimental film, emphasizing filmmakers for whom the conventional entertainment narrative is an object of radical investigation. Working outside the traditions of commercial film, experimental filmmakers take alternative approaches not only to narrative but also to visual representation, sound production, and editing, often exploiting new or unconventional technologies to achieve their effects. The course will also consider critical and theoretical perspectives, situating the unconventional techniques of experimental film in relation to broader aesthetic, cultural, historical, and political contexts.

Cross-listed with ENG 236.

**FST 249. Asian & Asian American Cinema. (3) (MPF)**

Explores films in the contexts of Western colonial influences and legacies in Asia and Asian America. Students will learn how mainstream notions of nation, gender, sexuality, family values, social hierarchies and social change are constructed at the intersection of the audience, visual imagery, political, and economic contexts. We will also explore the role alternative cinema plays in challenging mainstream forms of knowledge production with the overall goal of critically evaluating how cinema creates, recreates, perpetuates and reproduces "Asian" cultures for global and local audiences. IC, IIB, IIIB. CAS-B-Humanities.

Cross-listed with AAA/ENG.

**FST 250. History and Popular Culture. (3; maximum 6)**

Topical studies of historical imagery as presented in the popular communications media: best-selling fiction, documentaries, school texts, popular histories, and especially film. May not take course more than once with same instructor. When topic is film, cross-listed with HST 250. Offered infrequently.

**FST 252. History at the Movies. (3)**

Explores the ways that history is represented in film and video (as opposed to print). By comparing film to texts, analyzing narrative structure, and studying the representations of the past on screen, students learn how history is depicted in this medium. Introduces history of film by viewing and discussing works of several early directors who represented history. Films and directors selected for inclusion will vary from year to year.

Prerequisite: FST 201 recommended (not required).

Cross-listed with HST.

**FST 261. German Film in Global Context. (3) (MPF, MPT)**

Traces the dynamic development of German speaking cinema from 1895 to the present within a global context that defines filmmaking beyond national borderlines. The global context is determined by the international spread and commonality of: 1) technological innovations (camera, lighting, and sound systems, editing techniques); 2) commercial practices (of production, collaboration, distribution, exhibition), 3) political influences (the interplay of film, war, and ideology), and 4) aesthetic trends (the international popularity of certain genres, formal devices, and specific cultural preferences). The course is taught in English and all the films have English subtitles. IIB, IIIB. CAS-B.  
Cross-listed with GER.

**FST 262. Italian Cinema. (3) (MPT)**

Discussion and analysis of major movies and trends in Italian cinema. Topics may vary but attention is given to social and ideological implications of Italian cinema and the way movies produce a critique of cultural mores. Taught in English. No prerequisites. CAS-B-LIT.  
Cross-listed with ITL.

**FST 263. Soviet and Post-Soviet Russian Cinema. (3) (MPT)**

Critical survey of directors, genres, and movements in Soviet cinema. Screening of films from Eisenstein to current directors. Lectures, discussion, and readings in English. CAS-B-LIT.  
Cross-listed with RUS.

**FST 264. Chinese Cinema and Culture. (3)**

Study of selected films. Introduces Chinese cinema and, through films, Chinese culture. Works are from mainland China, Taiwan, and Hong Kong, and subject matter is both historical and modern. Knowledge of Chinese is not required.  
Cross-listed with CHI.

**FST 266. Survey of Japanese Cinema. (3)**

This course examines representative Japanese films from the immediate post-war era to the new wave of Japanese anime (animated film). Offered in English.  
Cross-listed with JPN.

**FST 272. Cinemas and Cultures of Central and Eastern Europe. (3)**

Analyses the developments and trends in the cinemas and cultures in Central and Eastern Europe from 1945 to the present; reflects on the definition of filmmaking beyond national concepts. Global context is determined by the theoretical exploration of: 1) the geopolitical region of Germany as well as Central and Eastern Europe in dialog with Western Europe and the world; 2) cultural practices related to identity formation and aesthetic perception; 3) film production and reception among domestic and international audiences; and 4) the interplay of film cultures in the Cold War. Taught in English and all films have English subtitles. IIB. CAS-B.  
Cross-listed with GER/RUS.

**FST 277. Independent Studies. (0-5)****FST 282. Sexualities and Film. (3)**

An exploration of film representations of diverse sexualities (e.g., gay, lesbian, bisexual, and transgendered) from the silent era to the present. IC.

**FST 301. Film Theory. (3)**

Introduction to the basic concepts of classical and contemporary film theory, such as realism, formalism, structuralism, post-structuralism, psychoanalysis, cognitive theories, among others. Mandatory weekly screenings.  
Prerequisite: FST 201.

**FST 330. Film Auteurs. (3; maximum 9)**

In-depth study of the films of a particular director or pair of directors, within the framework of auteurism. Weekly screenings required.

**FST 340. Internship. (0-20)****FST 345. Global Media, Ethnography, and Film. (3)**

Explores anthropological and ethnographic frameworks to the study of global media flows across boundaries, borders, and time. Examines the ways in which mediated performances, texts, and images are instrumental in building and negotiating communities, cultures, and identities.

Cross-listed with ATH.

**FST 350. Topics in Film. (3)**

In-depth and concentrated studies in film. Focuses on specific topics in film such as national film traditions (American, Japanese, French, etc.), genres (science fiction, western, detective, etc.), and themes (film and society, women in film, political conspiracy, etc.). May be repeated once when topic changes.

Cross-listed with ENG.

**FST 356. Women and Gender in Film. (3) (MPF)**

This course explores the construction of gender and representations of women in film in two contexts: in mainstream Hollywood cinema and in experimental and independent films. While not providing an extensive history of women in film, the course provides a sampling of iconic films—from early cinema to the present—to critically examine how women are portrayed throughout the twentieth century and in various genres, in films made by both men and women.

Course readings engage theoretical and practical points of contact within cinema, including feminist film theory, postcolonial theory, psychoanalysis, queer theory, and critical race theory. IIB, IC. CAS-B.  
Cross-listed with ENG/WGS.

**FST 360. Film Genres. (3; maximum 9)**

In-depth study of the conventions, artists, and styles associated with a specific film genre and the historical circumstances in which the genre appeared. Possible topics include the Western, film noir, the musical, etc.

**FST 366. French Cinema In Translation. (3) (MPT)**

Critical survey of major directors, genres, and movements in French cinema. Particular attention devoted to development of film theory and criticism in France and their relation to film production. Screening of films by Renoir, Bresson, Bunuel, Godard, Truffaut, Varda, Resnais, Tavernier, and others. Taught in English; reading in English translation. CAS-B-LIT.

Cross-listed with FRE.

**FST 377. Independent Studies. (0-5)****FST 381. Afro-Brazilian Diaspora Through Film and Arts. (3)**

A focus on questions of gender, race, class and stereotypes in the African Lusophone countries. Taught in English.

Prerequisite: any literature course.

Cross-listed with ENG/BWS/POR.

**FST 383. Brazilian Women through Literature and Film. (3) (MPF)**

Addresses questions about gender, race, class and stereotype of women's bodies in 20th-century Brazil. IIB, IIIB. CAS-B.

Cross-listed with BWS/ENG/POR/WGS.

**FST 400. Topics in Film. (3)**

In-depth and concentrated studies in film. Focuses on specific topics in film such as national film traditions (American, Japanese, French, etc.), genres (science fiction, western, detective, etc.), and themes (film and society, women in film, political conspiracy, etc.). May be repeated once when topic changes.

Prerequisites: Senior standing or instructor permission.

**FST 401. Seminar in Film Study. (3) (MPC)**

Students critique series of seminal analyses of films as preparation for development of their own research projects.

Prerequisite: FST 201 and nine credit hours of course work in courses cross-listed for the film studies minor.

**FST 460. Topics in French Cinema. (3) (MPT)**

In-depth and concentrated study of French cinema. Focus on specific topics such as film's relation to society, its relation to the other arts and artistic movements, and its productive role as an object of philosophical thought. Topics may also include the work of particular directors, historical periods, and comparative social and aesthetic studies. Taught in English translation.

Prerequisite: FST 201 or FRE/FST 366.

Cross-listed with FRE.

**FST 477. Independent Studies. (0-5)**

## Finance (FIN)

**FIN 101. Personal Finance. (3)**

Making informed choices related to spending, saving, borrowing, and investing continues to be the foundation of long-term financial security. This course educates students in areas such as financial planning, budgeting, federal income taxes, savings, borrowing, investing, insurance, housing, and retirement planning.

**FIN 177. Independent Studies. (0-5)****FIN 211. Financial Capital. (3)**

For non-business majors, the course develops the framework that firms use to make monetary and financing decisions. The course begins with an exploration of time value of money and moves to other topics such as: how the tax system operates, the mechanics of the stock market, the differences between stocks and bonds (equity vs. debt) and what makes a firm choose one over the other to raise money, how a firm determines the cost of the capital raised, and how a firm chooses which projects to accept, considering the firm does not have unlimited funds.

**FIN 277. Independent Studies. (0-5)****FIN 301. Introduction to Business Finance. (3)**

Financial management of business enterprises with emphasis upon financial analysis, working capital management, short and long term financing, capital budgeting, cost of capital, and dividend policy.

Prerequisite: ACC 221 and ECO 201.

**FIN 302. Intermediate Financial Management. (3)**

Theoretical development of financial decision making, working capital management, capital budgeting, capital structure, and dividend policy of the corporation. Finance majors are strongly encouraged to take FIN 302 and FIN 401/FIN 501 during the same semester.

Prerequisites: FIN 301 with a grade of "C" or better and one of ISA 225, STA 261, STA 301 or STA 368.

**FIN 303. Financial Principles and Introduction to Modeling with Excel. (3)**

This course provides a hands-on experience in obtaining financial data; using Excel to manipulate data for financial applications such as problem solving and financial modeling. Emphasis will be on building financial models and using data to evaluate common financial problems encountered.

Prerequisites: ACC 221 and CSE 148.

Co-requisite: FIN 301.

**FIN 320. Applied Equity Analysis. (3)**

An experiential course to give students an opportunity to learn and practice equity analysis skills in a real-world setting. After completing this course students will be able to conduct equity analysis using appropriate methodology. In addition, students will be able to develop and give an effective presentation on the merits of a particular position to industry executives. Finally, students will be able to articulate whether or not they want to work for a financial services firm, such as an investment bank.

Prerequisite: FIN 301.

**FIN 331. Real Estate Principles. (3)**

Principles course dealing with features of real estate, legal descriptions, brokerage industry and licensing, ownership interests, property tax, and closing transaction. Emphasis on applying finance principles to real estate with a focus on real estate financing and investing.

Prerequisite: FIN 301 with a grade of "C" or better.

**FIN 340. Internship. (0-20)**

Available to Farmer School of Business (FSB) majors and minors.

Available for 0 credit hour during spring, summer and fall terms.

Available for 1 credit hour during summer terms only. For one hour of credit, student must secure a sponsoring FSB faculty member within his/her major or minor to supervise the internship and accompanying required internship reflection paper. FIN 340 is not available during winter term. Students are to work through their respective academic departments to enroll in the course. Credit/no credit only. Note: FSB students may earn a maximum 2 credit hours toward graduation for BLS/BUS/ECO/ESP/FIN/ISA/MGT/MKT 340.

Prerequisite: 55 earned hours and permission of department.

**FIN 351. Principles of Insurance. (3)**

Nature and function of insurance and risk bearing. Fundamentals of insurance contracts with a survey of fire, casualty, life, and health insurance areas.

Prerequisite: FIN 301.

**FIN 377. Independent Studies. (0-5)****FIN 401/FIN 501. Principles of Investments and Security Markets. (3)**

Emphasis on investment methodology, investment risks, and security selection. Introduction to security analysis, security valuation, and portfolio management; for the individual investor. Finance majors are strongly encouraged to take FIN 302 and FIN 401/FIN 501 during the same semester.

Prerequisite: FIN 301 with a grade "C" or better and one of ISA 225, STA 261, STA 301 or STA 368.

**FIN 402. Fixed-Income Portfolio Management. (3)**

Consideration of securities portfolio management objectives and techniques; investment risks, and diversification strategy. Detailed consideration of bond portfolio management, mathematics of bond yields, and interest rate environment. Individual and group participation required.

Prerequisite: FIN 401/FIN 501.

**FIN 403. Portfolio Management. (3)**

Theory and practice of modern portfolio management. Special consideration to asset pricing theories, nature and application of derivative securities, and investment strategies.

Prerequisite: FIN 401/FIN 501.

**FIN 404. Forward, Futures and Derivatives. (3)**

This course covers the fundamentals of option from pricing and hedging to their use in the management of financial risk. The course begins with a thorough theoretical development of futures, forwards, options and swaps, and ends with an analysis of structured products that have embedded derivative contracts. Discussion of issues of counter-party risk and the responsible use of derivatives is an integral part of the course.

Prerequisite: FIN 401/FIN 501.

**FIN 408/FIN 508. Commercial Bank Management. (3)**

Operations of financial institutions. Identification and analysis of problems of financial institutions within our changing environment. Consideration of competition and growth, profitability, capital, and regulation. Emphasis on commercial banking.

Prerequisite: FIN 302 or FIN 618 or FIN 625 or permission of instructor.

**FIN 417. International Business Finance. (3)**

An introduction to the macro and market environments in which multinational firms operate and the additional risks they confront in a multi-currency world. Emphasis is on the decision-making process with an international perspective.

Prerequisite: FIN 301 or equivalent with a grade "C" or better.

**FIN 431. Real Estate Investments and Finance. (3)**

An examination of the valuation and investment complexities in commercial real estate. Topics include market analysis, cash flow estimation from properties, effects of leverage and taxes on valuation, and investment in real estate related securities such as REITs and mortgage backed securities.

Prerequisite: FIN 331.

**FIN 461/FIN 561. Financial Analysis of Mergers, Buyouts, and Restructuring. (3)**

An examination of the valuation complexities in corporate restructuring and corporate change of control on a global basis. Topics include free cash flow estimation and forecasting, estimation of capital costs using alternative methods, adjustments for complex financial structures, debt capacity, entry and exit options, alternative mediums of exchange, purchase contingencies, acquisitions in developed and emerging economies, leveraged buyouts and asset restructuring.

Prerequisite: FIN 302.

**FIN 462. Advanced Corporate Finance. (3)**

This course covers advanced topics in corporate finance and governance, including corporate monitoring, board structure, executive compensation, regulation and governance, capital structure, and payout policy.

Prerequisite: FIN 302.

**FIN 475. Case Problems in Finance. (3)**

Advanced case analysis of short and long term financial management. Topics include working capital management, leasing, mergers and acquisitions, and international finance.

Prerequisite: FIN 302.

**FIN 477. Independent Studies. (0-5)****FIN 481. Student Managed Investment Fund. (3)**

An experiential learning opportunity that takes concepts learned earlier in the curriculum and applies them to an actual corporate setting and provides experience in managing a real-dollar portfolio based on appropriate trading and investment criteria.

Prerequisite: FIN 401/FIN 501.

**FIN 485. Integrative Concepts in Finance. (3) (MPC)**

This Capstone provides students opportunity to apply their broad base of knowledge from their Foundation courses and the Farmer Business School core in an integrative manner to the field of finance. Provides students ability to see financial decisions in the broader context of society, law, government, and the global environment at large. Students come from different academic backgrounds and form teams to analyze case problems and readings from these different perspectives. These teams are required to present and defend their recommendation keeping in mind the variegated interests of the firm's stakeholders: customers, stockholders, creditors, employees, suppliers, etc. This course may not be used as a finance major elective.

Prerequisite: FIN 301 and senior standing and School of Business core or permission of instructor.

**FIN 625. Managerial Finance. (3)**

Introduces M.B.A. student to essentials of the finance functions of the organization. Emphasis on analysis of financial statements and understanding of the time value of money. Only available to full-time M.B.A. students.

**FIN 635. Investment Management. (3)**

Study of the theoretical and practical tool essential to the execution of a professional money manager's job.

Prerequisite: FIN 625.

**FIN 645. Futures and Options. (3)**

Study of the theoretical and practical tools essential to the execution of the Chief Risk Officer's job in organizations where financial risk management plays an important role in the financial performance of the firm.

Prerequisite: FIN 625.

**FIN 655. Analysis of Business Finance and Investments. (3)**

Further understanding of the finance functions for the M.B.A. student. Course has three interrelated themes: 1) acquisition and management of long-term sources of finance, 2) acquisition and management of short-term assets and financing, and 3) utilization of the capital markets where financial assets issued by corporations are bought and sold.

**FIN 665. Applied Mergers and Acquisitions. (3)**

Mergers and Acquisitions are typically large and risky investment decisions that confront many financial managers. This course provides an in-depth examination of the complexities encountered in corporate restructuring, with a primary focus on corporate change of control. Topics covered include the M&A process, participants, due diligence, deal structuring, financing, and integration. Additional restructuring events covered include spinoffs, carveouts, business alliances, and bankruptcy.

Prerequisite: FIN 625.

**FIN 675. Applied Advanced Corporate Finance. (3)**

This course covers the theoretical and practical tools essential to the execution of a Corporate Financial Officers' (CFO) job.

Prerequisite: FIN 625.

## French (FRE)

**Note:** Students who intend to continue studying the same foreign language as in high school are required to take the placement exam for that language before enrolling. See Placement Guides in the Academic Planning chapter. Once placed, a student may not skip a course in the sequence leading to FRE 202. No student may take FRE 101, FRE 102 or FRE 201 Credit/No Credit.

**FRE 101. Elementary French. (4)**

Emphasis on multiple skill acquisition, speaking, and writing, and how cultural difference affects experience of the world.

Prerequisite: see Placement Guides in the Academic Planning chapter.

**FRE 102. Elementary French. (4)**

Emphasis on multiple skill acquisition, speaking, and writing, and how cultural difference affects experience of the world.

Prerequisite: see Placement Guides in the Academic Planning chapter.

**FRE 107L. Practical French. (4)**

Develops basic language skills to function in a French language environment. Aimed at MUDEC students who do not intend to continue French or who have already completed their university language requirement. Students who intend to continue French must take placement test to determine level of next class.

**FRE 131. Masterpieces of French Culture in Translation. (3) (MPF)**

Accessible introduction to French culture through the study of selected examples of significant works in literature and the arts (understood in a broad sense). Works are examined in their social, historical, and ideological contexts and cover the period from the Middle Ages to the mid-20th century. All readings in English translation. IIB, IIBB. CAS-B-LIT.

**FRE 177. Independent Studies. (0-5)****FRE 201. Intermediate French. (3)**

Integrates intermediate-level language-skill development and study of cultural difference. Provides student to student interaction and addresses a broad range of cultural issues.

**FRE 202. Critical Analysis of French Culture. (3) (MPF)**

Second-semester, intermediate French course addresses literary and cultural issues through the study of short stories, poetry, film, journalism, and advertising. Works represent several French-speaking countries. Because texts, discussion, and compositions are in French, students continue to develop speaking, listening, reading, and writing skills. IIB, IIBB. CAS-A.

**FRE 231. Comics and Culture in Belgium. (3-6; maximum 6)**

Learn about Belgian cultural, artistic and linguistic traditions through the study of comics, graphic novels and their contexts while studying in Brussels, Belgium. Taught in English. Winter term only. CAS-B.

**FRE 277. Independent Studies. (0-5)****FRE 301. Culture & Interpretation. (3)**

Gateway to upper-level offerings in French. Organized around a theme developed by each professor (for example: modernity, desire, revolution, or voyages), this class initiates students into the work of original analysis and creative interpretation. The course will include works from a variety of media, voices, and historical moments, from films to comics, speeches to sonnets, Paris to Algiers, Versailles to the street. Students will explore the relationships between literature and culture while gaining exposure to a range of approaches to, and theories of, reading. Students will hone their ability to present their ideas in writing. ADVW. CAS-B-LIT.

Prerequisite: FRE 202.

**FRE 302. Pre-Revolutionary Literature and Life. (3)**

What is the relation between literature and life? How does life shape literature, and how does literature shape life? From the rowdy streets of Medieval Paris to the court of Versailles, from troubador love songs to the first modern novels, this introduction to French culture from the Middle Ages to the Revolution, explores literature as a live, engaged activity that provides a place to order, conceive, reimagine, and explore human and social experience. Course topics will change regularly, and can include issues such as ethics, space, bodies, medical discourses, legal discourses, trauma and witness, or insoluble problems. Alternatively, they may be organized around questions such as what is a subject? How are subjects related to collectivities? Systematic development of writing and speaking skills. Prerequisite: FRE 301. CAS-B-LIT.

**FRE 303. Modern and Contemporary Literature and Life. (3)**

From the Revolution of 1789 to the current day, France has weathered an astonishing array of governments (five republics, two empires, monarchies, Vichy); expanded colonial projects and decolonized; and hotly debated issues such as public education, the role of women and minorities in society, and the tensions between universalism and individual human rights. This introduction to French and Francophone culture from the Revolution to the current moment explores literature as a live, engaged activity that provides a place to order, conceive, reimagine, and explore human and social experience. Course topics will change regularly, and can include issues such as colonialism, ethics, space, bodies, medical discourses, legal discourses, trauma and witness or insoluble problems. Alternatively, they may be organized around questions such as what is a subject? How are subjects related to collectivities? Systematic development of writing and speaking skills. ADVW. Prerequisite: FRE 301. CAS-B-LIT.

**FRE 310. Texts in Context. (3) (MPT)**

Examines ways creative texts (significant literary, historical, graphic, or architectural systems) are linked to various cultural contexts. Explores the ways in which cultural productions are interconnected to specific historical contexts in which they are created. Focuses on interrelations between cultural productions and their historical, sociological, scientific, or philosophical ramifications. Explains how French cultural discourse has regulated meaning of French texts and how these texts have changed institutions of cultural discourse. Systematic development of writing and speaking skills. ADVW. Prerequisite: FRE 301.

**FRE 331. The European Graphic Novel. (3-6; maximum 6)**

Europe has long been a creative center for the graphic novel. The course begins with study of the coalescence of the form in the early 19th century and its subsequent rapid spread throughout Europe and beyond. Focus will then shift to important recent examples of the graphic novel in Europe. The course is taught in English in Brussels, Belgium, a major European capital and a hub for current developments in the graphic novel. Winter term only. CAS-B-LIT.

**FRE 340. Internship. (0-20)****FRE 341. Conversation and Current Events in France. (3) (MPT)**

Focuses on the development of speaking, writing, and presentation skills based on current social and political events in France. Viewing and discussions of SCOLA (International News Programming by Satellite) programming are an integral part of the course.

**FRE 341W. Conversation and Current Events in France. (3) (MPT)**

Summer Program in Dijon, France. Focuses on the development of speaking, writing, and presentation skills based on current social and political events in France. Viewing and discussions of SCOLA (International News Programming by Satellite) programming are an integral part of the course.

**FRE 350. Topics in French Literature in Translation. (3) (MPT)**

Discussion of selected works that suggest particular thematic problems. For non-specialist with little or no background in French literary history. CAS-B-LIT.

**FRE 361. French Pronunciation. (3)**

Theoretical and practical study of French pronunciation. Corrective exercises, laboratory work.

**FRE 366. French Cinema in Translation. (3) (MPT)**

Critical survey of major directors, genres, and movements in French cinema. Particular attention devoted to development of film theory and criticism in France and their relation to film production. Screening of films by Renoir, Bresson, Bunuel, Godard, Truffaut, Varda, Resnais, Tavernier, and others. Taught in English; reading in English translation. CAS-B-LIT.

Cross-listed with FST.

**FRE 377. Independent Studies. (0-5)****FRE 404. The French Renaissance. (3)**

Study of major writers of prose and poetry in the French Renaissance, including Rabelais, Montaigne, Labe, Ronsard, and DuBella.

**FRE 410. Senior Seminar. (3) (MPC)**

Required of all French majors in their senior year and open to qualified non-majors, this is a seminar on a selected topic in French literature designed to allow students to reflect upon what they have learned in previous French courses in order to further strengthen their powers of critical thinking and synthesis.

Prerequisite: senior standing; also, for majors: three 300-level courses and four 400-level courses (or four 300-level courses and three 400-level courses); for non-majors: three 300-level courses, three 400-level courses, and permission of instructor.

**FRE 411/FRE 511. French Civilization. (3) (MPT)**

Historical evolution of French society, its art, architecture, institutions and philosophical outlook.

Prerequisite: permission of instructor.

**FRE 411D. Tutorial in French Civilization. (3)**

Offered only in Summer French Program in Dijon, France. Directed study of a selected topic concerning French culture with an emphasis on contemporary issues as they affect the Burgundy region. For students who have previously successfully completed FRE 411W/FRE 511W/511W.

**FRE 411W/FRE 511W. French Civilization. (3) (MPT)**

Summer French Program in Dijon, France. Historical survey of various aspects of French culture with special emphasis on local Burgundian civilization.

Prerequisite: FRE 202 or equivalent.

**FRE 414/FRE 514. Art and Architecture in Dijon and Burgundy, France. (1-6; maximum 6)**

Study the rich history and current state of art and architecture of Dijon and the Burgundy region within their contexts while on site in France. May include, for example, the study of cinema, comics, dance, music, painting, photography and sculpture. Includes field trips. May be repeated for credit. Topics vary.

Prerequisite: FRE 202 or equivalent with permission of the instructor.

**FRE 420/FRE 520. Topics in Bande dessinée, Cartoons and Caricature. (1-3; maximum 6)**

Exploration of the history of French-language comics and related media, and analysis of form. Topics vary. Taught in French.

**FRE 423/FRE 523. Theatre, Performance, Spectacle. (3)**

Reading theater is, by definition, an incomplete act, for what makes a play theatrical is not the written script, but its performance to a group of spectators. This course considers the notion of "performativity" through an exploration of different modes and genres of theater and performance in French-language traditions. May include: plays from the middle ages to the 21st century; examples of performance art, music, dance, or opera; theories of theatre, performance, and spectacle from Aristotle to Artaud and Butler.

**FRE 430/FRE 530. Topics in Early Modern French Literature. (1-3; maximum 6)**

Thematic explorations of early modern French literature of all genres. Focus on critical and research methods and writing. CAS-B-LIT.

Prerequisite: FRE 301.

**FRE 431/FRE 531. Studies in Contemporary French Thought in Translation. (3) (MPT)**

Examination of major recent currents of French thought, such as existentialism, structuralism, and poststructuralism, with emphasis on their relation to the study of literary texts. Course content will vary. In English. CAS-B-LIT.

Prerequisite: junior or senior standing or permission of instructor.

**FRE 442/FRE 542. Literary Innovation, 16th-18th C. (3)**

Coincident with the evolving market and technology of printed books came an explosion of literary invention. Specific topics depend on the choice of the professor and may include early modern developments in poetry, the invention of French classical drama, prose from Montaigne's *Essais* to the experimental short forms of the 17th century, or novels and philosophical contes of the Enlightenment. CAS-B-LIT.

**FRE 443/FRE 543. French Literature and Society. (3)**

Introduction to the literature and society of Medieval France. Study of literary texts and works of art, and hands-on experience with medieval manuscripts and materials used to make them. Conducted in French.

**FRE 451/FRE 551. Rebellions, Revolutions, and Avant-gardes. (3)**

Analyzes the concept of revolution by examining one or more moments of upheaval and renewal, including political events such as the revolutions of 1789 and the nineteenth century, aesthetic avant-gardes such as romanticism or surrealism, scientific movements such as seventeenth-century optics or the rise of medicine, or technological discoveries such as the invention of the printing press and its implications for society. Taught in French. CAS-B-LIT.

**FRE 452/FRE 552. The 19th Century. (3) (MPT)**

Nineteenth-century France was wracked by multiple revolutions and changes of government, but it also transformed many of the bases of social life and led to a flowering in many of the arts. The century began with the vast Napoleonic expansion across Europe and ended with searching introspections about the notions of decadence and decay. In literature, it gave rise to what are arguably the greatest achievements in French lyric poetry and the novel. It created modern medicine both as a practice and a social force. It invented large-scale speculative capitalism and the modern city. This course will focus on exemplary aspects of nineteenth-century cultural production in France and may include literary, aesthetic, political, scientific, and philosophical trends. CAS-B-LIT.

**FRE 453/FRE 553. Poetry. (3)**

Exploration of French poetry and poetics. The course examines techniques and formal aspects of poetry, prosody and rhetoric, by focusing on certain authors and historical movements. It also analyzes the notion of the poetic as a way of envisioning and making sense of the world. CAS-B-LIT.

**FRE 454/FRE 554. The Origins of the 20th Century. (3)**

In the first years of the 20th century, Paris became a focal point and meeting place for various avant-garde artistic movements such as dada, cubism, and surrealism, many of which were born under the shadow of the First World War. With the rise of modernist urbanism, the city itself became a testing ground for ideas and ideologies that attempted to reenvision human nature. By the thirties, these totalizing visions of a human future largely divided between communism and fascism, and Paris, as a capital of ideas and immigration, became the battleground for competing, militant images of humanity. At the same time, the capital gazed out past the borders of France itself over an extensive colonial empire that returned vast riches at the cost of terrible moral and humanitarian injustices. This course will examine literary and other cultural works from this turbulent period to better understand the scope, meaning, and stakes of the French twentieth century. CAS-B-LIT.

**FRE 460/FRE 560. Topics in French Cinema. (3) (MPT)**

In-depth and concentrated study of French cinema. Focus on specific topics such as film's relation to society, its relation to the other arts and artistic movements, and its productive role as an object of philosophical thought. Topics may also include the work of particular directors, historical periods, and comparative social and aesthetic studies. Taught in English translation.

Prerequisite: FST 201 or FRE/FST 366.

Cross-listed with FST.

**FRE 462/FRE 562. The 20th-Century Novel: Contemporary Explorations Beyond Existentialism. (3)**

Study of the novel's most recent attempts to redefine itself. Texts include works by Celine, Leiris, Beckett, Robbe-Grillet, Queneau, Sarraute. CAS-B-LIT.

**FRE 477. Independent Studies. (0-5)****FRE 480. Independent Reading for Departmental Honors. (1-6)****FRE 600. Seminar in French Literature. (1-4)**

Intensive study of selected authors and critical perspectives. Offerings vary.

**FRE 614. Introduction to French Literary Theory. (3)**

Required of all French graduate students. An introduction to major movements and figures in French literary theory of the twentieth- and twenty-first centuries and to the practices of literary criticism.

**FRE 617. Intensive Course for Graduate Students. (3)**

A two-part course sequence that provides reading knowledge of French for graduate students in other disciplines. No speaking component in the courses. Vocabulary-building through reading, with emphasis on French grammar for recognition purposes. Readings of increasing difficulty with emphasis on idiomatic usage in students' disciplines.

**FRE 618. Intensive Course for Graduate Students. (3)**

A two-part course sequence that provides reading knowledge of French for graduate students in other disciplines. No speaking component in the courses. Vocabulary-building through reading, with emphasis on French grammar for recognition purposes. Readings of increasing difficulty with emphasis on idiomatic usage in students' disciplines.

**FRE 677. Independent Studies. (0-5)****FRE 680. Independent Studies. (1-6)**

Independent work in French literature or language.

**FRE 689. TA Orientation Seminar. (1)**

Required of new graduate assistants. Directly coordinated with organization of the beginning French course and deals with practical problems involved in this method of language instruction. Summer only. Cross-listed with SPN.

**FRE 699C. French Poetry and Criticism. (3)**

French poetry and literary criticism: we will read and analyze 100 French poems from the Middle Ages to the 20th c, as well as article-length texts from the M.A. Reading List, Theory section (by Césaire, Kristeva, Lévinas, Foucault and Badiou), and study poetics, prosody, rhetoric, and literary history.

**FRE 700. Research for Master's Thesis. (1-12; maximum 12)**

## Geography (GEO)

**GEO 101. Global Forces, Local Diversity. (3) (MPF, MPT)**

Application of human geography concepts to patterns and processes of economic, political, and cultural changes at global, regional and local scales. IIC, IIIB. CAS-C.

**GEO 111. World Regional Geography: Patterns and Issues. (3) (MPF, MPT)**

Introduction to world geography emphasizing regional approach and comparisons; combines analysis and synthesis of characteristics distinctive to each principal culture realm; focuses upon selected topical issues involving ethnic, political, economic, social, and environmental aspects. IIC, IIIB. CAS-C.

**GEO 121. Earth's Physical Environment. (4) (MPF, MPT)**

Study of the earth's physical environment, using systems approach to understand energy and material cycles, global circulation, and temporal dynamics. Focus on influence of physical processes on spatial patterns and on interrelationships of the atmosphere, soils, vegetation, and landforms. Credit not granted to students who have earned credit in GEO 122. IVB, LAB. CAS-D/LAB.

3 Lec. 1 Lab.

**GEO 122. Geographic Perspectives on the Environment. (3) (MPF, MPT)**

An introduction to physical geography that enables class participants to understand and interpret the environmental conditions of any geographic locality on earth. Special emphasis is placed on understanding relationships between geographic patterns and processes in the atmosphere (weather and climate), biosphere (vegetation and soils), and lithosphere (landforms). With knowledge of global physical environments, it is possible to predict the suitability an area may have for human habitation, and also the influences certain human activities may have on the physical environment. Credit not granted to students who have earned credit in GEO 121. IVB. CAS-D.

**GEO 159. Creating Global Peace. (3) (MPF)**

Focuses on the study of peace, as represented across disciplinary boundaries and at local-to-global scales of analyses. Combines guest lectures, scholarly readings and other media, reflective writing and discussion, and a service-learning commitment that together explore different ways of thinking about peace, and 'peace' practices at global to local scales. IIC, IIIB. CAS-C.

Cross-listed with SJS.

**GEO 177. Independent Studies. (0-5)****GEO 201. Geography of Urban Diversity. (3) (MPF, MPT)**

Introduction to the processes and patterns that shape life in the American City. Students interpret urban landscapes—historical and contemporary—in relation to their environmental, economic, and cultural contexts. Students develop a geographic perspective on the social and spatial development of diverse American communities, a necessary foundation for addressing current issues in urban development and planning. IC, IIC. CAS-C.

**GEO 205. Population and Migration. (3) (MPT)**

Examines the spatial distribution and dynamics of human fertility, mortality, and migration, primarily in the contemporary period, as well as the interaction of these trends with environmental, economic, and political issues. Special attention is given to interpreting and evaluating quantitative measures of population geography. CAS-QL.

**GEO 208. The Rise of Industrialism in East Asia. (3) (MPF, MPT)**

Introduction to historic parameters, geographic variables, state policies, and sociocultural contexts of industrialism in East Asia (China, Japan, Korea, Taiwan, Hong Kong, and Singapore). IIC, IIIB. CAS-C. Cross-listed with ITS/SOC.

**GEO 211. Global Change. (3) (MPT)**

Application of physical and human geography concepts to understanding processes of change in the use and allocation of resources from combined environmental and social perspectives.

**GEO 221. Regional Physical Environments. (3) (MPT)**

Brief, intensive review of patterns in the earth's physical environment followed by a comparative analysis of selected, distinctly different regions. Geographic techniques for data collection and analysis demonstrated and employed in the examination of these environments.

Prerequisite: GEO 121 or permission of instructor.

**GEO 241. Map Interpretation. (3)**

Introduces a variety of maps that there are in the world, including their symbolization and component parts. Illustrates map uses, and provides opportunity for the student to analyze and apply the map information.

**GEO 242. Mapping a Changing World. (3) (MPT)**

Technology and language of maps, including aerial and satellite imagery, and impact of these technologies on society. Tools for making maps that faithfully and effectively represent geographic data. CAS-QL.

**GEO 271. Human Dimensions of Natural Resource Conservation. (3) (MPT)**

Ecological, socioeconomic, and policy perspectives on the use and management of natural resources.

**GEO 276. Geography of the Global Economy. (3) (MPT)**

Focuses on the changing geography of the global economy, including production, distribution and consumption of goods and services. Covers the eras of mercantile capitalism, colonialism, industrial capitalism and today's globalization.

**GEO 277. Independent Studies. (0-5)****GEO 288. Geographic Field Study Abroad. (3-6; maximum 12)**

Field study abroad, focusing on various geographic issues in various locations. Content varies vary with location and subject matter, but includes active engagement with the environmental, cultural and/or historical context within which contemporary geographic issues are understood.

**GEO 301. Geography of Sub-Saharan Africa. (4) (MPT)**

Analysis of physical and cultural features of that area south of the Sahara Desert.

Cross-listed with BWS.

**GEO 302. Geography and Gender. (3)**

This class adopts a geographic approach to the study of gender relations. The role of space and place in shaping the diversity of gender relations throughout the world will be considered. Through case studies the importance of gender relations in understanding a variety of issues will be stressed. Overall, we will explore how geography shapes gender relations and how gender produces a variety of geographies. IC. CAS-C.

Cross-listed with WGS.

**GEO 308. Geography of East Asia. (3) (MPT)**

Analysis of cultural and physical landscapes of China, Japan, and Korea.

**GEO 309. Native American Women. (3) (MPT)**

A survey of writings and film by and about Native American women. The objective of the course is to provide students with a broad overview of Native American perspectives on a variety of topics including indigenous viewpoints on research methods, environmental activism, politics and policy, and critical analysis. IC. CAS-C.

Cross-listed with WGS.

**GEO 333. Global Perspectives on Natural Disasters. (3) (MPT)**

Exploration of the underlying causes, potential impacts, and mitigation measures of natural hazards including wildfire, severe weather events, and geologic hazards. Particular attention is paid to impacts on humans.

**GEO 340. Internship. (0-20)****GEO 352. Geographies of Urban Change. (3) (MPF, MPT)**

Examines the cultural, social and political dimensions of urban planning and development practices in the United States. Drawing on an array of source materials and using multiple methods of representing past places, students apply analytical tools to document the nature, extent, and significance of urban change and to communicate their understanding of the complex forces shaping urban America.

Prerequisites: GEO 201 or AMS 205 or GEO 101 or GIC 101 or permission of the instructor.

Cross-listed with AMS.

**GEO 354. Geomorphology. (4)**

Evolution of landscapes and landforms on Earth and other planets and the processes responsible for their formation. Analysis of landforms to assess the relative role of climate, tectonics, and humans in their formation.

Prerequisites: GLG 111, GLG 121 or GEO 121.

Cross-listed with GLG.

**GEO 377. Independent Studies. (0-5)****GEO 378. Political Geography. (3)**

Analysis of geographic factors significant in understanding international relations and internal politico-territorial organizations; detailed studies of specific problem areas.

**GEO 406/GEO 506. Indigenous Peoples and Their Sacred Lands. (3) (MPT)**

An in depth look at topics related to policy and land management practices that impact indigenous peoples nationally, as well as internationally. The major focus of the various case studies is on designated sacred lands of Native American tribes within the United States. The course provides students with interdisciplinary training about indigenous cultures and human rights.

Cross-listed with WGS.

**GEO 408/GEO 508. Geography of the Silk Road (The Heart of Asia). (3) (MPT)**

Examines the geography of the Inner Asia region including Uzbekistan, Kazakhstan, Kyrgyzstan, Turkmenistan, Tajikistan, Afghanistan, Pakistan, Mongolia, and Inner Asian China (Xinjiang).

**GEO 410/GEO 510. Advanced Regional Geography. (1-4; maximum 12)**

Specific area to be announced each time course is offered.

**GEO 412. Tropical Ecosystems of Costa Rica. (5)**

Introduces students to the structure and function of neotropical ecosystems, as well as to geological, biological, cultural, and economic forces affecting biodiversity in the tropics. This course is taught on-site in Costa Rica. There are additional costs beyond tuition.

Cross-listed with IES/LAS.

**GEO 413/GEO 513. Tropical Marine Ecology. (5)**

Investigates aquatic systems (estuaries, mangroves, coral reefs, seagrass beds, lagoons, beaches, intertidal zones, taxonomy of vertebrates and invertebrates of coral reefs, lagoons and tidal flats) paleobiology and global climate change (paleo-reconstruction of past lagoon environments, fossil coral reefs, and land use). Student research questions concerning biological and physical analyses of a select marine habitat are required. The course is taught on-site in the Florida Keys and the Bahamas. There are additional costs beyond tuition.

Cross-listed with GLG/LAS 413 and IES 423/IES 523.

**GEO 425/GEO 525. Hydrogeography. (3) (MPT)**

Investigation of the hydrologic cycle focusing on the surficial component parts of precipitation, infiltration, soil moisture, evaporation, transpiration, and surface runoff, and variation of these from place to place over the earth's surface.

**GEO 426/GEO 526. Watershed Management. (3) (MPT)**

Impacts of urban and agricultural land use on water resources; common watershed-scale tools for water quality and quantity management.

**GEO 428/GEO 528. Soil Geography. (4) (MPT)**

Study of soil morphology, formation, classification, and geographical distribution of soils. Field work and laboratory work required.

**GEO 431/GEO 531. Global Plant Diversity. (3) (MPT)**

Research-focused seminar on floristic, ecological, and cultural influences on global patterns of plant diversity, especially in tropical regions. Comparative topics include the role of disturbances and global environmental change.

Cross-listed with BIO.

**GEO 432/GEO 532. Ecoregions of North America. (3) (MPT)**

Ecological study of vegetation that applies an understanding of climate, soils, and physiography across the continent toward interpreting major vegetation types and local patterns of diversity. Discussions and field work focus on current research and conservation issues. Required field trip.

Cross-listed with BIO.

**GEO 436/GEO 536. Women, Gender, and the Environment. (3) (MPT)**

Seminar discussing literature on the role of women in their relationships with natural resources as advocates, practitioners, and scholars. Ideas on ecofeminism will be introduced from more-developed "north" and developing "south" perspectives, and then directed toward the study of gender and development, and participatory tools in gender analysis. IC. CAS-C.

Cross-listed with WGS.

**GEO 441/GEO 541. Geographic Information Systems. (3) (MPT)**

Introduces students to the structure, concepts, capabilities, and functionality of Geographic Information Systems (GIS) and geospatial science inquiry. The course focuses on the management and processing of spatial data, emphasizing data models and structures, geographic data input, data manipulation and storage, spatial analysis and modeling techniques. Students will learn to frame and solve a sequence of problems with GIS across a wide range of topics including environmental planning, biogeography, conservation biology, sustainable development, natural resource conservation, environmental justice, political geography, and urban geography and planning.

**GEO 442/GEO 542. Advanced Geographic Information Systems. (3) (MPT)**

Advanced-level application of GIS technology to geographic problem-solving. Follows on from topics introduced in GEO 441/GEO 541 to provide (a) in-depth understanding of the technical and substantive issues associated with the use of GIS and (b) advanced-level training in the functionality of major GIS products.

Prerequisite: GEO 441/GEO 541 or permission of instructor.

**GEO 443/GEO 543. Python Programming for ArcGIS. (3) (MPT)**

Introduces the basic concepts of computer programming languages, using the Python language as an example. Emphasis on use of Python scripts specifically within the ArcGIS software packages. Taught on-line; available to students on any Miami campus.

Prerequisite: GEO 441/GEO 541.

**GEO 444/GEO 544. GIScience Techniques in Landscape Ecology. (3) (MPT)**

Using geographic tools such as geographic information systems (GIS), remote sensing, global positioning system (GPS) receivers, and computer-based analysis, students will study a range of current topics in landscape ecology.

**GEO 445/GEO 545. Geographic Information Systems for Criminal Justice. (3)**

Collect, organize, analyze and display spatial data used in criminal justice and emergency management. Part of the course will be a GIS Crime Analysis Product. Taught on Regional Campuses.

Cross-listed with CJS.

**GEO 447/GEO 547. Aerial Photo Interpretation. (4)**

Interpretation and analysis of aerial photographic images for the purpose of identifying objects and characterizing their significance. Examples will be drawn from both human and physical environment.

**GEO 448/GEO 548. Techniques and Applications of Remote Sensing. (3) (MPT)**

Description of nonphotographic remote sensing such as radar, thermal infrared, and multispectral scanning. Experience with machine-based interpretation of multispectral imagery.

**GEO 451/GEO 551. Urban and Regional Planning. (3) (MPT)**

Introduction to the purposes and possibilities of urban and regional planning. Topics include historical development and theoretical rationale of planning, analytical techniques, and policy and design strategies for addressing urban problems. Surveys contemporary urban issues and areas of planning specialization. Prepares students with fundamental concepts and skills for careers in urban planning and development. ADVW. CAS-C.

Prerequisite: GEO 201.

**GEO 454/GEO 554. Urban Geography. (3) (MPT)**

Geographic principles related to the distribution, function, structure, and regional settings of urban centers.

Prerequisite: some other urban course in social sciences or permission of instructor.

**GEO 455. Race, Urban Change, and Conflict in America. (3) (MPT)**

Since the 1960s, changes at both global and local levels have affected the American city. Traditional study of the city has not focused on race and the effect of such changes on race. Conflicts with racial undertones occur on a daily basis in most American cities. More often these are conflicts over production, distribution, and consumption of public and private goods and are manifest in the housing market, job market, and access to education and social services amongst others. This seminar focuses on race in urban America within the context of conflict and change. CAS-C.

**GEO 457/GEO 557. Global Cities, World Economy. (3)**

Examines the strategic role of global cities within the world economy; processes of globalization and economic restructuring; social, political, and cultural challenges for global cities.

Prerequisites: GEO 201, 451, 454, or 459 or permission of instructor.

**GEO 459/GEO 559. Advanced Urban and Regional Planning. (3)**

Application of planning tools and techniques to significant urban and regional land use problems. Evaluation of major planning tools for redevelopment of central cities and declining regions in the U.S. Innovative techniques for solving American urban spatial problems at local to national levels.

Prerequisite: GEO 451/GEO 551 or permission of instructor.

**GEO 460/GEO 560. Advanced Systematic Geography. (1-4; maximum 12)**

Specific topical field announced each time course is offered.

**GEO 462/GEO 562. Citizenship and the City. (3)**

A seminar that explores issues relating to citizenship and the city. This includes both a conceptual and historical introduction to the topic, as well as more in-depth analysis of different aspects relating to politics and public and private space, cultural diversity and exclusion, and urban design.

Prerequisite: senior standing or permission of instructor.

**GEO 467/GEO 567. Land Use, Law and the State: Geographic Perspectives. (3)**

Explores the legal basis for urban and regional planning in the United States through analysis of relevant case law, statutes, and secondary texts. The course offers both practical knowledge of land use law and deeper understanding of its wider geographic context and significance.

**GEO 475/GEO 575. Global Periphery's Urbanization. (3) (MPT)**

Countries of the Third World have experienced an unprecedented rate of urban growth and expansion since the middle of this century. As Third World countries continue to industrialize, urbanization and related problems will increasingly become important and will continue to be on the agendas of national governments, international agencies, planners, and academics well into the next century. Explores Third World (Africa, Asia, and Latin America) urbanization literature from an interdisciplinary perspective.

**GEO 476/GEO 576. Global Poverty. (3) (MPT)**

Increasing attention has been placed on poverty around the globe by academics, practitioners and activists. With increasing globalization, global poverty has become entrenched. This course examines what poverty is, how it is measured, what causes poverty and how poverty can be alleviated in the global periphery and semi-periphery.

**GEO 477. Independent Studies. (0-5)****GEO 480. Departmental Honors. (1-6; maximum 6)**

Departmental honors may be taken for a minimum of four semester hours and a maximum total of six semester hours in one or more semesters of student's senior year.

**GEO 491. Senior Seminar. (4) (MPC)**

Requires the selection and development of a geographic research problem/topic and the submission of a final research paper. Student expected to build upon research, writing, and oral presentation skills developed as an undergraduate, provide peers with constructive criticism, and share on a continuing basis both research experience and development of the topic. Each student must select and work with at least one faculty adviser, not necessarily from the geography department, with appropriate expertise. Required for geography majors.

Prerequisite: senior standing.

**GEO 493. Urban Field Experience. (3) (MPC)**

Development of modern urban design and planning principles, emphasizing the central role of Chicago as a laboratory for the processes. Study of Chicago as an illustrative case study for understanding contemporary issues in urban design and planning. Importance of direct field observation methods in the study of urban design and planning patterns. Requires two long-weekend field trips to Chicago and field work in Chicago.

**GEO 601. Seminar in Research Techniques. (3)**

Survey of basic tools of graduate research in geography, including bibliographic resources, published data sources, and introduction to computer methods in geography.

**GEO 602. History of Geographic Thought. (4)**

Selected readings in Geography. Emphasis is on contemporary geographic thought.

**GEO 604. Research Project Development. (3)**

Research hypotheses in geography; organizing and defining a research project; proposal development.

**GEO 610. Research in Geography. (1-4; maximum 12)**

Advanced work on selected topics undertaken by individual students. May be taken for no more than four semesters.

**GEO 640. Internship. (0-20)****GEO 690. Internship in Geography. (1-12; maximum 12)**

Supervised application of principles and methodologies in an apprentice/intern relationship in a public or private agency.

**GEO 700. Research for Master's Thesis. (1-12; maximum 12)****GEO 704. Non-Thesis Project. (0-12; maximum 12)****GEO 710. Special Problems in Geography. (1-4; maximum 12)**

## Geology (GLG)

**GLG 111. The Dynamic Earth. (3) (MPF, MPT)**

Earth as a geophysical-geochemical unit and its internal and external processes. Formation of minerals and their relationships in rocks. Earth stresses and rock deformation, mountain building, and earthquakes. Geomorphic (landscape) evolution by mass wasting and wave, stream, wind, ground water, glacial, and volcanic activity. IVB. CAS-D. CAS-QL.

**GLG 115L. Understanding the Earth. (1) (MPF)**

Laboratory course exploring Earth from multiple perspectives. Earth in the solar system; Earth in time; the solid Earth; Earth's surface in flux; Earth's atmosphere and hydrosphere. IVB, LAB. CAS-D/LAB. Prerequisite or Co-requisite: any 100-level, 3 credit hour GLG course (students enrolled in these courses are not required to take the lab).

**GLG 121. Environmental Geology. (3) (MPF, MPT)**

A survey of introductory geology with a sub theme of human interaction with the geologic environment. Topics include flooding, earthquakes, volcanoes, water quality and availability, energy, use and abuse of natural resources and land-use planning. IVB. CAS-D. CAS-QL.

**GLG 141. Geology of U.S. National Parks. (3) (MPF, MPT)**

A survey of introductory geology with a sub theme of the structure and geologic evolution of North America as exemplified by the geologic features and development of U.S. national parks and other public lands. IVB. CAS-D. CAS-QL.

**GLG 147. Introductory Seminar - Geology & Environmental Earth Science. (1)**

Introduction to Geology & Environmental Earth Science, focusing on department orientation, research opportunities, professional development and career guidance. Conducted in seminar/lecture format.

**GLG 177. Independent Studies. (0-5)****GLG 201. Mineralogy. (4)**

Composition, physical properties, symmetry, crystal structure, and geologic occurrence of rock-forming minerals. 3 Lec. 1 Lab.

Prerequisite: GLG 111, 121, 141 or 180 and GLG 115L.

Co-requisite: CHM 141 and CHM 144.

**GLG 204. Survival on an Evolving Planet. (4)**

Paleontology is the scientific study of past life, and is therefore an interface between geology and biology. It includes such topics as the origin of life, mass extinctions, exceptional fossil preservation, and response of past ecosystems to climate change, to name a few. This course provides an overview of the history of life and an introduction to the primary research areas in paleontology.

Prerequisite: any 100-Level BIO or GLG course.

**GLG 211. Chemistry of Earth Systems. (3)**

Material presented serves as the basis for dynamic links with upper-division courses within the department. The chemical evolution of the Earth is presented spanning all pressure and temperature conditions. Major geological processes are discussed with respect to the chemical principles controlling the distribution of elements and mass, e.g., crustal genesis, metamorphism, metasomatism, formation of the atmosphere and oceans, diagenesis, hydrothermal processes, and low-temperature chemical weathering. ADVW.

Prerequisite: any 100-level, 3 credit hour GLG course.

**GLG 244. Oceanography. (3) (MPT)**

Examination of the major features of the ocean and the processes active there. Oceanic currents, waves and tides, biologic productivity and zonation, nutrient cycles, chemical parameters, bathymetry, and sediments explored.

Prerequisite: one natural science course from MPF IVA or B, or CAS-D.

**GLG 261. Geohazards and the Solid Earth. (3)**

Examines solid earth physical principles including theory and application. Applications will focus on the nature of geologic hazards and the Earth's interior, which will then be related to overriding scientific theories like plate tectonics and the observations they are based on.

Prerequisite: any 100-level 3 credit hour GLG course, or GEO 121, or PHY 111, or PHY 161, or PHY 191.

**GLG 277. Independent Studies. (0-5)****GLG 301. Sedimentology and Stratigraphy. (4) (MPT)**

Description and evaluation of sedimentary processes, sedimentary environments of deposition and the rocks that form in these environments are integrated with field trips and laboratory analyses of rocks in hand sample and thin section. Stratigraphic principles, sequence stratigraphy, and basin analysis are linked to global climate change and tectonics throughout geologic time. ADVW.

Prerequisite: any 100-level, 3 credit hour GLG course and GLG 115L or permission of instructor.

**GLG 307. Water and Society. (3) (MPT)**

Provides a basic scientific understanding of what water is, where it resides and how it moves throughout the entire hydrologic cycle both on a global and watershed scale. Topics emphasize the importance and fragility of water resources and the world-wide threats to those resources. Major issues examined include flooding, water scarcity, irrigation, settlement of arid land, international water conflict and contamination of drinking water supplies. Topics are examined not only through a natural science perspective, but also through perspectives of history, policy, law and societal attitudes.

Prerequisite: any 100-level, 3 credit hour GLG course, or GEO 121.

**GLG 311. Geoenvironmental Field Methods. (3)**

Develops environmental geoscience field skills useful for fundamental and applied investigations. Students learn to test field hypotheses and construct professional reports and will develop a portfolio of project work.

Prerequisites: GLG 111 or 121 or 141 and 115L.

**GLG 322. Structural Geology. (4) (MPT)**

Origins and characteristics of primary and secondary structures of Earth's crust. CAS-D/LAB.

3 Lec. 1 Lab.

Prerequisite: any 100-level, 3 credit hour GLG course; GLG 201 and GLG 301 (recommended prerequisites: MTH 151, 153, or 157).

**GLG 335. Ice Age Earth. (3) (MPT)**

Introduces the study of climate change as recorded in the geologic record. Discusses natural and anthropogenic causes for climate change.

Prerequisite: GLG 111, 121, 141 or GEO 121.

**GLG 340. Internship. (0-20)****GLG 354. Geomorphology. (4)**

Evolution of landscapes and landforms on Earth and other planets and the processes responsible for their formation. Analysis of landforms to assess the relative role of climate, tectonics, and humans in their formation.

Prerequisites: GLG 111, GLG 121 or GEO 121.

Cross-listed with GEO.

**GLG 357. Igneous/Metamorphic Petrology. (4)**

Theoretical, quantitative, and petrographic investigation of igneous and metamorphic rock physical and chemical characteristics and formational processes.

Prerequisite: any 100-level, 3 credit hour GLG course and GLG 201 (GLG 211 is recommended).

**GLG 377. Independent Studies. (0-5)****GLG 402/GLG 502. Geomicrobiology. (3)**

Focuses on mutual interactions between microbial and geological processes. Topics include: role of microorganisms on mineral weathering rates, microbial mediated ore deposit formation, microbe enhanced oil recovery, life in extreme environments, search for bio-signatures in geological records and meteorites and implications for life on Mars, microbial ecology in ocean floor hydrothermal vents.

Prerequisite: any 100-level, 3 credit hour GLG course; CHM 137 or 141, 144; or permission of instructor.

**GLG 408/GLG 508. Introduction to Hydrogeology. (4) (MPT)**

Introduction to the physical properties governing groundwater-flow in various geologic media and settings. Methods are explored for determining groundwater-flow directions and velocities and aquifer characteristics and potential. Introduction to groundwater-flow modeling and principles of mass transport and groundwater contamination.

3 Lec. 1 Lab.

Prerequisite: any 100-level, 3 credit hour GLG course, or permission of instructor.

**GLG 411A/GLG 511A. Field Geology. (6) (MPC)**

Taught annually during June through July at Miami University Geology Field Station, Dubois, Wyoming. Students identify, classify, and interpret geologic features and synthesize and communicate geologic interpretations. Students work outdoors six to eight hours a day and individually create geologic maps using pace and compass, topographic map base, air photo, and satellite image bases with the assistance of GPS satellite navigation receivers and software. Geologic mapping and rock interpretation techniques are the subject of evening lectures. Summer only.

Prerequisite: GLG 201, 301, 322, and 357 or equivalents or permission of instructor.

**GLG 412/GLG 512. Tropical Ecosystems of Costa Rica. (5)**

Introduces students to the structure and function of neotropical ecosystems, as well as to geological, biological, cultural, and economic forces affecting biodiversity in the tropics. This course is taught on-site in Costa Rica. There are additional costs beyond tuition.

Cross-listed with GEO/IES/LAS.

**GLG 413/GLG 513. Tropical Marine Ecology. (5) (MPT)**

Investigates aquatic systems (estuaries, mangroves, coral reefs, seagrass beds, lagoons, beaches, intertidal zones, taxonomy of vertebrates and invertebrates of coral reefs, lagoons and tidal flats) paleobiology and global climate change (paleo-reconstruction of past lagoon environments, fossil coral reefs, and land use). Student research questions concerning biological and physical analyses of a select marine habitat are required. The course is taught on-site in the Florida Keys and the Bahamas. There are additional costs beyond tuition.

Cross-listed with GEO/LAS 413 and IES 423/IES 523.

**GLG 417/GLG 517. Forensic Isotope Geochemistry. (3)**

Application of stable and radiogenic isotope systems to contemporary forensic problems including environmental contamination, climate change and wildlife forensics, archaeological forensics, animal migration patterns, soil provenancing, human provenancing, food authenticity and traceability, and criminal investigations including drug use and trafficking, weapons tracing, and counterfeit detection. Analytical methods, data quality, and isotopic mapping and modeling will be discussed as a basis for quantitative and qualitative forensic diagnostics. Prerequisites: GLG 201, GLG 211 or GLG/CHM 275; or permission of instructor.

**GLG 427/GLG 527. Isotope Geochemistry. (3)**

Natural variations, measurement techniques, and geologic applications of radiogenic and stable isotopes. Prerequisites: GLG 211 and GLG 357.

**GLG 428/GLG 528. Hydrogeological Modeling: Groundwater Flow and Contaminant Transport and Fate. (4)**

Explores techniques used in constructing and solving mathematical models of groundwater flow and contaminant transport. It reviews and covers the basic theory associated with these processes including the physical processes that govern the flow of groundwater in various geologic media and settings and the chemical, biological and physical processes involved in contaminant transport and fate in groundwater systems. The course explores how to incorporate our understanding of these various processes into numerical models that help us explore and come to a better understanding of natural systems and make predictions. The course also develops familiarity some widely-used packaged models while learning about grid and boundary design, model parameter-value selection, calibration and exploration of uncertainty.

**GLG 432/GLG 532. X-ray Powder Diffraction and Clay Analysis. (3)**

Covers one of the most utilized analytical methods in geology and materials characterization, powder X-ray diffraction. It is a hands-on active learning course involving theory and application of diffraction to phase identification, structural analysis and quantitative analysis of clays, soils, sediments, etc. It also covers the mineralogy and crystal chemistry of the clay minerals.

Prerequisite: GLG 201 and CHM 141 or permission of instructor.

**GLG 435/GLG 535. Soils and Paleosols. (3)**

Introduces methods of soil morphology, taxonomy, and genesis of modern and fossil soils. Describes how to use fossil soils to infer past environmental conditions.

Prerequisite: GLG 301 or permission of instructor.

**GLG 436/GLG 536. Paleoclimatology. (3)**

Reviews stable isotopic techniques to reconstruct climate change over geologic time scales from various types of records, including ocean sediment cores, ice cores, lakes, soils, and speleothems.

Recommended prerequisite: GLG 335.

**GLG 437/GLG 537. Paleontology in Conservation. (3)**

This course explores the needs of conservation scientists, what paleontological data contribute, and new methods for synthesizing modern and paleontological data to develop effective strategies for conservation, remediation, restoration, and policy.

Prerequisite: BIO 206, or BIO 209, GLG 204, or permission of the instructor.

Cross-listed with BIO.

**GLG 447/GLG 547. Volcanology. (3)**

Introduction to physical and chemical processes that govern volcanism. Volcanic processes and timescales will be discussed in the context of magma formation and evolution, controls on eruptive frequency and styles, the nature of resulting volcanic structures and deposits, and associated volcanic hazards and risk. Case studies will focus on geologic and historical evidence for the impact of volcanism on society and climate through time, and present-day risks and hazard mitigation.

Prerequisites: GLG 111 or 121 or 141; and GLG 211 or 261 or 357; or permission of instructor.

**GLG 450/GLG 550. Sedimentary Basin Analysis. (3)**

Evaluation of the physical mechanisms of sedimentary basin formation including isostasy; flexure, thinning and thermal contraction of the lithosphere; subsidence analysis; sequence stratigraphy; paleocurrents and sediment provenance; and tectonics of sedimentary basins.

Prerequisite: GLG 301.

**GLG 461/GLG 561. Geophysics. (3) (MPT)**

Active learning course on solid earth geophysics, covering theory and application. Techniques include seismology, GPS, gravity, magnetics, and mineral physics. Application will focus on large-scale tectonics and the Earth's interior, but will also include some exploration geophysics.

Prerequisite: MTH 151 or MTH 157; PHY 161 and PHY 191.

**GLG 467/GLG 567. Seismology. (3) (MPT)**

Active learning course on seismology covering theory and application. Topics will include elastic wave propagation, reflection/refraction seismology, waveform modeling, tomography plate kinematics, and time series analysis. Applications will focus on earthquakes and large-scale tectonics.

Prerequisites: MTH 151 or MTH 153; PHY 161 or PHY 162 or PHY 191 PHY 192; or consent of instructor.

Cross-listed with PHY.

**GLG 477. Independent Studies. (0-5)****GLG 492/GLG 592. Global Tectonics. (4) (MPT)**

Fundamentals of the theory of plate tectonics and its applications to regional geology. Physical processes and kinematics of plate motions, geology and geophysics of modern and ancient plate boundaries, and plate tectonic evolution of major orogenic belts examined.

Prerequisite: GLG 322, 357, or permission of instructor.

**GLG 496/GLG 596. Isotopes in Environmental Processes. (3)**

Focuses on applications of isotopes to environmental processes. Topics include introduction to environmental isotopes and basics of isotope fractionation, isotopes used as tracers in the hydrological cycle to identify and quantify reaction pathways for both clean and contaminated landscapes, dating of modern and paleo-groundwaters. The emphasis is given to the role of isotopes to trace sources, reactions and pathways of various contaminants in the environment. Prerequisites: GLG 211 or permission of instructor.

**GLG 497. Trends and Topics in the Geosciences. (3) (MPC)**

A common capstone experience where students apply their diverse backgrounds to assessing, evaluating, and interpreting cutting edge geoscience data and research in three theme areas: Earth, environment, and society; Earth's climate and life through time; Earth's physical and chemical systems. Students will further develop skills in written and oral communication, with particular emphasis on writing in multiple geoscience genres.

Prerequisites: GLG 204 or 211; GLG 301 or 357 or 408.

**GLG 498. Senior Thesis In Geology. (3-6)****GLG 630. Mineral Surface Geochemistry. (3)**

A study of the structure, composition, and reactivity of crystalline surfaces in aqueous environments.

Prerequisites: GLG 201, CHM 141 and permission of instructor.

**GLG 640. Internship. (0-20)****GLG 662. Subduction Zones. (3)**

Multidisciplinary examination of the subduction zone system focusing on current research of physical processes.

Prerequisite: GLG 461/GLG 561 or permission of instructor.

**GLG 666. Theoretical Seismology. (3)**

Investigation of earthquake sources and seismic wave propagation including derivation from first principles in physics and mathematics in addition to the development of hypotheses for predicting seismic and elastic behavior from a theoretical framework.

**GLG 670. Geochemical Modeling. (1-3; maximum 6)**

Development and application of geochemical modeling tools to aid in interpretation of petrologic, major element, trace element, and isotopic data in geologic and environmental materials, for applications in a wide range of geoscience disciplines including areas such as igneous petrology, mineralogy, aqueous geochemistry, climate change and environmental forensics. Students will explore the fundamentals behind existing modeling programs and develop new modeling programs geared to specific student research interests.

Prerequisite: permission of instructor.

**GLG 677. Independent Studies. (0-5)****GLG 700. Research for Master's Thesis. (1-12; maximum 12)****GLG 710. Geology Seminar. (1-3)**

Open to students who have completed a year of graduate study.

**GLG 720. Advanced Mineralogy. (1-3; maximum 3)**

Single crystal X-ray crystallographic studies; study of crystal structure and comparative crystal chemistry of various mineral groups.

Prerequisite: GLG 643, or equivalent work in another graduate program.

**GLG 730. Advanced Igneous Petrology. (1-3; maximum 3)**

Experimental igneous petrology, and complex magma systems.

Prerequisite: Permission of instructor.

**GLG 760. Advanced Carbonate Sedimentology. (1-3; maximum 12)**

Selected topics of sedimentology and geochemistry of carbonate sediments and rocks.

Prerequisite: permission of instructor.

**GLG 770. Advanced Topics in Isotope Geochemistry. (1-3; maximum 12)**

Current topics in isotope geochemistry. Recent analytical advances and results of current research.

Prerequisite: GLG 527.

**GLG 790. Research in Geology. (1-4; maximum 12)****GLG 850. Research for Doctoral Dissertation. (1-16; maximum 60)**

## German (GER)

**GER 101. Beginning German. (4)**

Basic grammar and development of reading, speaking, writing, and listening skills. For students with no prior study of German.

**GER 102. Beginning German. (4)**

Basic grammar and development of reading, speaking, writing, and listening skills.

Prerequisite: GER 101 or placement test.

**GER 103L. Practical German Language. (3)**

The goal of GER 103L is to expose students to and to develop basic language skills in German in order to enable them to conduct simple exchanges in a German language environment. This course is aimed at MUDEC students who do not intend to continue German in their university studies while having to fulfill the language requirement of MUDEC.

**GER 111. Review of Basic German. (3)**

Covers same material as GER 101 and GER 102; for students with prior study of German. Upon completion of GER 111, students enroll in GER 201. Credit earned in GER 101 and/or 102 is considered duplication of credit.

**GER 151. The German-American Experience. (3) (MPF)**

Explores the role that America's largest ethnic group has played in the history and culture of the United States. Topics include German settlements in Colonial America, the Eighteen-Forty-Eighters, and German-Americans in Hollywood. IC, IIB. CAS-B.

**GER 177. Independent Studies. (0-5)****GER 201. Second Year German. (3) (MPT)**

Comprehensive grammar review. Course material includes written and/or broadcast texts. Discussions and compositions in German. Prerequisite: GER 102 or 111; or placement test.

**GER 202. Second Year German. (3) (MPT)**

Emphasizes comprehension of written and spoken German. Course material includes written and/or broadcast texts. Discussions and compositions in German. CAS-A.

Prerequisite: GER 201 or placement test.

**GER 219. Introduction to Linguistics. (3) (MPF)**

Scope of linguistics: fundamental concepts and methods of linguistic science (phonetics, phonology, morphology, syntax, semantics, and pragmatics) in its descriptive and historical aspects. V. CAS-E. Cross-listed with ATH/ENG.

**GER 231. Folk and Literary Fairy Tales. (3) (MPF)**

Introduction to the principles of folklore studies. Close reading of all 210 tales in the Grimms' collection, and a survey of literary fairy tales from Goethe to Hesse and Kafka. Emphasis in the second half of the course is on the way literary tales use folklore motifs. Readings and discussion in English. IIB. CAS-B-LIT.

**GER 232. The Holocaust in German Literature, History, and Film. (3) (MPF)**

Critical reading, reflection, and discussion of Holocaust representations. Introduction to historical and political context and survey of debates surrounding memory culture. Examination of fiction, autobiographical writing, historical texts, and film with a focus on German-language sources. Taught in English. IIB, IIB. CAS-B.

**GER 252. The German-Jewish Experience. (3) (MPF, MPT)**

Discusses readings of and about major Jewish figures in the German-speaking world. Frames historical background. Discover constants and changes over time. Assesses terms for analyzing culture. In English. IIB, IIB. CAS-B-LIT.

**GER 260. Topics in German Literature in Translation. (3; maximum 12)**

Introduction to issues in German literature. Knowledge of German not required. CAS-B-LIT.

**GER 261. German Film in Global Context. (3) (MPF, MPT)**

Traces the dynamic development of German speaking cinema from 1895 to the present within a global context that defines filmmaking beyond national borderlines. The global context is determined by the international spread and commonality of: 1) technological innovations (camera, lighting, and sound systems, editing techniques); 2) commercial practices (of production, collaboration, distribution, exhibition), 3) political influences (the interplay of film, war, and ideology), and 4) aesthetic trends (the international popularity of certain genres, formal devices, and specific cultural preferences). The course is taught in English and all the films have English subtitles. IIB, IIIB, IC. CAS-B.

Cross-listed with FST.

**GER 272. Cinemas and Cultures of Central and Eastern Europe. (3)**

Analyses the developments and trends in the cinemas and cultures in Central and Eastern Europe from 1945 to the present; reflects on the definition of filmmaking beyond national concepts. Global context is determined by the theoretical exploration of: 1) the geopolitical region of Germany as well as Central and Eastern Europe in dialog with Western Europe and the world; 2) cultural practices related to identity formation and aesthetic perception; 3) film production and reception among domestic and international audiences; and 4) the interplay of film cultures in the Cold War. Taught in English and all films have English subtitles. IIB. CAS-B.

Cross-listed with FST/RUS.

**GER 277. Independent Studies. (0-5)****GER 301. German Language Through the Media. (3) (MPT)**

German language and cultural studies using media such as films, television, newspaper and magazine articles, and Internet sources. Taught in German. Completion of GER 202 or equivalent (with permission of instructor.)

**GER 311. Passionate Friendships in German Literature from the Middle Ages to the Present. (3) (MPT)**

Examines how intimate relationships between individuals, the bonds of love and friendship, intersect with and are shaped by social expectation, cultural taboos, and historical events. The theme is developed chronologically, from the Middle Ages to the present, emphasizing specific issues of conflict between individual desires and social norms. Texts include prose, poetry, plays, essays, interviews, and films. Primary readings, written assignments, and discussions are in German. CAS-B-LIT.

**GER 312. Coming of Age in German Life and Thought. (3) (MPT)**

Explores short and long texts as well as excerpts from works by some of the leading authors of German literature. The intertwined themes of personal, social, political, and national maturation will guide this exploration. Lectures and discussions are in German. CAS-B-LIT.

**GER 321. Cultural Topics in German-Speaking Europe Since 1870. (3) (MPF, MPT)**

Explores several major cultural foci within the German, Austrian, and/or Swiss experience. Readings, discussions, guided research projects predominantly in German. IIB. CAS-B-LIT.

**GER 322. Comparative Study of Everyday Culture: German-Speaking Europe and the U.S.A.. (3) (MPF, MPT)**

Explores patterns of everyday life in German-speaking European culture and compares them with similar cultural patterns in contemporary U.S. life. Lectures, readings, and discussions in German. IC, IIB, IIC, IIIB. CAS-B-LIT.

**GER 350. Topics in Contemporary Writing - German. (1-3)**

Explores current issues of German-speaking societies in contemporary as well as historical contexts.

**GER 377. Independent Studies. (0-5)****GER 386. Art of the Weimar Republic. (3)**

This class will trace developments in painting, photography, film, and architecture in Germany from 1918-1933. We will focus on connections between art and the historical and political events of this particularly turbulent time in Germany history. Artists to be studied include: Walter Gropius, Mies van der Rohe, Fritz Lang, Hannah Hoch, Georg Grosz, August Sander, and Laszlo Moholy-Nagy. Relevant artistic movements include: Expressionism, Dada, the Bauhaus, and New Objectivity.

Cross-listed with ART.

**GER 410/GER 510. Seminar in German Language and Literature. (1-4)**

Investigation of topic or problem established by instructor. CAS-B-LIT.

**GER 461. Germany Milestones in the 20th Century. (3)**

An exploration of German life in the twentieth century, using film as the chief medium, and drawing upon other cultural artifacts to provide additional perspectives. Taught in German.

**GER 471. Linguistic Perspectives on Contemporary German. (3) (MPC)**

The interaction of social factors and language in the development of the standard language of German, Austria and Switzerland throughout history until the present.

**GER 477. Independent Studies. (0-5)****GER 480. Department Honors. (1-6; maximum 6)**

Department honors may be taken for a minimum of three semester hours and a maximum total of six semester hours in senior year. Permission of instructor and department required.

**GER 610. Self-Paced Graduate Reading Course in German. (1-6)**

Prepares students pursuing advanced degrees in other departments to read German in their fields of study. Individualized format offers flexibility in scheduling, pace, and text selection. Prerequisite: graduate standing; seniors planning graduate study may seek permission of instructor.

**GER 677. Independent Studies. (0-5)****GER 680. Independent Studies. (1-6)**

Independent study in German language and literature.

## Gerontology (GTY)

### **GTY 110. Opening Minds through Art (OMA) Volunteer Experience. (1; maximum 3)**

OMA is an intergenerational visual art program for people with dementia. It is grounded in the belief that people with dementia are capable of expressing themselves creatively. Its approach is to capitalize on what people with dementia can still do. OMA currently offers its program at 15 sites that serve people with dementia in long-term care facilities, adult day centers and those living at home. OMA has four primary goals: 1) to promote the social engagement, autonomy, and dignity of people with dementia by providing creative self-expression opportunities; 2) to provide staff and volunteers with opportunities to build close relationships with people with dementia; 3) to show the public the creative self-expression capacities of people with dementia through exhibitions of their artwork; and 4) to contribute to the scholarly literature on dementia care and the arts. In this Service-Learning course you will volunteer weekly in the OMA program. IC.

### **GTY 154. Big Ideas in Aging. (3) (MPF, MPT)**

Overview of the processes of aging, with an emphasis on "big questions" such as why does aging matter, how do we study aging, why do people age in different ways, what are the diverse work and living conditions of older adults, and how do formal and informal programs influence the aging experience? IIC. CAS-C.

### **GTY 177. Independent Studies. (0-5)**

#### **GTY 244. Pre-Internship in Gerontology. (2)**

This course students develop their gerontological voice and prepare for their capstone internship. Topics include networking and careers in the aging network, development of short- and long-term professional goals, preparing a resume and cover letter, marketing one's self as a gerontologist, and professional and practice ethics. Prerequisites: GTY 154 and either GTY 318, GTY 354 or GTY 365.

#### **GTY 260. Global Aging. (3) (MPF, MPT)**

Integrates bio-demographic and socio-cultural approaches to the study of global aging by drawing on cross-cultural quantitative and qualitative data including ethnographic records. Developed and developing countries are compared and contrasted in terms of a wide range of issues related to aging, from global to local. The phenomenon of global aging is explored and addressed through active engagement with international organizations and individuals. IIIB, IC. CAS-C.

### **GTY 277. Independent Studies. (0-5)**

#### **GTY 310. Opening Minds through Art (OMA) Leadership Experience. (2; maximum 6)**

OMA is an intergenerational visual art program for people with dementia. It is grounded in the belief that people with dementia are capable of expressing themselves creatively. Its approach is to capitalize on what people with dementia can still do. OMA currently offers its program at 15 sites that serve people with dementia in long-term care facilities, adult day centers and those living at home. OMA has four primary goals: 1) to promote the social engagement, autonomy, and dignity of people with dementia by providing creative self-expression opportunities; 2) to provide staff and volunteers with opportunities to build close relationships with people with dementia; 3) to show the public the creative self-expression capacities of people with dementia through exhibitions of their artwork; and 4) to contribute to the scholarly literature on dementia care and the arts. In this Service-Learning course you will have a leadership role in OMA. IC.

Prerequisite: GTY 110.

#### **GTY 318. Social Forces and Aging. (3) (MPT)**

Examines the social forces that shape the diverse experiences of aging for individuals and the social structures in which they live. Particular emphasis is given to sociological issues such as age stratification, the life course, demographic change and its effects, and societal aging as a force in social change. IC.

Prerequisite: SOC 151 or SOC 153 or SOC/SJS 165; or SOC/DST/EDP 272; or GTY 154.

Cross-listed with SOC 318.

#### **GTY 340. Internship. (0-20)**

##### **GTY 354. Issues & Controversies in Aging. (3)**

Enables students to explore issues such as end-of-life, theories of functional decline, responsibility for care of older people, and other sometimes controversial topics. ADVW.

Prerequisite: GTY 154.

##### **GTY 357. Medical Sociology. (3)**

Sociological study of illness, patients, medical professionals, and problems inherent in the delivery of health care services.

Prerequisite: SOC 151, SOC 153 or GTY 154.

Cross-listed with SOC 357.

##### **GTY 362. Applied Research in Gerontology. (3) (MPT)**

Students will apply the principles of research methods to topics that are directly relevant to agencies/organizations that plan for/ provide services for older adults. Throughout the semester, agency liaisons will provide perspective on questions of importance to their organizations, and reinforce how research findings are used in the organization. A specific example based on existing data related to aging services will be used throughout the semester to illustrate all steps in the applied research process, from conceptualization to reporting findings. Students will work in teams to create an applied research question, analyze existing data to answer the question, and present their findings.

Prerequisites: GTY 154 and SOC 262 or permission of instructor.

##### **GTY 365. Social Policy and Programs in Gerontology. (3)**

Provides practical information about working in programs serving older people. Topics include social policy and old age, health policy and programs, federal economic reform, grantsmanship, program planning and coordination, and professions in the field of aging.

Prerequisite: GTY 154.

**GTY 377. Independent Studies. (0-5)****GTY 440P. Gerontology Practice Capstone Internship. (1-16; maximum 16) (MPC)**

Through field placement and a weekly seminar, students discuss their field site organization and professional challenges. GTY 440P is for students who complete a practice-based internship. EL.

Prerequisites: GTY 154, GTY 318, GTY 365, STA 261, SOC 262 and either GTY 362 or GTY 465.

**GTY 440R. Gerontology Research Capstone Internship. (4-6) (MPC)**

Through field placement and a weekly seminar, students discuss their field site organization and professional challenges. GTY 440R is for students who complete a research-based internship. EL.

**GTY 456/GTY 556. Aging & Health. (3)**

As individuals grow older, they experience a variety of physical and social changes that influence their health and well-being. In this course, topics such as age-related changes in health and illness, psychosocial and behavioral factors that contribute to those changes, and health promotion and disease management among older adults are explored.

Prerequisite: GTY 154.

**GTY 460/GTY 560. Selected Topics in Gerontology. (2-4; maximum 10)**

Draws upon current literature and research for in-depth consideration of selected special topics in gerontology.

Prerequisite: GTY 154.

**GTY 465. Policies & Programs in an Aging Society. (3)**

This course examines the policy debates faced by the United States as it becomes an aging society. Organized around such topics as income maintenance and health care, the seminar will describe and debate policy issues that arise as the older population in the U.S. continues to increase.

Prerequisites: GTY 154 and GTY 365 or permission of instructor.

**GTY 477. Independent Studies. (0-5)****GTY 479/GTY 579. Research on Inequality in Aging & Health. (4)**

This course examines health inequalities, unequal access, and usage of health care as they relate to aging. Topics include health conditions, social environments, caregiving, and access to and utilization of health services and resources. The emphasis is on intersections of various inequality systems (e.g., race/ethnicity, socioeconomic class, gender) and how age interacts with them to produce and reinforce health inequalities.

**GTY 601. New Frontiers in Aging. (3)**

This online course provides social entrepreneurs who are interested in the mature market with an overview of the processes of aging. The course offers students the opportunity to think critically about aging from a life course perspective and explore the impact of growing old on the lives of individuals and society. Students consider several key themes over the course of 10 weeks: Why does aging matter? How do we study aging? Why do people age in different ways? What are the diverse work and living conditions of older adults? How do formal and informal programs influence the aging experience?

**GTY 602. Perspectives in Gerontology. (3)**

Overview of theories and major issues in social gerontology including the development of the field.

**GTY 604. Gerontology Proseminar 1. (1)**

First course in a four-semester writing lab that teaches the process of communicating gerontological knowledge to different audiences using different genres. Focus on developing a gerontological voice; constructing project timelines; the feedback/revision process; key elements of a literature review, presentation, and conference abstract; and developing professional documents.

**GTY 605. Gerontology Proseminar 2. (1)**

Second course in a four-semester writing lab that teaches students the process of communicating gerontological knowledge. Focus on key elements of methods and results sections; giving presentations; reference management software; authorship and ownership; and the publication process.

**GTY 608. The Logic of Inquiry. (4)**

Presents detailed information about, and experience with, aspects of research design in social gerontology including conceptualization, measurement, sampling, analysis, and reporting. Examines inductive and deductive approaches to research questions and the use of national electronic data sets.

Prerequisite: admission into the MGS or MPSG program or permission of the instructor.

**GTY 609. Qualitative Research Methods. (3)**

Provides an introduction to the paradigmatic assumptions of qualitative research methods and strategies of data collection, analysis, and writing. Focuses on research questions and issues in gerontology.

**GTY 611. Linking Research and Practice. (3)**

Application of principles of research methods to agency-based evaluation of programs. Focuses on the uses and design of program evaluation research, including program initiation, process evaluation, and outcome assessment. Includes a component on grant-writing and budgeting for evaluation activities.

Prerequisites: GTY 602, GTY 608.

**GTY 612. Innovations and Trends in the Aging Marketplace. (3)**

This online course is designed to identify important trends in aging that will generate start-up ideas for social entrepreneurship ventures. Topical areas serve as the catalysts for ideas aimed at social entrepreneurs who want to launch an entrepreneurial venture related to aging. The areas of focus for the course include: Entrepreneurial Ideas in Aging; Science & Technology Innovation; Living Arrangements & Family; Work, Retirement & Encore Careers; Leisure, Learning & Civic Engagement; Health & Healthcare Systems; Long Term Services & Supports; Retail Markets & Aging Consumers.

Prerequisite: GTY 601.

**GTY 615. Readings in Gerontology. (1-5; maximum 6)**

Directed readings on selected topics in gerontology, for pass/fail grade.

**GTY 620. Supervised Research or Reading on Selected Topics in Gerontology. (1-5; maximum 6)**

Research on selected topics or problems in gerontology.

**GTY 640. Internship. (0-20)****GTY 641. Organizations and the Aging Enterprise. (3)**

Prepares graduate students for the practicum. Topics include types of aging-related organizations; organizational theory and behavior; organizational analysis; and professionalism (e.g., goal setting, ethical issues).

**GTY 667. Policy and Politics of Aging. (3)**

Focuses on major policy areas including income security, health care, long-term care, housing, and social services.  
Cross-listed with FSW.

**GTY 677. Independent Studies. (0-5)****GTY 686. Global Health and Health Care Systems. (3)**

Focuses on concepts, issues, and research addressed to health care systems from a comparative standpoint. Explores the uniform and the variable components of a health care system, the product of health care systems, how health care systems reflect and promote the values and institutions of a society, and how the major components of modern medicine relate to each other and to pre-modern or alternative components.

Prerequisite: GTY 602 or permission of instructor.

**GTY 700. Critical Inquiry In Gerontology. (1-6)**

Guided independent research required as a culminating, integrative experience for MGS/MPGS students. Students will design and execute a project that involves either original data collection, secondary data analysis, or critical analysis of policies and programs in the field.

**GTY 702. Knowledge Construction & Advanced Theory. (3)**

Examines the epistemological and ideological underpinnings of knowledge construction and explores the reciprocal relationship between theories and dominant research questions with particular emphasis on theory construction in gerontology. Builds on and reexamines issues and topics discussed in GTY 602 and GTY 608.

**GTY 705. Oral and Written Communication for Gerontologists. (3; maximum 6)**

Advanced communication of gerontological knowledge, with an emphasis on communicating to professional audiences and the publication process. By the end of the course, doctoral students will produce a manuscript or grant application that is submitted for review; MGS students will produce the background, introduction and methods section of their exit paper. Both groups of students will present an oral presentation based on the work.

**GTY 708. Quantitative Methods and Statistics. (4)**

Explores basic designs of survey and experimental research in aging. Discusses issues of measurement, sampling, causality, the concept of the sampling distribution as the basis for inferential statistics, and introductory and intermediate statistical techniques for continuous and categorical data.

Prerequisite: GTY 608 or permission of the instructor.

**GTY 709. Advanced Qualitative Research & Methods. (4)**

Builds on GTY 609 by focusing on the major genres in qualitative research, including participant observation, organizational case studies, phenomenological and narrative interpretation, participatory action research, and qualitative evaluation/policy research. Stresses practical mastery of strategies and skills in particular genres, according to students' dissertation interests.

**GTY 718. Statistical Modeling in Gerontology. (3)**

Focuses on statistical modeling techniques for continuous and categorical outcomes in aging research. Examines multivariate techniques based on the generalized linear model with opportunities for application using large scale gerontological datasets with special focus on longitudinal data analysis.

Prerequisite: GTY 708 or permission of instructor.

**GTY 745. Sociology of Aging. (3)**

Examines the sociological perspective, its contributions to social gerontology, and its application to issues facing an aging society. Reviews the role of major sociological theories and frameworks (such as structural functionalism, exchange, and conflict theories) in the development of social gerontology.

**GTY 747. Demography & Epidemiology of Aging. (3)**

Explores fertility, mortality, and global aging; distribution of health and illness within a population; age-based migration and its impact on locations of origin and destination; variations in health and mortality by gender, race, ethnicity, and social class; impact of health and mortality patterns for individuals, society and public policy.

**GTY 750. Special Topics in Advanced Quantitative Methodology in Aging Research. (1-4; maximum 20)**

Examines advanced quantitative methodology techniques in aging research. Specific special topical sections focus on particular quantitative methodologies including those techniques needed for working with longitudinal data and those that address issues of age, period, and cohort effects. Some sections have data analysis laboratory requirements.

Prerequisite: GTY 718 or permission of instructor.

**GTY 751. Categorical Modeling in Aging. (3)**

Applied statistical analysis techniques appropriate for categorical dependent variables (outcomes). Analysis techniques include logistic, ordinal, and multinomial regression, and techniques for analyzing count data (such as Poisson regression). Applications will be drawn from gerontological research.

Prerequisites: GTY 718 or equivalent, or permission of instructor.

**GTY 790. Pre-Candidacy Doctoral Research in Gerontology. (1-12; maximum 12)****GTY 850. Doctoral Dissertation Research. (1-16; maximum 60)**

Prerequisite: successful completion of comprehensive examination.

## Global & Intercultural Studies (GIC)

**GIC 101. Global and Intercultural Studies. (3) (MPF)**

An interdisciplinary approach to global and intercultural dynamics and issues. Examines historical and contemporary transnational perspectives to understand processes of globalization in an age of global social responsibility. IIB, IIC, IIIB.CAS-B, CAS-C.

**GIC 228. Cuba In Transition. (6) (MPF)**

Takes place in Cuba during winter term and identifies and expands students' understanding of contemporary Cuba. Both online assignments and field work in Cuba will draw on several themes ranging from pre and post- revolutionary Cuban history, domestic and international politics, Cuba's socialist economic model, an alternative approach to education, sustainable agriculture, Cuban art, religious practices, and U.S.-Cuba shared cultural experiences, including baseball and appreciation of Ernest Hemingway's literature and life in Cuba. Additionally, students will learn how categories of analysis such as race, class, and gender have evolved in Cuba over time. Taught during winter term only. IIIB, IC.

**GIC 286. Data, Ethics, and Society. (3)**

A historical, cultural, and philosophical introduction to key ethical and political problems in a world increasingly saturated with data. Examines rapidly changing and disquieting issues such as privacy and surveillance, intellectual property, and identity. Addresses the ethical issues that may arise from data collection, production, management, and use in scientific study, policy development, social justice debates, and economic applications. Students will develop critical skills to reflect upon, evaluate, and navigate issues they may encounter in a variety of environments impacted by data. CAS-B.  
Prerequisites: STA/ISA 125 or STA 261 or STA 301.  
Cross-listed with HST/PHL.

**GIC 301. Approaches to Global and Intercultural Studies: Globalization and Belonging. (3) (MPF)**

This course provides an interdisciplinary examination of how “we” and “they” are shaped in the context of heightened globalization. Specifically, how are citizenship, nationhood, ethnicity and race being imagined in an increasingly inter-connected world, and with what implications for democracy, social justice, and human rights. The U.S. provides foundational examples, but comparisons will be drawn from cases in Latin America, Europe, and Southern Africa. IIB, IIC, IIIB, IC. CAS-B or CAS-C.

**GIC 360. Topics in Global and Intercultural Studies. (3; maximum 6)**

Examines specific topics through frameworks of global and intercultural studies.  
Prerequisites: 32 credit hours or more.

**GIC 421/GIC 521. Critical Race and Post-Colonial Studies. (3)**

Utilizes critical sociology (intersectionality, critical race, and post-colonial theory) to investigate how race and social structures interact over time both within the U.S. and globally. Specifically the course examines the theories, research and policy associated with intersectional identities of race, class, gender, place and context. Finally, it investigates the role of intersectionality in (re)producing systems of inequality, privilege, and how they can be transformed. IIIB, IC.  
Prerequisites: CRE 151, GIC 101, SJS 165 or SOC 151.  
Cross-listed with SOC 421/SOC 521.

**GIC 477. Independent Studies. (0-5)****GIC 487. Globalization, Social Justice and Human Rights. (3) (MPF)**

This course explores the theories, issues, debates, and pedagogy associated with globalization, social justice, and human rights. The course provides students with a unique opportunity to explore these topics within the classroom and, via internet and other technologies, across classrooms located around the globe. The student, through collaborative projects with peers around the world, will reflect upon how globalization shapes and transforms local communities and national cultures. IIIB, IC. CAS-C.  
Prerequisites: GIC 101, SOC 151 or SOC 153, or SOC/SJS 165.  
Cross-listed with SJS/SOC.

## Global Health Studies (GHS)

**GHS 101. Introduction to Global Health. (3) (MPF)**

Introduces students to the complexity and ethical dilemmas of global health as a practical field that seeks to work with organizations and local communities to solve health problems. Students will learn to assess knowledge from multiple disciplines to thoroughly describe global health problems. This course is the required gateway to the Global Health Minor. IIIB.

**GHS 201. Data and Decisions in Global Health. (3)**

Develops understanding and skill interpreting different kinds of data (qualitative and quantitative) to understand, assess, and make ethical decisions regarding complex global health problems and the programs designed to address them. Required for the Global Health Minor. CAS-QL.  
Prerequisite: GHS 101.

**GHS 301. Seminar in Global Health. (1; maximum 3)**

Explores a variety of current issues and research in global health through in depth discussions and readings. Specific content will vary each semester according to current global health events and the specific perspectives of the professor. For Global Health Minors, this seminar must be repeated at least three times, and over multiple semesters students will be exposed to multiple disciplinary approaches to analyzing global health concerns. Required for the Global Health Minor.  
Prerequisite: GHS 101.

**GHS 377. Independent Studies. (0-5)****GHS 401. Global Health Experience. (2)**

In conjunction with an approved off-campus experience and a GH faculty advisor, this independent study course enables students to gain a richer understanding of the complexities of global health issues in context, and specifically it offers students an opportunity to explore a global health question or concern that emerges as a result of their off-campus experience. Students are expected to present a literature review that addresses their global health question or concern, as well as a summary of the ways in which the experience has enriched their understanding of global health at a professional forum. This is a requirement of the Global Health minor and must be pre-approved by a GH advisor.  
Prerequisite: GHS 101 and completion of the GH methods requirement.

**GHS 477. Independent Studies. (0-5)****GHS 491. Global Health Leadership. (1)**

Work in global health requires recognizing and integrating the skills and strengths of differently positioned people while collaboratively building a common vision. This practicum will encourage GHS minors to reflect on qualities of leadership and develop skills in negotiating team problem solving, facilitating the creativity and contribution of each team member, and coordinating contacts or networks of consultants to produce a viable grant proposal.  
Prerequisites: GHS 101 and GHS 301.  
Co-requisite: ATH 448.

## Graduate School Community (GSC)

**GSC 601. College Teaching Enhancement Program. (1; maximum 2)**

Orients graduate students and postdoctoral fellows to basic, practical issues related to college teaching, scholarship and service, and how these faculty roles are affected by institutional context. To be taken with membership in either the CTE Graduate Student Teaching Enhancement Program or the CTE PostDoc Teaching Enhancement Program.

**GSC 602. College Teaching. (1)**

Orients graduate students to theory and research in college pedagogy as well as teaching skills. Open to students in the Certificate in College Teaching program.

Prerequisite: admission to Certificate Program in College Teaching.

**GSC 603. Academic Cultures. (1)**

The purpose of the course is to orient graduate students to basic, practical issues related to college teaching, scholarship and service, and how these faculty roles are affected by institutional context. Open to students in the Certificate in College Teaching program.

**GSC 640. Internship. (0-12; maximum 12)****GSC 677. Independent Studies. (0-5)****GSC 700. Thesis Completion for Graduate Students. (0-9; maximum 18)**

This course is for students who are within two semesters of completing their thesis. It is only available with permission of the graduate school.

Prerequisites: Successful completion of course work; permission of the graduate school.

**GSC 850. Dissertation Completion for Graduate Students. (0-9; maximum 18)**

This course is for students who are within two semesters of completing their dissertation. It is only available with permission of the graduate school.

Prerequisites: Successful completion of comprehensive exams; permission of the graduate school.

## Greek Language and Literature (GRK)

**GRK 101. Beginning Greek. (4)**

Essentials of ancient Greek including basic principles of grammar, acquisition of basic vocabulary, and practice in reading and writing.

**GRK 102. Beginning Greek. (4)**

Continuation of GRK 101 culminating in readings selected from Homer, Plato, Xenophon, or Greek New Testament.

Prerequisite: completion of GRK 101 or equivalent.

**GRK 177. Independent Studies. (0-5)****GRK 201. Homer. (3)**

Introduction to the language, historical background, and artistic riches of Homer. Selected readings from Iliad or Odyssey. CAS-B-LIT.

Prerequisite: GRK 101, 102.

**GRK 202. Plato. (3)**

Introduction to Greek prose based on reading selections from Plato. Emphasis on reading comprehension and critical assessment of text. CAS -A or CAS-B-LIT (not both).

Prerequisite: GRK 201.

**GRK 277. Independent Studies. (0-5)****GRK 302. Advanced Readings in Representative Authors. (3)**

Close study of readings in history, tragedy, philosophy, or epic. Course will meet with GRK 202, but students registered under GRK 302 will be assigned additional work appropriate for their more advanced standing. CAS-B-LIT.

Prerequisite: GRK 202.

**GRK 310. Special Topics in Greek Literature. (3; maximum 12)**

Study of selected authors or special topics in Greek literature (may be repeated when content changes). CAS-B-LIT.

Prerequisite: GRK 202.

**GRK 377. Independent Studies. (0-5)****GRK 410. Special Topics in Greek Literature. (3; maximum 12)**

Study of selected authors or special topics in Greek literature (may be repeated when content changes). CAS-B-LIT.

Prerequisite: GRK 202.

**GRK 410A. Greek Tragedy. (3)**

410A Greek Tragedy. Exploration of the evolution and transformation of tragic drama in 5th century through reading and analysis of one play by each major tragedian: Aeschylus, Sophocles, and Thucydides.

**GRK 477. Independent Studies. (0-5)****GRK 480. Independent Reading for Department Honors. (1-6)**

Reading centered upon a major topic of Greek literature and thought, normally culminating in an independent essay.

Prerequisite: advanced level ability usually requiring completion of course offerings or equivalents, GRK 101 through at least one semester at 400 level.

## Hebrew (HBW)

**HBW 101. Beginning Modern Hebrew. (4)**

Basic grammar and development of reading, speaking, writing, and listening skills. No prior study of Hebrew needed.

**HBW 102. Beginning Modern Hebrew. (4)**

Continuation of basic grammar and development of reading, speaking, writing, and listening skills. Prerequisite: HBW 101 or equivalent.

**HBW 177. Independent Studies. (0-5)****HBW 201. Intermediate Modern Hebrew. (3)**

Conversation, vocabulary building, readings, composition, grammar. Prerequisite: HBW 102 or equivalent.

**HBW 202. Intermediate Modern Hebrew. (3)**

Continued development of conversation skills, vocabulary acquisition, reading and writing strategies, as well as grammar skills. CAS-A Prerequisite: HBW 201 or equivalent.

**HBW 277. Independent Studies. (0-5)****HBW 377. Independent Studies. (0-5)****HBW 477. Independent Studies. (0-5)**

## History (HST)

**Note:**

1. All history courses may be applied to CAS-B.
2. The second unit of a two-semester course may be taken before the first unit; credit is given for any semester unit of HST 111, HST 112.

**HST 111. Survey of American History. (3) (MPF)**

Survey of the interplay of forces that have brought about evolutionary development of American economic, cultural, and political history from 1492 to the Era of Reconstruction, 1877. A functional and synoptic treatment of America's great historical problems. IIB. CAS-B.

**HST 112. Survey of American History. (3) (MPF)**

Survey of the interplay of forces that have brought about evolutionary development of American economic, cultural, and political history from 1877 to the present. A functional and synoptic treatment of America's great historical problems. IIB. CAS-B.

**HST 147. Introductory Seminar in History. (1)**

Introduces first-year history majors to the department, the university, and each other. Students will meet history department faculty, and learn about course offerings and undergraduate research opportunities. Students will also learn about the many resources available to them on campus and will work with representatives from the Howe Center for Writing Excellence, the Center for Career Exploration and Success, and Study Abroad and Away.

**HST 177. Independent Studies. (0-5)****HST 189. History of Miami University. (3)**

Survey of the history of Miami University, 1760s to 2010s, as it relates to the development of higher education in the United States. Themes include frontier imperialism, settlement, nation-building, the modern university and finally the national university. Students will use primary sources unique to Miami University throughout the course; will access online archival, visual, oral, and other sources unique to Miami University; will begin to build historical arguments supported by primary and secondary evidence.

**HST 197. World History to 1500. (3) (MPF)**

Introduction to the origins and early development of individual civilizations prior to the period of Western European hegemony. Stresses interdependency and interrelations among cultures, and compares social, political, and religious experiences of peoples with one another. IIB, IIIB. CAS-B.

**HST 198. World History Since 1500. (3) (MPF)**

Provides global perspective as well as introduction into history of individual civilizations. Stresses interrelations among societies and cultures and compares experiences of peoples and civilizations with one another. IIB, IIIB. CAS-B.

**HST 206. Introduction to Historical Inquiry. (3)**

Introduction to essential skills in investigating and interpreting the past. Course stresses active participation, writing, and intensive reading of primary documents and secondary literature. Required of (and limited to) History Majors. ADVW.

**HST 212. United States History since 1945. (3)**

In-depth examination of political, social, economic, and cultural/intellectual developments in the U.S. since the end of World War II.

**HST 213. Appalachia: Cultures and Music. (3)**

History of country music since 1925 in context of Appalachian culture, regional modernization, and emergence of national media. Authenticity and cultural traditions, fans and artists, performance ceremonies, African American and gospel contributions, technological innovation in recording, radio, movies, and television. IC. CAS-B.

**HST 216. Introduction to Public History. (3)**

Introduction to the major issues addressed by historians who work in the public sphere, with emphasis on the creation of a shared public past and the disciplines that comprise the field of public history. Cross-listed with AMS.

**HST 217. Modern Latin American History. (3)**

Introduction to the major themes shaping Latin American history since independence, including US foreign policy; economic development; the discourses of race, ethnicity, class, and gender; cultural elements that either unite or distinguish Latin American countries.

Cross-listed with LAS.

**HST 221. African-American History. (3) (MPT)**

Survey of African-American history, concentrating upon the black experience in the United States. Black America from African origins to the 20th century. IC. CAS-B.

Cross-listed with BWS.

**HST 222. U.S. Foreign Relations Since 1898. (3) (MPT)**

Survey of U.S. foreign policy from 1898 to the present, with emphasis on issues of neutrality, isolationism, collective security, imperialism, the Cold War, nuclear policy, arms control, and relations with the Third World.

**HST 224. Africa to 1884. (3) (MPF)**

Survey course focusing on the changing historiography of Africa, African ancient civilizations, the emergence and development of the Bantu and Nilotes, Eastern Africa and the Orient, early Christianity and Islam, trans-Saharan trade, the medieval Sudanic Empires, statelessness and state formation, Africa and the West between 1400 and 1800, South Africa to 1870, the Mfecane, the Sudanic Jihads, long-distance trade, and African-European relations in the 19th century. IIB. CAS-B.

Cross-listed with BWS.

**HST 225. The Making of Modern Africa. (3) (MPF)**

Survey of the transformation of Africa, south of the Sahara, from the time of the scramble for, and partition of, the continent among European powers in the second half of the 19th century to the present. Emphasizes economic, social, cultural, political, and intellectual features. This is done through reading monographs, articles, and literary works (novels, plays, poems, etc.) on African experiences with colonialism, the rise and triumph of nationalism, African womanhood, popular culture and the experiences of change, and the rise and nature of post-colonial economic and political crises in the region. IIB. CAS-B.

Cross-listed with BWS.

**HST 231. Genocides in the 20th Century. (3) (MPF)**

Focuses on four of the largest instances of organized mass murder in modern times – the Armenian genocide, the Holocaust, the mass killings in Pol Pot's Cambodia, and the Rwandan genocide in 1994. Explores both the motivations behind these atrocities and the ways in which we have sought to "make sense" of them and prevent them from occurring again. IIB, IIIB. CAS-B.

**HST 236. Medicine and Disease in Modern Society. (3)**

Explores the history of medicine and disease in Europe and America from the late eighteenth century to the present. The focus is on the rise of scientific medicine emphasizing the methods of social, intellectual, and cultural history. This approach rejects traditional progressionist accounts of the rise of scientific medicine and seeks to place medicine in a wider context. The predominant theme is that of the increasing influence of medical theory and medical institutions on society, and the growing concern of the state with public health. The course includes an exploration of the connections between medicine and ideas about class, race, gender, nation, and disease. This course requires no previous knowledge of modern history.

**HST 238. Food in History. (3) (MPF)**

Explores the role of food in history. Selected topics include the history of food as a resource linked to markets, migration, empire, and globalization; as well as food as a cultural artifact linked to social position, political agency, culinary practices, and local identity. IIB, IIIB. CAS-B.

**HST 241. Introduction to Islamic History. (3)**

Introduction to medieval Islamic and Middle Eastern society, culture and political history from the Prophet Muhammad to the rise of the Ottomans.

**HST 243. History of the Atlantic Slave Trade, 1400s to 1800s. (3)**

Development of European slaving activity in the African continent in the 15th through 19th centuries. Emphasis on the activities of Portuguese, Spanish, English, French and Dutch slavers, including the Middle Passage and also the less-studied slave trade in the Mediterranean and Indian Ocean. Identifies the economic forces, as well as the social consequences, of the ongoing slave trade. Cross-listed with BWS and LAS.

**HST 245. Making of Modern Europe, 1450-1750. (3) (MPF)**

Survey of European history in global context from the Renaissance through the Enlightenment. Emphasis on political, cultural, and religious change in the first global age. Class also introduces students to the skills of historical thinking, and why they are essential to living in a global age. IIB, IIIB. CAS-B.

**HST 246. Survey of Medieval History. (3) (MPT)**

Formation of European Synthesis: from the crusades to 15th century.

**HST 250. History and Popular Culture. (3)**

Topical studies of historical imagery as presented in the popular communications media: best-selling fiction, documentaries, school texts, 'popular' histories, and especially film. Students may not take course more than once with same instructor.

**HST 252. History at the Movies. (3)**

Explores the ways that history is represented in film and video (as opposed to print). By comparing film to texts, analyzing narrative structure, and studying the representations of the past on screen, students learn how history is depicted in this medium. Introduces history of film by viewing and discussing works of several early directors who represented history. Films and directors selected for inclusion will vary from year to year.

Prerequisite: FST 201 recommended (not required).

Cross-listed with FST.

**HST 254. Introduction to Russian and Eurasian Studies. (3) (MPF)**

Examines the major developments that have shaped Russian and Eurasian Culture, society and politics over the last millennium. The course incorporates perspectives from the social sciences, humanities and the fine arts. IIB. ADVW. CAS-B.

Cross-listed with ATH/CLS/ITS/POL/REL/RUS.

**HST 259. Introduction to the Miami Tribe of Oklahoma. (3) (MPF)**

Offers an interdisciplinary examination of the Myaamia as a living people, within a living culture - a people with a past, present and future. Explores pre-contact economy, social and political organization; the historic period of contact, treaties and federal legislation and the cultural basis of Myaamia responses; and present-day issues of concern to the dependent sovereign nation of the Miami Tribe of Oklahoma. IC.

Cross-listed with IDS.

**HST 260. Latin America in the United States. (3) (MPF)**

Interdisciplinary examination of historical, social, economic, and cultural forces that have shaped the experience of peoples of Latin, Hispanic, Latino/a background in the United States. IC, IIB, IIIB. CAS-B. Cross-listed with LAS.

**HST 270. Topics in European History. (1-4; maximum 12)**

Topics in European History. May be repeated when topic changes.

**HST 270M. Genocides in the 20th Century. (3)**

This course focuses on four of the largest instances of organized mass murder in modern times - the Armenian genocide, the Holocaust, the mass killings in Pol Pot's Cambodia, and the Rwandan genocide in 1994. It explores both the motivations behind these atrocities and the ways in which we have sought to "make sense" of them and prevent them from occurring again.

**HST 271L. Western Heritage. (3)**

Analyze the origins of the key values, attitudes and aspirations out of which the western World has emerged since the days of the Italian Renaissance.

**HST 275. 20th Century European Diplomacy. (3) (MPT)**

Examines the origins of World War I and World War II, the Cold War, European unity, decolonization, the fall of communism, and the Yugoslav conflict.

**HST 277. Independent Studies. (0-5)****HST 286. Data, Ethics, and Society. (3)**

A historical, cultural, and philosophical introduction to key ethical and political problems in a world increasingly saturated with data. Examines rapidly changing and disquieting issues such as privacy and surveillance, intellectual property, and identity. Addresses the ethical issues that may arise from data collection, production, management, and use in scientific study, policy development, social justice debates, and economic applications. Students will develop critical skills to reflect upon, evaluate, and navigate issues they may encounter in a variety of environments impacted by data. CAS-B.

Prerequisites: STA/ISA 125 or STA 261 or STA 301.

Cross-listed with GIC/PHL.

**HST 290. Topics in American History. (1-4; maximum 12)**

May be repeated when topic changes.

**HST 290F. 1968: Year that Changed World. (1)**

This year, 2018, marks the 50th anniversary since the various events and protests of 1968 shook the world. This course explores what happened in that fateful year and its lasting impact. Topics include the Vietnam War and domestic protests against it; the Civil Rights movement; student activism; the Cultural Revolution; the Prague Spring and reform efforts in the Communist block; democratic engagement in Mexico and the Mexico City Olympics; Rock-n-Roll; technological advances; space exploration; and more.

**HST 296. World History Since 1945. (3) (MPF)**

From Hiroshima to the Information Age. Focuses on the politics of identity and social history. Students taking this course may not earn credit for HST 398. IIB, IIIB. CAS-B.

**HST 301. Age of Revolutions, Europe 1750-1850. (3)**

Examines the causes of the French and Industrial Revolutions and explores how they changed the social, economic, political, and cultural fabric of a continent.

Prerequisite: none, but HST 122 recommended.

**HST 304. History, Memory, Tradition. (3)**

Examination of the role of history, memory, and tradition in American culture, and the theoretical underpinnings of public history. Cross-listed with AMS.

**HST 313. History of England to 1688. (3)**

Life of the English people from the beginning of the Middle Ages to 1688.

**HST 315. The Renaissance. (3) (MPT)**

Intellectual developments of the period 1350-1550, set in their social, economic, and political contexts. Focuses on origins and development in Italy, but also looks to the movement's wider European context and impact. Topics include the 14th century crisis, humanism, the family, the debate between active and contemplative life, Renaissance court life, and the state as a work of art. Authors read include Petrarch, Kempe, Colonna, Valla, Castiglione, Machiavelli, Erasmus, More.

**HST 316. The Age of the Reformation. (3)**

The religious revolutions of the 16th century, both Protestant and Catholic, in their social, political, and religious contexts. Topics chosen from: medieval reform movements and heresies; popular religion; the debates over clerical celibacy, free will, and the priesthood; social discipline and the modern state; family and women; the missions to the New World; the witch craze and the Inquisition.

Cross-listed with REL 316.

**HST 318. British Empire. (3)**

Examines British Empire from the late 18th century to the 1960s. Emphasis is on the interaction of the peoples gathered into the Empire with their imperial rulers.

**HST 319. Revolution in Latin America. (3)**

History of modern Latin America through the experience of revolution in the 20th century. Focus on diverse expressions of political and social change with emphasis on Cuba, Mexico, Nicaragua, and Brazil. Cross-listed with LAS.

**HST 324. Eurasian Nomads and History. (3)**

Examination of the nomads of the Eurasian steppes and their role in the civilizations of the Eurasian periphery, including China, the Near East, and Russia.

**HST 325. Images of Africa. (3)**

How have Africans and Europeans perceived each other? With what effects on action? Emphasizing the discussion method, this course explores relationship between African and European worlds and traces patterns of their relations from slave trade to the present day. Cross-listed with BWS 324.

**HST 326. After Alexander: The Hellenistic Age. (3)**

(3) Society, politics and culture of the Hellenistic World from the campaigns of Alexander the Great to the rise of the Roman Empire.

**HST 328. Italy: Machiavelli to Mussolini. (3)**

Explores Italian history from the end of the Renaissance, through the Baroque, the Enlightenment, Romanticism, and on to modernity. Addresses questions about culture and society, identity and nationality, art and politics, and about Italy's influence worldwide.

**HST 330. Topics in European History. (1-4; maximum 9)**

Topics in European history. May be repeated when topic changes.

**HST 331. Industry and Empire: Europe from 1850 to 1914. (3)**

Explores the period during which Europe came to control the political and economic destiny of much of the world. This was also the period in which great mass movements that were to dominate the 20th century were born, theoretical constructs of the social sciences were created, and a great blossoming of national literatures and cultures occurred. Particular attention paid to the attempts states made to cope with new social and economic dynamics of the industrial world, as well as socialism, nationalism, and anti-Semitism.

**HST 332. Age of Dictators: Europe 1914-1945. (3) (MPT)**

Focuses on the great crisis of 20th century European civilization, from the outbreak of war in August 1914 to the defeat of Hitler Germany in May 1945. Through novels and historical monographs, explores effects of total war and mass mobilization on the industrially advanced state systems of the period, as well as social emancipation, economic disintegration, and cultural innovation brought on by the great wars of the period. Attention paid to the experience of the "Great Powers" (Germany, the Soviet Union, Britain, and France).

**HST 333. Reconstruction of Europe Since 1945. (3)**

Examines how Europe came to be divided into two political spheres sustained by dueling military alliances. Focuses on political and economic reconstruction within the two blocs created by the Cold War divide, as well as new cultural impulses generated by changed realities of a shrunken and shattered Europe after 1945. Examines the revolutions of 1989, the fall of the Soviet Union, and process of European unification.

**HST 340. Internship. (0-20)****HST 342. Africa Since 1945. (3)**

Addresses events and processes of change that informed sub-Saharan Africa after WWII, the meanings and experiences of decolonization, and the problems of political and economic development after independence.

Cross-listed with BWS.

**HST 346. Medieval Jewish History. (3) (MPT)**

Introduction to the history of the Jews of medieval Europe (the Ashkenaz) including Jewish culture, the beginnings of Christian persecution, and interactions and comparisons to Sephardic Jewish communities.

**HST 350. Topics in American History. (3; maximum 9)**

May be repeated when topic changes.

**HST 353. History of Chinese Civilization. (3)**

Survey of Chinese civilization, its origins and evolution in political institutions, economic activity, social structure, and cultural aspects from prehistory to 1840.

**HST 354. Modern Chinese History. (3)**

Survey of changes in institutions, ideas, economy and society in China's search for modernity from late imperial times (17th to 19th centuries) to the present.

**HST 355. History of Modern Sport and National Identity. (3)**

Examines the relationship between sports and national, regional, and local identities; sporting and relations between states; the process by which the world adopted or rejected Western games; and the impact of globalization on national sporting cultures, in the last two centuries. Topics include the history of Olympic Games, soccer's World Cup and the global proliferation of baseball and basketball.

**HST 356. Modern Japanese History. (3)**

Major issues in the history of Japan from mid-19th century to recent times such as the Meiji Restoration, the impact of the West, tradition and modernity, industrialization, social and cultural development, and wars and democracy.

**HST 357. Gilded Age America. (3)**

Covering the period between 1877 and about 1920, this course explores the political, economic, social, and cultural history of the era in the United States known as the Gilded Age, as well as Progressive Era responses to issues raised in that era. Pedagogy includes both lecture and hands-on experiential work with primary and secondary sources.

Cross-listed with AMS.

**HST 359. Junior Honors Colloquium. (3)**

Introduction to some of the issues involved in the conceptualization and writing of a major history project. Designed for students planning to write a thesis in history in the senior year.

**HST 360. Topics in Interdisciplinary and Comparative History. (1-4; maximum 8)****HST 361. Colonial America. (3)**

Exploration and conquest of North America by Europeans and the development of English colonies to 1730.

**HST 362. The Era of the American Revolution. (3)**

Origins, events, and legacies of the American Revolution, with particular emphasis on political and social developments. CAS-B. Cross-listed with AMS.

**HST 363. The Early American Republic, 1783-1815. (3)**

Emphasizes the Constitution, the Federalists, and the Jeffersonians with study of Washington, Madison, Hamilton, John Adams, and Jefferson as major figures. Cross-listed with AMS.

**HST 365. Civil War and Reconstruction Era. (3)**

Origins and growth of sectionalism with emphasis on the period after 1850, secession and Civil War, Federal and Confederate governments, Reconstruction, and foreign issues. Cross-listed with BWS.

**HST 367. The United States in the 1960s. (3) (MPT)**

Examines political, social, and cultural changes in the United States in the turbulent decade of the 1960s. Describes the consensus that existed in the 1950s, and then explores such topics as the civil rights movement, the women's movement, expansion of the welfare state, war in Vietnam, and the growth of a counterculture. Cross-listed with AMS.

**HST 368. United States from Progressive Era to Great Depression. (3)**

Social, cultural, economic, and political developments associated with transformations of United States life and culture, 1890-1930.

**HST 369. United States in the Modern Era. (3) (MPT)**

Social, cultural, economic, and political developments in the United States from the New Deal to the present.

**HST 371. Native American History to 1840. (3)**

American Indian history from the period before European contact through the removal era of the 1830s and 1840s. Cross-listed with AMS.

**HST 372. Native American History since 1840. (3)**

American Indian history from 1840 through the twentieth century and into the present. IC. CAS-B.

**HST 374. History of the Russian Empire. (3) (MPT)**

Key issues in Russian history, particularly the rise, growth, and stagnation of the vast multinational and multiconfessional Russian empire, the influence of other empires on Russia, the governance of vast territories, and the development of Russian imperial and national identities.

**HST 375. The Soviet Union and Beyond. (3) (MPT)**

Central problems and controversies in Russian history since 1917, among them: what produced the 1917 Revolution; how communism developed and collapsed; how Soviet citizens experienced communism; how Russian history changed after communism's collapse in 1991.

**HST 377. Independent Studies. (0-5)****HST 379. U.S. Consumerism, 1890-Present. (3)**

Examines the history of mass consumerism in North American society, including the rise of mass production and the mechanisms that have made mass-produced goods available to American and global markets. Cross-listed with AMS.

**HST 382. Women in American History. (3) (MPT)**

Survey of the history of women's lives and roles in American society from colonial period to present. Emphasis on examining women's individual and collective roles in private and public spheres and on exploring how specific economic and political transformations have affected women's lives. IC. CAS-B. Cross-listed with AMS/WGS.

**HST 383. Women in Chinese History. (3) (MPT)**

Survey of women's roles in the family and in political, economic, religious, and cultural lives of China from prehistory to the present. Various views about women in Chinese male-dominated society and development of feminist thought are discussed.

**HST 385. Race, Science, and Disease in the Americas. (3)**

Surveys a variety of debates over race and disease since the European overseas expansion to the Americas, particularly in those regions that developed plantation-based agriculture. Begins with the medical and scientific construction of ideas about race from the conquest to the eighteenth century. Places the development of racial theories of sickness and health in a broad social and political context, and, in particular, explains the medical salience of race in the settings of slavery and colonialism. Discussions will focus primarily on Latin America, the Caribbean, and the United States, but will also explore the making of knowledge about race in global setting. Cross-listed with BWS/LAS.

**HST 386. Race in U.S. Society. (3)**

Examines the historical contexts within which major transformations in racial practices and policies have taken place and analyzes racialized customs and behaviors in the United States across time and place. IC. CAS-B. Cross-listed with BWS.

**HST 387. U.S. Constitutional Development to 1865. (3)**

Development of state rights and nationalism from the framing of the Federal Constitution to 1865.

**HST 392. Sex and Gender in American Culture. (3) (MPT)**

Examination of change over time in the construction of sexual norms, attitudes, and behaviors in American culture, as well as of gender roles. Covers the period just prior to the Indian-European encounter through the present. IC. CAS-B. Cross-listed with AMS/WGS.

**HST 397. American Environmental History. (3)**

Introduction to human-natural environment relationships in English North America and the United States, ca. 1600 to present. Chronological and regional approach with emphasis upon political economy and the American conservationist/environmentalist movement.

Cross-listed with AMS 397 and WST 397.

**HST 399B. HST and Tourism in Beijing. (6)**

Students will study the history and various dynamics of tourism at work in Beijing, the capital of the People's Republic of China. In this unique context, you will gain greater intercultural awareness, appreciation, and consideration for how history and tourism negotiate China's unique place in the contemporary world. Specific topics include Chinese customs and folklore, the Qing Dynasty and Imperialism, communism, and the economic miracle and reopening of China to the outside world since the 1970s. Students will visit various historical sites such as Tiananmen Square, the 798 Art District, and the Great Wall. The course will allow you to study a new language, learn Chinese style cooking and banqueting, go on hikes and excursions to the countryside, and wander the historic hutong neighborhoods of a city hundreds of years old. Students must be prepared for long air travel, uncertainty, and to accept accommodations and customs that are not "Americanized." As part of the course, students will design their own travel guide that discusses many of these sites and analyzes the role that tourism and historical memory play in attracting visitors to the PRC and projecting ideas about the Chinese past to the international community. The travel guides should pay particular attention to the importance of material culture--relics, architecture, monuments, propaganda posters, etc.--to the crafting of political messages. To complete the study abroad course upon returning to the US, students will then present these guides in a community event designed to share what they have learned and experienced with the general public.

**HST 399D. The Balkans: HST, POL and Cult. (6)**

Cross-listed with POL 399D.

**HST 400. Senior Capstone in History. (3; maximum 6) (MPC)**

Provides intensive reading, research, and writing in selected topics. Each topic focuses on a specific problem or issue presented for analysis. Though requirements vary with topic, each Capstone involves active participation, both orally and in writing. Topics and descriptions are published annually in the department's course-offerings booklet. Take Capstones that build upon other classes taken. Required of all history majors. EL. CAS-B.

**HST 410/HST 510. Topics in Foreign Policy. (3; maximum 12)**

Topics in foreign policy history and international history. May be repeated when topic changes.

**HST 428. History Through Literature. (3)**

Explores the relationship between historical narratives and fictional ones. Students will read works of historical fiction along with historical theories in order to think more deeply about narrative and how fiction can offer profound historical interpretations. Reading assignments will vary from instructor to instructor: possibilities include Tolstoy's *War and Peace* and Eliot's *Middlemarch*.

**HST 433/HST 533. Oral Tradition: History and Practice. (3)**

Traces the oral tradition in historical writing and introduces theory and practice of oral history as a methodology basic to historical research.

**HST 434/HST 534. China along the Silk Road before 1600. (3)**

Examines the role the transcontinental Silk Road played in Chinese history, including the development of the Road, its role in China's foreign relations, the impact of foreign trade, and the spread of cultures and religions.

**HST 435/HST 535. Public History Practicum. (3)**

Combines classroom study, primary and secondary source research, and fieldwork in the public sphere. Projects may include digital history projects including database projects, digital visual representations, and creation of online exhibits. Other projects may include archival research, local museum and historical society collaborative projects, and public writing.

Cross-listed with AMS.

**HST 436/HST 536. Havighurst Colloquium. (3)**

Exploration of significant issues related to Russian and post communist affairs. Each semester focuses on a central theme or topic that is examined through presentations, readings, research, discussion, and writing. May be repeated once for credit with only 3 hours counting towards the history major.

Cross-listed with ATH/RUS 436/RUS 536; CLS 436; POL 440/POL 540 and REL 470A.

**HST 450/HST 550. Topics in Women's History. (3; maximum 12) (MPT)**

In-depth study of a selected topic in the history of women, focusing on either a specific period and place, or a theme.

Cross-listed with WGS.

**HST 452/HST 552. Florence in the Time of the Republic, 1250-1550. (3) (MPT)**

Few European city-states have aroused as much comment from contemporaries and historians as the Republic of Florence. Begins with the emergence of the popular commune (1250), continues through the crisis of the 14th century (plague, depression, workers' revolts), the Medici family domination, foreign invasions, and the fall of the republic. Special attention to the myth of the 'Renaissance' and Florence's role in the creation of that myth. Topics include: political theory, including Machiavelli's *Prince and Discourses*; banking and business; the definition of community through civic religion; families and clans; art and architecture; ritual behavior and the definition of people marginal to society.

**HST 459. Historicizing the News. (3)**

Focuses on ways to use history to deepen and contextualize understanding of contemporary events and trends. Emphasis on skills development in information literacy, conducting targeted research, and using writing to meet the needs of various audiences.

**HST 470/HST 570. Topics in Russian History. (3-4) (MPT)****HST 472. Germany 1918-1945. (3) (MPT)**

Adolf Hitler, the Weimar Republic, and the Third Reich, 1918-1945.

**HST 477. Independent Studies. (0-5)****HST 480. Departmental Honors. (1-6; maximum 6)**

Departmental honors may be taken in one or more semesters of the student's senior year.

**HST 601. Historical Methods. (3)**

Introduction for beginning graduate students to the practice of history.

**HST 602. History and Theories. (3)**

Introduction to theories and models of the practice of history in the last century.

**HST 603. Research Seminar I. (3)**

Required course, which gives students an opportunity to conduct research in primary and secondary sources in a field of interest, complete a prospectus and a bibliography or source list, and set out a research and writing plan. The course is designed as well to prepare students for HST 604 to be taken subsequently.

**HST 604. Research Seminar II. (3)**

Required course and must be taken in sequence with HST 603. Students are required to write a finished paper of between 20 and 25 pages that is based on their research but which is independent of the final project.

**HST 611. Prospectus Workshop. (1)**

This course is meant to instruct and assist students as they prepare a prospectus for their Masters thesis or project.

**HST 612. Thesis Workshop. (1)**

This course is meant to instruct and assist students as they prepare/write their Masters thesis or project.

**HST 645. College Teaching of History Surveys. (0)**

Reading and discussion of major works on selected topics. Colloquium may be taken more than once if topic changes.

**HST 677. Independent Studies. (0-5)****HST 700. Research for Master's Thesis. (1-12; maximum 12)**

## Honors (HON)

**HON 177. Independent Studies. (0-5)****HON 181. Foundations of Engaged Learning I. (1-2; maximum 2)**

Introduces students to the mission, requirements and portfolio review process of the University Honors Program. Sections vary in theme, yet all sections foster the development of inquiry, academic and leadership skills and personal reflection. This course is required for all first-year, first-semester students in the University Honors Program, and it is credit/no credit only.

**HON 190. Introductory Honors Experience. (0-2; maximum 10)**

Students will have the opportunity to learn and practice authentic research, service and leadership tasks and activities designed by and under the careful supervision of a faculty, staff or other trained educator. These learning experiences may include (but are not limited to) undergraduate research programs, intensive introductory Service-Learning and community engagement programs, and substantive leadership experiences. The experience involves ongoing self-reflection. This course is credit/no credit only.

**HON 290. Intermediate Honors Learning Experience. (0-2; maximum 10)**

Students will have the opportunity to practice authentic research, service and leadership tasks and methods using guided support. These learning experiences may include (but are not limited to) Honors seminars, undergraduate research programs, intensive Service-Learning and community engagement programs, and substantive leadership experiences such as serving as a peer mentor. This course is credit/no credit only.

**HON 340. Honors Internship. (0-20)****HON 390. Advanced Honors Experience. (0-2; maximum 10)**

Students will have the opportunity to design and complete a major scholarly, leadership, teaching or service-oriented project with ongoing mentorship from an expert. These learning experiences may include (but are not limited to) designing and implementing curricula or a major co-curricular program, restructuring student organizations, or completing an article. The course involves ongoing self-reflection and is credit/no credit only.

**HON 477. Independent Studies. (0-5)**

## Information Systems & Analytics (ISA)

**ISA 125. Introduction to Business Statistics. (3)**

This course provides an introduction to data, probability, sampling and its importance to analytical decision-making in business. Upon successful completion of this course, students will have the foundational skills necessary to summarize data, describe relationships among variables, and conduct one-sample and two-sample statistical inference. Prerequisites: MTH 102 or 104 or MTH 121 or MTH 151 or Math Placement score of 12 or higher or three years of college preparatory mathematics or permission of department chair. Cross-listed with STA.

**ISA 177. Independent Studies. (0-5)****ISA 203. Supplementary Business Statistics. (1)**

Review of elementary statistics. Regression analysis and statistical process control. For students needing additional coursework to complete the topics in ISA 205. Prerequisite: MTH 151, STA 261 or equivalents.

**ISA 205. Business Statistics. (4) (MPT)**

Basic probability. Discrete and continuous distributions. Sampling theory, confidence intervals, and hypothesis testing. Analysis of process data. Simple and multiple regression analysis. Emphasis on computer implementation. Credit for graduation will not be given for more than one of ISA 205, STA 261, STA 301, or STA 368. Prerequisite: MTH 151 and a high school course in computers or equivalent.

**ISA 211. Information Technology and Data Driven Decision Making in Business. (3)**

Introduction to the concepts of information systems and analytics used to support organizations for the non-business major. Focus is on the critical information technology and systems impacting the operations of organizations in the digital world. Additionally, how organizations use business analytics to make data-driven decisions will be covered.

**ISA 225. Principles of Business Analytics. (3)**

Provides a continuation of the study of data and its importance to analytical decision-making in business. Topics include: probability and classification, data visualization, two or more population inference, predictive modeling with simple and multiple regression analysis, business forecasting, data-mining. Emphasis on computer implementation, analysis of real data, and communication of results. Prerequisite: MTH 151 and ISA/STA 125.

**ISA 235. Information Technology and the Intelligent Enterprise. (3) (MPT)**

Focuses on the strategic role of information technology and systems. Topics include: Challenges faced by managers in firms, understanding key technologies and how they help meet these challenges, and the processes, policies and procedures needed to manage technical and digital assets.

Prerequisite: CSE 148.

**ISA 243. Database and Programming for Analytics. (3)**

This course is designed to help students develop skills related to collection, manipulation, and management of structured data in databases along with programming skills to access and process data. The first part of this course deals with the logical and physical design of databases, entity relationship modeling, and structured language query (SQL). The second part of this course equips students with programming skills and tools to build and maintain business applications. Emphasis is on the use of structured techniques and using application libraries for data retrieval, logic development, and information presentation.

**ISA 245. Database Systems and Data Warehousing. (3) (MPT)**

Provides an understanding of the importance of database systems in organizations. The course focuses on database concepts, design methodologies, database management systems, structured query language, implementation of database systems, and data warehousing.

Prerequisite: ISA 235.

**ISA 250. Basic Math for Analytics. (3)**

Provides students with practical and applied foundational mathematics needed as background for success in data-driven decision making. Topics include sets, functions in single and multiple variables including logarithms, exponentials, and trigonometric; matrix algebra operations; introductory calculus concepts; and basic optimization principles necessary for data analysis. Introduction to applied software driven techniques is included in the course.

Prerequisites: MTH 102 or MTH 104 or MTH 121 or three years of college preparatory mathematics or permission of department chair. Co-requisites: STA 261, ISA 225, or STA 301.

Cross-listed with STA.

**ISA 277. Independent Studies. (0-5)****ISA 281. Concepts in Business Programming. (3)**

The course focuses on structuring, designing and developing data driven business applications. Emphasis is on the use of structured, object-oriented techniques, and using application libraries for data retrieval, logic development, and information presentation.

**ISA 291. Applied Regression Analysis in Business. (3) (MPT)**

Multiple regression as related to analysis of business problems. Includes useful regression models, statistical inference (intervals and hypothesis tests) in regression, model building, regression assumptions, remedies for violations of assumptions, applications in experimental design, and time series analysis.

Prerequisite: ISA 225 with a grade of C or better or ISA 205.

**ISA 301. Business Data Communications and Security. (3)**

Introduces theory, concepts and applications of data communications technologies in a today's business environment. It includes and introduction to personal, local and wide area network architectures as well as wired, wireless, and mobile technology standards employed in those architectures. The course also introduces the business issues related to network and data security and covers methodologies and technologies commonly employed to protect corporate data assets. Finally, the course explores emerging standards and other related management considerations such as cloud computing.

Prerequisite: ISA 235.

**ISA 303. Enterprise Systems. (3) (MPT)**

An introduction to enterprise systems such as enterprise resource planning (ERP), Supply Chain and customer relationship management (CRM) systems. Both managerial and technological considerations in the implementation and use of these systems within businesses will be explored in depth.

Prerequisite: ISA 235.

**ISA 305. Information Technology, Risk Management, Security and Audit. (3)**

The foundations of information technology risk management, security and assurance including the principles of which managerial strategy can be formulated and technical solutions can be selected.

Prerequisites: ISA 235 or equivalent; ACC 221; or permission of instructor.

**ISA 321. Quantitative Analysis of Business Problems. (3) (MPT)**

Examination of business problems from a quantitative model building point of view. Selected models from management science, including linear and nonlinear programming and simulation. Methodologies combined with those from prerequisite courses.

Prerequisite: ISA 291 or ECO 311 or STA 463/STA 563.

**ISA 333. Nonparametric Statistics. (3) (MPT)**

Applied study of statistical techniques useful in estimating parameters of a population whose underlying distribution is unknown. Chi-square, runs, and association tests covered. CAS-QL. (For majors in the department, this course counts only toward the B.S. in Data Science and Statistics.)

Co-requisite: ISA 291 or STA 363.

Cross-listed with STA.

**ISA 335. Blockchain and Business Applications. (3)**

This course provides an introduction to Blockchain, the revolutionary technology behind Bitcoin. The first part of the course is designed to provide an understanding of all the traditional components of blockchains, including cryptographic techniques required to make transactions safe, consensus mechanisms, and incentive schemes. In the second part of the course, students are exposed to applications of Blockchain in a variety of domains, including modern tools for the development and modeling of blockchains.

Prerequisite: BUS 104.

**ISA 340. Internship. (0-20)**

Available to Farmer School of Business (FSB) majors and minors. Available for 0 credit hour during spring, summer and fall terms. Available for 1 credit hour during summer terms only. For one hour of credit, student must secure a sponsoring FSB faculty member within his/her major or minor to supervise the internship and accompanying required internship reflection paper. ISA 340 is not available during winter term. Students are to work through their respective academic departments to enroll in the course. Credit/no credit only. Note: FSB students may earn a maximum 2 credit hours toward graduation for BLS/BUS/ECO/ESP/FIN/ISA/MGT/MKT 340. Prerequisite: 55 earned hours and permission of department.

**ISA 365. Statistical Monitoring and Design of Experiments. (3)**

Introduction to statistical methods for monitoring process data and data streams. Introduction to experimental design with applications in business analytics. Prerequisite: ISA 205 or ISA 225 or STA 301 or STA 363 or equivalent. Cross-listed with STA 365.

**ISA 377. Independent Studies. (0-5)****ISA 385. Applications of Electronic Commerce Technology. (3) (MPT)**

Examines the critical business issues, technological infrastructure, and contemporary information systems applications required to carry out electronic commerce. Key interactions include business-to-business and business-to-consumer transactions. Prerequisite: ISA 235.

**ISA 387. Designing Business Systems. (3)**

Introduces contemporary approaches for planning, evaluating, and acquiring business software applications such as development, outsourcing, and purchase. Provides an understanding of the business and development environment, the application life cycle, methods, techniques, and tools used today. Co-requisite: ISA 245 or CSE 385.

**ISA 401/ISA 501. Business Intelligence and Data Visualization. (3)**

An introduction to the use of business intelligence and data visualization in organizations, with emphasis on how information is gathered, stored, analyzed, and used. Topics covered include business intelligence, data warehousing, data visualization, and data mining. Prerequisite: ISA 245 or CSE 385.

**ISA 403. Building Web and Mobile Business Applications. (3)**

A second course in the design and development of business applications for mobile and the web. It follows the data driven business programming prerequisite ISA 281 and focuses on delivering scalable web and web based mobile applications by using client and server side technologies. Prerequisites: ISA 281 and ISA 245 or CSE 385.

**ISA 405. Information Security. (3)**

Introduces the broad foundational topics of information security such as threats, vulnerabilities, encryption, controls, privacy issues. An in-depth coverage of organizational security concepts such as governance, policy, risk management frameworks, business continuity planning, security compliance, ethics etc. Concepts are covered using both case studies and cyber security tools. Finally the course will explore emerging standards and managerial issues in security. Prerequisites: ISA 301 or permission of instructor.

**ISA 406. IT Project Management. (3)**

Information technology project management theories, techniques, and software tools are taught. Focus is on the problems and methods of conduction projects with special attention to modern information technology and software implementation projects. Prerequisites: ISA 387 or CSE 201.

**ISA 412/ISA 512. Data Warehousing and Business Intelligence. (3)**

The first part of this course deals with the design of data warehouses for business intelligence purposes. In particular, students learn about different design practices and architectures of data warehouses, how to design multidimensional databases, and how to create data integration workflows (ETL processes) to populate and update data warehouses. After learning how to design and populate data warehouses, students learn in the second part of the course how to perform descriptive analytics using different querying languages and tools, and how to create business reports and dashboards based on data from data warehouses. Prerequisite: Math concepts covered in ISA/STA 250.

**ISA 414/ISA 514. Managing Big Data. (3)**

This course provides an introduction to the storage, retrieval and analysis of unstructured and big data. Topics include web analytics, text processing, text analytics such as sentiment analysis, and trend detection in unstructured data. The course will cover and use frameworks that use distributed computing, cloud-based systems for analyzing business information data that contain both structured and unstructured data. Managing big data in organizations, and visualizing big data is introduced.

Prerequisites: ISA 245 or CSE 385 and one of (ISA 281, ISA 401/ISA 501, ISA 491/ISA 591, STA 402/STA 502, STA 404/STA 504); or permission of instructor.

**ISA 432. Survey Sampling in Business. (3) (MPT)**

Survey sampling with application to problems of business research. Simple random sampling, systematic sampling, stratified random sampling, ratio estimation, and cluster sampling. Prerequisite: ECO 311, ISA 291, STA 363, STA 401/STA 501 or STA 463/STA 563 or permission of instructor. Cross-listed with STA.

**ISA 444. Business Forecasting. (3) (MPT)**

Applied techniques useful in analyzing and forecasting business time series. Emphasis on Box/Jenkins methodology. Time series regression with autocorrelated errors, exponential smoothing, and classical decomposition are also discussed. Prerequisite: ECO 311, ISA 291 or STA 463/STA 563.

**ISA 477. Independent Studies. (0-5)****ISA 480. Topics in Decision Sciences. (1-3; maximum 3)**

Issues oriented seminar focused upon significant emerging topics in the decision sciences field. Prerequisite: determined by professor.

**ISA 481. Topics in Information Systems. (3-4; maximum 3)**

Issues oriented seminar focused upon significant emerging topics in the decision sciences field. Prerequisite: determined by professor.

**ISA 491/ISA 591. Introduction to Data Mining in Business. (3) (MPT)**

Analysis of large data sets related to business is the focus. Topics such as cluster analysis, market basket analysis, tree diagrams, logistic regression, neural nets, model evaluation and application will be presented and implemented using current data mining software. Prerequisite: ECO 311, ISA 291, or STA 463/STA 563.

**ISA 495. Managing the Intelligent Enterprise. (3) (MPC)**

Includes research, reading, writing, and discussion. Independent research on a topic and company from a management information systems perspective. Respond to issues or problems raised in cases in an analytic and creative manner. Present topic report and research to class.

Prerequisite: Farmer School of Business core courses, senior standing.

**ISA 496. Business Analytics Practicum. (3)**

Provide analytics consulting to various business clients to work through and solve analytical, data driven problems. Course will utilize skills gained from previous analytics courses including data mining, visualization, modeling and data skills.

Prerequisite: ISA 401/ISA 501 or ISA 491/ISA 591.

**ISA 616. Communicating with Data. (3)**

Bridges the study of technical and computational tools to the audiences who need the results of this work. This course will span the entire process of developing a data analytic product from consultation with a client to implementing a solution to presenting the solution to the client. This course will address the fundamentals of effectively communicating with and about quantitative analyses. Topics include using data visualization to describe data; document descriptive, predictive, and prescriptive analytical methods for reproducibility; write professional white papers and technical reports; and ethical considerations related to writing and communication with data. Cross-listed with STA.

**ISA 621. Enabling Technology Topics I. (3)**

Examines existing and emerging information technology (IT) within the organization. The foci of the course are the role IT plays in business processes, the underlying theoretical basis for innovation through IT, methodologies for successful IT innovation, and infrastructure technologies commonly employed and why.

**ISA 625. Management of Information Technology. (3)**

Offers rigorous study of information technology (IT) resources in organizations with an emphasis on electronic commerce technologies. The underlying theme of this course is strategic uses of IT by organizations for operating support, improving productivity, and gaining competitive advantage.

**ISA 630. Machine Learning Applications in Business. (3)**

In this course students will learn supervised and unsupervised modeling techniques using artificial intelligence and machine learning. Methods will include ensemble modeling, customized ensembles and deep learning. The course will focus on the impact and implications of these advanced techniques in business.

Prerequisite: ISA 591.

**ISA 632. Big Data Analytics and Modern AI. (3)**

This course will further develop students' big data and AI skills for advanced data analytics tasks. We will introduce advanced operations and functions in in-memory cluster computing and non-relational storage solutions, and investigate how to integrate various data sources into a data lake. We will also discuss how data governance can help to improve the management and quality of big data.

Moreover, we will examine advanced analytics functions enabled by in-memory cluster computing, such as distributed machine learning, real-time analytics on streaming data, and large-scale social network analysis. Following that, we will cover data-driven modern AI technologies, such as natural language processing, speech recognition, image processing and dialog generation. Those topics will be taught in an applied way, without focusing too much on the theory. Prerequisites: ISA 514.

**ISA 633. Prescriptive Analytics in Business. (3)**

This course will cover different strategies to optimize decision-making in practice. The course is divided into three main modules. Students will be first introduced to statistically designed experiments and their use to find optimal courses of action in different business settings. In the second module, students will utilize mathematical models to take an abstract business problem and represent it using mathematical equations/relationships. The third module introduces students to discrete-event simulations and how it can be used to evaluate a number of what-if-analyses. Using the knowledge from this class, the students will model real-world business problems in the domains of: supply chain management, human resource management, finance, accounting, economics and/or marketing.

**ISA 634. Analytics Solution Deployment and Lifecycle Management. (3)**

This course will introduce students to current and emerging methods and technologies for deploying and managing analytical solutions in practice. The emphasis will be on how organizations embed analytical solutions into corporate technology systems and infrastructures to make the solutions consumable. This will include performing business validation of the model, developing an execution plan for deployment, monitoring, and maintenance of the solution. The course will include deploying analytics solutions to a small number of users as well as scaling solutions throughout the enterprise. We will examine methodologies for tracking model quality and changes over time.

**ISA 635. Introduction to Predictive Analytics. (3)**

Introduction to foundational statistical methods and techniques relevant to predictive statistical modeling. Topics include simple and multiple linear regression models, logistic regression models, nonlinear regression, and classification and regression trees. Widely used statistical software packages will be introduced and used extensively in the course.

Cross-listed with STA.

**ISA 636. Managing Data for Business Analytics. (3)**

A survey of approaches to efficiently organize, store, query, and generate reports from both structured and unstructured data. The course will cover and use frameworks that use relational databases, distributed computing, cloud-based systems for analyzing business information data. An emphasis will be laid on producing information and effectively communicating the results. Managing big data in organizations, and visualizing big data is introduced.

**ISA 638. Predictive Analytics and Data Mining. (3)**

An in-depth look at predictive modeling using decision trees, neural networks, logistic regression and ensemble methods. Best practices for building, comparing, and implementing predictive models are presented. Other topics include unsupervised learning techniques such as cluster analysis, segmentation analysis, market basket, and sequence analysis. Emphasis on use of software and real-world applications.

Cross-listed with STA.

**ISA 650. Business Analytics Practicum. (3; maximum 6)**

The graduate level Business Analytics Practicum is an immersive, project-based, experiential course intended to draw on skills and knowledge gained in courses throughout the MS in Business Analytics program. Students will be immersed in a semester long data driven problem solving project that requires the selection and application of appropriate skills, tools and methodologies covered in the MSBA program to address the problem at hand and appropriately communicate findings to multiple audiences.

Prerequisites: Completion of the 12 hours of coursework in the Graduate Certificate in Analytics.

**ISA 680. Special Studies in Decision Sciences. (1-3)**

Intensive reading or research in a selected field of advanced decision sciences.

Prerequisite: graduate standing and permission of instructor.

**ISA 681. Studies-Management Information Systems. (1-3)**

## Integrative Studies (BIS)

**BIS 177. Independent Studies. (0-5)****BIS 201. Introduction to Integrative Studies. (3)**

Introduces integrative learning processes needed to build and focus learning throughout the multidisciplinary BIS program. Students explore their own epistemologies while practicing strategies to meaningfully integrate various disciplines and fields of study, culminating in individualized Statements of Educational Objectives for their course of studies in the degree program.

**BIS 210. Special Topics in Integrative Studies. (3; maximum 6)**

Special Topics in Integrative Studies offers a rotating series of topics to meet the changing needs and interest of students and faculty. May be taken for credit more than once with different content and permission of instructor.

**BIS 277. Independent Studies. (0-5)****BIS 301. Integrative Studies Seminar II. (3)**

Second required seminar in Bachelor of Integrative Studies program, shaped around selected theme. Integrates concepts, perspectives, and methodologies of student Concentrations. Emphasizes critique, analysis, and synthesis of knowledge and ways of knowing and of cross-disciplinary connections. Service learning project extends focus from student self to engaged learner.

Prerequisite: a grade of C- or better in BIS 201.

**BIS 305. Integrative Writing in Global Contexts. (3)**

Through this advanced composition course, students develop and exercise means to integrate multiple perspectives and disciplinary discourses through writing for global audiences. Readings focused on issues in diversity and intercultural communication, assignments involving various genres and disciplinary methodologies, and projects that analyze and integrate multiple forms of writing help students draw on their liberal learning to address real-world challenges in regard to diverse others and the interconnected global community. IC, ADVW.

Cross-listed with EGS 305.

**BIS 340. Internship. (0-20)****BIS 377. Independent Studies. (0-5)****BIS 401. Senior Integrative Seminar. (3) (MPC)**

This course brings together BIS seniors in a way that will complete the integrative nature of their course work. It is a true seminar in its intensive, collaborative, and rhetorical nature. The course re-inforces and extends the emphasis on "self," "others," and "product/outcome" characterizing the three BIS seminars.

Prerequisites: BIS 201 and a grade of C- or better in BIS 301.

**BIS 410. Advanced Special Topics Seminar in Integrative Studies. (3; maximum 6)**

Topical offerings in Integrative Studies in emerging and established fields of interdisciplinary study such as Critical Animal Studies, Youth Studies, Area Studies, Critical Race Studies, and Environmental Studies. May be taken for credit more than once with different content and permission of instructor. IC.

**BIS 477. Independent Studies. (0-5)**

## Interactive Media Studies (IMS)

**IMS 101. Introduction to IMS. (1)**

This course provides an overview of all of the areas of specialization within the IMS program as well as a review of the landscape of emerging media.

**IMS 102. Digital Experience Bootcamp. (1; maximum 4)**

This one-credit-hour course offers students the opportunity to experience a collaborative project that spans from brainstorming to a deliverable under a compressed timeframe. Offered in concert with Start Up Weekend and Global Game Jam, IMS Experience Bootcamp brings together students, faculty, staff, and experts from the community to engage in rapid iteration and development.

**IMS 111. Introduction to Game Careers. (1)**

In this course, students learn the careers available in game design and development, the basics of games as an academic discipline, and become acquainted with the games faculty and university resources.

**IMS 171. Humanities and Technology. (3) (MPF, MPT)**

Introduction to methods of thinking used in humanities disciplines (literature, history, philosophy, classics, etc.), computer technologies, and their relationship. Practical skills (web page making; research on the Internet) and analytical skills (how to tell good information from bad) combined with theories about the Information Society. IIB, CAS-B.

Cross-listed with ENG.

**IMS 177. Independent Studies. (0-5)****IMS 201. Information Studies and Digital Citizenship. (3) (MPF, MPT)**

Explores what it means to be information literate in today's "post-truth" world. Students will reflect on ethical and legal issues created by the information age and will develop awareness of the power of information and its effect on society. This course prepares students to ask critical questions about technologies and tools they encounter everyday, apply those skills to their own disciplines, and reflect on their own role as knowledge creators. Students will learn how to critically evaluate information and how information is produced and valued, and explore personal privacy, information ethics, and intellectual property issues in changing technology environments. IIB.

**IMS 203. Applied Digital Humanities. (3) (MPF)**

Explores how digital technologies are transforming scholarly practice. Course is intended for students wishing to explore the use of technology to investigate scholarship in the humanities. Students will collaboratively plan, develop, and create a digital scholarship project over the course of the class. IIB.

**IMS 211. Introduction to Game Studies. (3)**

Offers an introduction to key historical and contemporary research in game studies and theories of play, with particular attention paid to the digital video game. The course surveys current debates and issues in the field of game studies, introduces various methods for interpreting games, and cultivates a deeper understanding of the importance of games and play in contemporary social, political, and cultural contexts.

**IMS 212. Introduction to Game Design. (3)**

This course is an introduction to the many philosophies of game design. Students will learn the core principles of game design, will create games (non-digital) and will learn to iterate and play-test. No previous game design training is required.

**IMS 213. Introduction to Game Development. (3)**

This course introduces students to the process of developing simple 2D games. It is built around a number of game-development challenges that are selected to develop a basic proficiency in 2D game development while learning basic programming and art principles. To complete the challenges, the students are provided with curated online videos and 1-1 in-class instruction.

**IMS 215. 3D Digital Sculpting. (3)**

Digital sculpting is an essential part of 3D content creation. This course needs to be a requirement for students in the game program who want to work as an artist creating assets for video games. This course teaches industry standard software and the methodologies that game studios use when producing professional quality 3D assets for video games and other media. The course is project driven, and grades will be based on the visual quality and passion expressed in the work submitted for assignments, ability to follow instructions for submission and their ability to meet deadlines for assignments. Cross-listed with ART.

**IMS 218. 3D Shading and Texturing. (3)**

In this course, students will learn the workflows necessary to create materials, textures, and shaders for physically based render systems. Students will learn how to edit shaders and materials through the creation and editing of textures in an image-editing program. Students will also be taught the theory behind physically based rendering and how it relates to rendering objects in real time through game engine technology. The course is project driven and grades will be based on the visual quality and passion expressed in the work submitted for assignments, ability to follow instructions for submission, and ability to meet deadlines for assignments. Cross-listed with ART.

**IMS 221. Music Technologies. (3) (MPF)**

Introduces students to the fundamentals of music technology in the context of its historical and cultural use. Scientific foundations of acoustics, digital audio, and audio engineering as well as technical skills for music production and notation will be addressed. Participants will learn the skills-based foundations of music technology through hands-on projects. Critical discussion will consider the social impact of contemporary and historical systems of recording, notation, and dissemination. Applications in the fields of interaction design, music entertainment, game design, digital signal processing, electrical engineering, music education, acoustics, and mass communications will be explored. IIA, V. Cross-listed with MUS.

**IMS 222. Introduction to Interaction Design and Development. (3) (MPF)**

This course is an opportunity to investigate interactive design and front-end development as it relates to a variety media types. Using industry standard tools, students will learn to design, implement, and refine interactive media for specific audiences. For the purpose of this class, interactive media includes a variety of software and hardware solutions that intersect the domain of human-computer interaction. Effective interactive design is often achieved by the creative application of sometimes disparate disciplines. Students should expect to incorporate their understanding of art theory, psychology, commercial business practice, and creative problem solving. V.

**IMS 224. Digital Writing and Rhetoric: Composing with Words, Images and Sounds. (3) (MPT)**

Students will analyze and produce digital multimodal compositions that integrate words, images, and sounds. No prior web or digital writing experience required. ADVW. Cross-listed with ENG.

**IMS 225. Games and Learning. (3)**

Surveys and assesses the role of gaming within educational research. Topics covered include: games and literacy, designing games for schools, and the learning implications of gaming culture.

**IMS 228. Collaborative Laboratory 1. (2)**

The Co-Lab course sequence is a unique set of courses designed to enable students to work collaboratively on projects of their choosing while being coached and mentored directly by faculty and industry mentors. This will allow sophomores and juniors to begin using their skills to collaborate on emerging technology to build portfolio pieces that will push the envelope of what's possible. Co-Lab 1 focuses on problem/project identification, prototyping, and team-building. Prerequisite: IMS 222 and either completion or concurrent enrollment in IMS 322.

**IMS 229. Collaborative Laboratory 2. (2)**

The Co-Lab course sequence is a unique set of courses designed to enable students to work collaboratively on projects of their choosing while being coached and mentored directly by faculty and industry mentors. This will allow sophomores and juniors to begin using their skills to collaborate on emerging technology to build portfolio pieces that will push the envelope of what's possible. Co-Lab 2 focuses on production. In this course, students will complete the alpha version of their artifact.

Prerequisite: IMS 228.

**IMS 238. Narrative and Digital Technology. (3) (MPF, MPT)**

Applies to digital games those notions about narrative structure and character development that have evolved in literature. Students will explore digital art as literary critics, asking whether games are "art" and analyzing how postmodern literary/digital art participates in globalization. Students compose narratives in writing as well as 3D graphics. IIB. CAS-B-Other.

Cross-listed with ENG.

**IMS 253. Building and Designing Interactive Devices. (3)**

Building and Designing Interactive Devices is an introduction to Physical Computing for students interested in exploring and building alternative game controllers. Through building simple prototypes, students will learn how to use a variety of switches and sensors, how to build circuits for them, and various ways microcontrollers (like Arduino) can be used with them as well as interface with a variety of computing systems and software. We will prototype using various design lenses including form, function, accessibility, and immersion.

**IMS 254. Design Principles Applied. (3)**

An understanding of design principles is central to the creation of digital solutions and interfaces. This course introduces students to the principles of design in a seminar format with some simple exercises to apply various principles. Whether it be the design of a system/organization or the creation of an application like a website, a design solution is the unification of various elements. This multi-disciplinary approach explores various forms of design and how principles are used to create a holistic solution. No prior design experience required.

**IMS 259. Art and Digital Tools I. (3)**

This course builds a solid foundation for making and manipulating digital images and graphics, and for thinking about the cultural nature of visual materials produced with these processes and software tools. Students will critically engage with a variety of related imagery, from fine art to marketing. Technical theory is coupled with projects to provide hands-on mastery of fundamental ideas, techniques, and specific software tools.

Cross-listed with ART.

**IMS 261. Information and Data Visualization. (3)**

Introduction to both static and interactive information and data visualization. Includes basic statistical and design principles for data visuals and diagrams. The course covers the history, context, ethics, and theory of analytical design. Includes application and creation of static and interactive visuals.

Prerequisites: IMS 222, IMS 254, and IMS 257/IMS 322.

**IMS 277. Independent Studies. (0-5)****IMS 278. Digital Innovation Workshop Preparation. (1; maximum 2)**

Introduction to Digital Innovation is a 1 credit hour preparatory course designed for students that have already been accepted into the Digital Innovation Program. The course will cover program requirements, provide city-specific orientations, and support professional development activities in order to best prepare students for success during the program. To be taken the semester immediately preceding participation in Digital Innovation.

**IMS 285. Inside the Game Developers Conference. (2; maximum 6)**

This Sprint course takes place during the GDC (Game Developers Conference). Students collaboratively prepare for & attend the conference along with their Professor, meet with industry and academic presenters, and return for reflective study and debriefing.

**IMS 287. Streaming Media: Twitch.tv and Beyond. (3)**

Streaming media has become ubiquitous. In this course, students will learn the mechanics and methods of creating and streaming video.

**IMS 304. Electronic Music. (3)**

Electronic music history, literature, styles, and studio techniques with emphasis on original expression using digital, editing, multi-track recording, and basic synthesis concepts. Designed for the undergraduate junior or senior, but open to all students. Formal music training not required.

Cross-listed with MUS 304.

**IMS 305. 3D Character Design. (3; maximum 6)**

In this course, students will create fully realized characters using 3D animation software to be implemented in a game engine. Students will learn a complete workflow for taking a character concept through all stages of a 3D character-creation process. This includes concept art, proper scene setup, 3D modeling, digital sculpting, degrading assets, UV Unwrapping, texture painting, and character rigging, posing, rendering, and importing into a game engine. The course is project driven and grades will be based on the visual quality and passion expressed in the work submitted for assignments, ability to follow instructions for submission, and ability to meet deadlines for assignments.

Prerequisites: ART/IMS 215, ART/IMS 218, and IMS 319 or permission of instructor.

Cross-listed with ART.

**IMS 306. Advanced Electronic Music. (3)**

Advanced Electronic Music offers an in-depth look at the music studio environment. The course focuses on Ableton Live as the primary Digital Audio Workstation (DAW) and touches on a few other free music apps. Class time is devoted to learning practical skills such as the use of microphones, studio hardware use, and mixing and mastering. Also introduced is Max-for-Live, a relatively simple programming environment that greatly expands on the capabilities of Ableton Live. Synthesis is covered from both a theoretical and practical perspective, including the use of the Doepfer analog modular synthesizer. A survey of historical and contemporary practice in the field will provide the basis for exploring analytical and critical techniques.

Prerequisites: MUS/IMS 221 or MUS 304/IMS 304 or permission of instructor.

Cross-listed with MUS 306.

**IMS 314. Game Usability & Human Factors. (3)**

Usability and user experience design are critical to the design and production of games. For most games, however, this has been limited to playtesting. While playtesting is important, it only addresses usability after the point that the game has been developed to the point of actual play. As any game designer will tell you, that's late in the process. This course looks at how to utilize existing UX concepts and testing on games, but the class will also focus on how games are different and why games require specific testing and research techniques.

**IMS 315. User Experience Research. (3)**

We will explore and discuss important concepts in human-computer interaction (HCI) theory and usability, and learn about cutting-edge technologies used to measure the effectiveness of digital media environment design. In so doing, we will pay particular attention to user expectations and how they drive user behavior. The major focus of the course assignments is designing and managing a usability study then reporting on the results of that study.

**IMS 317. Writing for Games. (3)**

Writing for Games offers students an opportunity to learn the genres and professional standards of writing for games and the gaming industry, including instructions, proposals, design documents, publicity documents, and in-game scripts. ADVW.

Prerequisite: ENG 111.

Cross-listed with ENG.

**IMS 319. Foundations in Digital 3-D Modeling and Animation. (3) (MPT)**

Provides knowledge in the underlying concepts and practical skills in the design and development of computer generated 3-D imagery. Examines 3-D modeling; animation, lighting and rendering; character animation; and other related topics.

**IMS 322. Intermediate Interaction Design and Development. (3; maximum 6)**

This course covers the basic coding patterns and practices present in all programming languages with an emphasis on those languages most common in web and mobile application platforms. It will take students through the fundamentals of algorithm design and then move on to expressing those designs in several popular languages. Because of the focus on web environments, this course will also explore the difference between presentation (such as with HTML) and interactivity (such as with JavaScript). The web and mobile focus will lead to rudimentary discussions on client/server architectures and what content delivery choices are available when a mobile device, such as a smartphone or a tablet, has such strong technical capabilities.

Prerequisite: B- or better in IMS 222.

**IMS 328. Collaborative Laboratory 3. (2)**

The Co-Lab course sequence is a unique set of courses designed to enable students to work collaboratively on projects of their choosing while being coached and mentored directly by faculty and industry mentors. This will allow sophomores and juniors to begin using their skills to collaborate on emerging technology to build portfolio pieces that will push the envelope of what's possible. Co-Lab 3 focuses on conducting user-testing, research, and product-market fit analyses for their artifact.

Prerequisite: IMS 229.

**IMS 333. Digital Innovation and Entrepreneurship. (3) (MPT)**

Focuses on building new interactive/digital ventures, venture capital, and private equity with respect to networking technologies in both existing and emerging industries based on opportunity and assembling the resources required.

**IMS 340. Internship. (0-20)****IMS 351. Introduction to Mobile Application Development. (3; maximum 6)**

Examination of the critical issues related to development of mobile applications; creation of application non-native mobile applications using graphical and script-based programming languages; ethics of mobile applications; mobile media and user interfaces for mobile devices; problem analysis for assessing applicability of mobile solutions.

Prerequisite: IMS 322 or IMS 257.

**IMS 354. Intermed Interaction Design. (3)**

The synthesis of design principles, usability, and technology is vital to successful interaction design. This course will leverage the exploration of emerging design processes and emerging technology to delve deeper into interaction design. This course challenges students to integrate design principles from a variety of domains to create user interfaces that surprise and delight.

Prerequisites: IMS 254 and IMS 259.

**IMS 355. Principles and Practices of Managing Interactive Projects. (3)**

Students will prepare themselves for life beyond Miami by learning about leadership, client management, digital project organization, and team work. This course teaches lightweight methods of running an interactive project of any kind, allowing the student to apply what he/she learn through actual project-management and team work. Emphasizing the latest Agile project management techniques, the course teaches how to manage complex interactive media projects using a leadership philosophy that encourages teamwork, self-organization and accountability.

Prerequisites: IMS 228, IMS 315, IMS 418/IMS 518 or IMS 419/IMS 519, IMS 414/IMS 514.

**IMS 375. Human Robot Interaction. (3)**

This course introduces basic robotic principles including kinematics, robot architecture and control. The historic context of robotics will be discussed. Students research current technical and societal issues related to human robot interaction. Throughout the course, students develop a project to observe a small humanoid robot interacting with people. The project includes the design and implementation of the robotic activity.

Prerequisite: MME/ECE 303 or IMS 322.

Cross-listed with MME.

**IMS 377. Independent Studies. (0-5)****IMS 381. Music for Games. (3)**

Music for Games (a) examines the theory and traditions of background or incidental music in various media, (b) discusses how to put theory into practice within game design, and (c) places new music into new games. Students create their own music for their own games or for games of colleagues. Unity is the preferred software platform.

Prerequisite: IMS 221.

Cross-listed with MUS.

**IMS 382. The Business of Games. (3)**

In this course students will learn the basics of gamification and of marketing games and will learn how to work as an independent developer or start their own games business.

Prerequisite: IMS 211.

**IMS 384. Rhetoric of Games. (3)**

The study of video games has exploded in the last decade. While the field of "game studies" is still relatively small in academia, when partnered with disciplinary knowledge, the study of the rhetoric of games constitutes some of the most cutting-edge theoretical and practical liberal arts work being done in all of the academy. In this class, students will learn to apply rhetorical thinking and disciplinary knowledge to the study of games. A particular focus will be placed on cultural (race and gender) rhetorics as related to games and gaming. IC.

Prerequisite: IMS 211.

**IMS 390. Special Topics in Interactive Media Studies. (3; maximum 9)**

This course offers a rotating series of topics to meet the changing needs and interest of students and faculty, specifically focusing on the varying applications and theories of interactive media. Though designed for those who live in a world of digital media, this course does not teach mechanical skills (PowerPoint, Fireworks, Flash, or Photoshop).

**IMS 390C. Special Topics in Interactive Media Studies. (3)**

This course offers a rotating series of topics to meet the changing needs and interest of students and faculty, specifically focusing on the varying applications and theories of interactive media.

**IMS 390S. Special Topics in Interactive Media Studies. (3)**

This course offers a rotating series of topics to meet the changing needs and interest of students and faculty, specifically focusing on the varying applications and theories of interactive media.

**IMS 391. 3D Character Animation. (3)**

Introduction to 3D character animation and motion capture, with a strong emphasis on the principles of animation. The course examines how to design a good character, in a general sense, and how to express personality through motion. The course also covers related topics such as creating video-game animation clips and designing game-engine character controllers. A working knowledge of 3D modeling and animation is required.

Prerequisite: IMS 319.

**IMS 396. Inside Startups. (3; maximum 6)**

This course is designed to provide students an inside look at some of the most successful startup companies in regional startup ecosystems. It provides a hands-on approach to investigating successful business models. The course is structured around company visits, guest lectures, and company research.

Prerequisite: IMS 278.

**IMS 397. Inside the Startup Environment (SF). (3; maximum 6) (MPF)**

This course is designed to provide students an inside look at some of the most successful startup companies in regional startup ecosystems in San Francisco. It provides a hands-on approach to investigating successful business models. The course is structured around company visits, guest lectures, and company research. IIIB.

Prerequisite: IMS 278.

**IMS 398. Startup Networking. (1; maximum 2)**

Professional Networking is designed to complement the internship required in the Digital Innovation Program. Within this course, students will develop relationships with industry experts, build a network of professional contacts, and increase their exposure to the startup ecosystem in their respective cities.

Prerequisite: IMS 278.

**IMS 404/IMS 504. Advanced Data Visualization. (3)**

Communicating clearly, efficiently, and in a visually compelling manner using data displays. Identifying appropriate displays based on various data characteristics/complexity, audiences, and goals. Using software to produce data displays. Integrating narratives and data displays. Critiquing visualizations based on design principles, statistical characteristics, and narrative quality. CAS-QL.

Prerequisites: at least one of the following: STA 261, 301, 368, 671; IMS 261; ISA 205; or by permission of instructor.

Cross-listed with JRN/STA.

**IMS 404Y. Mind and Medium. (3)**

Courses in three of the primary curricular areas: communication process; history and theory; environmental systems. Offerings vary. May include: housing, contemporary architecture theory and practice, vernacular architecture, urban studies, architectural theory, exploration of graphic media, advanced work in building systems, etc. Seminar descriptions available at departmental office during preregistration each semester.

Cross-listed with ARC.

**IMS 407/IMS 507. Interactive Business Communication. (3)**

Writing and communicating effectively within business contexts, with an emphasis on researching, reporting, proposing, and maintaining relationships using digitally networked interactive technologies.

Cross-listed with ENG.

**IMS 411/IMS 511. Visual Rhetoric. (3) (MPT)**

Provides an introduction to the theory and techniques of visual rhetoric used by professional communicators. Covers elements of layout, design, and typography, giving students practice with short and longer print texts and non-print media.

Cross-listed with ENG.

**IMS 414/IMS 514. Web and Social Media Analytics. (3)**

Examines and develops analytical ability with respect to the variety of information provided by web and social media behaviors. Students will learn about the mechanisms for observing behavioral and consumer generated information and the leading-edge technologies that aid in the collection and analysis of these data. We will focus on strategic and practical ways to provide radical personalization, improve consumer relationships, and develop effective and value-driven online marketing activities.

**IMS 415/IMS 515. Advanced Usability and User Experience. (3)**

This course is the second in a sequence (IMS 315 is the first) focusing on the study of user experience research and design. In this class, students work with a real client to evaluate and redesign an existing interface. As part of this engagement, students are assigned to small groups. They have client contact and consider and carry out the user experience research methodologies (including eye tracking and facial expression analysis) that will be most helpful to their client. After analyzing the data, teams then decide on an interactive design approach to take and work through the steps to build wireframes and a clickable prototype. Finally, they prepare a written recommendations report and client presentation. There is no coding involved.

Prerequisite: IMS 315.

**IMS 416/IMS 516. Writing for Global Audiences. (3)**

This course focuses on how to write effectively in print and digital media for global audiences. Students will research cross-cultural written communication, including networked communication, and they will develop intercultural literacy skills necessary for writing to global audiences. Through frequent writing assignments, students will learn and enact the theories and strategies for targeting print and digital communications to international and culturally diverse audiences.

Cross-listed with ENG.

**IMS 418/IMS 518. Social Media Marketing and Online Community Management. (3)**

Traditional advertising and marketing models are being increasingly challenged by a world in which content creation, transmission, and aggregation are being decentralized. Markets are now conversations - some very short. Social media are living conversations that present marketers with the challenge of how to understand and participate in those conversations in an authentic and value-based manner. Moreover, these conversations don't happen in a vacuum. The connected nature of different social (and physical) relationships define a community of interest. The community manager uses this entire space to help bring value to this community. This class examines the variety and taxonomy of social media and the strategies and tactics associated with social media marketing and community management. Recommended prerequisite: IMS 201.

**IMS 419/IMS 519. Digital Branding. (3) (MPT)**

Survey course emphasizing a hands-on immersion into ECommerce; studies the impact this technology has on the basics of the marketing mix and effective and efficient marketing strategies. Focuses on applications, innovations, and future direction (not on the technology that enables the Internet and www). Heavy reading, electronic and in-class discussions, and 'surfing' required (recommended prerequisite: MKT 291).

Cross-listed with MKT.

**IMS 421. Digital Product Management. (3)**

Digital Product management can be defined as the general business structure within a company that supports and manages all the activities related to developing, marketing and selling a product - or even more than one - all through its lifecycle. Managing a product encompasses everything related to a specific product, from creating a concept and studying the targeted audience to developing, producing and marketing it (and providing customer support afterward).

Prerequisites: IMS 228, IMS 315, IMS 414/IMS 514 and IMS 418/IMS 518 or IMS 419/IMS 519.

**IMS 422/IMS 522. Advanced Interaction Design and Development. (3)**

This course is an opportunity to investigate interactive design as it relates to a variety of media types used by businesses. Using industry-standard measures of effective design methods, students will learn to design and evaluate interactive products for business needs. This includes the design and evaluation of websites, games, kiosk systems, and others. Topics include the use of standard interaction (e.g., mouse, touch screens) but also extend into emerging interaction through eye tracking, computer vision, and haptic interface. Effective interactive design is often achieved by the creative application of sometimes disparate disciplines. Students should expect to incorporate their understanding of art theory, psychology, commercial business practice, and creative problem solving.

Prerequisites: IMS 257/IMS 322 or a working knowledge of HTML/CSS/JavaScript; or by permission of instructor.

**IMS 424/IMS 524. Ethics and Digital Media. (3)**

Students will focus on key ethical issues related to online writing, communication, and visual design. Course will introduce key ethical principles, including principles of rhetoric, communication, and design ethics, as well as key principles of professional ethics as articulated in fields like professional writing, technical communication, and graphic design. Topics include intellectual property, access and universal design, privacy and surveillance, visual representation and manipulation, global communication and cultural difference, economic issues of justice and equity, and professional rhetorics.

Cross-listed with ENG/JRN.

**IMS 426/IMS 526. Developing & Publishing Digital Books. (3)**

Digital Publishing offers students opportunities to design, edit, and distribute electronic books. Students will learn theories and processes for digital publishing and work with a number of tools and platforms. They will also learn the genres, standards, and literacies required for web-based and ebook production. Students will gain real-world, client-based experience by assisting a non-profit academic press with the development of new ebooks and the digitization of earlier titles.

Cross-listed with ENG.

**IMS 440/IMS 540. Interactive Media Studies Practicum. (4; maximum 8) (MPC)**

Examines the tools and methodologies involved in creating and managing the production of new media. Students will study different development models in a real-world setting and work with a client in business or industry to produce an interactive solution. This course particularly focuses on two aspects of the client project: (1) the management of new media development, and (2) the processes that best develop the synergy of an interdisciplinary team working toward a shared goal and the tools of development. It will also emphasize project planning and management. While it may be the case that programmers need to know coding and graphic designers need to know vector graphics, the successful manager will know something about all of these tools, about how they work together, and about how to specialize in one of them.

Prerequisites: (IMS 355 or IMS 421) and (IMS 422/IMS 522 or IMS 351 or CSE 252).

**IMS 443. Research Methods in Games. (3)**

Research in the games space is different than in some other spaces. Major issues change. For example, what are the ethics of treating an avatar vs. treating a person? When observing a gamer playing, are you observing the on-screen activity, the human holding the interface device, or both? The goal of this course is to explore and better understand these issues.

**IMS 445. Advanced Game Design. (3) (MPT)**

Develops theoretical foundations, methods, and skills in building complete games. Focuses are placed in particular on the understanding of how design influences gameplay and mechanics.

Prerequisites: IMS 211, IMS 212, and IMS 213.

**IMS 452. Senior Degree Project. (3) (MPT)**

Independent interactive media research project, to be completed in the final year of IMS coursework. This project provides an opportunity for the student to synthesize various strands of their academic work, professional experiences, and knowledge into a work that should stand as a demonstration of the student's accumulated skills and critical perspective. IC.

Prerequisite: IMS 322/IMS 257 and IMS 328.

**IMS 453. Indie Game Development I. (3; maximum 6)**

All IMS students with a games focus must complete an independent project in which they create and publish a finished game (on an online distribution platform). This project provides an opportunity for the student to synthesize various strands of their academic work, professional experience, and design knowledge. Furthermore, it requires the student to develop the ability to scope their projects realistically and see them through within a strict time budget. This is the first of a two-course sequence.

Prerequisite: IMS 211, IMS 212, and either IMS 213 or CSE 251.

**IMS 454. Indie Game Development II. (3; maximum 6)**

All IMS students with a games focus must complete an independent project in which they create and publish a finished game (on an online distribution platform). This project provides an opportunity for the student to synthesize various strands of their academic work, professional experience, and design knowledge. Furthermore, it requires the student to develop the ability to scope their projects realistically and see them through within a strict time budget. This is the second of a two-course sequence.

Prerequisite: IMS 453.

**IMS 461/IMS 561. Virtual Reality. (3)**

Advanced course in Virtual Reality, 360-degree video, 3D simulations, motion tracking, and 3D data visualization. Provides background, theory, and practice in creating virtual reality simulations, games, training applications, and 3D visualizations. Prior experience with Game engines is strongly recommended (e.g., CSE 251 or IMS 466/IMS 566).

Prerequisites: CSE 251 or CSE 487/CSE 587 or IMS 465 or permission by instructor.

**IMS 465. Game Engine Scripting. (3)**

This is an advanced game development course meant to build on the introductory game engine groundwork laid by the coding and game development courses students must take as prerequisites. Students will design and code a short series of game prototypes using a commercial-level game engine, increasing proficiency in navigating the engine tools and speed in which they are able to prototype and iterate on game mechanics and design. Guidance and constraints will be provided to keep projects within a reasonable scope. Students are expected to put a great deal of effort into learning how to debug problems and understand engine features while being provided guidance, not answers, by the professor. The goal of this course is to increase student comfort with professional game engine tools and prepare students to learn (and self-teach) increasing advanced features based on their development interests.

Prerequisite: IMS 213 and CSE 251.

**IMS 466/IMS 566. Critical Game Development. (3; maximum 6)**

It often takes an entire collegiate career for a student to develop their first finished game. This course aims to change this by letting students develop a short game (by themselves or with friends who are also taking the class). The course starts with the development of a game design that has a realistic scope. Afterwards, the students get to use their class time to work, discuss the games, playtest them, and tackle development problems as a group, all under the guidance of an experienced game design professor. The students are expected to invest a minimum of 100 hours into developing this game (which will be divided between home work and in-class time). The goal of the course is for to develop a short game that is publishable on an indie gaming website, such as Itch.io, Game Jolt, Desura, and that can be submitted to design competitions.

Prerequisite: IMS 212, IMS 445 or IMS 487/IMS 587.

**IMS 477. Independent Studies. (0-5)****IMS 487/IMS 587. Game Prototyping, Pipeline and Production. (3)**

In this class students will learn how to create a contemporary computer game, applying standard techniques for creating art assets, communicating design and developing a playable demo. Students are expected to combine the knowledge and experience they have gained in preceding game courses to design and develop an engaging play experience from concept to completion.

**IMS 488. Game Preproduction. (3)**

In this course, students will bring together everything they learned during the program and start preproduction for a digital game that they will develop and (independently) publish in the games capstone production class. They learn skills, concepts and competencies that deal with the video game production pipeline. The goal of the course is to finalize the game concept, to complete tech demos, to finish concept art, and to deliver a production plan. As the students work in a team format in which they are assigned a role that corresponds to the role that they seek to take on in the industry after graduating, the deliverables for each student differ based on their role. Programmers will develop tech demos, artists will develop concept art, designers write technical documents, etc. Unique, interesting or unorthodox ideas are encouraged.

Prerequisites: IMS 487/IMS 587.

**IMS 489. Game Production. (6) (MPT)**

This course follows IMS 488. In this course, students move from pre-production for their capstone game into the production phase. At the end of this course, the game is intended to be completely functional and ready for distribution.

Prerequisite: IMS 488.

**IMS 490/IMS 590. Advanced Topics in Interactive Media Studies. (3; maximum 6)**

This course complements IMS 390, the IMS "Special Topics" course. This course is taught by various faculty about topics that may be timely, unique, or experimental and are not covered by the permanent curriculum. This course may be a test bed for a future permanent course or it may be a one-time exploration of a topic. Topics vary each time the course is taught. Look for a notation in the course listing that provides additional detail about which special topic is being covered at the advanced level.

**IMS 640. Internship. (0-12; maximum 12)****IMS 677. Independent Studies. (0-5)**

## Interdisciplinary (IDS)

### IDS 151. Diversity Seminar. (1)

Seminars designed to enable students to take part in discussions involving difference, including those stemming from race, ethnicity, gender, religion, sexual orientation, physical ability, class and region. Seminar helps create an environment where students learn to engage the differences found on campus and in the world into which students graduate.

### IDS 154. Introduction to Study Abroad. (2)

Introduces students to cultural basics, skills, and host-country specifics required for maximizing their study abroad experience and for respecting and interacting with people in other cultures. Students will consider questions, issues, and challenges that will be part of their travel, study, and daily lives while studying abroad and develop tools for increased cultural competencies.

Prerequisite: second semester sophomore, junior, or senior standing.

### IDS 156. Study Abroad Reentry Seminar. (1)

Guides students on a journey of unpacking their international travel experiences and reflecting on what it means to cross cultures. Along the way, students will explore their own identity while identifying ways to integrate their global experiences into their lives now and in the future. Limited to students who have studied abroad, including current international students here at Miami.

### IDS 159. Strength Through Cultural Diversity. (3) (MPF)

Serves as an interdisciplinary introduction to diversity. A primary goal of this course is to facilitate students' abilities to build their cultural competencies and their abilities to work toward a socially just and inclusive world by providing the conceptual tools and vocabulary to think about, discuss and experience diversity. Topics covered include multiculturalism, ethnocentrism, prejudice, discrimination, privilege, the impacts of social and cultural change, and the engagement of students in the global community. IC, IIC, IIIB.

### IDS 177. Independent Studies. (0-5)

#### IDS 206. Diversity and Culture in American Film. (3) (MPF)

Analysis of the representation of diversity and culture as portrayed in American motion pictures. IC, IIB. CAS-B.  
Cross-listed with FST.

#### IDS 259. Introduction to the Miami Tribe of Oklahoma. (3) (MPF)

Offers an interdisciplinary examination of the Myaamia as a living people, within a living culture - a people with a past, present and future. Explores pre-contact economy, social and political organization; the historic period of contact, treaties and federal legislation and the cultural basis of Myaamia responses; and present-day issues of concern to the dependent sovereign nation of the Miami Tribe of Oklahoma. IIC, IC.  
Cross-listed with HST.

### IDS 277. Independent Studies. (0-5)

#### IDS 340. Internship. (0-20)

#### IDS 377. Independent Studies. (0-5)

#### IDS 477. Independent Studies. (0-5)

## International Studies (ITS)

### ITS 141L. European Cities in Cultural Context/Luxembourg. (1)

Deals with certain key European cities and considers for each its place in history, its development, the remaining landmarks of important events in the past, architectural and artistic masterpieces, important persons who lived there (statesmen, philosophers, musicians, etc.) and their contribution. Considers the present significance of the city in economic, political and cultural terms, as appropriate.

### ITS 142L. Great European Cities. (1)

This course introduces students to the historic and cultural evolution of Europe from its ancient past to its contemporary process of economic and political integration. Students will be exposed to the multifaceted aspect of the present European mosaic and the search for a European identity.

### ITS 177. Independent Studies. (0-5)

#### ITS 201. Introduction to International Studies. (3) (MPF, MPT)

Integration of core disciplines comprising international studies, with analysis of major world regions and issues. Recommended for freshmen and sophomores. IC, IIC, IIIB. CAS-C.

#### ITS 202. Writing Policy Analysis. (3)

This course is a required course for the major in International Studies and comprises the major's writing requirement. The course covers the fundamentals of policy analysis and writing policy recommendations as an analytical method for institutional engagement in understanding and seeking to solve complex international problems. The course is a prerequisite for ITS 302, ITS 365 and ITS 402. ADVW. CAS-W.  
Prerequisite: ITS 201.

#### ITS 208. The Rise of Industrialism in East Asia. (3) (MPF)

Introduction to historic parameters, geographic variables, state policies, and sociocultural contexts of industrialism in East Asia (China, Japan, Korea, Taiwan, Hong Kong, and Singapore). IIC, IIIB. CAS-C.  
Cross-listed with GEO/SOC.

#### ITS 254. Introduction to Russian and Eurasian Studies. (3) (MPF)

Examines the major developments that have shaped Russian and Eurasian Culture, society and politics over the last millennium. The course incorporates perspectives from the social sciences, humanities and the fine arts. IIB. ADVW. CAS-B.  
Cross-listed with ATH/CLS/HST/POL/REL/RUS.

### ITS 277. Independent Studies. (0-5)

#### ITS 301. Intercultural Relations. (3) (MPT)

This course bridges ITS 201 and the senior capstone, ITS 402, within the ITS major. Development of cultural awareness; in-depth study of theory and field-based research on the cross-cultural dynamics of cross-national encounters, trends, and events. CAS-C.  
Cross-listed with ATH.

#### ITS 302. Problems of Non-Western Societies. (3)

This course bridges the required ITS 202, Writing Policy Analysis course and the senior capstone within the ITS major. Examines a series of problems faced by developing societies. Topics include theories of national independence, technology, post-colonial hardships, and the role of the U.S. This course can be taken to complete part of the ITS core requirements or to complete one course requirement in the International Development concentration.  
Prerequisite: ITS 201.

**ITS 333. Global Development and Inequality. (3)**

Examines processes and outcomes of economic development in the modern era, emphasizing the interpretation of development measures and critiques of prevailing models. This course adopts an interdisciplinary perspective emphasizing the recent history and political, cultural, and geographic dimensions of economic development and the production of global patterns of inequality. Prerequisites: ECO 201 and ECO 202.

**ITS 340. Internship. (0-20)****ITS 365. Applied Topics in International Studies. (3; maximum 6)**

This course bridges the required ITS 202, Writing Policy Analysis course and the senior capstone within the ITS major. Students examine a series of cases about applied topics in global issues today. Students evaluate the cases from an interdisciplinary perspective and from the point of view of a policy analyst or participant. Examples of topics include global trade, human rights, UN decision making, veiling in Islam, and dictatorship. ITS 365 may be taken to complete a core requirement in the major and a separate section of ITS 365 may be taken to complete one course in the concentration requirement. A total of two different sections of ITS 365 can be taken for the major. Prerequisite: ITS 201, ITS 202.

**ITS 377. Independent Studies. (0-5)****ITS 390. Special Topics in International Studies. (1-3)**

Presentations and discussion of current international events. Students read the newspaper daily and reflect on global developments in human rights. Offered credit/no credit only.

**ITS 402. Senior Capstone in International Studies. (3) (MPC)**

Examination of approaches and diverse human relationships that comprise the field of international studies, with participants writing a group-project policy report.

Prerequisite: international studies major with senior standing, who has previously completed either ITS 302 or ITS 365, or permission of instructor.

**ITS 402N. Problems of the Middle East. (3)****ITS 402O. Issues in Post-Soviet Eurasia. (3) (MPC)**

Examination of approaches and diverse human relationships that comprise the field of international studies, with participants writing a group-project policy report.

Prerequisite: international studies major with senior standing or permission of instructor.

**ITS 477. Independent Studies. (0-5)**

## Italian (ITL)

**ITL 101. Beginner's Course. (4)**

Objective: to develop the four language skills of oral comprehension, speaking, reading, and writing.

**ITL 102. Beginner's Course. (4)**

Objective: to develop the four language skills of oral comprehension, speaking, reading, and writing.

Prerequisite: ITL 101.

**ITL 105W. Intensive Elementary Italian. (8)**

Intensive course, offered only in summer abroad, covers work normally included in 101, 102. Allows student to take a full year's work in less than eight weeks, 15 hours per week.

**ITL 177. Independent Studies. (0-5)****ITL 201. Second Year Italian. (3)**

Review of grammar, writing skills, and augmentation of vocabulary and idiomatic expression, and an introduction to critical reading. Prerequisite: ITL 102 or 105 or equivalent.

**ITL 202. Second Year Italian. (3)**

Review of grammar, writing skills, and augmentation of vocabulary and idiomatic expression, and an introduction to critical reading. CAS-A.

Prerequisite: ITL 201.

**ITL 205W. Intensive Intermediate Italian. (8)**

Intensive course, offered only in summer abroad, covers work normally included in 201, 202, plus structured conversation. Allows student to take a full year's work in less than eight weeks, 15 hours per week. CAS-A.

Prerequisite: ITL 102 or 105 or equivalent.

**ITL 221. Italy, Matrix of Civilization. (3) (MPF)**

An investigation of Italian contributions to civilization through recorded history, from the cultures of the Etruscans and the Romans to contemporary Italians, taking into consideration the Italian peninsula's geography and history, the artistic outpouring of the Renaissance, the scientific revolution, opera, literature, cinema, emigration and immigration, and Italy's multi-ethnic future. Taught in English. No prerequisites. IIB. CAS-B.

**ITL 222. Italian American Culture. (3) (MPF)**

A survey and investigation of the history of Italian immigration in America, the development of Italian American communities across the land, and the contributions that Italian Americans have made to American society and culture. Taught in English. No prerequisites. IC, IIB. CAS-B.

Cross-listed with AMS/FST.

**ITL 262. Italian Cinema. (3) (MPT)**

Discussion and analysis of major movies and trends in Italian cinema. Topics may vary but attention is given to social and ideological implications of Italian cinema and the way movies produce a critique of cultural mores. Taught in English. No prerequisites. CAS-B-LIT. Cross-listed with FST.

**ITL 277. Independent Studies. (0-5)****ITL 301. Culture, Society and Politics in Perspective. (3)**

Gateway to upper-level offerings in Italian. Organized around a theme developed by each professor, this class initiates students into the work of original analysis and creative interpretation. The course will include works from a variety of media, voices, and historical moments, from films to songs, journal articles to sonnets, theater to opera. Students will explore the relationships between cultural production, intended in a broad sense, and Italian society while gaining exposure to a range of approaches to, and theories of, reading. Students will hone their ability to present their ideas orally and in writing.

Prerequisites: ITL 202 or ITL 205 or equivalent.

**ITL 302. Introduction to Italian Literature. (3)**

A survey of Italian literature, from classical to contemporary literature. Techniques for critical reading in major genres such as drama, poetry, visual art and prose with emphasis on historical and societal transformation across time. CAS-B-LIT.

Prerequisite: ITL 202 or 205 or equivalent.

**ITL 305W. Intensive Advanced Italian. (8)**

Students perfect their ability in the four language skills through practice in oral and written composition and are introduced to various aspects of Italian culture including literature, art, music, history, politics, etc., through lectures, reading, and discussion. Offered only in summer abroad. CAS-A.

Prerequisite: ITL 202 or 205 or equivalent.

**ITL 364. From Marco Polo to Machiavelli. (3) (MPT)**

Examination of Classical and Asian influences in Italian culture from the Middle Ages through the Renaissance. Works of Marco Polo, Dante, Petrarca, Boccaccio, the Italian Humanists, and Renaissance artists and writers, such as Leonardo da Vinci, Michelangelo, Ariosto, Castiglione, and Machiavelli, including women poets, such as Vittoria Colonna, Gaspara Stampa, and Veronica Franco, are read and discussed against the historical background of Mediterranean trade and culture from the 13th through the 16th century, when the Italian peninsula was a crossroads between Europe, Africa, and Asia. Taught in English. CAS-B-LIT.

Cross-listed with ENG.

**ITL 377. Independent Studies. (0-5)****ITL 399C. Fashion in Italy. (6)****ITL 401. Dante's Divine Comedy. (3) (MPT)**

Intensive examination of Dante's major work, *The Divine Comedy*, read in a bilingual edition. Lectures and discussion in English. No prerequisites. CAS-B-LIT.

Cross-listed with ENG.

**ITL 410. Topics in Italian. (3; maximum 9)**

This course, taught in Italian, focuses on different topics in Italian literature and culture. Specific topics to be studied will be announced each time the course is offered. Students may take the course for credit up to three times, provided that the topic of each offering is different each time. All readings, discussions, and assignments will be in Italian.

Prerequisite: ITL 202 or 205, or the equivalent (two years of university-level Italian), or permission from the instructor.

**ITL 420. Italian Contributions to the World. (3)**

Students study aspects of Italian culture and write, share, critique, discuss, and revise essays on topic(s) studied in the course, in two genres: one for a specialized audience, with the aim of submitting it for a national essay contest, and the other for a popular audience, to submit for publication in the "travel" section of a newspaper, magazine, or e-publication.

**ITL 477. Independent Studies. (0-5)****ITL 677. Independent Studies. (0-5)****ITL 680. Independent Studies. (1-6)**

Independent work in Italian literature or language.

## Japanese (JPN)

**JPN 101. First Year Japanese. (4)**

Acquisition of the basic oral-aural skills of elementary Japanese as well as the reading and writing skills.

**JPN 102. First Year Japanese. (4)**

Acquisition of the basic oral-aural skills of elementary Japanese as well as the reading and writing skills.  
Prerequisite: JPN 101 or equivalent.

**JPN 177. Independent Studies. (0-5)****JPN 201. Second Year Japanese. (3) (MPT)**

Further development of the fundamental skills of speaking, listening, writing, and reading in Japanese.

Prerequisite: JPN 102 or equivalent.

**JPN 202. Second Year Japanese. (3) (MPT)**

Further development of the fundamental skills of speaking, listening, writing, and reading in Japanese. CAS-A.

Prerequisite: JPN 201 or equivalent.

**JPN 231. Japanese Tales of the Supernatural in English Translation. (3) (MPF)**

Focusing on the supernatural, this course examines major literary works chronologically, *Tale of Genji* (ca. 1010), to contemporary films. IIB. CAS-B-LIT.

**JPN 255. Drama in China and Japan in English Translation. (3) (MPF)**

Provides historical overview of major traditional dramatic art forms of China and Japan: Zaju, Kunqu, Peking Opera, Noh, Kyogen, Bunraku, and Kabuki. Critically treats and interprets theatrical conventions in each and attempts to clarify aesthetic significance. IIB. CAS-B-LIT.

Cross-listed with CHI.

**JPN 260. Topics in Japanese Literature in English Translation. (3; maximum 9)**

Treatment of selected works of Japanese literature that suggest a particular theme, such as Death. CAS-B-LIT.

**JPN 266. Survey of Japanese Cinema. (3)**

This course examines representative Japanese films from the movies of the immediate postwar era to the new wave of Japanese anime (animated films).

Cross-listed with FST 266.

**JPN 277. Independent Studies. (0-5)****JPN 301. Third Year Japanese. (3) (MPT)**

Emphasis on advanced oral and written communication in Japanese, while learning about important concepts in modern Japanese society through reading and discussion.

Prerequisite: JPN 202 or equivalent.

**JPN 302. Third Year Japanese. (3)**

Emphasis on advanced oral and written communication in Japanese, while learning about important concepts in modern Japanese society through reading and discussion.

Prerequisite: JPN 301 or equivalent.

**JPN 340. Internship. (0-20)****JPN 377. Independent Studies. (0-5)****JPN 381. Introduction to Japanese Linguistics. (3)**

Provides a deeper understanding of the characteristics of the Japanese language, using the framework of theoretical linguistics as an analytical tool.

Prerequisite: JPN 102.

**JPN 401. Fourth Year Japanese. (3)**

Development of advanced command of Japanese in comprehension and production through written works and class discussion. Cultural, social, and psychological implications, literary works, contemporary articles, etc., will also be explored.

Prerequisite: JPN 302 or equivalent.

**JPN 402. Fourth Year Japanese. (3)**

Development of advanced command of Japanese in comprehension and production through written works and class discussion. Cultural, social, and psychological implications, literary works, contemporary articles, etc., will also be explored.  
Prerequisite: JPN 401 or equivalent.

**JPN 477. Independent Studies. (0-5)****JPN 677. Independent Studies. (0-5)**

## Journalism (JRN)

**JRN 101. Introduction to Journalism. (3) (MPF)**

Introduces issues facing news media in a democratic society. These include ethics, law, and press performance in the context of news criticism and journalism history. Students explore several journalistic modes and a variety of careers in journalism. They learn critical news consumption and several basic writing styles. IIB. CAS-B.

**JRN 120. Scholars in Media Writing. (3; maximum 6)**

Writing for the Media: This class will introduce students to genres of nonfiction writing such as narrative nonfiction, memoir and documentary film writing. This two-course sequence is open only to first-year students selected to participate in the University Academic Scholars Program in Writing for the Media.

**JRN 177. Independent Studies. (0-5)****JRN 201. Reporting and News Writing I. (3)**

Introduces basic news writing, news gathering, and interviewing. Emphasizes instruction and experience in writing for print and online forms. Prerequisite for all journalism writing and creative courses. ADVW.

**JRN 202. Reporting and News Writing II. (3)**

Refines media news writing skills acquired in JRN 201, with an emphasis on multiple-field reporting. Students produce cross-media content, working in broadcast and online forms.  
Prerequisite: JRN 201.

**JRN 240. Student Media Practicum. (1; maximum 4)**

This course introduces students to real-world journalism and media production through hands-on experience in student media. Students develop story ideas, conduct interviews and prepare news stories for student media. Students also have opportunities to attend weekly presentations about practicing journalism. Currently offered only for students who write one article every two weeks for the Miami Student.

**JRN 277. Independent Studies. (0-5)****JRN 301. Journalism Law and Ethics. (3)**

Focuses on statutory and common law limitations on freedom of the press in America, and the legislative and judicial rationales for them. Considers ethical theories and their application to situations that journalists commonly encounter.

**JRN 303. Multimedia Journalism. (3)**

Explores the theory and practice of multimedia journalism. Topics include current forms of and social impact of multimedia reporting, particularly in online spaces. Students will also develop online multimedia news projects.  
Prerequisite: JRN 202.

**JRN 310. Topics in Journalism Studies. (3; maximum 6)**

Introduces students to a particular area of scholarship or research methodology within the academic discipline of journalism studies (such as content analysis, journalism history, cultural representations, journalism theory). Students in this class produce work intended for an audience of interested scholars (such as literature reviews or primary source, critical or content analyses) rather than for a general audience.  
Prerequisite: JRN 101.

**JRN 313. Digital Audio Reporting. (3)**

Advanced-level coursework emphasizing digital audio writing, reporting and editing. Students will learn to produce audio news stories across broadcast and online platforms.  
Prerequisite: MAC 211 and JRN 202, major status or permission of instructor.

**JRN 314. Digital Video Reporting. (3)**

Advanced-level coursework emphasizing digital video writing, reporting and editing. Students will learn to produce video news stories across broadcast television and mobile platforms.  
Prerequisite: MAC 211 and JRN 202, major status, or permission of instructor.

**JRN 316. Editing and Design. (3)**

Introduces the roles of news producers and editors as key team members in print, broadcast, and online journalism. Topics to be covered include text editing, news values, and design principles, photo presentation and visual editing, audiences and interactivity.  
Prerequisite: JRN 201.

**JRN 318. Advanced Storytelling in Journalism. (3)**

Engages students in the art and craft of telling in-depth stories that inform, engage, compel, and entertain. These techniques involve reporting and writing alike, and they can be put to use in magazines, newspapers, books, websites, documentary film, and multimedia formats.  
Prerequisite: JRN 201.

**JRN 333. International Journalism. (3)**

Examines reporting from around the world, and evaluates and re-thinks the distinctly American vantage point and model of journalism by gaining exposure to broader treatment of international political, economic and cultural issues.  
Prerequisite: JRN 201.

**JRN 340. Internship. (0-20)****JRN 350. Specialized Journalism. (3; maximum 6)**

Focuses on rotating topics such as In-Depth Reporting, Business Reporting, Opinion Writing, Political Reporting, Sports Reporting, and Photojournalism.  
Prerequisite: JRN 201.

**JRN 350P. Specialized Journalism: Photojournalism. (3)**

Rotating topics, including In-Depth Reporting, Business Reporting, Opinion Writing, Political Reporting, Sports Reporting, Photojournalism, and Narrative Nonfiction Writing.  
Prerequisite: JRN 201.

**JRN 377. Independent Studies. (0-5)****JRN 404/JRN 504. Advanced Data Visualization. (3)**

Focuses on how to communicate clearly, efficiently, and in a visually compelling manner using data displays. Identifying appropriate displays based on various data characteristics/complexity, audiences, and goals to use software to produce data displays to integrate narratives and data displays; and to critique visualizations based on design principles, statistical characteristics, and narrative quality. CAS-QL.

Prerequisites: at least one of the following: STA 261, 301, 368, 671; IMS 261; ISA 205; or by permission of instructor.

Cross-listed with IMS/STA.

**JRN 412. Public Affairs Reporting. (3)**

An advanced class that focuses on reporting about issues that affect people's lives. Students learn to locate and analyze data sets that shed light on those issues. They also learn to develop story ideas from such data, and to incorporate the data into elegantly written stories accompanied by effective visual representations of related data. CAS-QL.

Prerequisite: JRN 201.

**JRN 415. Capstone in Television Journalism. (4) (MPC)**

Provides practicum experience in which students write, report, and produce a regularly scheduled television newscast aired on Oxford's cable television system. Participate in and evaluate all aspects of television news gathering and reporting process.

Prerequisite: MAC 211, JRN 202, and JRN 314 or applied television journalism experience (subject to instructor approval if prereqs not met).

**JRN 418. Critical Writing in Journalism. (3)**

Focuses on theory and practice in reviewing books, stage productions, motion pictures, and concerts for mass media.

Prerequisite: JRN 201 and JRN 318.

**JRN 421. Capstone in Journalism. (3)**

Integrates theory and practice of journalism; issues of law, ethics, and history as they pertain to journalism. Topics vary each year.

Prerequisite: JRN 201 and senior standing.

**JRN 424/JRN 524. Ethics and Digital Media. (3)**

Students will focus on key ethical issues related to online writing, communication, and visual design. Course will introduce key ethical principles, including principles of rhetoric, communication, and design ethics, as well as key principles of professional ethics as articulated in fields like professional writing, technical communication, and graphic design. Topics include intellectual property, access and universal design, privacy and surveillance, visual representation and manipulation, global communication and cultural difference, economic issues of justice and equity, and professional rhetorics.

Cross-listed with ENG/IMS.

**JRN 426. Inside Washington. (8)**

Engages students in an intensive study of the contemporary Washington, D.C. - government institutions, public officials, journalists, consultants, staff, and interest groups - through reading, lecture, on-site observations, expert presentations, discussion, research, writing, and internships. Program conducted in Washington, DC.

Prerequisite: permission of instructor.

Cross-listed with MAC/POL.

**JRN 427. Inside Washington Semester Experience. (4; maximum 4)**

Engages students in an intensive study of the contemporary Washington, D.C. -government institutions, public officials, journalists, consultants, staff, and interest groups - through reading, lecture, onsite observations, expert presentations, discussion, research, and writing. Course is part of a 16-credit semester program conducted in Washington, D.C. Prerequisites: permission of instructor.

Co-requisites: JRN/MAC/POL 454; JRN/MAC/POL 377 or 477; JRN/MAC/POL 340.

Cross-listed with MAC/POL.

**JRN 429/JRN 529. Environmental Communication. (3)**

Examines theories, principles, and methods for communicating environmental concepts and scientific information verbally, textually and visually to a range of audiences and stakeholders. Students will work with scientists, peer communities, clients, and focus groups to develop effective and appropriate environmental communications across mediums. Projects may include producing scientific posters, writing reviews of research projects on an environmental problem, preparing oral presentations, creating visual story of scientific work, interviewing scientists for a general news story, writing environmental proposals, and facilitating focus groups.

Cross-listed with ENG/IES.

**JRN 454. The Washington Community. (3-4; maximum 4)**

This course focuses on the Washington, D.C., as a complex political-social system that is both the seat of American democracy and a metropolis with typical urban opportunities and problems. In this class, students will complement their study of the formal political and media systems in the "Inside Washington" course by focusing on the development and behavior of constituent communities within the city of Washington. Course is part of a 16-credit semester program conducted in Washington, D.C.

Cross-listed with MAC/POL.

**JRN 477. Independent Studies. (0-5)**

## Kinesiology and Health (KNH)

**KNH 101. Personal Nutrition: a survey course. (2)**

Nutrition topics relevant to young adults will be explored through application of basic nutrition principles to real life situations. Self-assessment and monitoring of personal nutrition status are an integral part of this course. This course is for non-majors. This is not substitution for KNH 102 Fundamentals of Nutrition for KNH majors.

**KNH 102. Fundamentals of Nutrition. (3)**

Food nutrients, essentials of an adequate diet, relationship of food to physical well-being.

**KNH 103. Introduction to the Profession of Dietetics. (2)**

An introductory course for students interested in Dietetics. Content will include the history, current practices and future trends in Dietetics. This course covers the practical application of principles from the integration of knowledge of food, nutrition, biochemistry, physiology, management and behavioral and social science. Students will explore career opportunities in Dietetics including an overview of the dietetic internship application process.

**KNH 104. Introduction to Food Science and Meal Management. (3)**

Introduction to food composition, selection and preparation, principles and techniques of meal management. Includes lecture (1) and lab (2).

**KNH 110. Dance. (2)**

Emphasis placed on beginning technique of each dance form.

**KNH 110A. Beginning Ballet. (2)**

Classical ballet technique. Work at the barre stressed.  
Cross-listed with THE 110A.

**KNH 110G. Beginning Modern Dance. (2)**

Technique stressed. Correct form and body placement along with flexibility and control covered.  
Cross-listed with THE.

**KNH 110S. Social Dance - Men. (2)**

Rhythms, steps, and positions of various ballroom dances, mixers, etc.

**KNH 110T. Social Dance - Women. (2)**

Rhythms, steps, and positions of various ballroom dances, mixers, etc.

**KNH 110U. Intermediate Social Dance - Men. (2)**

This class focuses on advanced rhythms, steps, and positions for complex dances from around the world, emphasizing the difference between American and international styles. Students will perform the Foxtrot, Rumba and Tango, among others, and learn about the historical, social, and cultural practices associated with these dances. Students will be taught the correct etiquette of each dance and be required to attend 3 extra dances outside class time.  
Prerequisite: KNH 110S or 110T.

**KNH 110W. Intermediate Social Dance - Women. (2)**

This class focuses on advanced rhythms, steps, and positions for complex dances from around the world, emphasizing the difference between American and international styles. Students will perform the Foxtrot, Rumba and Tango, among others, and learn about the historical, social, and cultural practices associated with these dances. Students will be taught the correct etiquette of each dance and be required to attend 3 extra dances outside class time.  
Prerequisite: KNH 110S or 110T.

**KNH 112. Transition for College Students. (2)**

This course is designed to help students prepare for the transition from high school to college. This course will focus on personal and leadership development through small group discussions, hands on experience, guest lectures, and a variety of readings and assignments to help you acclimate to college. Students will explore their values and belief systems, practice advanced study strategies and techniques, develop critical time management skills, research various leadership theories, and develop their own personalized development plan to help them achieve their goals.  
Prerequisite: first and second year students only.

**KNH 116. Personal Wellness. (1)**

Introduction to the dimensions of Wellness Model. Promote and facilitate a holistic approach to living the Health Enhancement Lifestyle Management (HELM).

**KNH 120A. Aerobics. (2)**

Fitness program consisting of rhythmic activities to develop cardiovascular conditioning and flexibility.

**KNH 120B. Beginning Badminton. (2)**

Beginning badminton will develop students' understanding of badminton as an international sport. Students will learn the culture, history, fundamental rules and regulations, and basic movement techniques through participation in the course.

**KNH 120C. Individual Exercise. (2)**

Programming to give students opportunity to develop strength, endurance, flexibility, coordination, and power by executing specific exercises and activities.

**KNH 120E. Self Defense. (2)**

Individual basic defense skills; awareness of necessary precautions.

**KNH 120G. Weight Training. (2)**

Introduction to fundamental principles of weight training. Includes selection and implementation of a weight training program and discussions of kinesiological and physiological principles as they relate to weight training.

**KNH 120I. Power Walking for Fitness. (2)**

This course introduces and develops the appropriate choices in making walking a core component within a healthy lifestyle.

**KNH 120K. Marathon Training. (2)**

This course introduces and develops the techniques to train and successfully complete a marathon.

**KNH 120L. Jogging for Health and Fitness. (2)**

This course introduces and develops the appropriate choices in making running a core component within a healthy lifestyle.

**KNH 120N. Nature Fit: Physical Activity in the Great Outdoors. (2)**

This course introduces students to sustainable ways to engage in physical activity. The course explores a variety of activities such as parcourse, yoga, tai chi, informal games, mountain biking and student developed activities.

**KNH 120T. Beginning T'ai Chi. (2)**

This course will cover the Short (Simplified Modern) Yang Style T'ai Chi Chuan 24-Posture form which is the most-often taught version in the world. Developed by Yang Cheng Fu for instructing the Chinese Emperor's family over a hundred years ago, it is considered a valuable health exercise with many proven benefits, although it is also an effective martial art or self-defense. Often called "Meditation In Motion", T'ai Chi has been shown to relieve stress and increase flexibility, balance and focus.

**KNH 125. Introduction to Public Health. (3) (MPF)**

Public health is a multi-disciplinary field aimed at reducing preventable morbidity and premature mortality, and promoting a higher quality of life in populations and groups through health intervention. This course is designed to introduce the basic tenets, applications, and foci of public health, including integrating public health with other health professions. It will provide a history of public health, an overview of the core disciplines, current events and issues in the field. IIC.

**KNH 130H. Golf. (2)**

Basic golf skills, etiquette, and rules of the game.

**KNH 130I. Intermediate Golf. (2)**

Intermediate techniques and strategies for students who have mastered basic skills.

**KNH 130K. Racquetball. (2)**

Fundamental skills and knowledge of the game.

**KNH 130M. Tennis. (2)**

Basic strokes of tennis including forehand, backhand, serve, and game experience.

**KNH 130O. Basic Ice Skating. (2)**

For students with little or no previous experience.

**KNH 130P. Intermediate Ice Skating. (2)**

Intermediate skills and techniques for students who have mastered fundamentals.

**KNH 130T. Advanced Ice Skating. (2)**

Advanced techniques of skill in ice skating.

**KNH 140A. Basketball. (2)**

Fundamental skills, rules, and strategy necessary for team play.

**KNH 140B. Power Volleyball. (2)**

Fundamental skills, rules, and strategy necessary for team play.

**KNH 140F. Softball. (2)**

Fundamental skills, rules, and strategy necessary for team play.

**KNH 140H. Ice Hockey. (2)**

Fundamental skills, rules, and strategy necessary for team play.

**KNH 140J. Soccer. (2)**

Fundamental skills, rules, and strategy necessary for team play.

**KNH 140K. Advanced Ice Hockey. (2)**

Advanced ice hockey theory and techniques for those with demonstrated skill and hockey background.

**KNH 140M. Broomball. (2)**

Introduction to basic broomball skills, for those who have never played, for those with limited experience, or with broomball experience, but no formal instruction.

**KNH 150. Outdoor Pursuit Activities. (2)**

Includes leisure, recreational, and environmental pursuits. Instruction provided in basic skills, knowledge, and social behavior necessary for competent participation. Instruction at the Miami stables and other outdoor locations.

**KNH 150A. Beginning Canoeing. (2)**

This beginning canoeing course will focus on the essential skills and information that students need to travel safely and comfortably on flat and moving water. The course will cover history, canoe anatomy, clothing and equipment, paddling strokes and techniques, river reading/hazard identification, navigation, and minimizing environmental impact for boaters.

**KNH 150B. Beginning Backpacking. (2)**

This course will focus on the essential skills and information that backpackers need to travel safely and comfortably in the wilderness. The course will cover trip planning, equipment and usage, cooking and nutrition, minimal impact camping, trail technique, navigation, emergency procedures, and wilderness first aid.

**KNH 150C. Beginning Rock Climbing. (2)**

Introduction to beginning rock climbing that covers the terminology, equipment, technical and safety skills appropriate for the novice level climber.

**KNH 150E. Beginning Horseback Riding. (2)**

Introductory course to the fundamentals of horsemanship, basic horse care, and safety around equines.

**KNH 150F. Intermediate Horseback Riding. (2)**

Develops the fundamental skills of the western style of riding. Course explores equine anatomy, nutrition, and health care. Continues to focus on safety around equines.

**KNH 150H. Advanced Horseback Riding. (2)**

Explores advanced techniques and tradition in English Equitation. Course content focuses on advanced equine nutrition, anatomy, and physiology of the horse.

**KNH 150K. Intermediate Rock Climbing. (2)**

This course covers the terminology, equipment, technical and safety skills appropriate for the intermediate level climber. Students will have several opportunities to experience climbing and to put lecture, discussion, and reading materials into practice.

**KNH 150M. Mountain Biking. (2)**

Students will learn about mountain biking: equipment, performance, safety, its role in health promotion, environmental issues, trail development and maintenance, and building community. Students will learn how to mountain bike safely and will have opportunities to bike on a variety of mountain bike trails of different difficulty levels. Students will also participate in mountain bike trail maintenance and sustainability.

**KNH 150N. Beginning Kayaking. (2)**

This beginning kayaking course will focus on the essential skills and information that recreational kayakers need to travel safely and comfortably on the water by utilizing the American Canoe Association (ACA) Introduction to Kayaking, Level 1 curriculum. The course will cover equipment and usage, environmental impact for boaters, paddling technique, risk management and emergency procedures.

**KNH 170A. Swimming. (2)**

For students with little or no previous experience. Basic skills to meet requirements for American Red Cross beginners and advanced beginners certification.

**KNH 170B. Intermediate Swimming. (2)**

Basic swimming strokes, turns, diving, rescue skills, and personal safety skills; meets American Red Cross intermediate and swimmers requirements.

Prerequisite: ability to swim 25 yards on stomach and back, and swim in deep water.

**KNH 177. Independent Studies. (0-5)****KNH 182. Introduction to Athletic Training. (2)**

Introductory course for potential athletic training majors and all declared athletic training majors. Emphasis on athletic training profession and clinical components of the athletic training program at Miami.

**KNH 183. Foundations of Athletic Training. (3)**

Introductory course in the principles of athletic training. Overviews basic techniques of athletic training.

Prerequisite: KNH 182.

Co-requisite: KNH 183L.

**KNH 183L. Foundations of Athletic Training Laboratory. (1)**

Introductory laboratory to develop and master taping, wrapping, and assessment skills necessary for entry-level certified athletic trainers.

Prerequisite: KNH 182.

Co-requisite: KNH 183.

**KNH 184. Motor Skill Learning and Performance. (3)**

Introductory analysis of neurophysiological, biomechanical, and socio-behavioral factors that facilitate and inhibit acquisition, refinement, and retention of motor skills.

**KNH 184L. Motor Skill Learning and Performance Laboratory. (1)**

Laboratory portion of KNH 184.

**KNH 188. Physical Activity and Health. (3) (MPF, MPT)**

Critical examination of relationships among exercise, physical activity, fitness, and health from epidemiological perspective. The role of genetic, sociocultural, economic, geographic and political influences on physical activity patterns, exercise habits, fitness and health are explored. A description of the physiological mechanisms that link physical activity and health are also examined. IIC.

**KNH 194. Standard First Aid and CPR. (2)**

Meets requirements for American Red Cross Standard First Aid certification and Cardiopulmonary Resuscitation (CPR) certification. Prerequisite: sophomore standing or permission of instructor. Co-requisite: KNH 194L.

**KNH 194L. Standard First Aid and CPR Laboratory. (1)**

Laboratory portion of KNH 194. Co-requisite: KNH 194.

**KNH 203. Nutrition in Disease Prevention Management. (3)**

This course is the study of nutrition in the relation to chronic disease prevention. The course will focus on the menu development for the institutional food service environment including hospitals, extended care facilities and schools. Basic culinary terms and techniques will be integrated into the lab portion of the course. Students will learn and practice management strategies while designing custom menus for specific health related populations. Economic and financial concepts will also be demonstrated and evaluated.

Prerequisites: KNH 102, KNH 103, and KNH 104.

**KNH 205. Understanding Drugs for the Health Promotion Professional. (3)**

Examines historical, personal, and cultural bases for current patterns of drug use, misuse, and abuse, and identifies the short and long-term consequences associated with such patterns.

**KNH 206. AIDS: Etiology, Prevalence, and Prevention. (3) (MPF)**

Analysis of personal and social aspects of AIDS, with special emphasis upon preventive behaviors and their education potential. IIC.

**KNH 207. Serving and Supporting Children, Youth, and Families I. (4) (MPT)**

Introductory analysis of relationships among the conditions, characteristics, and capacities of children, youth, and families (especially those labeled 'at risk') and the institutional services and supports intended to improve their well-being. Emphasis placed upon question-finding in different contexts, especially the ways in which the knowledge we claim and the solutions we offer are dependent upon our analytical frames and language.

Cross-listed with FSW.

**KNH 208. Serving and Supporting Children, Youth, and Families II. (5) (MPT)**

Focuses upon children, youth, and families experiencing needs, problems, and crises. Today's institutional services and supports are analyzed and evaluated both in class and in educational, health, and social service agencies. Students 'shadow' helping professionals in these agencies during directed field experiences. Cross-listed with FSW 208.

**KNH 209. Medical Terminology for Health Professionals. (3)**

Provides the opportunity for students to comprehend basic terms related to anatomy, pathophysiology, diagnostics and treatment. Students will understand word parts necessary to build medical terms and acceptable medical abbreviations and symbols. Credit not granted to students who have earned credit in BTE 224.

**KNH 212. Introduction to Sport Management. (3)**

Introduces the foundations and principles of sport management, with a broad focus on administration, supervision, and leadership in the business of sport at all levels.

**KNH 213. Global and Community Nutrition. (3) (MPF)**

Explores the integration of current food and nutrition research into the development of public policy with emphasis on implementation of Global and Community Nutrition programs. IIIB.

Prerequisites: KNH 102.

**KNH 214. Global Well-Being. (3) (MPF)**

As a result of the positive psychology movement that has gained momentum around the world, well-being is now known to be a significant factor influencing quality of life, health, and human performance. This course explores the essence of well-being and its relevance to everyday living. The course also broadens students' perspective by exploring well-being within cultural and global contexts. Students will be given multiple opportunities to examine institutional and cultural influences on individual and societal well-being as well as the global forces influencing the development and use of the human experience of well-being across the globe. IIC, IIIB, IC.

**KNH 218. Applied Health Behavior Change. (3)**

Applied Health Behavior Change focuses on the role of theory in shaping research and practice in health promotion and education. This course will provide an overview of social and behavioral science theories that are currently used to: 1) understand health related behaviors; and 2) guide development of interventions designed to prevent, reduce or eliminate major public health problems.

**KNH 221. Social Marketing in Public Health. (3)**

Foundational principles and techniques of social marketing which influences individual and societal health behaviors through a systematic plan.

**KNH 225. Ethics in Sport. (3)**

This course includes an introduction and moderate exploration of ethics in sports. Most of the content is reliant upon the four dominant contemporary ethical-decision making models – consequentialism, deontology, contract theory, and virtue ethics – and their nexus with sports. Topics include foundational ethics, fair play, performance-enhancing techniques, gender equity, intercollegiate sports, the business of sports, social responsibility in sports, violence in sports, and other dilemmas in sports as they are topical.

**KNH 242. Personal Health. (3) (MPF)**

Variable course content based upon students' personal health problems and needs. Includes such topics as mental health, marriage and family, mood modifiers, nutrition, etc. IIC.

Prerequisite: sophomore standing.

**KNH 243. Women's Health Care: Problems and Practices. (3)**

Examines health and medical problems or concerns of women. Current controversial issues and misconceptions revealed in such topics as sexuality, rape, obstetrical and gynecological procedures, cancer detection and treatment, menopause, and psychotherapy. Women's health movement is introduced; health care delivery system scrutinized from the point of view of the female consumer. Cross-listed with WGS.

**KNH 244. Functional Anatomy. (3)**

The course emphasizes aspects of bodily structures and function among skeletal, nervous, and muscle systems. Students will learn the major bony landmarks, the structure and function of the major joints and muscles responsible for controlling human movement.

Co-requisite: KNH 244L.

**KNH 244L. Functional Anatomy Laboratory. (1)**

Practical examination of musculoskeletal structures of the human body.

Co-requisite: KNH 244.

**KNH 245. Issues of Health & Wellness for the Young Child. (3)**

This course examines contemporary issues of health and wellness for children ages three to eight years. Childhood health encompasses physical, intellectual, emotional, social, spiritual, and environmental components. The needs of all children, including those with acute and chronic illness and disability, will be promoted through a child-centered approach in a variety of educational contexts.

**KNH 262. Public Health Education. (3)**

Foundational principles and techniques of health education pedagogy including professional assessments preparing for the Certified Health Education Specialists credential.

**KNH 272. Contemporary Perspectives on Leadership in Sport Contexts. (3)**

Examination of contemporary theories of leadership as they apply to sport settings and consideration of the sociopolitical and socioenvironmental factors that may affect leadership effectiveness in the sport domain.

**KNH 274. Critical Perspectives on the Body. (3)**

Explores the ways in which the body is culturally created and shaped by socio-political concerns. The fields of exercise science, athletic training, health, nutrition, physical education, and sport will provide contexts to examine ideological influences on the body including those related to gender, race, class, ability, age, and sexuality.

**KNH 276. Current Issues in Leisure and Sport. (3) (MPF)**

This course engages students in a critical examination of leisure as negotiated practices and experiences. Issues of globalization, sustainability, social equality and social justice are explored and provide a context for students to reflect on their leisure and inform their future professional practice. IIC. CAS-C.

**KNH 277. Independent Studies. (0-5)****KNH 279. African Americans in Sport. (3) (MPF)**

Socio-historical analysis of participation of African Americans in sport and society, and examination of the role sport has played in African Americans' integration into the larger society. Investigates the way the image of African Americans has been constructed and maintained through sporting practices. Sociological theories and concepts used to examine the impact of historical events, such as Reconstruction, black migration, and World Wars, on African American involvement in sport and other institutions. IC, IIC. CAS-C.

Cross-listed with BWS/SOC.

**KNH 284. Emergency Care in Athletic Training. (2)**

Recognition, immediate care and emergency management of common athletic injuries and illnesses.

Prerequisite: KNH 182.

Co-requisite: KNH 183.

**KNH 285. Evaluation and Assessment of Athletic Injuries to Neck, Head and Torso. (3)**

Specific assessment and evaluation techniques for dealing with athletic injuries and conditions to the neck, head, and torso. Common injury mechanisms and specific test for orthopedic injuries. Injury recognition, evaluation, and referral will be emphasized throughout the course. Co-requisite: KNH 285L

Prerequisites: KNH 183, 183L, and 244.

**KNH 285L. Evaluation and Assessment of Athletic Injuries to the Neck, Head, and Torso Laboratory. (1)**

Sessions will provide students with opportunities to explore, practice, and master a variety of evaluation and assessment techniques under direct supervision of the course instructor.

Prerequisites: KNH 183, 183L, and 244.

Co-requisite: KNH 285.

**KNH 286A. Practicum in Athletic Training I. (1)**

Athletic training major course designed to develop clinical competencies in a directed progressive manner.

Prerequisites: KNH 182 and KNH 183.

**KNH 286B. Practicum in Athletic Training II. (1)**

Athletic training major course designed to develop clinical competencies in a directed progressive manner.

Prerequisite: KNH 286A.

**KNH 286C. Practicum in Athletic Training III. (1)**

Athletic training major course designed to develop clinical competencies in a directed progressive manner.

Prerequisite: KNH 286B.

**KNH 286D. Practicum in Athletic Training IV. (1)**

Athletic training major course designed to develop clinical competencies in a directed progressive manner.

Prerequisite: KNH 286C.

**KNH 286E. Practicum in Athletic Training V. (1)**

Didactic and psychomotor skill instruction of competencies and evaluation of proficiency skill in Athletic Training, which includes advanced athletic training room observation. Emphasis will be based on principles of the analytical skills used in the operational and administrative aspects of the various Athletic Training settings. Development of a professional vita and interviewing skills will also be highlighted.

Prerequisite: KNH 286D, KNH 383.

**KNH 286F. Practicum in Athletic Training VI. (1)**

Didactic and psychomotor skill instruction of competencies and evaluation of proficiency skill in Athletic Training, which includes advanced athletic training room observation. Emphasis will be based on principles of the analytical skills used in the management of non-orthopaedic clinical pathology and special interest intervention. Preparation for the various segments of the BOC Certification Examination will also be highlighted.

Prerequisite: KNH 286E, KNH 484.

**KNH 287. Evaluation & Assessment of Athletic Injuries to Extremities. (3)**

Specific assessment and evaluation techniques for dealing with athletic injuries and conditions to the extremities. Common injury mechanisms and specific tests for orthopedic injuries to joints throughout the body. Injury recognition, evaluation and referral will be emphasized throughout the course.

Prerequisite: KNH 183, KNH 183L, KNH 244.

Co-requisite: KNH287L.

**KNH 287L. Evaluation and Assessment of Athletic Injuries to the Extremities, Laboratory. (1)**

A laboratory course, to be taken concurrently with the Evaluation of Athletic Injuries, KNH 287 (3 credit hours). Sessions will provide students with opportunities to explore, practice and master a variety of evaluation and assessment techniques under the direct supervision of the course instructor.

Prerequisite: KNH 183, 183L, 244 and 244L.

**KNH 288. Therapeutic Modalities. (3)**

A comprehensive study of the use of therapeutic agents for the treatment of athletic injuries. Emphasis will be placed upon the indications, contraindications, precautions, and physiological effects of electrical stimulation, ultrasound, cryokinetics, and pharmacology.

**KNH 289. Therapeutic Exercise. (3)**

A comprehensive study of the application of manual therapy, neuromuscular re-education, movement and exercise as each relates to the varied and detailed goals of rehabilitation and re-conditioning for injured physically active individuals. Emphasis on pathologies and their relationship to therapeutic rehabilitation.

**KNH 293. Fitness and Conditioning. (3)**

Analysis of training principles and conditioning strategies for individuals of all ages. Differences between sport-specific strategies and those for health-related fitness are emphasized.

**KNH 294. Games and Sport. (3)**

Focuses on educational progressions for games and sports with a focus on developing appropriate curriculum for grades three to 12.

**KNH 295. Research and Evaluation Methods. (3)**

Techniques needed to understand and evaluate research within social work and family studies are explained. Quantitative and qualitative approaches to gathering and interpreting data are addressed. Cross-listed with FSW 295.

**KNH 303. Food Systems Management. (3)**

Organization and management of food systems: study of the functions of management including human and physical resources, food service design and layout, production and fiscal controls, computer usage and labor guidelines. Prerequisites: KNH 102, KNH 103, KNH 104 and KNH 203,

**KNH 304. Advanced Nutrition. (3)**

This course is the study of normal nutrition and physiologic function in the human body with emphasis on interpretation and use of dietary research and data.

Prerequisites: KNH 102, CHM 141, and CHM 144.

**KNH 313. Sport Economics and Finance. (3)**

This course provides a comprehensive synopsis of the application of economics and financial management used in the sport organization decision-making context from both a macro and micro level.

**KNH 321. National and Global Health Policy. (3)**

National and Global Health Policy provides students with an overview of the U.S. health care system, its components, and the policy challenges created by its organization. The course focuses on the major health policy institutions (nationally and globally) and important issues that cut across institutions, including private insurers and the federal/state financing programs. The course will also address mental health issues, disparities in access to care, the quality of care, structure of the delivery system, the challenges of long-term care and the aging of the population, including the drivers of cost growth.

**KNH 329. Psychological Perspectives on Health. (3)**

Examines psychological factors involved in health. Topics include appraisal of information concerning risks to health, effects of social comparison on the experience of illness, control processes and coping with illness, emotional and cognitive factors associated with physiological responses to stress, psychosocial factors that moderate stress, including social relationships, personality, and gender, and the processes involved in attitude and behavioral change with respect to health issues.

**KNH 336. Coaching Techniques and Tactics. (2)**

Detailed study of sport fundamentals and teaching and coaching techniques.

**KNH 337. Foundations and Fitness Training for Coaches. (3)**

Overview of basic foundations of coaching applications in coaching philosophy, sport science, and sport management with in-depth analysis of sport physiology resulting in American Sport Education Program certification.

**KNH 338. Psychosocial Aspects of Coaching. (3)**

In-depth analysis of theory and application techniques in sport psychology to provide understanding of appropriate coaching behavior and resulting in American Sport Education Program certification.

**KNH 340. Internship. (0-20)****KNH 362. Public Health Communication. (3)**

Describes the foundations of professional development in health promotion through multiple perspectives: health education, health communication, health science, and health behavior. Principles of design inform the diverse role of health promoters working within an ecological framework. Applications of models and theories are practiced in personal, national, and international contexts. Prerequisite: Junior standing.

**KNH 375. Psychological Perspectives in Sport and Exercise. (3)**

Examines antecedents and consequences of individual and group behavior in sport and exercise settings. Focuses on (a) effects of psychosocial factors on performance and participation in physical activity, and (b) effects of physical activity participation on personal growth and development.

**KNH 377. Independent Studies. (0-5)****KNH 378. Sport, Power and Inequality. (3)**

Focuses on allocation and socialization. Emphasis upon power in social structure as evidenced in class, status, gender, and race relations.

**KNH 381. Biodynamics of Human Performance. (3)**

Mechanics and neurophysiology of movement performance. Co-requisite: KNH 381L.

**KNH 381L. Biodynamics of Human Performance Lab. (1)**

Provide students with opportunities to explore and apply concepts presented in lecture to daily activities and sport movements through hands-on experiments by using some of the measurement equipment used in the field of biomechanics.

Co-requisite: KNH 381.

**KNH 382. Physical Activity & Fitness Assessment. (3)**

Examination of the theory and application of various procedures, methodologies and technologies used to assess heart disease risk, physical activity, the attributes of health-related physical fitness and the administration of clinically-oriented exercise testing procedures in healthy and chronic disease populations.

Prerequisite: KNH 188.

Co-requisite: KNH 382L.

**KNH 382L. Physical Activity & Health-Related Physical Fitness Assessment Laboratory. (1)**

This course is designed to be taken in conjunction with KNH 382 (Lecture); KNH 382L will supplement the theoretical knowledge gained in KNH 382 (Lecture) and enable you to develop the practical skills necessary to: 1. Assess major signs or symptoms of cardiovascular, renal, pulmonary or metabolic diseases and coronary heart disease risk; 2. Risk stratify individuals for appropriate medical clearance procedures and initial physical activity/exercise intensity recommendations; 3. Develop and administer an appropriate/optimal battery of physical activity, health-related physical fitness and functional movement assessment procedures; 4. Administer clinically-oriented exercise testing procedures; and 5. Interpret and discuss all of these assessment data.

Prerequisite: KNH 188.

Co-requisite: KNH 382.

**KNH 383. Operational and Administrative Aspects of Athletic Training. (2)**

Planning, implementation, and supervision of an athletic training program.

Prerequisites: KNH 182 and KNH 183.

**KNH 385. Contemporary Issues in Men's Health. (3)**

Focuses on health and medical problems of men. Examines interrelationships between dimensions of health, gender, morbidity, and mortality in men.

Prerequisite: junior standing.

**KNH 392. Lifetime and Adventure Activities. (3)**

Development of personal skills and teaching techniques for lifetime sports and adventure activities. Activities include tennis, golf, swimming, orienteering, ropes course, and hiking.

**KNH 399C. Food and Culture in Italy. (6)**

The department of Kinesiology and Health offers many fascinating study abroad programs, but there has yet to be one that focuses on food and nutrition. The purpose of this program is to facilitate student learning in nutrition, culture and food science with the focus on all foods found or originating in Italy. Traveling to the sites where certain foods (cheese, wine, and pasta to name a few) have been created and perfected, learning about how they have evolved over time, scientifically and culturally, is the main course objective. Students who have any interest in creating and enjoying food, with focus on science and nutrition, will possibly consider taking this course. This workshop is designed to meet the global perspectives requirements.

**KNH 402. Critical Reflection on Practices in Health and Physical Culture. (3) (MPC)**

Engages collaborative groups of students and faculty in problem-based and/or community Service-Learning initiatives related to health and the culture of physical activity. Students work in teams to critically analyze a social need or problem, and develop a reflective action plan for the community based on that need.

Prerequisite: senior standing.

**KNH 403. Professional Practices in Dietetics. (3)**

Study of principles of nutrition counseling, dietetic education, and ethics. Develops skills to practice dietetics in both clinical and informal settings for culturally diverse clients.

Prerequisites: KNH 102, 104 and junior standing.

**KNH 404. Advanced Food Science. (4)**

Applications of experimental methods in the preparation of food. Comparison and evaluation of food products in relation to quality and use. Research methods are emphasized.

2 Lec. 2 Lab.

Prerequisites: KNH 104 and minimum of 8 hours in chemistry.

**KNH 409/KNH 509. Nutrition for Sports and Fitness. (3)**

Study of the interrelationship between nutrition and physical fitness. Discussion of nutritional aspects for specific sports. Examination of nutrition research related to health enhancement and performance.

Prerequisite: KNH 102.

**KNH 411. Medical Nutrition Therapy I. (3)**

Examination of physiological and metabolic changes in selected states and implications for medical nutrition therapy.

Prerequisites: KNH 102 and a minimum of 6 hours chemistry.

**KNH 413. Medical Nutrition Therapy II. (3)**

In depth study of the principles of nutrition in more complicated disease states of the Neurological System, Respiratory System, Musculoskeletal System, and Neoplastic and Metabolic Disorders.

Prerequisites: KNH 102 and a minimum of 6 hours in chemistry.

Co-requisite: KNH 411.

**KNH 414/KNH 514. Facilities and Event Management in Sport. (3)**

A comprehensive focus on the planning, funding, and operation of sporting events and sport/recreation facilities of all types.

**KNH 416/KNH 516. Sport Marketing. (3)**

Provides an overview of various aspects of sport marketing, or the business of promoting and selling products and services in the sport industry.

**KNH 419A. Health Education Student Teaching. (12)**

Intern teaching in elementary, middle, and/or high school placements for eight weeks each with university support and school-based mentoring.

Prerequisites: senior standing, KNH 245, 415, and 362 and approval of application.

**KNH 420. Field Experience. (1-4; maximum 8)**

Practice in field settings of instructional, diagnostic, prescriptive, and evaluative processes in physical education, health, sport studies, and athletic training.

Prerequisite: departmental permission.

**KNH 420A. Field Experience: Athletic Training. (1-4)****KNH 420G. Field Experience in Dietetics. (1-4)****KNH 421. Senior Seminar in Athletic Training. (2)**

This course will offer students the opportunity to synthesize advanced Athletic Training theory and evidence-based practices, clinical techniques, and foundational behaviors of professional practice necessary for successful practice as an entry-level athletic trainer. Students will also have opportunities to develop an understanding of the necessary requirements for continued professional growth, and appreciate the roles and responsibilities of an athletic trainer. Seminars will include discussions on current topics pertaining to the field of athletic training.

**KNH 424. Public Health Disparities Past and Current. (3)**

Interpretation of the principles and patterns of public health through a historical lens. Thematic comparisons are explored from antiquity to contemporary health practices in human health and disease.

**KNH 432. Nutrition Across the Life Span. (3)**

This course follows the special nutrition needs of an individual throughout the lifespan. This course starts with a review of the specific assays and examinations to determine good nutrition health. The healthy adult is used as a starting point in the lifespan. The course highlights the special needs of pregnancy, infancy, young child, older child, "tweens and teens" and the adult. There are discussions on special considerations such as disordered eating, diabetes, obesity, athletes and performance nutrition. Finally there is nutrition for the aging and aged. Prerequisite: KNH102.

**KNH 438/KNH 538. Principles of Effective Coaching. (3)**

Examination of the research and theory on the effects of different types of coaching behaviors and practices on the performance and psychosocial development of athletes and evaluation of the contextual (socioenvironmental and sociocultural) factors that may affect the coach-athlete interaction across different types of sport settings.

**KNH 441/KNH 541. Environmental Public Health. (3)**

This course is a study of the effects of human-made and natural physical, biological, and chemical agents on human health. The course explores the interaction of population health, demographics, and environmental determinants of disease. The course covers the basic principles of epidemiology, exposure, risk characterization, disease pathogenesis, and diagnostic testing, as well as the public works and regulatory controls used to limit exposure. CAS-D. Cross-listed with IES 441/IES 541.

**KNH 442/KNH 542. Strength Training and Conditioning. (3)**

This course critically examines the physiological principles and current research underlying the design of strength training and conditioning programs aimed at improving health and performance of athletes and non-athletes.

Prerequisite: junior or senior standing.

**KNH 447/KNH 547. Sport Pedagogy for Coaches and Practitioners. (3)**

This course describes models of instruction for coaches and practitioners with the application of technical teaching styles, strategies, and skills in sport. Students will focus on the analysis of the teaching-learning process and the use of appropriate coaching/teaching methods and assessment for all learners.

**KNH 448/KNH 548. Global Sport Perspectives. (3) (MPF)**

This course provides students with a global perspective about sport, including research and professional practice information, across diverse cultural and global contexts. Students are provided opportunities to examine the global forces influencing sport participation, to critically analyze the meaning of sport for others and oneself, and to rethink complex issues and events in sport. IIIB.

**KNH 453/KNH 553. Seminar in Kinesiology and Health. (1-4)**

Advanced study of current developments in technical and organizational aspects of activities within these fields. IC. Prerequisite: junior or graduate standing.

**KNH 4536. Cultural Persp of South Amer. (3)****KNH 455. Comparative Exercise Physiology. (3)**

Study of muscular, cardiovascular and pulmonary systems in a diversity of organisms (vertebrates and invertebrates). Focus on activity and locomotion with emphasis on comparative methods. Prerequisite: BIO 305 or KNH 468/KNH 568; or permission of instructor.

Cross-listed with BIO.

**KNH 462/KNH 562. Public Health Planning and Evaluation. (3)**

Introduction to current models of health education programming and the issues and trends therein. Provides knowledge and skills needed to plan, implement, and evaluate health education programs.

Prerequisite: KNH 362.

**KNH 468/KNH 568. Physiology of Exercise and Physical Activity. (3)**

468 Physiology of Exercise and Physical Activity (3) Critically examines the physiological processes and mechanisms thought to underlie the relationships between physical activity, exercise, and health.

Prerequisite: (BIO 161 or BIO 305) and KNH 188. Co-requisite: KNH 468L/KNH 568L.

**KNH 468L/KNH 568L. Physiology of Exercise and Physical Activity Laboratory. (1)**

468L Physiology of Exercise and Physical Activity Laboratory (1) Allows engagement in fundamental activities and skills involved in exercise physiology assessment. Co-requisite: KNH 468/KNH 568.

Prerequisite: KNH 184, KNH 188 and KNH 244 (for KNH 468/KNH 568), and graduate standing for KNH 568.

**KNH 471/KNH 571. Sport, Leisure, and Aging. (3)**

Critical analysis of leisure and sport as contexts for and practices of adult development and aging.

Prerequisite: junior or graduate standing.

**KNH 472/KNH 572. Sport Administration. (3)**

Provides relevant theoretical and practical application of management strategies and administrative principles within sport organizations.

Offers an overview of organizational structures, functions, and policies of local, regional, national, and international sport governing bodies.

Prerequisite: junior or graduate standing to enroll in this course (or permission of course instructor).

**KNH 473. Children and Youth in Sport. (3)**

Influences on and consequences of the involvements of children and youth in sport.

Prerequisite: junior standing.

**KNH 475/KNH 575. Women, Gender Relations, and Sport. (3)**

Explores the meanings of women's participation in sport and physical activity using sociological, feminist, and cultural studies perspectives. Special consideration given to the ideological significance of sport in U.S. culture and ways in which sporting women accept and challenge contemporary gender relations. IC.

Prerequisite: junior or graduate standing.

Cross-listed with WGS.

**KNH 477. Independent Studies. (0-5)****KNH 480/KNH 580. Mechanics of Musculoskeletal Injury. (3)**

In this class, we learn how various human and animal biological materials such as muscle, tendon, ligament, bone, cartilage, skin and other tissues develop. We then examine how mechanical loading can cause adaptation and injury of these biological materials.

Prerequisite: KNH 244.

**KNH 481. Life at Altitude. (6; maximum 12)**

During this course we will visit Nepal/Tibet and trek through the Himalayas to Mt Everest Base Camp. We will perform physiological tests before and during the workshop to assess the effects of altitude exposure on the body. We will live among a group of Sherpa and learn about their culture including their religion, role of the family, health care education etc. All majors are welcome. No trekking experience necessary.

**KNH 482/KNH 582. Exercise Prescription: Healthy Individuals & Individuals with Chronic Diseases/Disorders. (3)**

In a case-study format, students will develop evidence-based physical activity/exercise recommendations (exercise prescriptions) for healthy individuals. Additionally, this course provides in-depth information about chronic diseases, disorders and disabilities that are commonplace and can be managed with exercise and physical activity. Content is directed towards understanding of specific physiological and pathophysiological characteristics associated with common chronic diseases, disorders and disabilities, its effect on the exercise response and adaptations, the effects of commonly used medications on the exercise response, and unique circumstances associated with specific chronic diseases/disorders. The development of specific physical activity/exercise prescriptions (recommendations & guidance) is directed for individuals with the following: cardiovascular diseases, pulmonary diseases, metabolic diseases, immunological and hematological diseases, orthopedic diseases and disabilities, neuromuscular disorders, and cognitive, psychological, and sensory disorders.

Prerequisite: KNH 382 and KNH 382L.

**KNH 483/KNH 583. Advanced Motor Control and Learning. (3)**

This course provides advanced-level examination of the behavioral neuroscience of human action. Emphasis is placed on understanding the sensorimotor control of stance and locomotion, reflex circuitry and voluntary movement, visually-guided actions and programmed movement, as well as the process by which humans benefit from experience so that future behavior is better adapted to the environment.

Prerequisite: must have had an introductory course in motor control and learning such as KNH 184 or permission of instructor.

**KNH 484. General Medical Conditions and Pharmacology for Athletic Training. (3)**

Techniques of physical appraisal of selected body systems and evaluation techniques for distinguishing normal from abnormal conditions, with special emphasis on the most common medical conditions that affect athletic participation. Exploration of medications commonly encountered in the practice of athletic training, including categories of drugs, their effects and precautions of how various drugs affect the patient response to activity.

Prerequisites: KNH 285 and 287.

**KNH 495. Practicum in Sport Leadership and Management. (3) (MPC)**

This course provides a setting for students to integrate practical field experiences with their sport leadership and management coursework and liberal arts foundation. Students complete a field-based experience in management, coaching, sport journalism, or sport media, and attend intermittent class meetings to discuss and critically analyze these professional practice experiences. Professional development skills are also addressed, such as resume writing, interviewing, professional networking, and professional standards and expectations within the field.

Prerequisite: junior standing or higher.

Co-requisite: KNH 212 and KNH 272.

**KNH 499Q. Life in Iceland and Greenland. (1-3)**

Come visit the land of Fire and Ice. The unique geography of Iceland and Greenland will allow us to see both glaciers and volcanoes. During the day we will participate in dog sledding, snow shoeing, walk through volcano caves and see the spectacular scenery of both Iceland and Greenland. During the night we will check more stars than most people will ever see and hope for a show of the northern lights.

**KNH 553A. Seminar: Health, Physical Education, Recreation, and Athletics. (3)**

Advanced study of current developments in technical and organizational aspects of activities within these fields.

Prerequisite: junior or graduate standing.

**KNH 600. Independent Reading. (1-4)**

Prerequisite: permission of department chair and instructor.

**KNH 610. Internship in Exercise, Health, and Sport Delivery Systems. (1-4)**

Supervised clinical experiences in sport and health agencies coupled with directed readings.

**KNH 611. Behavioral Approaches to Health Promotion and Education. (3)**

Analysis of research and theory in health promotion, especially behavioral approaches to disease prevention.

**KNH 612. Theoretical Foundations of Health Promotion and Education. (3)**

Focuses on the role of theory in shaping research and practice in health promotion and education. Includes a historical perspective to investigate the interaction between health education and applied social sciences.

**KNH 613. Health Communication & Education. (3)**

Introduces health communication theory and processes for different audiences within the social ecological model. Explores evidence-based strategies when educating for health, including design analysis of health literacy and media literacy.

**KNH 620. Research Problems. (1-4)**

Prerequisite: permission of department chair and instructor.

**KNH 621. Research Foundations in Kinesiology and Health. (3)**

Provides foundational knowledge and skills regarding the research process in kinesiology and health, including a critical analysis of research traditions and practices in the field.

**KNH 623. Qualitative Methodological Research Approaches in the Exercise, Health, and Sport Studies Fields. (3)**

Course provides overview of the methodological procedures used by researchers in the exercise, health, and sport studies fields that adhere to an interpretive, qualitatively-based research approach. Course topics include research methods, data collection issues, and basic analysis procedures.

Prerequisites: Graduate Status and KNH 621.

**KNH 632. Psychological Foundations of Sport. (3)**

Examines theory and research related to individual difference factors (e.g., personality, motivation, anxiety, confidence) that affect cognitions, affect, behavior and performance in sport.

**KNH 633. Psychological Interventions in Sport. (3)**

Examines theory, research, and professional practice related to psychological interventions in sport. Focuses on the use of educational psychological interventions to facilitate personal development and performance of athletes by teaching them strategies and techniques to enhance mental skills.

**KNH 634. Social Psychology of Sport and Exercise. (3)**

Examination and analysis of theory and research relating to social psychological factors and group dynamics affecting sport and exercise behavior.

**KNH 635. Strategic Management of Sport Organizations. (3)**

This course provides students with specific knowledge and skills related to the strategic management of sport organizations. The primary focus of this class is the development of strategy within organizations; this includes perspectives and materials deriving from a variety of subdisciplines related to strategic thinking and decision-making, such as behavioral economics, organizational theory, game theory, and marketing. By integrating the literatures from outside of sport with sport-specific theory, students will assemble short and long-term strategic plans for organizations within the sport industry. Ultimately, this course will provide students the theoretical and analytical tools to both design strategic business plans for sport organizations and to evaluate existing strategies for sport organizations.

**KNH 640. Internship. (0-12; maximum 12)****KNH 654. Physical Activity Motivation. (3)**

This broad survey course examines physical activity from primarily a social psychological perspective. The focus is on the role physical activity plays in people's health and wellbeing as well as the psychological and social factors that influence their physical activity participation. The philosophy and effectiveness of varying types of physical activity interventions, programs, and strategies are also examined.

**KNH 668. Advanced Physiology and Biophysics of Human Activity. (3)**

Advanced level study of the physiological responses and adaptations to physical activity. Heavy emphasis is placed on the nature of control mechanisms and their integration across organ systems. Prerequisite: KNH 468/KNH 568 or its equivalent.

**KNH 673. Developmental Perspectives on Youth Sport Participation. (3)**

A multidisciplinary developmental analysis of children and youth that focuses on the description and explanation of biological, psychological, and social aspects that relate to sport participation.

**KNH 676. Cultural Studies of Sport. (3)**

Critically interrogates US sport as an important socio-cultural institution and as a site for the production, reproduction and contestation of gender, race and class ideologies.

**KNH 677. Independent Studies. (0-5)****KNH 685. Exercise, Age, and Health. (3)**

Examination of research on aspects of the relationship among exercise, health and selected disease processes.

**KNH 688. Advanced Biomechanics. (3)**

Examines biomechanical concepts and applications using math, physics, and physiology. Focuses on the application of force to the human body and how the human body adapts/ reacts to these forces. Involves use of force plates, electromyography, and computer based motion analysis.

**KNH 699H. Life in Iceland & Greenland. (1)**

Come visit the land of Fire and Ice. The unique geography of Iceland and Greenland will allow us to see both glaciers and volcanoes. During the day we will participate in dog sledding, snow shoeing, walk through volcano caves and see the spectacular scenery of both Iceland and Greenland. During the night we will check more stars than most people will ever see and hope for a show of the northern lights. This 9 day trip is the perfect way to spend spring break.

**KNH 700. Thesis, M.A.. (1-10; maximum 10)****KNH 704. Non-Thesis Project. (0-12; maximum 12)**

## Korean (KOR)

**KOR 101. Beginning Korean I. (4)**

Introductory course designed to prepare learners to speak, comprehend, read and write basic Korean. It begins with an introduction to the Korean language and culture. By the end of the semester students will be able to produce simple questions and statements involving learned materials.

**KOR 102. Beginning Korean 2. (4)**

Introductory course designed to prepare learners to speak, comprehend, read and write basic Korean. Cultural material will be integrated with language practice activities. Students will learn to talk about themselves and handle most basic social situations. Prerequisite: KOR 101 or permission of instructor.

**KOR 177. Independent Studies. (0-5)****KOR 201. Intermediate Korean 1. (3)**

Focuses on vocabulary building and integrating the five language skills, i.e., listening, speaking, reading, writing, and culture. Students will learn to communicate in most daily life situations, using appropriate speech styles.

Prerequisite: KOR 102 or permission of instructor.

**KOR 202. Intermediate Korean 2. (3)**

Class discussions will center on a variety of situations that one is likely to encounter while living in Korea. The course is taught mainly in Korean. CAS-A.

Prerequisite: KOR 201 or permission of instructor.

**KOR 277. Independent Studies. (0-5)****KOR 377. Independent Studies. (0-5)****KOR 477. Independent Studies. (0-5)**

## Latin American Studies (LAS)

**LAS 177. Independent Studies. (0-5)****LAS 204. Brazilian Culture Through Popular Music. (3) (MPF)**

Through music, lyrics and rhythms this course raises questions about history, national identity, social, religious, and ethnic diversity in Brazil. IIA, IIB, IIIB. CAS-B.

Cross-listed with BWS/FST/MUS/POR.

**LAS 207. Latin America before 1910. (3) (MPF)**

Focuses on Latin America and the Caribbean before the twentieth century through broad historical survey emphasizing cultural, geographical, political, and social developments in colonial and pre-colonial Americas. IIC. CAS-C.

**LAS 208. Introduction to Latin America. (3) (MPF, MPT)**

An interdisciplinary introduction to contemporary Latin America and the Caribbean through anthropology, art, geography, environment, film, history, literature, music, politics, sports and others. IC, IIC, IIIB. CAS-C.

Cross-listed with ATH 206.

**LAS 211. Writing with Purpose: Interdisciplinary Inquiry and Communication. (3)**

This is an intermediate level course which enables students to investigate and discuss interdisciplinary practices of knowledge creation and dissemination. Students will practice a variety of writing and other communication strategies necessary for the effective dissemination of ideas to interdisciplinary audiences and the general public, and can expect to gain experience in working with a wide spectrum of interdisciplinary research, tools and methods while engaging intellectually in interdisciplinary modes of thinking, reading, listening, and speaking. ADVW.

Cross-listed with AAA/AMS/BWS/WGS.

**LAS 217. Modern Latin American History. (3)**

Introduction to the major themes shaping Latin American history since independence, including US foreign policy; economic development; the discourses of race, ethnicity, class, and gender; cultural elements that either unite or distinguish Latin American countries.

Cross-listed with HST.

**LAS 243. History of the Atlantic Slave Trade, 1400s to 1800s. (3)**

Development of European slaving activity in the African continent in the 15th through 19th centuries. Emphasis on the activities of Portuguese, Spanish, English, French and Dutch slavers, including the Middle Passage and also the less-studied slave trade in the Mediterranean and Indian Ocean. Identifies the economic forces, as well as the social consequences, of the ongoing slave trade.

Cross-listed with BWS/HST.

**LAS 254. Latino/a Literature and the Americas. (3) (MPF)**

Study of literature by Cuban American, Puerto Rican, Central American, and Chicano/a writers, with an emphasis on political, social, and economic conflicts in the Americas. Specific study of writing in relation to ethnic identity formation and transnational communities. IC, IIB, IIIB. CAS-B-LIT.

Cross-listed with ENG 254.

**LAS 260. Latin America in the United States. (3) (MPF)**

Interdisciplinary examination of historical, social, economic, and cultural forces that have shaped the experience of peoples of Latin, Hispanic, Latino/a background in the United States. IC, IIB, IIIB. CAS-B.

Cross-listed with HST.

**LAS 277. Independent Studies. (0-5)****LAS 300. Special Topics. (1-3)**

Topics vary.

**LAS 315. Latin American Diaspora: Communities, Conditions and Issues. (3)**

Study realities and challenges of Hispanic-Latino communities in Southwest Ohio in the context of transnational connections that link communities across the Americas. Incorporates Service-Learning projects and community based research. IC.

Cross-listed with AMS.

**LAS 317. The Arts of Colonial Latin America. (3)**

Explores the art of Iberia and Latin America, with a particular emphasis on the latter, from 1492 to 1810. Topics to be examined include conquest, assimilation, integration, and resistance as it informed the predominantly religious art and urban fabric of Latin America.

Cross-listed with ART.

**LAS 319. Revolution in Latin America. (3)**

History of modern Latin America through the experience of revolution in the 20th century. Focus on diverse expressions of political and social change with emphasis on Cuba, Mexico, Nicaragua, and Brazil. Cross-listed with HST.

**LAS 325. Identity, Race, Gender, Class. (3) (MPT)**

Develops conceptual tools and critical perspectives that enable students to better understand and analyze the processes through which identities are constructed and experienced. Learning activities facilitate analysis of individual identities as experienced through the life cycle and across diverse cultural and subcultural contexts, and build a systematic understanding of the processes and dynamics through which identities and identity groups develop and interact. IC. CAS-C.

Cross-listed with ATH/BWS/WGS.

**LAS 332. Latin American Popular Culture. (3)**

Interprets and contextualizes elements of Latino and Latin American popular culture (art, music, food, and celebrity) in light of academic readings in Spanish and English that explore issues of hybridity, representation, commodification, and the quest for authenticity. Conducted in Spanish and English.

Prerequisite: SPN 311 or permission of instructor.

Cross-listed with SPN.

**LAS 377. Independent Studies. (0-5)****LAS 385. Race, Science, and Disease in the Americas. (3)**

Surveys a variety of debates over race and disease since the European overseas expansion to the Americas, particularly in those regions that developed plantation-based agriculture. Begins with the medical and scientific construction of ideas about race from the conquest to the eighteenth century. Places the development of racial theories of sickness and health in a broad social and political context, and, in particular, explains the medical salience of race in the settings of slavery and colonialism. Discussions will focus primarily on Latin America, the Caribbean, and the United States, but will also explore the making of knowledge about race in global setting.

Cross-listed with BWS/HST.

**LAS 390. Special Topics. (3)**

Topics vary.

**LAS 410. Current Latin American Issues. (1-3) (MPC)**

Apply academic knowledge of Latin America to contemporary issues by reading works by scholars, authors and artists; attending lectures and performances; and engaging in critical analysis and debate.

**LAS 412/LAS 512. Tropical Ecosystems of Costa Rica. (5)**

Introduces students to the structure and function of neotropical ecosystems, as well as to geological, biological, cultural, and economic forces affecting biodiversity in the tropics. This course is taught on-site in Costa Rica. There are additional costs beyond tuition.

Cross-listed with GLG/IES.

**LAS 413. Tropical Marine Ecology. (5) (MPT)**

Investigates aquatic systems (estuaries, mangroves, coral reefs, seagrass beds, lagoons, beaches, intertidal zones, taxonomy of vertebrates and invertebrates of coral reefs, lagoons and tidal flats) paleobiology and global climate change (paleo-reconstruction of past lagoon environments, fossil coral reefs, and land use). Student research questions concerning biological and physical analyses of a select marine habitat are required. The course is taught on-site in the Florida Keys and the Bahamas. There are additional costs beyond tuition.

Cross-listed with GEO/GLG 413/GLG 513 and IES 423/IES 523.

**LAS 424/LAS 524. Seminar on Modern Architecture in Latin America. (3)**

The course combines general background readings on the subject with specific readings on a selected group of countries, architects and projects based on a thematic organization. The faculty presents introductory lectures, while class members will present the results of individual and team research and analysis as assigned. Some of the analysis will be graphical, some will be written; all presentations will require illustrations of the work(s) in question.

Cross-listed with ARC.

**LAS 477. Independent Studies. (0-5)****LAS 677. Independent Studies. (0-5)**

## Latin Language & Literature (LAT)

**Note:** Students who have previously taken Latin must take the placement test before enrolling in any Latin course. Once placed, a student may not skip a course in the sequence leading to [LAT 202](#).

**LAT 101. Beginning Latin. (4)**

Essentials of Latin language including basic principles of grammar, acquisition of a basic vocabulary, and practice in reading and writing.

**LAT 102. Beginning Latin. (4)**

Continuation of LAT 101 culminating in readings selected from appropriate Latin authors.

Prerequisite: completion of LAT 101 or equivalent.

**LAT 111. Review Latin. (4)**

This course is designed as a rapid review of Latin that is equivalent to LAT 101 and LAT 102. The primary goal of this course is to review Latin forms, vocabulary, grammar and syntax to prepare for LAT 201 and LAT 202. It covers the basic vocabulary, grammar, and syntax of Latin, in order to prepare students to read more complex passages transitioning to ancient Latin authors. Credit earned in LAT 101 and/or 102 is considered duplication of credit.

Prerequisite: two years of high school Latin.

**LAT 121. Review Latin. (4)**

Intensive review of basic Latin grammar with practice in reading and translation. The reading in the course prepares students for Latin 202. Recommended for those whose previous preparation is insufficient. Full credit toward graduation will not be awarded for LAT 121 if student earned credit in LAT 101, 102, and/or 201.

Prerequisite: at least two years of high school Latin or equivalent.

**LAT 177. Independent Studies. (0-5)****LAT 201. Intermediate Latin. (3)**

Review of essentials of Latin grammar with immediate emphasis on reading. Readings selected from major figures in Latin poetry.

Prerequisite: LAT 102 or two years of high school Latin.

**LAT 202. Representative Latin Authors. (3)**

Reading and analysis of selections from such authors as Vergil and Cicero. CAS-B-LIT or CAS-A (not both).

Prerequisite: LAT 121 or 201 or three years of high school Latin.

**LAT 277. Independent Studies. (0-5)****LAT 310. Special Topics in Latin Literature. (3; maximum 12)**

Study of selected authors or special topics in Latin literature (may be repeated when content changes). CAS-B-LIT.

Prerequisite: LAT 202.

**LAT 377. Independent Studies. (0-5)****LAT 410. Latin Seminar. (3; maximum 12)**

Intensive reading of a selected author or in a specific topic. Advanced reading level and comprehension are assumed. Individual research and reports required. Specific study of current scholarship. CAS-B-LIT.

Prerequisite: one semester of Latin at 300 level or permission of instructor.

**LAT 477. Independent Studies. (0-5)****LAT 480. Independent Reading for Departmental Honors. (3-6)**

Reading centered upon a major topic of Roman literature and thought, normally culminating in an independent essay.

Prerequisite: normally completion of LAT 201 through at least one semester at 400 level.

**LAT 630. Graduate Work in the Latin Language. (1-4; maximum 12)**

Graduate standing and permission of department chair and instructor required.

## Liberal Studies (LST)

**LST 302. Principles of Liberal Studies. (3)**

Focuses on exploring the nature and purpose of a liberal studies education and gaining an in-depth understanding of key liberal studies skills and competencies. Through experiential learning, examine how liberal studies skills function in the professional world.

Prerequisite: completion of 60 credit hours to declare the degree and take LST courses.

**LST 402. Capstone in Liberal Studies. (3) (MPC)**

Focuses on the application of knowledge from students cognate areas to develop solutions to real-world problems. As part of the Miami Plan, it emphasizes sharing of ideas, synthesis, and critical, informed action and reflection, and includes student initiative in defining and investigating problems. Culminates in an applied research project and oral presentation.

Prerequisite: 96 hours registered or earned (senior standing).

## Luxembourg (LUX)

**LUX 277. Independent Studies. (0-5)****LUX 325. Study Tour Component. (1)**

The required study tour 1-credit course provides the field trip component attached to required Base Courses of the Dolibois European Center. It is each time linked to a specific course.

**LUX 335. European Experience. (1)**

The European Experience course is designed to present and self-assess the learning experience of students attending the program of Miami University John E. Dolibois European Center through a portfolio of experiences and accomplishments, whether direct (such as participating to lectures or organizing events) or indirect (such as publishing wikis or blog posts). It emphasizes engagement in the community, reflection on personal growth, and appreciation for diverse perspectives during a study abroad experience. It helps students develop a personal narrative on an experience that is both individual and collective. The purpose of the European Experience course is a systematic self assessment of a study abroad experience and is intended to help student formalize their time abroad in a narrative that will develop their awareness of the outcomes and benefits of their experience abroad.

**LUX 340. Internship. (0-20)****LUX 345. Luxembourg: European Context. (1)**

MUDEC's experience in Luxembourg is unanimously praised by students. However, MUDEC offers no course that deepens the student experience through an academic understanding of the context in which they are living. Miami University chose the Grand Duchy as the site of its European Center because of its geographic location in the heart of Western Europe. The history and culture of the Grand Duchy are closely linked to that of Europe, from ancient, medieval and modern times to the present day. In the contemporary world, Luxembourg, despite its small size (999 square miles) and a population of only 540,000, plays an important role in European politics. This wider European dimension, both past and present, forms the central focus of this course.

**LUX 377. Independent Studies. (0-5)**

## Management (MGT)

**MGT 102. CBL Buck Leadership Lab I: Individual Leadership Development. (1)**

This course is only open to students accepted into the Isaac & Oxley Center for Business Leadership. This lab allows students in the early stages of their CBL experience to explore their own leadership approach through professional, validated leadership assessments (e.g. Strengthsfinder 2.0, Emotional Intelligence), discuss the importance of personal values in ethical leadership, and ultimately develop an understanding of their own authentic leadership. Prerequisite: acceptance into The Isaac and Oxley Center for Business Leadership.

**MGT 103. CBL Buck Leadership Lab II: Team Leadership Development. (1)**

This course is limited to those accepted into the Isaac & Oxley Center for Business Leadership. This lab allows students in the early stages of their CBL experience to explore the dynamics of team leadership through hands on simulations, case discussion, and team-based challenges. Students will explore the value they bring to a team context, how to leverage the talents of teammates, and how to build emotionally intelligent work teams.

Prerequisite: acceptance into The Isaac and Oxley Center for Business Leadership.

**MGT 111. Introduction to Business. (3) (MPF)**

Study of relationships between business and its environment, social responsibilities of business, and business management. Not open to business students. IIC.

**MGT 177. Independent Studies. (0-5)****MGT 211. Introduction to Management for Non-business Majors. (3)**

An introduction to the practice of management, including the topics of managing culture, ethics, and diversity. The course examines decision making, competition, strategy, managing change, organizational structures, and behavioral topics of leadership, motivation, and team management.

**MGT 277. Independent Studies. (0-5)****MGT 291. Introduction to Management & Leadership. (3) (MPT)**

Introduction to the importance of investing in human capital. Students are introduced to the theories and practices of how to attract, develop, and retain a competitive workforce. The goal of this course is to help students better understand, predict, and manage themselves and their work relations with others and with organizations, and to understand how organizations utilize this knowledge to design competitive management practices. Prerequisite: sophomore standing.

**MGT 302. Introduction to Operations and Supply Chain Management. (3) (MPT)**

Identification, understanding, analysis, application, and measurement of basic issues encountered in the creation of goods and services for a given firm as well as the strategic and tactical relationships between firms that participate in an effective supply chain. Problems examined through use of cases, lectures, discussions, and computer-based approaches such as simulation, spreadsheets, and problem-solving software.

Prerequisite: ISA 205, STA/ISA 125, STA 261, STA 301 or STA 368, proficiency in spreadsheet use, or permission of instructor.

**MGT 303. Human Resource Management. (3)**

Introduction to concepts, issues, and practices of modern human resource management and their impact on organizational effectiveness. Students develop a critical appreciation of the role human resource management plays in the dynamic environment in which organizations operate. Topics covered include human resource planning, recruitment, selection, training and career development, performance appraisal, compensation and benefits, employee and labor relations, and employee rights.

**MGT 304. Cross Cultural Management. (3)**

This course is designed to familiarize students with the major concepts used in managing people in diverse environments, both internationally and domestically. In addition to learning about a variety of cultures, students can become more adept at thinking about issues from multiple perspectives. IC. Prerequisite: MGT 291 or MGT 211.

**MGT 340. Internship. (0-20)**

Available to Farmer School of Business (FSB) majors and minors. Available for 0 credit hour during spring, summer and fall terms. Available for 1 credit hour during summer terms only. For one hour of credit, student must secure a sponsoring FSB faculty member within his/her major or minor to supervise the internship and accompanying required internship reflection paper. MGT 340 is not available during winter term. Students are to work through their respective academic departments to enroll in the course. Credit/no credit only. Note: FSB students may earn a maximum 2 credit hours toward graduation for BLS/BUS/ECO/ESP/FIN/ISA/MGT/MKT 340.

Prerequisite: 55 earned hours and permission of department.

**MGT 377. Independent Studies. (0-5)****MGT 402/MGT 502. Employment Law. (3) (MPT)**

Examines the growing body of law that governs the employment relationship. Students learn the rights and responsibilities of employers and employees by reading and discussing judicial decisions. Aims at improving students' ability to analyze legal questions and to identify the applications of the law for the practice of human resource management. IC.

**MGT 404/MGT 504. Compensation Management. (3)**

Explores design and evaluation of compensation programs that attract, retain, and motivate competent employees. Particular emphasis on job evaluation, performance appraisal, incentive wage systems, supplementary benefits, and international compensation. Prerequisite: MGT 303 or permission of instructor.

**MGT 405/MGT 505. Negotiations and Conflict Management. (3)**

Examines collective bargaining, employee involvement, organizational dispute resolution systems, and other means of ensuring participation and fair treatment in the workplace. Emphasis is given to understanding and practicing techniques for managing workplace conflicts, including mediation, negotiation, and arbitration. Prerequisite: MGT 303 or permission of instructor.

**MGT 406. Talent Acquisition and Development. (3)**

Provides an in-depth exploration of the components of successful talent acquisition and development programs including demand and organizational needs forecasting, internal and external recruitment strategies, selection tools, training program design, and other employee development strategies. Emphasizes creating comprehensive talent acquisition and development programs that align with organizational goals, mission, and strategy. Prerequisites: MGT 291 or MGT 211; and MGT 303.

**MGT 414. Employee Engagement and Motivation. (3) (MPT)**

In-depth examination of concepts, principles, and theories of motivation and their relationship to work behavior and work contexts. Historical and current perspectives are explored, emphasizing integration and application. Prerequisite: MGT 291 or MGT 211.

**MGT 415. Leadership and Learning. (3) (MPT)**

Investigates current leadership thinking and behavior in formal organizations as well as its relationship to power and decision-making in those settings. Emphasis on exploring theory, research, and applications of leadership in order to develop personal guidelines for exercising leadership in organizations. Impact of power and dependence of both leaders and followers is investigated as well as the particular relationship of leadership to decision-making in organizations. Prerequisite: MGT 291 or MGT 211.

**MGT 416. Leading Organizational Change. (3)**

Offers in-depth study of behavioral topics critical for success of contemporary organizations, including organizational theory, organizational design, organizational change and development, organizational culture, job stress, organizational conflict, and group dynamics. Extensive in-depth readings into selected topics and a major project form the basis of the course. Prerequisite: MGT 291 or MGT 211.

**MGT 431/MGT 531. Logistics Management. (3)**

Develops a framework for understanding all the firm's movement-storage activities necessary to provide products to customers where and when they are desired. Transportation, warehousing, inventory, order-processing, and handling activities are investigated in terms of their impact on customer service and total distribution cost. Prerequisite: MGT 302.

**MGT 432. Global Strategic Sourcing. (3)**

Provides an overview of the corporate sourcing function. Emphasis is on outsourcing analysis, sourcing strategies and supplier selection, strategic cost analysis, negotiations and assessments of supplier and sourcing department performance. Prerequisite: MGT 302.

**MGT 451/MGT 551. Operations Planning and Scheduling. (3)**

Problems and solution methodologies associated with planning and scheduling of operations in a production or service environment. Graduate credit not available for Farmer Business School students. Prerequisite: MGT 302 or equivalent or permission of instructor.

**MGT 453/MGT 553. Quality Management Systems. (3) (MPT)**

Study of techniques used to improve productivity of organizational resources. Topics include employee involvement, total quality management, group technology, cellular manufacturing, supplier development, and preventive maintenance. Prerequisite: MGT 302 or equivalent or permission of instructor.

**MGT 474. Human Capital Consulting. (3)**

Students will learn how to measure various aspects of an organization's human capital using a variety of tools enabling them to quantify the effect of human capital on organizational performance. Prerequisites: MGT 291, MGT 303.

**MGT 477. Independent Studies. (0-5)****MGT 490/MGT 590. Contemporary Issues. (1-3; maximum 9)**

Issues oriented seminar for seniors or graduate students; focuses on a significant contemporary topic in the management field. Prerequisite: senior or graduate standing and permission of instructor.

**MGT 495. Executive Decision Making and Strategy. (3) (MPC)**

Provides opportunity for students, at or near the conclusion of their undergraduate business curriculum, to integrate the concepts learned in the core courses and to bring together various disciplines to bear on the strategic issues facing any organization. Business problems are examined that simultaneously involve several functional areas, employ analysis methodologies from a variety of courses in marketing, organizational behavior, finance, accounting, statistics, law, operations and economics, and involve consequences that effect the entire organization. Prerequisites: FIN 301, MGT 291, 302, MKT 291, senior standing, or permission of instructor.

**MGT 498. Supply Chain Management. (3)**

Provides students with broad understanding of supply chain management. Covers primary activities required to manage supply chains effectively, how members of the supply chain are horizontally integrated, and processes for assessing performance and impact of supply chain management activities. Focuses on relationships between supply chain entities and behavioral issues that influence management of those issues. Students learn integrative tools for analyzing and evaluating alternative courses of action regarding supply chain management activities and functions. Prerequisites: MGT 432 and MGT 431/MGT 531.

**MGT 627. Supply Chain and Operations Management. (3)**

' Broad study of production system that is part of all manufacturing and service organizations. Examines, in a variety of organizational settings, the process design, facilities deployment, materials management, quality control problems, and supply chain management.

**MGT 644. Leadership, Change & Cross-Cultural Management. (3)**

Leadership, change, and cross-cultural management are pervasive factors for success in a complex global environment. This course addresses the interface among these three bodies of knowledge and practice because they play critical and related roles in managing a firm's strategic advantages.

Prerequisite: MBA standing.

**MGT 654. Strategic Human Resource Management. (3)**

Organizational leaders have responsibility for setting and implementing human resource strategy, which needs to be aligned with organizational strategy. Proper alignment is key to establishing a sustainable competitive advantage.

Prerequisite: MBA standing.

**MGT 677. Independent Studies. (0-5)****MGT 681. Special Studies in Management. (1-3; maximum 6)**

Intensive reading or research in a selected field of advanced management.

Prerequisite: graduate standing and permission of instructor.

## Marketing (MKT)

**MKT 177. Independent Studies. (0-5)****MKT 211. Business Concepts in Customer Engagement. (3)**

A business concepts course for students in majors and minors outside of the Farmer School of Business. The course content has been specifically designed to focus on critical areas of the customers' experiences in and with organizations. Concepts from courses in Consumer Behavior, Service Delivery, and Personal Selling will be used to examine the Customer Engagement Process. The course will be taught in three modules.

**MKT 277. Independent Studies. (0-5)****MKT 291. Principles of Marketing. (3) (MPT)**

Factors involved in the management of the marketing function relative to product development, promotion, pricing, physical distribution, and determination of marketing objectives within the framework of the marketing system and in domestic and international markets.

Prerequisite or Co-requisite: ECO 201.

**MKT 292. Careers In Marketing. (1)**

Survey course dealing with possible careers in marketing. Focus is on self assessment, building a resume portfolio and career objectives. Over half of the classes will involve practitioner panels and discussions. Credit/No Credit only.

Co-requisite: MKT 291.

**MKT 301. Strategic Thinking and Decision-Making in Marketing. (3)**

Strong strategic thinking skills are needed to effectively set goals, analyze the marketing and external environment, anticipate the unexpected, and develop long-range plans. This course will enhance students' ability to think strategically, use creative thinking and processes to approach marketing problems and opportunities from multiple perspectives, employ strategic decision-making frameworks, tools, and capabilities to solve complex marketing challenges, and communicate strategic decisions and rationale to stakeholders.

Prerequisite: MKT 291.

**MKT 325. Developing Customer Insights. (3) (MPT)**

Successful marketers need to (a) understand their customers' needs, motivations, attitudes, decision-making, and behaviors, and (b) use their understanding to generate insights that drive marketing strategies. This course is designed to help students develop an understanding of the skills, processes, and concepts necessary to generate meaningful and actionable customer insights. Students will gain hands-on experience with insight development techniques and learn to translate generated insights into actionable marketing recommendations.

Prerequisite: MKT 291.

**MKT 335. Analytical Research and Reasoning for Marketers. (3) (MPT)**

Marketing in today's environment with numerous large and real-time data sets requires new analytic skills. This class focuses on analytical research methods utilized by marketers to better understand the markets in which they compete; the categories, competition, channels and consumers that comprise their risks and growth opportunities. Students will be equipped to move at the speed of data availability, address complexity and ambiguities in information, quickly respond with research analyses and develop actionable conclusions with recommendations.

Prerequisites: ISA 225 and MKT 291.

**MKT 340. Internship. (0-20)**

Available to Farmer School of Business (FSB) majors and minors.

Available for 0 credit hour during spring, summer and fall terms.

Available for 1 credit hour during summer terms only. For one hour of credit, student must secure a sponsoring FSB faculty member within his/her major or minor to supervise the internship and accompanying required internship reflection paper. MKT 340 is not available during winter term. Students are to work through their respective academic departments to enroll in the course. Credit/no credit only. Note: FSB students may earn a maximum 2 credit hours toward graduation for BLS/BUS/ECO/ESP/FIN/ISA/MGT/MKT 340.

Prerequisite: 55 earned hours and permission of department.

**MKT 377. Independent Studies. (0-5)****MKT 405. Professional Selling. (3) (MPT)**

A fundamental aspect of business is selling – whether it is an idea, product, service, or point of view. This course focuses on the role of personal selling and customer relationship management in business, including how salespeople carry out their boundary spanning responsibilities to their organization and customers.

Prerequisite: MKT 291.

**MKT 412. Sustainable Marketing Management. (3)**

The goal of this course is to provide an overview of the role of sustainability in marketing strategy. We use the triple bottom line perspective to cast sustainability as the simultaneous pursuit of financial, social/relational, and environmental performance. The course provides an assessment of current efforts to pursue sustainability with a primary focus on the interaction of the marketing organization with the environment. In the process, we investigate the interaction between consumption and the physical environment. We examine specific marketing tactics employed by firms seeking to maximize triple bottom line performance. We subsequently address consumption processes in the household, industrial, services, and transportation sectors of the economy.  
Prerequisite: MKT 291.

**MKT 415. Marketing to Organizations. (3) (MPT)**

Introduces the nature and functions of marketing between businesses and business/government in terms of structure, buyer behavior, processes, supply chain management, information flows and the marketing mix.  
Prerequisite: MKT 291.

**MKT 419/MKT 519. Digital Branding. (3) (MPT)**

Survey course emphasizing a hands-on immersion into ECommerce; studies the impact this technology has on the basics of the marketing mix and effective and efficient marketing strategies. Focuses on applications, innovations, and future direction (not on the technology that enables the Internet and www). Heavy reading, electronic and in-class discussions, and 'surfing' required. Recommended prerequisite: MKT 291.

Cross-listed with IMS.

**MKT 425. Global Marketing. (3)**

This course will provide students with an overview and understanding of global marketing. This involves an analysis of world markets, their respective consumers and environments, and the marketing management required to meet the demands of constantly changing foreign markets.  
Prerequisite: MKT 291.

**MKT 435. Building and Managing Strong Brands. (3) (MPT)**

This course is designed to teach students how to build and manage seamless brand experiences in an increasingly complex media environment. It provides students with conceptual frameworks and specific skills relevant to branding and brand management. Students will learn how to measure brand value, how to manage social media platforms, how to create branding synergistic effects through integration of traditional and digital media, and how to measure and optimize branding efforts.  
Prerequisite: MKT 291.

**MKT 442. Highwire Brand Studio. (4-8) (MPC)**

Multidisciplinary practicum involving students from marketing, graphic design and other relevant majors. Three competing, multidisciplinary student teams work for a semester on an actual client's current brandings and marketing communications challenge. Campaign solutions typically include primary research and market analysis, campaign strategy development and graphic design for advertising and other sales support materials. Incorporates contemporary technology and industry standard materials and research. Expertise and facilities of marketing, graphic design and other relevant majors are fully integrated within each team. Each campaign is formally presented to the client at the end of the semester.

Prerequisite: MKT 435 or permission of instructor.

**MKT 461. Principles of Retailing. (3)**

TS Survey of retail management issues impacting effective last mile customer service in contemporary product and service retailing; includes topics such as retail channels, retail mix, retail market strategy, financial strategy, ethics, location, trading area and site analysis, store design/environment, visual merchandising, merchandise assortments and budgets, and store operations.  
Prerequisite: MKT 291.

**MKT 477. Independent Studies. (0-5)****MKT 490. Emerging Topics in Marketing. (1-4; maximum 6)**

This course focuses on a significant emerging topic in the marketing field. The course itself may take the form of a lecture, seminar, practicum, or individual study depending on the topic.  
Prerequisite: MKT 291 or permission of instructor.

**MKT 490D. Careers in Consulting. (1)**

This class prepares students for careers in consulting. It focuses on the different types of consulting companies and how to prepare and interview for the jobs. Part of the preparation is learning to solve case problems and concentrating on communication and math skills necessary to interview successfully.

**MKT 495. Strategy Works. (4) (MPC)**

This marketing strategy practicum will provide students an opportunity to integrate and apply marketing planning and strategic concepts to real-world problems while developing skills in teamwork, written and oral communication, critical thinking, and quantitative and qualitative analysis.  
Prerequisites: MKT 291, MGT 291 and FIN 301.

**MKT 618. Marketing Management. (3)**

Focuses on business's front lines; the value creation from which all economic activity derives. Address how sellers identify, manage, and meet customer needs and wants through concepts, heuristics, models, and frameworks that help stimulate and manage customer-centric organizations. Leverage a mix of current readings and case analyses to bring cutting edge thinking and applications to life.

**MKT 622. Creativity, Innovation & Problem Solving in Marketing. (3)**

Participants will learn to meet the demand for rapid, creative solutions to ever-changing business challenges. Addresses creativity stimulation within both individuals and teams by building a toolbox of techniques that participants apply to problems commonly arising in marketing and business. Included are topics such as (1) problem definition (e.g., too narrow vs. too broad), (2) the need for multiple perspectives (e.g., core competency vs. core rigidity), (3) methods for stimulating idea generation (e.g., empathic design), and methods for evaluating ideas and their potential profitability (e.g., conjoint).  
Prerequisite: MKT 618.

**MKT 632. Information Network Marketing. (3)**

This course surveys the digital marketing landscape including its fringes, examining opportunities and threats driven by advances on the network frontier. The student will develop a set of critical skills so that she/he is better able to evaluate and find opportunity when presented with new technologies throughout their career. Understanding how to approach these advances is a critical skill for a marketer in today's environment.  
Prerequisites: MKT 618 and ISA 621.

**MKT 635. Branding and Brand Equity Management. (3)**

Theory and practice of brand equity management in consumer and business-to-business environments. Topics include brand equity models, brand audits, brand equity leveraging and brand portfolio management. Significant emphasis is also placed on the theory and practice of integrated marketing communications.  
Prerequisite: MKT 618.

**MKT 640. Internship. (0-12; maximum 12)****MKT 645. Marketing Analytics for the Executive. (3)**

Marketing decisions have always been rooted in data. However, over the past decade more and more data has become available to marketers. This course details the analysis measures and methods used by leading marketers to make more precise marketing decisions in the 21st century.  
Prerequisite: MKT 618.

## Mathematics (MTH)

**Note:**

1. *Service courses* do not count toward majors in the Department of Mathematics. They may or may not count toward majors in other departments. Look carefully at your major requirements and at the mathematics and statistics placement guide in this Bulletin.
2. On regional campuses, placement into MTH 115, MTH 125, and MTH 151 is based on achieving an appropriate score on a standard placement test administered at the regional campus.
3. Credit cannot be earned in a lower level course after earning credit at a higher level.
4. At most, five credit hours toward graduation can be earned from any combination of MTH 104, MTH 123, and MTH 125.

**MTH 049. Math Literacy. (4)**

Math Literacy for College Students is a one-semester course for students whose programs do not require Precalculus or Calculus. The emphasis is on active learning, applications, and context. Students work in groups daily, with very limited lecture time. Topics include numeracy, unit conversion, problem-solving, data analysis, pattern recognition, mathematical reasoning, linear, exponential and quadratic models, and basic statistics. MTH 049 is designed to be accessible to students that struggle with the abstract nature of algebra. The successful student will be well-prepared for STA 261 and MTH 119, as well as non-majors science courses that have traditionally required completion of an algebra course.

**MTH 104. Precalculus with Algebra. (5)**

Service course. Functions, rational functions, logarithmic and exponential functions, trigonometry, along with review of algebra topics important for calculus. Note: Students who have credit for MTH 151 or a higher mathematics class may not enroll in MTH 104. The only exceptions are when a student re-takes the course or meets the criteria of the Course Repeat Policy, as stated in the Student Handbook. Credit for graduation will not be given for more than one of MTH 102 and MTH 104 nor for more than one of MTH 104, MTH 123, and MTH 125. At most nine credit hours toward graduation can be earned from any combination of MTH 101, MTH 102, MTH 104, MTH 123, and MTH 125.

Prerequisite: MTH 102 or an ACT Math score of at least 22 or an SAT Math score of at least 520 or score of at least 8 on the Miami International Math Placement Test.

**MTH 115. Mathematics for Teachers of Grades P-6. (4) (MPF)**

Service course. Topics include problem solving, numeration, computation, number theory, and rational numbers. Designed to provide content background for teaching mathematics in elementary grades. Successful completion of this course may require an examination in basic mathematics. Open only to early childhood or middle childhood majors not concentrating in mathematics and special education majors. V.  
Prerequisite: two years of high school algebra or a college algebra course.

**MTH 116. Mathematics for Elementary Teachers. (4)**

Service course. Topics are from geometry, probability, and statistics. Designed to provide content background for teaching mathematics in elementary grades. Open only to early childhood and special education majors.

**MTH 119. Quantitative Reasoning. (4) (MPF)**

Quantitative Reasoning is a course designed to satisfy the Miami Plan Formal Reasoning requirement for students in majors that don't specifically require a mathematics course beyond the level of Precalculus. The focus is on critical thinking and applications, and all topics are covered from a contextual standpoint. Topics include mathematical reasoning and problem solving, consumer math, probability, and statistics. Instructors have the discretion to cover other selected topics as time permits. V. CAS-E.  
Prerequisites: Successful completion of MTH 049, or an ACT Math score of at least 18, or an SAT Math score of at least 500, or a Miami International Math Placement Test score of at least 6, or permission of instructor.

**MTH 121. Finite Mathematical Models. (3) (MPF)**

Service course. Introduction to linear, probabilistic, graph-theoretic, and network models with emphasis on development of algorithms. Systems of linear equations, linear programming, matrix algebra, graphs, networks, discrete probabilistic models, and linear recurrence relations with applications of these topics to areas in the management, social, and biological science. V. CAS-E.  
Prerequisite: MTH 102 or 104 or three years of college preparatory mathematics including Algebra II.

**MTH 123. Precalculus. (3)**

Service course. Covers many topics important for calculus: functions, rational functions, logarithmic and exponential functions, trigonometry, and some analytic geometry. Note: Students who have credit for MTH 151 or a higher mathematics class may not enroll in MTH 123. The only exceptions are when a student audits the course or meets the criteria of the Course Repeat Policy, as stated in the Student Handbook. Credit for graduation will not be given for more than one of MTH 102 and MTH 104 nor for more than one of MTH 104, MTH 123, and MTH 125. At most nine credit hours toward graduation can be earned from any combination of MTH 101, MTH 102, MTH 104, MTH 123, and MTH 125.  
Prerequisite: three years of college preparatory mathematics including some trigonometry.

**MTH 125. Precalculus. (5)**

Service course. Review of algebra topics important for calculus. Functions, polynomials, rational functions, logarithmic and exponential functions, trigonometric functions and their inverses, conic sections, nonlinear systems, and applications of functions. Credit does not count toward a major in mathematics and statistics. Note: Students who have credit for MTH 151 or a higher mathematics class may not enroll in MTH 125. The only exceptions are when a student audits the course or meets the criteria of the Course Repeat Policy, as stated in the Student Handbook. Credit for graduation will not be given for more than one of MTH 102 and MTH 104 nor for more than one of MTH 104, MTH 123, and MTH 125. At most nine credit hours toward graduation can be earned from any combination of MTH 101, MTH 102, MTH 104, MTH 123, and MTH 125. Prerequisite: Earn a grade of C or better in MTH 102, or an ACT Math Score of 22 or higher, or an "old" SAT Math Score of 510 or higher, or a "new" SAT Math Score of 540 or higher, or Miami International Math Placement Test score of 8 or higher, or Miami Precalc Placement Test score of 8 or higher, or successful completion of MTH 025.

**MTH 147. First Year Seminar in Mathematics and Statistics. (1)**

Serves as an introduction to various areas of Mathematics and Statistics. Conducted in a seminar/lecture format, the course provides majors in the departments of Mathematics and Statistics with information about undergraduate research and career options as well as about departmental, College, and University resources and requirements. The course helps students plan how to make the most of their time at Miami, and establish a foundation for academic and co-curricular success. Prerequisites: Completion of or enrollment in MTH 151 (or above) or permission of instructor. Cross-listed with STA 147.

**MTH 151. Calculus I. (5) (MPF, MPT)**

Limits and continuity, derivatives, integration, calculus of trigonometric and exponential functions. Credit not awarded for both MTH 151 and MTH 153. V. CAS-E. Prerequisite: Successful completion of MTH 104 or MTH 123 or MTH 125, or an ACT Math score of at least 26, or an "old" SAT Math score of at least 590, or a "new" SAT Math score of at least 610, or score of at least 16 on the Miami International Math Placement Test.

**MTH 177. Independent Studies. (0-5)****MTH 217. Mathematics for Middle Childhood Teachers: Structure of Arithmetic and Algebra. (4)**

Service Course. A systematic study of the underlying properties and structures of arithmetic and algebra with an emphasis on the rationales and irrationals. Topical Units include problem solving; arithmetic operations; place value; ratios, rates, proportion and percent; algebraic reasoning and functions; integers; rational and irrational numbers; and number theory. Open only to middle childhood education majors with a concentration in mathematics. Prerequisites: MTH 151 or equivalent.

**MTH 218. Geometry for Middle Childhood Teachers. (4)**

Service Course. Designed to develop a deep understanding of geometry appropriate for the middle grades. Topics include: proof and geometric reasoning, properties of geometric figures, similarity and scaling, measurement, symmetry, geometric transformations, and mathematical modeling. Open only to middle childhood education majors with a concentration in mathematics.

**MTH 222. Introduction to Linear Algebra. (3) (MPT)**

Treatment with emphasis on Euclidean spaces and matrix algebra: systems of linear equations, elementary matrix operations, determinants, vector methods in geometry, vector spaces, and linear transformations. CAS-E. Prerequisite: MTH 249 or 249H or 251.

**MTH 222T. Introduction to Linear Algebra (Honors). (2)**

Departmental honors version of MTH 222. Prerequisite: MTH 249 or 249H or 251 and permission of instructor. Co-requisite: MTH 331T.

**MTH 231. Elements of Discrete Mathematics. (3) (MPT)**

Service course. Topics, techniques and terminology in discrete mathematics: logic, sets, proof by mathematical induction, relations, counting. Credit does not count toward a major in the department of Mathematics or Statistics. Prerequisite: MTH 151 or permission of instructor.

**MTH 245. Differential Equations for Engineers. (3)**

Service course. Mathematical techniques used in engineering: ordinary differential equations first order, higher order and systems, Laplace transforms, and applications. Note: Credit for graduation will not be given for more than one of MTH 245 and MTH 347. Prerequisite: MTH 251, MTH 249 or MTH 249H.

**MTH 246. Linear Algebra and Differential Equations for Engineers. (4)**

Service course. Mathematical concepts and methods of Linear Algebra and Differential Equations important in engineering: matrix operations, determinants, eigenvalues and eigenvectors, linear transformations, systems of linear and differential equations, first-order and higher-order differential equations, Laplace transforms, and applications. Note: Credit for graduation will be given for only one of the following courses: MTH 245, MTH 246, MTH 347. Math and/or Stats majors should take MTH 222. Prerequisite: MTH 249 or MTH 251.

**MTH 247. Financial Mathematics for Actuaries. (4)**

Theory of interest, annuities, loan repayment, bonds, interest rate sensitivity. Introduction to derivatives including forwards, futures and options. Portfolio insurance, use of spreads and collars. Intended for students preparing to take the SOA Exam FM or the Casualty Actuarial Society Exam 2. Prerequisite: credit for MTH 151, and either registration in Actuarial Science minor or permission of instructor. Co-requisite: MTH 251, MTH 249, or MTH 249H.

**MTH 249. Calculus II. (5) (MPF)**

Offers a review of fundamental concepts of MTH 151 followed by content of Calculus II. Topics include plane analytic geometry, techniques of integration, parametric equations, polar coordinates, infinite series, approximations, applications. Admission to the honors course requires honors standing or permission of the instructor. Enrollment limited to first-year students. Credit not awarded for both MTH 249 and 251. V. CAS-E. Prerequisite: a grade of B or better in MTH 151; if credit earned through the AP exam, a score of 4 or above.

**MTH 249H. Calculus II. (5) (MPF)**

Offers a review of fundamental concepts of MTH 151 followed by content of Calculus II. Topics include plane analytic geometry, techniques of integration, parametric equations, polar coordinates, infinite series, approximations, applications. Admission to the honors course requires honors standing or permission of the instructor. Enrollment limited to first-year students. Credit not awarded for both MTH 249 and 251. V. CAS-E.

Prerequisite: a grade of B or better in MTH 151; if credit earned through the AP exam, a score of 4 or above.

**MTH 251. Calculus II. (4)**

Continuation of Calculus I. Plane analytic geometry, techniques of integration, parametric equations, polar coordinates, infinite series, approximations, applications. Credit not awarded for both MTH 249 and 251. CAS-E.

Prerequisite: a grade of C or better in MTH 151.

**MTH 252. Calculus III. (4) (MPT)**

Continuation of Calculus I and II. Three-dimensional analytic geometry, vectors, derivatives, multiple integrals, applications. The honors course offers an in-depth treatment of these topics. Admission to the honors course requires honors standing or permission of the instructor.

Prerequisite: MTH 249, MTH 249H or MTH 251.

**MTH 253. Introduction to Technical Computing. (1)**

Introduction to technical computing using Matlab or a comparable software. The students learn mathematical functions, their limitations, how to modify the functions to suit specific mathematical needs, and the use of computer graphics. Topics include introduction to the software; matrices and vectors; linear equations; interpolation; zeros and roots; least squares; quadrature; eigenvalues and singular values; plotting graphs and surfaces.

Prerequisites: MTH 222 and MTH 252.

**MTH 277. Independent Studies. (0-5)****MTH 330. Problems Seminar. (1; maximum 2)**

Solution and discussion of calculus and linear algebra problems found in challenging sections of textbooks and on standard, externally administered examinations. Credit/nocredit only.

Prerequisite: completion of or enrollment in MTH 252 and MTH 222.

**MTH 331. Proof: Introduction to Higher Mathematics. (3) (MPT)**

Designed to ease the transition to 400-level courses in mathematics and statistics. The emphasis of the course is on writing and analyzing mathematical proofs. Topics covered will be foundational for higher level courses and will include propositional and predicate logic, methods of proof, induction, sets, relations and functions. ADVW.

Prerequisite: a grade of C- or above in MTH 249 or MTH 251; or a score of 4 or 5 on the AP Calculus BC exam.

Prerequisite or Co-requisite: MTH 222.

**MTH 331T. Proof: Introduction to Higher Mathematics (H). (3)**

Departmental honors version of MTH 331. Requires permission of instructor. ADVW.

Prerequisite: MTH 249, MTH 249H, or MTH 251.

Co-requisite: MTH 222T.

**MTH 340. Internship. (0-20)****MTH 347. Differential Equations. (3) (MPT)**

Theory of ordinary differential equations with applications. Topics include first order differential equations, higher order linear equations, and systems of first order equations. Credit for graduation will not be given for more than one of MTH 245 and MTH 347.

Prerequisite: completion of or registration in MTH 222 and MTH 252.

**MTH 377. Independent Studies. (0-5)****MTH 407/MTH 507. Mathematical Structures Through Inquiry. (3) (MPC)**

MTH 407/MTH 507 is open only to middle childhood education majors; MTH 507 is open only to preK-9 teachers. Study of the structure of mathematical systems, especially number systems, developed through student-centered inquiry: pattern recognition, generalizing conjecturing, and proof.

Prerequisite: MTH 151, MTH 217, and MTH 218, or permission of instructor.

**MTH 408/MTH 508. Mathematical Problem Solving with Technology. (3)**

For current and prospective AYA mathematics teachers; built around problem solving experiences. Heuristics for problem solving are developed, and students solve problems in a variety of mathematical areas. Various technologies, including computers and calculators, are used as tools for problem solving. Only for students in licensure or MAT programs.

Prerequisite: MTH 151.

**MTH 409/MTH 509. Secondary Mathematics from an Advanced Perspective. (3)**

Provides a deeper analysis of problems and concepts drawn from high school mathematics to help teachers make connections between the advanced mathematics they are learning in college and the high school mathematics they will be teaching. Only for students in AYA licensure programs.

Prerequisite: at least 9 hours of 400-level MTH/STA courses and completion of or enrollment in MTH 421/MTH 521.

**MTH 410/MTH 510. Topics In Geometry. (3; maximum 6)**

A course in an area of geometry; for example: affine and metric geometry, differential geometry, advanced analytic geometry, non-Euclidean geometries, finite geometries.

Prerequisite: A grade of C- or better in MTH 222 and in MTH 331, or permission of instructor.

**MTH 411/MTH 511. Foundations of Geometry. (3) (MPT)**

Careful examination of underlying ideas of Euclidean geometry and some non-Euclidean geometries, including projective, metric, and finite. Various approaches include transformations and synthetic treatments.

Prerequisite: A grade of C- or better in MTH 222 and MTH 331.

**MTH 420/MTH 520. Topics in Algebra. (1-4; maximum 8)**

Topics selected from an area of modern or linear algebra.

Prerequisite: A grade of C- or better in MTH 222 and in MTH 331, or permission of instructor.

**MTH 421/MTH 521. Introduction to Abstract Algebra. (4) (MPT)**

Elementary theory of groups, rings, integral domains, fields, homomorphisms, and quotient structures.

Prerequisites: A grade of C- or better in MTH 222 and in MTH 331.

**MTH 422/MTH 522. Linear Algebra and Fields. (4)**

Fields and an introduction to Galois theory. Linear algebra, matrix algebra, determinants, an introduction to modules, and canonical forms.

Prerequisite: MTH 222 and 421/521 or 621 or permission of instructor.

**MTH 425/MTH 525. Number Theory. (3) (MPC)**

An overview of topics from classical and modern number theory. Topics may include modular arithmetic, prime counting, units in modular rings, quadratic reciprocity, and Gauss sums.

Prerequisite: MTH 421/MTH 521 or permission of instructor.

**MTH 430. Problems Seminar. (1; maximum 3)**

Solution and discussion of problems from the 'Mathematical Monthly' and other sources.

Prerequisite: permission of instructor.

**MTH 432/MTH 532. Optimization. (3)**

Optimization of functions of several variables, convexity and least squares, Kuhn-Tucker conditions, linear programming.

Prerequisite: A grade of C- or better in MTH 222, in MTH 252 and in MTH 331.

**MTH 435/MTH 535. Mathematical Modeling Seminar. (3) (MPC)**

Teaches how mathematics can help solve real world problems in fields such as biology, ecology, geophysics, engineering, and social sciences. The material is learned through a hands-on approach.

A significant amount of class time is spent on a variety of group projects. This seminar introduces mathematical modeling as the art of using mathematics to formulate and analyze practical problems, and emphasizes usefulness of mathematics in understanding complex phenomena. A differential equations course (MTH 245 or MTH 347) is recommended but not required. CAS-QL.

Prerequisites: A grade of C- or better in MTH 222 and in MTH 252, or permission of instructor.

**MTH 437/MTH 537. Game Theory and Related Topics. (3)**

At the instructor's discretion, one of the following areas is covered. (1) Economic/Traditional Game Theory: Mixed-strategy equilibria, two-person games with applications, and N-person cooperative games with side payments. (2) Combinatorial Game Theory: The game of Nim and how all impartial two-player combinatorial games are Nim-like, Partisan games, and possibly solitaire games.

Prerequisite: MTH 222 or 231 or 331; or permission of instructor.

**MTH 438/MTH 538. Theory and Applications of Graphs. (3)**

Basic structural properties of graphs, trees, connectivity, traversability (Eulerian Tours and Hamiltonian Cycles), matchings, and vertex and edge colorings. Classic graph algorithms will also be analyzed, including shortest path, minimum weight tree, optimal assignment, etc. Additional topics are selected from network flows, planarity, extremal problems, and directed graphs as time allows. This is a theory-oriented course, so familiarity with mathematical proof is desirable.

Prerequisite: A grade of C- or better in MTH 222 and in MTH 331, or permission of instructor.

**MTH 439/MTH 539. Combinatorics. (3)**

Counting methods: permutations, combinations, generating functions, recurrence relations, inclusion/exclusion. Incidence structures: block designs, Latin squares, finite geometries.

Prerequisites: A grade of C- or better in MTH 222 and in MTH 331, or permission of instructor.

**MTH 440/MTH 540. Topics in Analysis. (1-4; maximum 8)**

Topics selected from an area of analysis.

Prerequisites: A grade of C- or better in MTH 252 and in MTH 331, or permission of instructor.

**MTH 441/MTH 541. Real Analysis. (3)**

Continuity, differentiation, convergence, series and integration, in both one and several variables.

Prerequisites: A grade of C- or better in MTH 222, in MTH 252 and in MTH 331.

**MTH 447/MTH 547. Topics in Mathematical Finance. (3)**

Mathematical methods in options pricing; options and their combinations, arbitrage and put-call parity, stock and option trees, risk neutral pricing, geometric Brownian motion for stock models and derivation of the Black-Scholes formula; and as time allows, additional topics such as futures, forwards, swaps and bond models. A course in probability, such as STA 401/STA 501, is recommended but not required.

Prerequisite: A grade of C- or better in MTH 249, in MTH 251, or in an equivalent course.

**MTH 451/MTH 551. Introduction to Complex Variables. (4)**

Algebra and geometry of complex numbers, elementary functions of a complex variable including integrals, power series, residues and poles, conformal mapping, and their applications.

Prerequisites: A grade of C- or better in MTH 222, in MTH 252 and in MTH 331.

**MTH 453/MTH 553. Numerical Analysis. (3)**

Errors and error propagation, root-finding methods, numerical solution of linear systems, polynomial and cubic spline interpolation, numerical differentiation and integration, programming of algorithms. An introductory CSE course, such as CSE 174, is recommended but not required. CAS-QL.

Prerequisite: A grade of C- or better in MTH 222 and in MTH 252.

**MTH 455/MTH 555. Introduction to Partial Differential Equations. (3)**

Course focuses on first and second order partial differential equations (PDEs), boundary value problems and their applications. Topics include physical examples of PDEs, classification of second order linear PDEs, method of characteristics, D'Alembert's formulation, maximum principles, heat kernels, separation of variables, and Fourier series.

Prerequisites: MTH 245 or MTH 347, or permission of the instructor.

**MTH 477. Independent Studies. (0-5)****MTH 482. Great Theorems of Mathematics. (3) (MPC)**

Students explore the development of certain mathematical topics from 1800 B.C.E. to the modern day, with emphasis on the following: Development of numeration systems, Pythagorean Theorem, pi and quadrature, algebra, calculus, and the concept of infinity. Each student adopts a mathematician and completes an individual project related to that person's mathematical work. The course concludes with a final paper and presentation assignment for each student on the development of a great theorem or topic that wasn't yet explored in the coursework.

Prerequisite: MTH 411/MTH 511, 421, or 441.

**MTH 483/MTH 583. Introduction to Mathematical Logic. (3)**

Propositional logic, first-order logic, theories and models, completeness and compactness, additional topics such as nonstandard analysis.

Prerequisite: MTH 421/MTH 521 or MTH 441/MTH 541, or permission of instructor.

**MTH 486/MTH 586. Introduction to Set Theory. (3)**

The recursion theorem, cardinality, cardinal numbers, well-orderings, ordinals, the axiom of replacement, transfinite induction and recursion, ordinal arithmetic, the axiom of choice, cardinal exponentiation, ultrafilters, stationary sets.

Prerequisites: MTH 421/MTH 521 or MTH 441/MTH 541, or permission of instructor.

**MTH 491/MTH 591. Introduction to Topology. (3)**

Topological spaces, continuity, countability and separation axioms, product topology, quotient topology, compactness, connectedness, Tychonoff's Theorem, Urysohn's Lemma, metrizable spaces.

Prerequisite: A grade of C- or better in MTH 222, in MTH 252 and in MTH 331.

**MTH 495/MTH 595. Introduction to Applied Nonlinear Dynamics. (3)**

Study of nonlinear dynamics of dynamical systems with application of associated one-dimensional and two-dimensional flows/maps, bifurcations, phase plane dynamics, stability and control. Applications from physics, biology, chemistry, and engineering will be utilized throughout the course.

Prerequisite: MTH 245 or MTH 347 or permission of instructor. Cross-listed with MME.

**MTH 600. Topics in Advanced Mathematics. (1-4; maximum 10)**

Prerequisite: permission of department chair.

**MTH 604. Discrete Mathematics for Secondary School Teachers. (3)**

For high school teachers. Selected topics, such as: algorithms, Boolean algebra, combinatorics, difference equations, functions, graphs, and networks. For students in mathematics and statistics programs, credit may only be applied to the degree Master of Arts in Teaching.

Prerequisite: licensure in secondary school mathematics or permission of instructor.

**MTH 605. Calculus for Secondary School Teachers. (3)**

For high school teachers. A return to the main topics of calculus with more emphasis on theory, applications, and historical development than in the usual introductory course. For students in mathematics and statistics programs, credit may only be applied to the degree Master of Arts in Teaching.

Prerequisite: licensure in secondary school mathematics or permission of instructor.

**MTH 606. Geometry for Secondary School Teachers. (3)**

For high school teachers. Re-examination of traditional material of secondary-school geometry from an advanced viewpoint. Recent developments on content and methods are included. For students in mathematics and statistics programs, credit may be applied only to the degree Master of Arts in Teaching.

Prerequisite: licensure in secondary school mathematics or permission of instructor.

**MTH 607. Algebra for Secondary School Teachers. (3)**

For high school teachers. An in-depth development of selected topics with their applications and history. Theory of equations, number theory, number systems, complex numbers, systems of equations, matrices, determinants, algebraic structures. For students in mathematics and statistics programs, credit may be applied only to the degree Master of Arts in Teaching.

Prerequisite: licensure in secondary school mathematics or permission of instructor.

**MTH 620. Topics in Algebra. (1-4; maximum 8)**

Topics selected from an area of algebra.

Prerequisite: permission of department chair.

**MTH 621. Abstract Algebra I. (4)**

Sylow theory, composition series, polynomial rings. Galois theory of fields, modules over a principal ideal domain and their application.

Prerequisite: MTH 421/MTH 521 or permission of department chair.

**MTH 622. Abstract Algebra II. (3)**

Continued study of structures from MTH 621 together with algebras, tensor products, radicals, chain conditions and dimension, within one of the frameworks: commutative algebra, artinian rings, homological algebra, or Lie algebras.

Prerequisite: MTH 621.

**MTH 630. Topics in Operations Research. (1-4; maximum 8)**

Special topics selected from game theory, combinatorics, graph theory, optimization, computer algorithms, and other subjects under general heading of operations research.

Prerequisite: permission of instructor.

**MTH 632. Advanced Optimization. (3)**

Careful development of the theory of finite-dimensional continuous optimization, emphasizing the differentiable and convex cases.

Prerequisite: MTH 432/MTH 532/532 and 441 or permission of instructor.

**MTH 638. Advanced Graph Theory. (3)**

Advanced treatment of graph theory with selected topics from: Extremal problems, probabilistic, algebraic, and topological aspects of graph theory, analysis of graph algorithms, Ramsey theory.

Prerequisite: MTH 438/MTH 538 or permission of instructor.

**MTH 641. Functions of a Real Variable. (4)**

Lebesgue measure, Lebesgue integration, differentiation, general measures and integration, Radon-Nikodym theorem, Fubini theorem, classical  $L_p$  spaces, Banach spaces.

Prerequisite: MTH 491/MTH 591.

**MTH 651. Functions of a Complex Variable. (4)**

Complex number system, analytic functions, complex integration and calculus of residues, representation, analytic continuation, Riemann mapping theorem.

Prerequisite: MTH 441/MTH 541 and 451.

**MTH 677. Independent Studies. (0-5)****MTH 691. Introduction to Algebraic Topology. (4)**

Fundamental group and covering spaces: homotopy, fundamental group of the circle, Seifert-Van Kampen Theorem, group presentations, covering spaces and the correspondence theorem.

Additionally, if time permits, topics in homology.

Prerequisite: MTH 491/MTH 591.

**MTH 700. Research for Master's Thesis. (1-12; maximum 12)**

# Mechanical & Manufacturing Engineering (MME)

## **MME 102. Introduction to Mechanical and Manufacturing Engineering. (3)**

This course introduces students to engineering, with a focus on mechanical and manufacturing engineering. Topics include how to use state-of-the-art tools to: draw, perform computational analyses, model physical systems, and manipulate and present data. The course covers the Engineering Design Process; a systematic approach to problem solving used by all engineering disciplines. Additionally, the course addresses skills including effective time management, an ability to study and work effectively in groups, and professionalism. The course culminates in a team based engineering design project that draws upon all the lessons covered. This course is open to all majors.

## **MME 177. Independent Studies. (0-5)**

### **MME 201. Modeling and Design in Engineering. (2)**

Students will develop the ability to read, interpret and develop solid models, and drawings, in the context of applying an engineering design process. Students will apply engineering analyses to guide design decisions.

Prerequisite: MME 102 or equivalent.

Prerequisite or Co-requisite: MME 211.

### **MME 202. Numerical Methods in Engineering. (3)**

This course provides hands-on experiences for MME students in the areas of numerical methods and its application to engineering problems. This course includes lab exercises and focuses on utilizing computational software, which will implement numerical methods in order to solve problems associated with various engineering applications and systems.

Prerequisites: MME 102 and MTH 151.

Prerequisite or Co-requisite: MTH 245 or MTH 246.

### **MME 211. Static Modeling of Mechanical Systems. (3)**

Introduction to mechanics. Study of the theory and application of the mechanics of rigid bodies in equilibrium.

Prerequisite: MTH 151 or equivalent; and PHY 191, sophomore standing.

Prerequisite or Co-requisite: MME 102 or equivalent.

### **MME 213. Computational Methods in Engineering. (3)**

Study and use of fundamental computational methods as applied to engineering analysis and design. Computational methods are explored via discussion of errors and approximations, iterative methods of solving equations. Graphical methods are explored via 3-D modeling with emphasis on assembly and design including limit dimensioning and geometric tolerancing.

Prerequisite: MME 102 or equivalent; sophomore standing.

### **MME 223. Engineering Materials. (3)**

Study of metals, ceramics, and plastics; dependence of properties on structure; selection and application of engineering materials.

2 Lec. 1 Lab.

Prerequisite: MTH 151 and sophomore standing.

Prerequisite or Co-requisite: CHM 141.

### **MME 231. Manufacturing Processes. (3)**

Introduction to a wide variety of manufacturing processes with emphasis on process modeling and laboratory measurement of process conditions and product variables. Consideration of relations among material properties, process settings, tooling features, and product attributes. Design and implementation of a process for manufacture of a given component.

2 Lec. 1 Lab.

Prerequisite: MME 211, MME 223, MME 201.

Prerequisite or Co-requisite: STA 301 or STA 261.

### **MME 277. Independent Studies. (0-5)**

#### **MME 301. Product Design and Development. (3)**

This course explores the product development cycle from product planning to production ramp up. The relationship between customer needs, product design, and manufacturing capability are discussed within a business and engineering context. Students will apply decision making tools and techniques through case studies and a product based design project in order to critically evaluate the course concepts.

Prerequisites: MME 201 and MME 231.

#### **MME 303. Computer-Aided Experimentation. (3)**

Study of theory and application of instrumentation and experimentation including: components and concepts of computer-machine interface systems; design of computer-controlled experimentation for real-time industrial measurement, monitoring, and control; AC power analysis; applications of the Laplace Transform. Laboratory component included.

3 Lec. 1 Lab.

Prerequisite: ECE 205.

Prerequisite or Co-requisite: MTH 245 or MTH 347.

Cross-listed with ECE.

#### **MME 305. Measurements and Instrumentation. (3)**

Study of theory and application of instrumentation and experimentation including: components and concepts of sensors, transducers, signal conditioning, data transmission and acquisition, design of computer-controlled experimentation for real-time industrial measurement, monitoring, and control; AC power applications. Laboratory component included.

Prerequisite: ECE 205.

Prerequisite or Co-requisite: MTH 246.

#### **MME 311. Dynamic Modeling of Mechanical Systems. (3)**

Displacement, velocity, and acceleration of a particle; relations between forces acting on a rigid body and changes in motion produced; translation; rotation, plane motion. Solutions using principles of force, mass, and acceleration; work and energy; and impulse and momentum.

Prerequisite: MME 211, MME 213, MTH 251 or equivalent.

#### **MME 312. Mechanics of Materials. (3)**

Elastic relationships between external forces acting on deformable bodies and resulting stresses and deformations. Theory, analysis, and applications of these relationships.

Prerequisite: MME 211.

#### **MME 313. Fluid Mechanics. (3)**

Fundamentals and application of the mechanics of fluids including properties, statics and dynamics of fluids, dimensional analysis and similitude, steady state flow, and topics in compressible flow.

Prerequisite: MTH 251 or equivalent, PHY 191, and either CPB 219 or MME 211, or permission of instructor.

Cross-listed with CPB.

**MME 314. Engineering Thermodynamics. (3)**

Study of the fundamental principles of thermodynamics. Emphasis placed on engineering applications such as power cycles, refrigeration, and heat transfer systems.

Prerequisite: MME 211 or CPB 204 or CPB 219.

Prerequisite or Co-requisite: MTH 251 or equivalent.

Cross-listed with CPB.

**MME 315. Mechanical Vibrations. (3)**

Modeling and analysis of the vibrational response characteristics of single-degree-of-freedom, multi-degree-of-freedom, and continuous systems.

Prerequisites: MME 311 and MTH 245 or MTH 347.

**MME 320. Professional Practice. (0)**

Students participating in the MME co-op program register for this course during semesters when they are away from Oxford on work assignment. This enables students to remain in good standing with the University Registrar.

**MME 321. System Modeling, Analysis, & Control. (3)**

This course provides an in-depth study of mathematical modeling, and analysis of dynamic systems and introduces the design of controllers to achieve closed-loop behavior. The mathematical models will be developed for multiple domains (mechanical, electrical, thermal, fluids, electromechanical etc.) from first principles. Time and frequency domain techniques will be used to predict the dynamic performance of various engineering systems.

Prerequisites: MME 202, MME 211, and MTH 246.

Prerequisite or Co-requisite: MME 305.

**MME 334. Quality Planning and Control. (3)**

Study of principles and techniques of precision linear measurement, analysis of these measurements, design of experiments, total quality management concepts and applications in the manufacturing environment. Philosophy, structure, and implementation of quality assurance programs.

Prerequisite: MME 231 and STA 301 or STA 261.

**MME 335. Design of Experiments for Quality Control. (1)**

This course develops the fundamentals of Design of Experiments and applies them to Quality Control concepts. Projects require the design and implementation of experiments that address engineering problems in quality control, process control and manufacturing.

Subsequent data analysis emphasizes robust statistical techniques.

Prerequisite: STA 301.

Prerequisite or Co-requisite: MME 334.

**MME 340. Internship. (0-20)****MME 341. Engineering Economics. (3)**

Engineering economic decisions; breakeven and minimum cost analysis; engineering methods of resource allocation; concepts of interest; time evaluation of tactical and strategic alternatives.

Prerequisite: MTH 151 and (CPB 102 or CEC 102 or MME102 or equivalent).

Prerequisite or Co-requisite: STA 301 or STA 261 or ECE 345.

Cross-listed with CPB.

**MME 360. Special Topics. (1-3)****MME 375. Human Robot Interaction. (3)**

This course introduces basic robotic principles including kinematics, robot architecture and control. The historic context of robotics will be discussed. Students research current technical and societal issues related to human robot interaction. Throughout the course, students develop a project to observe a small humanoid robot interacting with people. The project includes the design and implementation of the robotic activity.

Prerequisite: MME/ECE 303 or IMS 322.

Cross-listed with IMS.

**MME 377. Independent Studies. (0-5)****MME 403/MME 503. Heat Transfer. (3)**

Continued study of unit operations with emphasis on heat transfer. Study of steady and unsteady conduction, and laminar, turbulent, boiling, and condensing convective heat transfer. Radiation heat transfer, heat exchangers, evaporators, and transfer units.

Prerequisite: CPB/MME 314 and (CPB/MME 313 or CPB 318 or CPB 418/CPB 518) and (MTH 245 or MTH 246).

Cross-listed with CPB.

**MME 410. Undergraduate Research Seminar. (1)**

Seminar course for initiating research problems in consultation with the faculty advisor and participation in the seminars. For grade only.

Prerequisite: permission of instructor.

**MME 411. Machine and Tool Design. (4)**

Applications of fundamental engineering principles for implementing all phases of the design of machines and tooling, including economic and manufacturability considerations. Emphasis on design, analysis, and engineering judgment.

3 Lec. 1 Lab.

Prerequisite: MME 231, 312.

**MME 412/MME 512. Advanced Mechanics of Materials. (3)**

This course is the advanced study of mechanical behavior of structures. Analysis, design and computational techniques for curved beams, spinning disks, thick-walled cylinders, asymmetric beams, torsion, and buckling will be introduced with the foundations for energy and Finite element methods.

Prerequisites: MME 223 and 312; MTH 245 or MTH 347.

Prerequisite or Co-requisite: MME 411.

**MME 413/MME 513. Introduction to Compressible Flow. (3)**

Introductory concepts to compressible flow; conservation of mass, momentum, and energy; methods of treating one-dimensional gas dynamics including flow in nozzles and diffusers; normal and oblique shock waves; Prandtl-Meyer flow, Fanno flow, and Rayleigh flow.

Prerequisite: MME/CPB 313.

**MME 414. Engineering Thermodynamics II. (3)**

Thermodynamics of ideal and real power and refrigeration cycles and devices, mixtures, combustion, and compressible flow, property relations and determination, advanced energy considerations.

Prerequisite: MME/CPB 314.

**MME 415. Thermal-Fluid Studio. (2)**

This course provides hands-on experiences for MME students in the areas of fluid mechanics, thermodynamics, and heat transfer. This course includes lab exercises and focuses on the collection, analysis and interpretation of data associated with thermal-fluid applications and systems. Students will learn about different measurement devices and complete practical engineering lab work which includes design methodologies applied in exercises and projects.

Prerequisites: MME/CPB 313 and MME/CPB 314.

Prerequisite or Co-requisite: MME/CPB 403/CPB 503.

**MME 434. Manufacturing Design. (3)**

This course focuses on the process of transforming a design concept into a producible artifact. Workparts produced via machining operations will provide the primary context for this process, with supplemental coverage of design considerations for solidification and bulk deformation processes where feasible. Additionally, students will augment their "toolbox" for manufacturing design by gaining both breadth and depth in processes and current topics that are beyond the scope of the typical introductory manufacturing processes course. 2 Lec. 1 Lab.

Prerequisite: MME 231.

**MME 435. Manufacturing Competitiveness. (3)**

This course provides an in-depth study of the proper selection and sequencing of manufacturing enterprise processes and resources in order to continuously improve operations. The course focuses on process improvement methodologies and their integration into overall production aims to provide value, improve quality, and reduce cost.

2 Lec. 1 Lab.

Prerequisite: MME 231.

**MME 436/MME 536. Control of Dynamic Systems. (3)**

An in-depth study of the theory, design, and analysis of feedback control of dynamic systems. Integrate the problem-solving techniques and concepts of electric circuits and computer-aided experimentation into the design and construction of programmable-logic based control systems and its application in modern manufacturing systems. Design methodologies applied in lab exercises and short-term design projects.

2 Lec. 1 Lab.

Prerequisite: ECE 205 and (MTH 245 or MTH 347).

Prerequisite or Co-requisite: ECE/MME 303.

Cross-listed with ECE.

**MME 437. Manufacturing Automation. (3)**

This course examines the integration of automation into the manufacturing environment. Through instruction, practical activities and case studies, students will be exposed to programmable logic controllers, robotics, flexible manufacturing systems, computer integrated manufacturing and control technology.

2 Lec. 1 Lab.

Prerequisite: MME 231 and ECE/MME 303.

**MME 441/MME 541. Applications of Technical Computing Environments. (1)**

This course provides engineering and science students with knowledge of technical computing environments, such as MATLAB or Mathematica, to solve a wide range of engineering and science problems. The emphasis is on the numerical solution of problems in linear algebra, differential equations, and optimization. Several toolboxes or libraries, such as those for signal processing, bioinformatics, and symbolic manipulation will be covered.

Prerequisites: CEC 102 or equivalent, MTH 245 or MTH 347, and STA 368 (or equivalent).

Concurrent courses: CSE 153 and 174, or 603, or equivalent.

Cross-listed with CSE 441/CSE 541.

**MME 448. Senior Design Project. (2) (MPC)**

Student teams, with varied academic backgrounds, conduct major open-ended research/design projects. Elements of the design process are considered as well as real-world constraints, such as economic and societal factors, marketability, ergonomics, safety, aesthetics, and ethics; feasibility studies performed.

Prerequisite: ECE 306 or MME 312 or MME 314 and senior standing in student's major.

Cross-listed with ECE.

**MME 449. Senior Design Project. (2) (MPC)**

Continuation of MME 448. Student teams, with varied academic backgrounds, conduct major open-ended research/design projects; implementation, testing, and production of design. Nonmajors can register for 1-2 credits. Prerequisite: senior standing in student's major.

Prerequisite: senior standing in student's major and (MME 448 or ECE 448).

Cross-listed with ECE.

**MME 451/MME 551. Sustainability Considerations in Design and Development. (3)**

This course presents sustainability issues to be considered in the planning process and provides tools to evaluate these for a balanced design. Topics include analysis of interactions between the technical, economic, and societal and policy aspects of sustainability, balance of the technical evaluation (life cycle costs, etc.) against the product's impact on the environment and societal preferences, and applying decision analysis methods to evaluate these preferences and tradeoffs.

Prerequisite: MTH 151 or equivalent.

Prerequisite or Co-requisite: ISA 205 or STA 301 or equivalent.

**MME 470/MME 570. Special Topics in Mechanical Engineering. (1-4; maximum 6)**

Advanced special topics in mechanical engineering, which are not covered in the regular curriculum for the mechanical engineering major.

Prerequisite: Permission of Instructor (specific pre-requisite courses may be added for different special topic).

**MME 477. Independent Studies. (0-5)****MME 495/MME 595. Introduction to Applied Nonlinear Dynamics. (3)**

Study of nonlinear dynamics of dynamical systems with application of associated one-dimensional and two-dimensional flows/maps, bifurcations, phase plane dynamics, stability and control. Applications from physics, biology, chemistry, and engineering will be utilized throughout the course.

Prerequisite: MTH 245 or MTH 347 or permission of instructor.  
Cross-listed with MTH.

**MME 610. Graduate Seminar. (1)**

Invited presenters and faculty provide lectures and demonstrations on current research topics in computational science and engineering of interest to the faculty and students. Required of all MME CS&E graduate students in residence. Approved for credit/no-credit grading only. May be repeated.

Prerequisites: graduate student standing or consent of instructor.

**MME 612. Engineering Analysis. (3)**

Analytical considerations involving the construction and solutions of mathematical models for processes and systems pertinent to chemical and mechanical engineering. The analytical methods will cover the modeling of steady and unsteady state engineering problems. Recommended prerequisites: CPB 403/CPB 503, 414, 415; MME 412/MME 512, 414, 436 (or equivalent); or permission of instructor.

Cross-listed with CPB.

**MME 613. Computational Fluid Dynamics. (3)**

Introduction to computational fluid dynamics (CFD). Covers classification of PDEs, discretization and stability conditions. Finite difference methods, solution of elliptic, parabolic and hyperbolic equations. Navier-Stokes equation. Introduction to finite volume problems and grid generation techniques.

Prerequisite: MME 403/MME 503, MME 412/MME 512 or permission of instructor.

**MME 615. Advanced Vibration. (3)**

Advanced research and computational topics in vibration and its applications. Topics will include Modeling and response of discrete and continuous vibratory systems; Active and passive vibration control; Computational methods for estimating response of vibratory system; and Research problems in vibration.

Prerequisites: MME 315 or equivalent and MME 436/MME 536 or equivalent or permission of instructor.

**MME 620. Special Topics in Mechanical/Manufacturing Engineering. (1-3; maximum 6)**

Advanced topics in Mechanical and/or Manufacturing Engineering will be presented. Topics will be selected based on department decision.

Prerequisite: Graduate standing and permission of instructor.

**MME 621. Finite Element Analysis. (3)**

Introduction to the finite element method in terms of theory and implementation. Weak variational form boundary value problems. Formulations in one and two dimensions. Accuracy estimation.

Prerequisite: MME 412/MME 512 or permission of instructor.

**MME 623. Mechanical Behavior of Materials. (3)**

Mechanics and materials aspects of elastic and inelastic deformation. Basic concepts of stress and strain in 3-D representation. Specific phenomena considered include fracture mechanics, creep behavior, and fatigue of materials. The implications towards the part design will be considered. Principal approaches to metallic and polymer deformation modeling will be introduced.

Prerequisites: MME 412/MME 512 or equivalent or permission of instructor.

**MME 640. Internship. (0-12; maximum 12)****MME 677. Independent Studies. (0-5)****MME 700. Research for Master's Thesis. (0-10)**

Study under graduate faculty supervision of a research problem related to mechanical engineering. Maximum of six credit hours of ECE 700 may be applied toward fulfillment of the thesis research requirement for the Master of Science in Mechanical Engineering.

Prerequisite: permission of student's graduate advisor.

**MME 704. Non-Thesis Project. (0-12; maximum 12)**

## Media and Culture (MAC)

**MAC 143. Introduction to Media. (3) (MPF, MPT)**

Introduction to major mass communication theories as a context to examining some major issues surrounding mass media in American society. IIB. CAS-B.

**MAC 146. Media Aesthetics. (3)**

This course is an introduction to media aesthetics. Students will develop an awareness of the artistic choices necessary for good media production and will be introduced to design elements and techniques available for use.

Prerequisite: majors or permission of instructor.

**MAC 167. Practicum in Electronic Media Production. (1)**

Practicum experience to expose students considering a major in mass communication to the production process. Student participates in a minimum number of productions of media materials and must attend the pre- and postproduction discussion sessions. Offered only credit/no-credit. Students who must enroll for credit should petition the assistant chair for mass communication.

Prerequisite: written permission of the instructor.

**MAC 177. Independent Studies. (0-5)****MAC 209. Advertising in Consumer Culture. (3)**

This course examines the historical and cultural roots of advertising in Western culture, identifying the critical components that have shaped and continue to shape its persuasive dimensions.

**MAC 211. Introduction to Video Production. (4)**

Introduction to electronic media production. Students become acquainted with fundamentals and techniques of sound production and elements involved in the design and production of video messages.

Prerequisite: MAC 146, major status or permission of instructor.

**MAC 212. Media, Representation, and Society. (3)**

Survey of the place of electronic media in society. Topics covered include media and culture; media economics, industries, and institutions; politics of media content; media and social representation.

Prerequisite: major status or permission of instructor.

**MAC 213. Writing for Media. (3)**

Basic course in writing for radio and television, and new media, with emphasis on scriptwriting for feature film and narrative for television; treatment of documentary subjects; introduction to narrative forms in new media.

Prerequisite: MAC 146, or permission of instructor.  
Cross-listed with ENG.

**MAC 215. Media History. (3)**

Survey of electronic media history. Beginning with early experiments in electromagnetism, students examine development and impact of electronic media in the United States and international settings.

Prerequisite: major status or permission of instructor.

**MAC 258. Copywriting for Electronic Media. (3)**

Basic course in writing for radio and television, and new media with emphasis on commercial, noncommercial, and promotional copywriting.

Prerequisite: MAC 146, or permission of instructor.

**MAC 267. Practicum in Electronic Media Production II. (1-3)**

Practicum experience designed to expose students majoring in mass communication to the production process. Student participates in a minimum number of productions and must attend pre- and post-production sessions.

Prerequisite: MAC 211, major status, or written permission of instructor.

**MAC 277. Independent Studies. (0-5)****MAC 311. Digital Film Production. (3)**

Experience in production and direction of television formats with emphasis on applied media aesthetics. Field production theories and exercises.

Prerequisite: MAC 211, major status or permission of instructor.

**MAC 312. TV Studio Production. (3)**

Experience in the production and direction of television formats with emphasis on applied media aesthetics. Studio production theories and exercises.

Prerequisite: MAC 211, major status, or permission of instructor.

**MAC 324. Ethics and Digital Media. (3)**

Students will focus on key ethical issues related to online writing, communication, and visual design. Course will introduce key ethical principles, including principles of rhetoric, communication, and design ethics, as well as key principles of professional ethics as articulated in fields like professional writing, technical communication, and graphic design. Topics include intellectual property, access and universal design, privacy and surveillance, visual representation and manipulation, global communication and cultural difference, economic issues of justice and equity, and professional rhetorics. Cross-listed with ENG/IMS.

**MAC 325. Social Media Cultures. (3)**

In this course, students will research and study the relationship between human social interaction and media. We will consider and compare both analog and digital forms of social media. Students will apply theories from cultural studies, media studies, and communication studies to both online and offline social media in order to understand the interaction between social practices and contemporary media cultures. Students critique and assess multiple forms of social media through active engagement with social media platforms, critical response papers, and final group projects.

Prerequisite: MAC 143.

**MAC 340. Internship. (0-20)****MAC 343. Advanced Audio Production. (3)**

This course is an advanced study in audio production for the electronic media. Included topics are music recording, narrative and journalism. It includes studio procedures, microphone techniques, and control room operations. This class introduces the student to audio production theory and criticism. The course focuses on sound aesthetics and values, providing an overview of traditional sound production and the use of digital audio media.

Prerequisite: MAC 211, major status, or permission of instructor.

**MAC 353. Audience Studies. (3)**

Introduction to audience analysis including review of services provided by media research organizations and procedures of applied survey research for the media. Prerequisite major status or permission of instructor.

**MAC 355. Media Technology & Culture. (3)**

Focuses on the relationships among technology, society, and communications (mass media and information systems), exploring key historical, cultural, and political/economic issues raised by new communication technologies.

Prerequisite: major status or permission of instructor.

**MAC 367. Practicum in Electronic Media Production III. (1-3)**

Practicum experience designed to expose students majoring in mass communication to the production process. The student participates in a minimum number of productions and must attend the pre- and post-production sessions.

Prerequisite: MAC 311 or 312, major status, or written permission of instructor.

**MAC 377. Independent Studies. (0-5)****MAC 414. Capstone Pictures: Project in Digital Narrative Film Production. (4; maximum 8) (MPC)**

In-depth production of a digital narrative film. This may involve conceptualizing, researching and writing; comprehensive budgeting and planning; creative design of visual and aural elements; management of a production team. Students meet regularly with other students to discuss progress, problems, issues and integrate ideas. Students work together to produce the film and present it to the Miami University community.

Prerequisite: appropriate course work in a relevant area and permission of instructor.

**MAC 422. Advanced Creative Writing: Screenwriting Workshop. (3)**

Advanced workshop in feature film screenwriting. Analysis of examples of contemporary screenplays, with emphasis on the craft of writing screenplays. Class discussion and sharing of student-written screenplays.

Prerequisite: MAC 213 or ENG 320 or permission of instructor.  
Cross-listed with ENG.

**MAC 425. Inside Hollywood. (3)**

Intensive study of the contemporary entertainment industry centered in Hollywood/Los Angeles, California, through reading, lecture, on-site observations, expert presentations, discussion, research, writing and internships. The main focus is on the film and television industry, but music, gaming and other entertainment industries are studied as well. Areas of the industry covered may include development, finance, casting, scriptwriting, production, post-production, marketing and entertainment Law. Program is conducted in Hollywood/Los Angeles, CA. Offered Summer and Winter terms only.

Prerequisite: Permission of instructor.

**MAC 426. Inside Washington. (8)**

Intensive study of the contemporary Washington community - government institutions, public officials, journalists, consultants, staff, and interest groups - through reading, lecture, on-site observations, expert presentations, discussion, research, writing, and internships. Program conducted in Washington, DC.

Prerequisite: permission of instructor.

Cross-listed with JRN/POL 426.

**MAC 427. Inside Washington Semester Experience. (4)**

Intensive study of the contemporary Washington community - government institutions, public officials, journalists, consultants, staff, and interest groups - through reading, lecture, on-site observations, expert presentations, discussion, research, and writing. Program conducted in Washington. Prerequisites: permission of instructor.

Co-requisites: JRN/MAC/POL 454; JRN/MAC/POL 377 or 477; JRN/MAC/POL 340.

Cross-listed with JRN/POL.

**MAC 443/MAC 543. Media Economics. (3)**

Study of the interrelationships of economic systems, political systems, and the media industries. Prerequisite major status or permission of instructor.

**MAC 445/MAC 545. Electronic Media Policy and Regulation. (3) (MPC)**

Study of development and implementation of federal and state law and regulations and their effect on American mass media. Emphasis on regulatory process, judicial review, and political process as they affect the Federal Communications Commission and other government agencies.

**MAC 446. Media Globalization. (3)**

Survey of international communication systems, with emphasis on comparative analysis based on current typologies, and economic, social, political, and regulatory variables.

Prerequisite: major status or permission of instructor.

**MAC 447. Mass Media Criticism. (3) (MPC)**

Examination of the performance of mass media, especially television, in current social settings. Topics include news and entertainment programming and relationship between media industry and its products.

Prerequisite: major status or permission of instructor.

**MAC 450. Topics in Communication. (3)**

Study or research of issues and problems associated with communication under the guidance of a faculty member of the department.

Prerequisite: major status or permission of instructor.

**MAC 454. The Washington Community. (3-4)**

This course focuses on the Washington, D.C., as a complex political-social system that is both the seat of American democracy and a metropolis plagued with typical urban problems. In this class, students will complement their study of the formal political and media systems in the "Inside Washington" course by focusing on the development and behavior of constituent communities within the city of Washington.

Cross-listed with JRN/POL.

**MAC 461. Gender, Sexuality and Media. (3) (MPT)**

Examines how media help to shape notions of gender in society, how gender ideologies influence mass media perspectives and practices, and how mediated representations may reinforce or challenge social hierarchies based in differences of gender, race, ethnicity, class and sexual orientation. IC.

Cross-listed with WGS.

**MAC 462. Red Atlantic: Practicum in U.K. Media, Advertising & Public Relations. (3)**

London-based. Provides an overview of media and advertising practices in the U.K. as a foundation for practicum experience developing an integrated marketing communications campaign for a real client. Recommended prerequisites: MAC 143 and either MAC 211, MAC 258, or STC 259; or permission of instructor.

Cross-listed with JRN.

**MAC 467. Practicum in Electronic Media Production IV. (4)**

Practicum experience in which students research topics for productions, prepare and present treatments and scripts and produce and direct original media work, including drama and documentary.

Prerequisites: MAC 211 and 311 or permission of instructor.

**MAC 477. Independent Studies. (0-5)****MAC 677. Independent Studies. (0-5)**

## Microbiology (MBI)

**MBI 104. Developing Skills and Approaches for Science Success. (1-2; maximum 2)**

Teaches effective study strategies to enable comprehension of basic biology concepts emphasized in the introductory biology course, BIO/MBI 115/116; Explores the relationship of these concepts to current endeavors such as scientific research; Emphasizes development of skills and habits of mind that will ensure success for biological science majors.

Cross-listed with BIO.

**MBI 111. Microorganisms and Human Disease. (3) (MPF)**

Discussion of microorganisms and human diseases they cause, with particular emphasis on the impact of these relationships on the development of human societies' past, present, and future. Does not count as credit toward an A.B. or B.S. in microbiology. IVA. CAS-D.

**MBI 115. Biological Concepts: Ecology, Evolution, Genetics, and Diversity. (4) (MPF, MPT)**

Integrated study of microbes, plants, and animals, emphasizing biological diversity and interdependence of life and the environment. IVA, LAB. CAS-D/LAB.

3 Lec. 1 Lab.

Cross-listed with BIO.

**MBI 116. Biological Concepts: Structure, Function, Cellular and Molecular Biology. (4) (MPF, MPT)**

Biological principles common to microbes, plants, and animals, including interactions between organism and the environment. IVA, LAB. CAS-D/LAB. CAS-QL.

3 Lec. 1 Lab.

Cross-listed with BIO.

**MBI 121. The Microbial World. (3) (MPF)**

Introduces basic concepts in the study of microorganisms - bacteria, viruses, and fungi. Topics include microbial structure and function, metabolism, genetics and the immune system. Special emphasis is placed on the impact of microorganisms on medicine, agriculture, food production, biotechnology, and the environment. IVA. CAS-D.

**MBI 123. Experimenting with Microbes. (1) (MPF)**

A series of laboratory exercises and demonstrations emphasizing general techniques of isolation, characterization, and cultivation of selected microorganisms. IVA, LAB CAS-D/LAB.

Co-requisite: MBI 111 or MBI 121.

**MBI 131. Community Health Perspectives. (3) (MPF)**

Discussion of community health primarily from the perspective of leading causes of disease and death in the U.S. Exploration of the impact of environment, behavior, and disease, including prevention and treatment strategies, on human health, public resources, and quality of life for society. Does not count as credit toward an A.B. or B.S. in microbiology. IVA. CAS-D.

**MBI 143. Parasitology and Mycology Labs. (1) (MPF)**

Combination of laboratory exercises, demonstrations, and discussions exploring concepts and techniques used in parasitology and mycology laboratories, including public health, research, and diagnostic laboratories. Does not count as credit toward an A.B. or B.S. in microbiology. IVA. CAS-D/LAB.

**MBI 147. Microbiology Introductory Seminar. (1)**

Introduces the majors offered by Department of Microbiology, and the associated degree requirements. Students learn about departmental and university resources available to help achieve their academic goals. Includes discussion of undergraduate research opportunities and career development. Provides students with opportunities for professional orientation and networking via access to faculty, graduate students, alumnae, and professional microbiologists from industry, government and academia.

**MBI 150. Topics in Microbiology. (1-4; maximum 4)**

Focuses on selected topics in microbiology. No prior courses in microbiology are required. Does not count as credit toward an A.B. or B.S. in microbiology.

**MBI 161. Elementary Medical Microbiology. (4) (MPF, MPT)**

Elementary microbiology for students interested in a single unit devoted to understanding characteristics and activities of microorganisms and their relation to health and disease. Taught in Hamilton and Middletown only. IVA, LAB. CAS-D/ LAB.

**MBI 177. Independent Studies. (0-5)****MBI 201. General Microbiology. (4) (MPT)**

Consideration of fundamental aspects of structure, metabolism, genetics, and behavior of bacteria, archaea, viruses, and fungi. Laboratory stresses basic techniques and procedures common to all phases of science at professional level. CAS-D/LAB. Recommended:

MBI 121 or BIO/MBI 116.

3 Lec. 1 Lab.

Co-requisite: CHM 231 or CHM 241.

**MBI 223. Bacteriophage Biology. (1)**

Isolation and study of viruses that infect bacteria using general microbiology techniques together with electron microscopy and molecular biology methods.

Co-requisite: MBI 121 or BIO/MBI 115.

**MBI 224. Bacteriophage Genomics. (1)**

Continues from MBI 223 (Bacteriophage Biology). First-year students will perform hands-on analysis of the genome of a virus that infects bacteria (bacteriophage). Students will be introduced to principles of DNA structure, genome organization, and basic principles of bioinformatics, and will apply this knowledge toward the annotation of a complete bacteriophage genome using current computational methods.

Prerequisite: MBI 223.

Co-requisite: BIO/MBI 116.

**MBI 250. Topics in Microbiology. (1-6; maximum 6)**

Focuses on selected topics in microbiology.

Prerequisite: BIO/MBI 115, or BIO/MBI 116, or equivalent.

**MBI 256. Introduction to Programming for the Life Sciences. (3)**

Introduction to programming for majors in the life sciences. The ability to write programs to perform tasks related to the organization and analysis of biological data has become a highly-valued skill for researchers in the life sciences, allowing wet-lab researchers to quickly process and sort through large amounts of data to find information relative to their own work. This course serves as an introduction to programming designed specifically for life science majors, targeting the specific skills and techniques commonly needed and explaining the fundamental methods of working with biological data while centering programming assignments around topics of interest to those studying the life sciences. Topics covered include basic programming techniques, representation and manipulation of genomic and protein sequence data, and the automated interface with BLAST and the NCBI GenBank database.

Cross-listed with BIO/CSE.

**MBI 277. Independent Studies. (0-5)****MBI 333. Field Ecology. (3)**

Experience in collection, analysis, and interpretation of ecological data. CAS-D/LAB.

1 Lec. 1 Lab.

Prerequisite: BIO 209.

Cross-listed with BIO.

**MBI 340. Internship. (0-20)****MBI 350. Topics in Microbiology. (1-6; maximum 6)**

Focuses on selected topics in microbiology.

Prerequisite: MBI 201 or equivalent.

**MBI 361. Epidemiology. (3) (MPT)**

Consideration of the epidemic nature, etiology, and characteristics of infectious and organic diseases, and methods used to analyze their control within the framework of environmental and population variables.

Prerequisite: two hours of microbiology or biology or permission of instructor.

**MBI 365. Molecular and Cell Biology. (3) (MPT)**

Cellular and molecular mechanisms utilized by bacteria, bacterial viruses, eukaryotes and animal viruses in converting genetic information into functional macromolecules, transporting them, using them to receive signals that induce cellular effects, and controlling the cell cycle.

Prerequisites: BIO/MBI 116 and MBI 201.

Co-requisite: CHM 231 or CHM 241.

**MBI 377. Independent Studies. (0-5)****MBI 405/MBI 505. Medical Bacteriology. (4)**

Pathogenic bacteria, their identification, and mechanisms by which they cause disease.

3 Lec. 1 Lab.

Prerequisites: MBI 201 and either MBI 365 or BIO 203.

**MBI 410. Senior Internship. (2; maximum 4) (MPC)**

Supervised microbiology-related work experience in government agencies, industry, or academia; and construction of an extensive analytical and reflective report based on the experience.

Prerequisite: senior status in MBI and permission of instructor (MBI 410 combined with MBI 490 is a Miami Plan Capstone).

**MBI 414/MBI 514. Immunology Principles. (3)**

Lectures covering molecules, cells, tissues, and organs of the immune system. Primary emphasis on mechanisms involved in immune responses.

3 Lec. 1 Lab.

Prerequisites: MBI 365 or BIO 203, and CHM 242 or CHM 332.

**MBI 415/MBI 515. Immunology Principles and Practice. (4)**

Covers the same lecture content as MBI 414/MBI 514, but adds laboratory exercises and demonstrations illustrating a variety of immunologic phenomena, techniques, and applications. Credit not given for both MBI 414/MBI 514 and MBI 415/MBI 515.

3 Lec. 1 Lab.

Prerequisites: MBI 365 or BIO 203, and CHM 242 or CHM 332.

**MBI 424/MBI 524. Advanced Experimental Techniques in Structural and Functional Genomics. (4)**

Theory and application of modern biological instrumentation and techniques. Basic and advanced skills including use, maintenance and calibration of biological instruments.

Prerequisites: BIO/MBI 115 or BIO/MBI 116 or BIO 191 or MBI 201 or equivalent, CHM 141 and CHM 142 or equivalent, or permission of instructor.

Cross-listed with BIO/CHM.

**MBI 425/MBI 525. Microbial Physiology. (4)**

Biochemical activities of microorganisms as revealed by their cellular physiology.

3 Lec. 1 Lab.

Prerequisite: MBI 201 and either CHM 242 or CHM 332.

**MBI 435/MBI 535. Medical Mycology. (3)**

Characteristics of fungi associated with disease. Includes discussion of epidemiology, pathology, and diagnosis of mycotic diseases. Laboratory focuses on identification and biochemical activities of pathogenic fungi.

2 Lec. 1 Lab.

Prerequisite: BIO/MBI 116 or MBI 201 or permission of instructor.

**MBI 440. Research Problems. (1-4; maximum 4)**

Library research. Open to senior majors. (MBI 440 (2 cr) combined with MBI 490 is a Miami Plan Capstone).

Prerequisite: 20 hours of microbiology and permission of instructor.

**MBI 445/MBI 545. Microbial Genetics. (3)**

Genetic changes that occur in bacteria and bacterial viruses and resulting changes in their biochemical and physiological activities.

Prerequisite: MBI 365.

**MBI 450. Topics in Microbiology. (1-6; maximum 6)**

Focuses on selected topics in microbiology.

Prerequisite: MBI 201 or equivalent.

Co-requisite: an MBI or BIO class at the 300-level or higher or equivalent.

**MBI 461. Human Disease and Epidemiology. (3)**

Serves as the culminating experience for Public Health majors concentrating in the Human Disease and Epidemiology track. Provides students with hands-on experience assessing and analyzing disease surveillance data and in communicating findings.

Prerequisites: Core public health major requirements including: MBI 131 or KNH 125, MBI 361, IES 441/IES 541, GTY 365 or KNH 321, Stat 261 or 301, KNH 218, KNH 221.

**MBI 464/MBI 564. Human Viruses. (3)**

Study of the physical and chemical characteristics of viruses, virus replication mechanisms, disease causation and host response, and tumor induction.

Prerequisites: MBI 365 or BIO 203 and BIO 342 or permission of instructor.

**MBI 465. Microbial and Molecular Genetics Laboratory. (2)**

Laboratory methodology associated with experimental aspects of microbial genetics and recombinant DNA technique.

Prerequisite: BIO 342 or MBI 445/MBI 545 or permission of instructor.

**MBI 466/MBI 566. Bioinformatics Computing Skills. (3)**

Study of the core computational and biological concepts in bioinformatics, with programming in Python, MySQL and Ubuntu OS. You will gain hands-on experience in popular bioinformatics applications, including BLAST, sequence alignment, genome browser, and gene annotation, among others.

Prerequisites: BIO 256; or CSE 174; or permission of instructor.

Cross-listed with BIO/CHM/CSE.

**MBI 475/MBI 575. Microbial Ecology: Exploration of the Diverse Roles of Microorganisms in Earth's Ecology. (4)**

Integrative examination of the evolution of life, distribution, and abundance of microorganisms, and biogeochemical cycles leading to the discovery of principles used for societal applications such as water quality management and bioremediation.

3 Lec. 1 Lab.

Prerequisites: MBI 201 and either CHM 231 or CHM 242; or permission of instructor.

**MBI 477. Independent Studies. (0-5)**

Research experience in the laboratory of a professor. Special attention given to the scientific method, literature searches, experimental design, and laboratory instrumentation and techniques. (MBI 477R combined with MBI 490 is a Miami Plan Capstone).

Prerequisite: MBI 201.

**MBI 480. Departmental Honors. (1-6; maximum 6)**

Departmental honors may be taken for a minimum of one semester hour and a maximum of six semester hours in two semesters of student's senior year. (MBI 480 combined with MBI 490 is a Miami Plan Capstone).

**MBI 485/MBI 585. Bioinformatics Principles. (3)**

Concepts and basic computational techniques for mainstream bioinformatics problems. Emphasis placed on transforming biological problems into computable ones and seeking solutions. Recommended prerequisite: BIO/MBI 116 or MBI 201 or BIO 342 or CHM 332 or CHM 433; or permission of instructor.

Cross-listed with BIO 485/BIO 585 and CSE 456/CSE 556.

**MBI 487. Medical Laboratory Science Practicum. (8) (MPC)**

Off-campus, structured sequence of laboratory and lecture rotations through clinical chemistry, hematology, immunohematology, immunology, microbiology, molecular, and other emerging diagnostics laboratories. Structured lecture criteria accompany the corresponding laboratory rotations.

**MBI 488. Medical Laboratory Science Practicum. (12) (MPC)**

Off-campus, structured sequence of laboratory and lecture rotations through clinical chemistry, hematology, immunohematology, immunology, microbiology, molecular, and other emerging diagnostics laboratories. Structured lecture criteria accompany the corresponding laboratory rotations.

**MBI 489. Medical Laboratory Science Practicum. (12) (MPC)**

Off-campus, structured sequence of laboratory and lecture rotations through clinical chemistry, hematology, immunohematology, immunology, microbiology, molecular, and other emerging diagnostics laboratories. Structured lecture criteria accompany the corresponding laboratory rotations.

**MBI 490. Undergraduate Seminar. (1; maximum 4) (MPC)**

Discussion by undergraduate majors and staff of current topics in selected areas. (MBI 490 combined with 2 credits of with MBI 410 or MBI 440 or MBI 477 or MBI 480 is a Miami Plan Capstone).  
Prerequisite: 20 hours of microbiology and senior status.

**MBI 495/MBI 595. Bacterial Cellular and Developmental Biology. (3)**

Focuses on the biology of bacteria at the cellular level, including regulation of cell shape, cell division, motility, development and differentiation, and interactions with other cells, including life in a biofilm and in association with symbionts.  
Prerequisite: MBI 201 or BIO 203; or permission of instructor.

**MBI 605. Advanced Molecular Biology. (3)**

In-depth study of genome organization, rearrangement, replication, and expression in prokaryotic and eukaryotic cells and their viruses, with an emphasis on regulatory mechanisms.  
Prerequisite: graduate status, a course in molecular genetics, biochemistry, or cell biology, and permission of instructor.  
Cross-listed with BIO.

**MBI 606. Advanced Cell Biology. (3)**

Advanced level study of molecular basis of prokaryotic and eukaryotic cell structure/function relationships. Offered even year Spring semesters.  
Prerequisite: graduate status, course in molecular genetics, cell biology, or biochemistry, and permission of instructor.  
Cross-listed with BIO.

**MBI 615. Communicating Science: Papers, Proposals, and Presentations. (2)**

Introduces the principles of scientific writing for the biological sciences. Students practice writing grant proposals and papers and prepare graphic presentation of data for poster and oral presentations.

**MBI 640. Infectious Disease Microbiology for Teachers. (0-20)****MBI 650. Seminar in Molecular Biology. (1)**

Discussion of current literature in molecular biology.  
Prerequisite: graduate standing.  
Cross-listed with BIO/CHM.

**MBI 671. Population and Community Ecology. (4)**

Principles and applications of population and community ecology: population dynamics, direct and indirect species interactions, food webs, and species diversity.  
Prerequisite: at least one course in general ecology (calculus is recommended).  
Cross-listed with BIO.

**MBI 672. Ecosystem and Global Ecology. (4)**

Structure, dynamics and management of ecosystems and the biosphere, including food web interactions, nutrient cycling, ecosystem functioning, and biogeochemical cycles at local, regional and global scales.  
Prerequisites: at least one course in general ecology and general chemistry.  
Cross-listed with BIO.

**MBI 677. Independent Studies. (0-5)**

**MBI 689. Pedagogy in Microbiology for Graduate Students. (1)**  
Introduction of new graduate students to the role of the graduate teaching assistant. Summer only.

**MBI 690. Graduate Seminar. (1; maximum 8)**

Discussions of current research and literature by graduate students and faculty.

**MBI 700. Research for Master's Thesis. (1-12; maximum 12)****MBI 710. Graduate Research Problems. (1-10; maximum 16)**

Prerequisites: graduate standing and permission of instructor.

**MBI 750. Advanced Topics in Microbiology. (1-3; maximum 36)**

Study of special topics from current research in the following areas: 750A Pathogenic Microbiology, 750B Immunology, 750C Microbial Physiology, 750E Microbial and Molecular Genetics, 750F Microbial Ecology, 750H Virology, 750I Bacterial Cell Biology, 750J Bioinformatics.  
Prerequisites: graduate standing and permission of instructor.

**MBI 790. Pre-Candidacy Doctoral Research. (1-12)****MBI 850. Research for Doctoral Dissertation. (1-16; maximum 60)**

## Military Science (MSC)

**MSC 121. Foundations of Officership. (3)**

Introduces students to issues and competencies that are central to a commissioned officer's responsibilities. These initial lessons establish a framework for understanding officership, leadership, and Army values. Additionally, the semester addresses life skills including fitness and time management. (Open enrollment for all students, with no military obligation).  
Co-requisite: MSC 121L.

**MSC 121L. Leadership Lab. (1)**

The leadership lab examines the challenges of leading tactical teams in the complex contemporary operating environment (COE). This course highlights dimensions of terrain analysis, patrolling, and operation orders. Continued study of the theoretical basis of the Army leadership framework explores the dynamics of adaptive leadership in the context of military operations. Cadets develop greater self awareness as they assess their own leadership styles and practice communication and team building skills. COE case studies give insight into the importance and practice of teamwork and tactics in real-world scenarios. Co-requisite MSC 121.

**MSC 122. Introduction to Tactical Leadership. (1)**

Overviews leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. You will explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises. Open enrollment for all students, with no military obligation.

Prerequisites: MSC 121, MSC 121L.

Co-requisite: MSC 122L.

**MSC 122L. Leadership Lab. (1)**

An academically challenging course where you will study, practice, and apply the fundamentals of Army leadership, Officership, Army values and ethics, personal development, and small unit tactics at the team and squad level. At the conclusion of this course, you will be capable of planning, coordinating, navigating, motivating and leading a team or squad in the execution of a tactical mission during a classroom PE, a Leadership Lab, or during a Situational Training Exercise (STX) in a field environment. Successful completion of this course will help prepare you for success at the ROTC Leader Development and Assessment Course (LDAC). Open enrollment for all students, with no military obligation.

Prerequisites: MSC 121, MSC 121L.

Co-requisite: MSC 122.

**MSC 221. Individual Leadership. (3)**

Explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army leadership framework. Aspects of personal motivation and team building are practiced planning, executing and assessing team exercises. The focus continues to build on developing knowledge of the leadership attributes and core leader competencies through the understanding of Army rank, structure, and duties as well as broadening knowledge of land navigation and squad tactics. Case studies will provide a tangible context for learning the Soldier's Creed and Warrior Ethos as they apply in the contemporary operating environment. (Open enrollment for all students, with no military obligation).

Co-requisite: MSC 221L.

**MSC 221L. Leadership Lab. (1)**

Examines the challenges of leading tactical teams in the complex contemporary operating environment (COE). This course highlights dimensions of terrain analysis, patrolling, and operation orders. Continued study of the theoretical basis of the Army leadership framework explores the dynamics of adaptive leadership in the context of military operations. MSC 221L provides a smooth transition into MSC 321. Cadets develop greater self awareness as they assess their own leadership styles and practice communication and team building skills. COE case studies give insight into the importance and practice of teamwork and tactics in real-world scenarios. (Open enrollment for all students with no military obligation)

Co-requisite: MSC 221.

**MSC 222. Individual Leadership Part II. (3)**

Second part of a two-semester introduction to organizational leadership. It is designed to help you understand how to build teams, influence others, communicate effectively, make decisions, engage in creative problem solving, and plan and organize. This semester's emphasis is on individual-level leadership. (Open enrollment for all students, with no military obligation).

**MSC 222L. Leadership Lab. (1)**

Emphasizes the functions, duties, and responsibilities of junior Army Officers with special attention focused on to developing advanced leadership potential, and developing personal communications (oral and written) skills, and to active participation in the planning and conduct of training.

**MSC 320. Tactical Problems Seminar. (1; maximum 2)**

Introduction to and discussion of land navigation and tactical route planning.

**MSC 321. Advanced Tactical Leadership Part I. (3)**

This is an academically challenging course where you will study, practice, and apply the fundamentals of Army leadership, Officership, Army values and ethics, personal development, and small unit tactics at the team and squad level. At the conclusion of this course, you will be capable of planning, coordinating, navigating, motivating and leading a team or squad in the execution of a tactical mission during a classroom PE, a Leadership Lab, or during a Situational Training Exercise (STX) in a field environment. Successful completion of this course will help prepare you for success at the ROTC Leader Development and Assessment Course (LDAC).

Co-requisite: MSC 321L.

**MSC 321L. Leadership Lab MS 301. (1)**

This lab prepares you for attendance at the Leadership Development and Assessment Course (LDAC) during the summer following completion of NSC 322 and 322L. During the conduct of this lab you will be challenged to practice and hone your leadership technique. You will be evaluated on your leadership skills as you are presented with the demands of LDAC in a series of challenging scenarios related to small unit tactical operations are used to develop self awareness and critical thinking skills. You will receive systematic and specific feedback on your leadership abilities.

Co-requisite: MSC 321.

**MSC 322. Advanced Tactical Leadership Part II. (3)**

Part two of the required courses to prepare the student for attendance at the Leadership Development Assessment Course (LDAC). Students will be challenged to study, practice, and evaluate adaptive leadership skills as you are presented with the demands of LDAC. Challenging scenarios related to small unit tactical operations are used to develop self awareness and critical thinking skills. You will receive systematic and specific feedback on your leadership ability.

Co-requisite: MSC 322L.

**MSC 322L. Leadership Lab. (1)**

A continuation of MSC 321L that prepares you for attendance at the Leadership Development and Assessment Course (LDAC). The cadet will attend LDAC during the summer following the completion of this lab. During the conduct of this lab you will be challenged to practice and hone your leadership technique. You will be evaluated on your leadership skills as you are presented with the demands of LDAC in a series of challenging scenarios related to small unit tactical operations are used to develop self awareness and critical thinking skills. You will receive systematic and specific feedback on your leadership abilities.

Co-requisite: MSC 322.

**MSC 377. Independent Studies. (0-5)****MSC 421. Adaptive Leadership. (3)**

A practical application of adaptive leadership. Throughout the semester, students are assigned the duties and responsibilities of an Army staff officer and must apply the fundamentals of principles of training, the training management, the Army writing style and military decision making to weekly training meetings. During these weekly training meetings, the student will plan, execute and assess ROTC training and recruiting events.

Co-requisite: MSC 421L.

**MSC 421L. Leadership Lab. (1)**

Prepares the future officer to take charge and perform duties as a small unit leader. Cadets will plan, supervise and execute the training for the underclassmen under the supervision of cadre. Cadets will also apply their experience gained from their attendance at the Leadership Development and Assessment Course and pass that unique knowledge on to underclassmen in order to prepare them for LDAC.

Co-requisite: MSC 421.

**MSC 422. Leadership in a Complex World. (3)**

Explores the dynamics of leading in the complex situations of current military operations in the contemporary operating environment (COE). You will examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. You also explore aspects of interacting with non-government organizations, civilians on the battlefield, and host nation support. It uses case studies, scenarios, and "What Now, Lieutenant?" exercises to prepare you to face the complex ethical and practical demands of leading as a commissioned officer in the United States Army.

Co-requisite: MSC 422L.

**MSC 422L. Leadership Lab. (1)**

Continues to prepare the future officer to take charge and perform duties as a small unit leader. Cadets will plan, supervise and execute the training for the underclassmen under the supervision of cadre. Cadets will also apply their experience gained from their attendance at the Leadership Development and Assessment Course and pass that unique knowledge on to underclassmen in order to prepare them for LDAC.

Co-requisite: MSC 422.

**MSC 477. Independent Studies. (0-5)**

## Music (MUS)

**Note:**

1. The following music history and literature courses require a reading knowledge of music: MUS 211-MUS 212, MUS 405/MUS 505, MUS 457/MUS 557-MUS 458/MUS 558, MUS 461/MUS 561, MUS 481-MUS 482, MUS 505, MUS 557-MUS 558, MUS 561, MUS 621, MUS 661.
2. Applied music courses are listed at the end of this section.

**MUS 100. Ensemble. (0-2)****MUS 100A. Collegiate Chorale. (1-2)**

Mixed chorus of 75 to 125 voices. May be repeated for credit.

**MUS 100B. Men's Glee Club. (1-2)**

Membership: 75. May be repeated for credit.

**MUS 100C. Symphony Orchestra. (1-2)**

Open to all students by audition only. Membership: 80 string, wind, and percussion players. Study and performance of main symphonic literature. May be repeated for credit.

**MUS 100D. Choraliers. (1-2)**

Women's chorus. Membership:80. May be repeated for credit.

**MUS 100E. Marching Band. (1-2)**

Membership: 200 wind and percussion players. May be repeated for credit.

**MUS 100F. Symphony Band. (1-2)**

Membership: 72 wind and percussion players. May be repeated for credit.

**MUS 100G. Wind Ensemble. (1-2)**

Membership: 55 wind and percussion players. May be repeated for credit.

**MUS 100H. Chamber Music Brass. (1)**

Participation in the performance of brass chamber music with such groups as French horn quartet, trumpet trio and quartet, brass quintet, trombone quartet. May be repeated for credit.

**MUS 100I. Chamber Music Strings. (1)**

Study and performance of major chamber works for string quartets, string trios and string quartets, and compositions for strings with piano and other instruments. May be repeated for credit.

**MUS 100J. Chamber Music - Piano. (1)****MUS 100K. Jazz Ensemble. (1-2)**

Open to all students by audition only. Contemporary jazz ensemble literature is covered in this performance group. Two sections are available: advanced and intermediate. May be repeated for credit.

**MUS 100M. Miami University Percussion Ensemble. (1)**

Open to all with necessary proficiency. Admittance determined by audition or instructor recommendation. Study and performance of literature for varied combinations of percussion instruments. Literature ranges from percussion ensemble classics to pop arrangements. May be repeated for credit.

**MUS 100N. Steel Band. (1-2)**

Open to all students by audition only. Two sections are available: advanced and beginner. Advanced ensemble focuses on performance of steel band literature; beginner ensemble is for students with little or no experience playing steel drum instruments. May be repeated for credit.

**MUS 100P. Chamber Orchestra. (1)**

Open to all students by audition or instructor recommendation. Membership: 30 string, wind, and percussion players. Study and performance of the main chamber orchestra literature. May be repeated for credit.

**MUS 100Q. Chamber Singers. (1-2)**

Chamber choir; 20-25 mixed voices. Auditions open to all students. May be repeated for credit.

**MUS 100R. Chamber Music Winds. (1)****MUS 100S. Choral Union. (1)****MUS 100T. Chamber Music - Jazz Combo. (1)****MUS 100U. Basketball/Hockey Band. (1-2)**

Open to all students. Ensemble performs for on-campus basketball activities.

**MUS 100X. Marching Band Percussion Ensemble. (1)**

Open to all with necessary proficiency. Admission determined by audition or instructor recommendation. Study and performance of literature for varied combinations of percussion instruments. Literature ranges from percussion ensemble classics to pop arrangements. May be repeated for credit.

**MUS 100Y. Marching Band Auxiliaries. (1)****MUS 100Z. Laptop Ensemble. (1; maximum 8)**

The Miami University Laptop Ensemble (MULE) provides students the opportunity to perform electro-acoustic and digital music using laptops, tablets, various sensors, controllers, synths, and other electronic instruments. Students will gain an understanding of how to use computers and other emerging music technologies to create music in an ensemble environment. Additionally, they will develop music industry strategies for ensemble development, such as publicity, booking, and promoting music.

**MUS 101. Theory of Music I. (3)**

A study of music's structural elements and their usage, directed toward intelligent interpretation and informed performance. MUS 101 covers the fundamentals of musical construction, including scales, keys, chords, meter, and species counterpoint. Recommend taking concurrently with MUS 151. Required of music majors and open to all students with permission of instructor. Students must be able to read music fluently in at least one clef before enrolling in this course.

**MUS 102. Theory of Music II. (3)**

A study of music's structural elements and their usage, directed toward intelligent interpretation and informed performance. MUS 102 covers diatonic harmony, phrase and period structure, sequences, and applied dominants. Recommend taking concurrently with MUS 152.

Prerequisite: successful completion of MUS 101.

**MUS 110. Vocal Accompanying. (1)**

Practical experience in studio accompanying of voice students. Fulfills either accompanying requirement or large ensemble requirement in a single semester, but not both.

**MUS 111. Lab Band. (0)**

Laboratory ensemble for instrumental music education majors. Students reinforce and improve fundamentals of instrumental performance, expand technical and musical abilities, and develop and refine skills necessary for effective conducting and teaching. Prerequisite: junior students must have completed MUS 352.

**MUS 112. Lab Choir. (0)**

Introduction to the role of the choral conductor/teacher in the junior and senior high school.

Prerequisite: junior students must have completed MUS 352.

**MUS 113. Choral Practicum. (1; maximum 4)**

113 Choral Practicum )1; maximum 4) Methods, materials, and techniques for teaching choral ensembles at the secondary level. Overview of choral literature appropriate for secondary level choirs.

**MUS 115. Beginning Piano for Non-Majors. (2)**

Beginning level group piano instruction for non-music majors. The course introduces and develops basic piano skills, music reading skills, as well as music theory fundamentals through repertoire, scale, and chord playing.

**MUS 117. Class Voice. (2)**

Fundamentals of vocal production, song literature, and interpretation designed either as terminal course or to prepare for private study. Class approach combines lecture with group and individual singing. Literature assigned to students according to individual interests and needs.

**MUS 118. Class Voice. (2)**

Fundamentals of vocal production, song literature, and interpretation designed either as terminal course or to prepare for private study. Class approach combines lecture with group and individual singing. Literature assigned to students according to individual interests and needs.

**MUS 119. Introduction to Music Theory. (3)**

An introductory course for students who are not yet familiar with the symbols and language of music literacy: this includes rhythm, melody, harmony, and basic keyboard skills. The students will learn how to read and write music through instruction, daily assignments, group and individual sight-singing and ear training exercises, and finally the practice of playing basic melodic and harmonic progressions on the keyboard.

**MUS 120. Instrumental Accompanying. (1)**

Practical experience in studio accompanying of solo instruments: woodwinds, brass, or strings. Fulfills either accompanying requirement or large ensemble requirement in a single semester, but not both.

**MUS 135. Understanding Jazz, Its History and Context. (3) (MPF, MPT)**

History of jazz in the United States from its origins to the present. Emphasis placed on developing aural perceptions of stylistic differences between historical periods and significant performers. IIA, IIB, IIIB.

Cross-listed with AMS.

**MUS 139. Chamber Music Experience. (0)**

Completion of a chamber music experience.

**MUS 140. Recital Requirement. (0)**

Required recital attendance as nonparticipant for undergraduate music majors consisting of seven semesters of verified attendance at minimum of 12 approved events per semester.

**MUS 142. Applied Music. (2)**

You must audition to qualify for studio lessons in applied music. Study in applied music consists of one-hour private lessons, given weekly, and periodic studio classes.

**MUS 142A. Applied Music Voice- FR. (2)**

Study of basic principles of singing, including posture, breath control, vocal freedom, resonance, and diction. First semester repertoire is at the discretion of the instructor. Second semester repertoire for 142. A is a minimum of three songs (memorized); for 144.A is a minimum of five songs (memorized).

**MUS 142B. Applied Music Piano- FR. (2)**

Introduction to piano technique and interpretation based on study of scales, arpeggios, and other standard pianistic patterns, as well as compositions from the standard repertoire, such as: Bach Inventions, and Preludes and Fugues from the Well-Tempered Clavier; Haydn, Mozart, and Beethoven sonatas; Chopin, Schumann, and Debussy character pieces; and Bartok Mikrokosmos.

**MUS 142C. Applied Guitar- FR. (2)**

Applied guitar is the study of the classical guitar, in which the student applies the study of technique and literature to music from all periods.

**MUS 142D. Applied Music Flute- FR. (2)**

Studies for development of tone and technique; major and minor scales and arpeggios. Drouet 25 Etudes Celebres; Donjon Etudes de Salon; Karg-Elert 24 Caprices. Sonatas of Blavet, Handel, C.P.E. Bach, Koechlin 14 pieces pour Flute et Piano; Bloch Suite Modale; and works of comparable difficulty.

**MUS 142E. Applied Music Clarinet- FR. (2)**

Technical studies as needed: embouchure, breath control, hand and finger position, articulation, intonation, phrasing. Scales Studies Baermann Bk. III, Etudes from Rose, Klose Celebrated Method. Works by Weber, Mozart, Stamitz, St-Sans, Tartini, Brahms, Hindemith, and others. Reed work. All scales.

**MUS 142F. Applied Music Saxophone- FR. (2)**

Technical studies as needed; embouchure, breath control, hand and finger position and articulation. Studies by Klose, Mule Etudes after Berbiguier and after Samie. All major and minor scales. Pieces by Bozza, Bach, Leclair, Creston, or works of comparable difficulty.

**MUS 142G. Applied Music Oboe- FR. (2)**

Focuses on basic elements of tone production: breathing embouchure and articulation. Musicality. Reedmaking. All major and minor (3 forms) scales, Triad arpeggios. Articulation and melodic Studies from Barret Oboe Method, Salviani Scale Studies, Book II. Pieces: Handel Sonatas, Telemann Sonata in A Minor, Sammartini Sonata in G, Albinoni Concerti, Cimarosa Concerto, Haydn Concerto.

**MUS 142H. Applied Music Bassoon- FR. (2)**

Basic technical studies; proper breath control, tongue placement, vibrato, embouchure, reed making. Weissenborn Studies, Ozi Caprices, solos of difficulty of the Galliard Sonatas.

**MUS 142I. Applied Music Trumpet- FR. (2)**

Emphasis on tone production, articulation, and lip flexibility. Introductory work in Schlossberg, Daily Drills; Arban, Complete Method for Trumpet. Introduction to transposition. Study of etudes from Hering, 32 Etudes for Trumpet; Concone, Legato Etudes; and others. Technique: all major scales and arpeggios; etudes from Clarke, Technical Studies; introduction to multiple tonguing as in Arban, Complete Method for Trumpet.

**MUS 142J. Applied Music French Horn- FR. (2)**

Emphasis on elements of basic technique: embouchure, breathing, tone production. Develop individual routine to address range extension, endurance, flexibility. All major and minor scales, transposition study. Etudes from Kopprasch 60 Studies, Kling 40 Studies, Pottag- Andraud Method Book 1, Shoemaker Legato Etudes for French Horn, bass clef studies. Solo literature by Mozart, Saint-Saens, and others.

**MUS 142K. Applied Music Trombone- FR. (2)**

Emphasis on tone production, articulation, and basic musicianship. Bordogni-Rochut Melodious Etudes Vol. I; Blazhevich Studies in Clefs. Solos by Guilmant, Barat, Galliard.

**MUS 142L. Applied Music Euphonium- FR. (2)**

Primary emphasis on tone production and advancement of technique: breath studies, range development, major and minor scales. Example: Stacy Scale Studies Bk. 3, Arban Bass Clef Studies, Pares Daily Exercises and Scales, solo works of the difficulty of Marcello Sonata in C Major, Muller Prelude, Chorale, Variations and Fugue, Presser Sonatina.

**MUS 142M. Applied Music Tuba- FR. (2)**

Primary emphasis on tone production and advancement of technique: breath studies, range development, major and minor scales. Example: Tyrrell Advanced Studies for Tuba, Arban Bass Clef Studies, Bell Daily Routines for Tuba, solo works of the difficulty of Bach-Bell Air and Bourree, Marcello Sonata in C Major.

**MUS 142N. Applied Music Percussion- FR. (2)**

Snare drum: development of rudimental and concert styles through study of rolls (double and triple stroke, multiple bounce); grace note rudiments (flams, drags, and ruffs); others from PASIC 40 International Rudiment list; and sight reading. Method books: Stick Control, George L. Stone; Modern School for Snare Drum, Morris Goldenberg; Standard Snare Drum Method, B. Podemski; others, Garwood Whaley; concert and rudimental solos from O.M.E.A. approved list for solos and ensemble contest. Keyboard instruments: major and minor scales played two octaves in all keys; major, minor, augmented, and diminished 7th broken chord patterns in all keys; selected warm ups; repertory appropriate to level; sight reading; introduction to four mallet techniques. Method books: Modern School of Xylophone, Marimba, and Vibraphone, Morris Goldenberg; Modern Mallet Methods, Phil Kraus; Mental and Manual Calisthenics, Elden Bailey; Instruction Course for Xylophone, George L. Green; Method for Movement for Marimba, Leigh H. Stevens; others, Garwood Whaley; solos from OMEA approved list. Tambourine, triangle, cymbals: basic performance techniques, ensemble repertoire.

**MUS 142O. Applied Music Violin- FR. (2)**

Technical facility in scales, arpeggios, and violin studies. Sonatas and concerti of the baroque, classical, or romantic repertoire.

**MUS 142P. Applied Music Viola- FR. (2)**

Scales: three octaves, arpeggios. Etudes: Sevicik (bowing), Mazas, Kayser, position studies. Repertoire level: Bach, Solo Suite, G Major, Hoffmeister, Telemann, Zelter, Concerto, Marcello, Sonatas.

**MUS 142R. Applied Music Cello- FR. (2)**

Technical facility in scales, arpeggios. Studies: sonatas, concerti, and solo pieces of the baroque, classical, and romantic repertoire. Orchestral repertoire.

**MUS 142S. Applied Music String Bass- FR. (2)**

Technical facility in scales, arpeggios. Studies: sonatas, concerti, and solo pieces of baroque, classical, and romantic repertoire. Orchestral repertoire.

**MUS 142T. Applied Music Harp- FR. (2)**

Technical studies and etudes such as Salzedo Conditioning Exercises, Bochsá Etudes Op. MUS 318, Pozzoli Studies. Grandjany Two French Folk Songs, Salzedo Chanson dans la Nuit, Handel Passacaglia and Concerto in Bb Major, Haydn Theme and Variations, Annie Louise David Album of Solo Pieces Vol. 1&2.

**MUS 144. Applied Music. (3-4)****MUS 144A. Applied Music Voice- FR. (3-4)**

Study of basic principles of singing, including posture, breath control, vocal freedom, resonance, and diction. First semester repertoire is at the discretion of the instructor. Second semester repertoire for 142. A is a minimum of three songs (memorized); for 144A is a minimum of five songs (memorized).

**MUS 144B. Applied Music Piano- FR. (3-4)**

Introduction to piano technique and interpretation based on study of scales, arpeggios, and other standard pianistic patterns, as well as compositions from the standard repertoire, such as: Bach Inventions, and Preludes and Fugues from the Well-Tempered Clavier; Haydn, Mozart, and Beethoven sonatas; Chopin, Schumann, and Debussy character pieces; and Bartok Mikrokosmos.

**MUS 144C. Applied Guitar- FR. (3)**

Applied guitar is the study of the classical guitar, in which the student applies the study of technique and literature to music from all periods.

**MUS 144D. Applied Music Flute- FR. (3-4)**

Studies for development of tone and technique; major and minor scales and arpeggios. Drouet 25 Etudes Celebres; Donjon Etudes de Salon; Karg-Elert 24 Caprices. Sonatas of Blavet, Handel, C.P.E. Bach, Koechlin 14 pieces pour Flute et Piano; Bloch Suite Modale; and works of comparable difficulty.

**MUS 144E. Applied Music Clarinet- FR. (3-4)**

Technical studies as needed: embouchure, breath control, hand and finger position, articulation, intonation, phrasing. Scales Studies Baermann Bk. III, Etudes from Rose, Klose Celebrated Method. Works by Weber, Mozart, Stamitz, St-Sans, Tartini, Brahms, Hindemith, and others. Reed work. All scales.

**MUS 144F. Applied Music Saxophone- FR. (3-4)**

Technical studies as needed; embouchure, breath control, hand and finger position and articulation. Studies by Klose, Mule Etudes after Berbiguier and after Samie. All major and minor scales. Pieces by Bozza, Bach, Leclair, Creston, or works of comparable difficulty.

**MUS 144G. Applied Music Oboe- FR. (3-4)**

Focuses on basic elements of tone production: breathing embouchure and articulation. Musicality. Reedmaking. All major and minor (3 forms) scales, Triad arpeggios. Articulation and melodic Studies from Barret Oboe Method, Salviani Scale Studies, Book II. Pieces: Handel Sonatas, Telemann Sonata in A Minor, Sammartini Sonata in G, Albinoni Concerti, Cimarosa Concerto, Haydn Concerto.

**MUS 144H. Applied Music Bassoon- FR. (3-4)**

Basic technical studies; proper breath control, tongue placement, vibrato, embouchure, reed making. Weissenborn Studies, Ozi Caprices, solos of difficulty of the Galliard Sonatas.

**MUS 144I. Applied Music Trumpet- FR. (3-4)**

Emphasis on tone production, articulation, and lip flexibility. Introductory work in Schlossberg, Daily Drills; Arban, Complete Method for Trumpet. Introduction to transposition. Study of etudes from Hering, 32 Etudes for Trumpet; Concone, Legato Etudes; and others. Technique: all major scales and arpeggios; etudes from Clarke, Technical Studies; introduction to multiple tonguing as in Arban, Complete Method for Trumpet.

**MUS 144J. Applied Music French Horn- FR. (3-4)**

Emphasis on elements of basic technique: embouchure, breathing, tone production. Develop individual routine to address range extension, endurance, flexibility. All major and minor scales, transposition study. Etudes from Kopprasch 60 Studies, Kling 40 Studies, Pottag- Andraud Method Book 1, Shoemaker Legato Etudes for French Horn, bass clef studies. Solo literature by Mozart, Saint-Saens, and others.

**MUS 144K. Applied Music Trombone- FR. (3-4)**

Emphasis on tone production, articulation, and basic musicianship. Bordogni-Rochut Melodious Etudes Vol. I; Blazhevich Studies in Clefs. Solos by Guilment, Barat, Galliard.

**MUS 144L. Applied Music Euphonium- FR. (3-4)**

Primary emphasis on tone production and advancement of technique: breath studies, range development, major and minor scales. Example: Stacy Scale Studies Bk. 3, Arban Bass Clef Studies, Pares Daily Exercises and Scales, solo works of the difficulty of Marcello Sonata in C Major, Muller Prelude, Chorale, Variations and Fugue, Presser Sonatina.

**MUS 144M. Applied Music Tuba- FR. (3-4)**

Primary emphasis on tone production and advancement of technique: breath studies, range development, major and minor scales. Example: Tyrrell Advanced Studies for Tuba, Arban Bass Clef Studies, Bell Daily Routines for Tuba, solo works of the difficulty of Bach-Bell Air and Bourree, Marcello Sonata in C Major.

**MUS 144N. Applied Music Percussion- FR. (3-4)**

Snare drum: development of rudimental and concert styles through study of rolls (double and triple stroke, multiple bounce); grace note rudiments (flams, drags, and ruffs); others from PASIC 40 International Rudiment list; and sight reading. Method books: Stick Control, George L. Stone; Modern School for Snare Drum, Morris Goldenberg; Standard Snare Drum Method, B. Podemski; others, Garwood Whaley; concert and rudimental solos from O.M.E.A. approved list for solos and ensemble contest. Keyboard instruments: major and minor scales played two octaves in all keys; major, minor, augmented, and diminished 7th broken chord patterns in all keys; selected warm ups; repertory appropriate to level; sight reading; introduction to four mallet techniques. Method books: Modern School of Xylophone, Marimba, and Vibraphone, Morris Goldenberg; Modern Mallet Methods, Phil Kraus; Mental and Manual Calisthenics, Elden Bailey; Instruction Course for Xylophone, George L. Green; Method for Movement for Marimba, Leigh H. Stevens; others, Garwood Whaley; solos from OMEA approved list. Tambourine, triangle, cymbals: basic performance techniques, ensemble repertoire.

**MUS 144O. Applied Music Violin- FR. (3-4)**

Technical facility in scales, arpeggios, and violin studies. Sonatas and concerti of the baroque, classical, or romantic repertoire.

**MUS 144P. Applied Music Viola- FR. (3-4)**

Scales: three octaves, arpeggios. Etudes: Sevicik (bowing), Mazas, Kayser, position studies. Repertoire level: Bach, Solo Suite, G Major, Hoffmeister, Telemann, Zelter, Concerto, Marcello, Sonatas.

**MUS 144R. Applied Music Cello- FR. (3-4)**

Technical facility in scales, arpeggios. Studies: sonatas, concerti, and solo pieces of the baroque, classical, and romantic repertoire. Orchestral repertoire.

**MUS 144S. Applied Music String Bass- FR. (3-4)**

Technical facility in scales, arpeggios. Studies: sonatas, concerti, and solo pieces of baroque, classical, and romantic repertoire. Orchestral repertoire.

**MUS 144T. Applied Music Harp- FR. (3-4)**

Technical studies and etudes such as Salzedo Conditioning Exercises, Bochs Etudes Op. MUS 318, Pozzoli Studies. Grandjany Two French Folk Songs, Salzedo Chanson dans la Nuit, Handel Passacaglia and Concerto in Bb Major, Haydn Theme and Variations, Annie Louise David Album of Solo Pieces Vol. 1&2.

**MUS 151. Theory of Music: Aural Skills I. (1)**

Practice in rhythmic and melodic reading of music and its reproduction through singing, dictation, and contextual listening of musical excerpts. Content is correlated with MUS 101. Required of all music majors. Recommend taking concurrently with MUS 101.

**MUS 152. Theory of Music: Aural Skills II. (1)**

Practice in rhythmic and melodic reading of music and its reproduction through singing, dictation, and contextual listening of musical excerpts. Content is correlated with MUS 102. Required of all music majors. Recommend taking concurrently with MUS 102. Prerequisite: MUS 151.

**MUS 160. Functional Piano I. (1)**

Beginning level group piano instruction for music majors preparing to meet the piano proficiency requirement. Open to music majors only.

**MUS 161. Functional Piano II. (1)**

Elementary level group piano instruction for music majors preparing to meet the piano proficiency requirement. Open to music majors only.

Prerequisite: MUS 160 or permission of instructor.

**MUS 171. Composition Seminar. (3; maximum 6)**

This course provides young composers with practical technical training in composition through direct work with Miami Composition Faculty and student performers. It is designed to allow Composition majors to advance to private lessons, and to set Composition minors and other interested students on the path to a productive independent composition practice. Composers will work directly with Miami University composition faculty and student performers to realize their compositions. Class content will include review of works in progress, discussion of relevant repertoire and current compositional trends, and preparation for a final concert.

Prerequisite: status as a Composition major or minor, or permission of instructor.

**MUS 175. Introduction to Music Education. (3)**

Scope of music education in early childhood, elementary, and secondary schools; licensure and degree requirements; assessment of personal and musical competencies/career counseling; foundations/philosophy of music education; introduction to computers in music education. Open to Music majors only.

**MUS 177. Independent Studies. (0-5)****MUS 182. Discovering Italian Opera. (3) (MPF)**

The objective of this course is to draw students into a passionate connection with the arts through studying the medium of Italian opera, an art form that combines music, art, theatre, dance, history, mythology, literature, politics and society. Opera was born in Italy and has remained vibrant in Italian culture as a living, breathing art form. It maintains an important role within European society, as well as around the globe and, is a unifying force communicating across cultures, language and national boundaries through live performances and electronic media. To help connect operas with the contemporary society in which they were premiered, the course will include reflections of the social and political history of Italy as it relates to the art form. Intended to develop a deep appreciation of Italian opera and culture, the course will also highlight the artistic choices an artist makes and how they can be analyzed in a critical manner. IIA, IIB.

**MUS 184. Opera: Passport to the Liberal Arts. (3) (MPF)**

This course focuses on opera as the "total art work", encompassing history, art, literature, theatre, business and traces the course of opera's history from its roots in ancient Greek drama to the present day. Framed in the context of Italy as the self-proclaimed birthplace of opera, the course addresses how the passion for this art form has spread through and united European cultures. Students will learn to appreciate the art form by studying selected operas and attending an opera at Miami University, with an optional trip to Chicago to see an opera live at the Chicago Lyric Opera. IIA, IIB.

**MUS 185. The Diverse Worlds of Music. (3) (MPF)**

An investigation of music as it exists in diverse areas around the world. The approach will be ethnomusicological, best defined as an exploration of music and its relationship to human culture. IIA, IIB, IIIB. CAS-B.

**MUS 186. Global Popular Music. (3) (MPF)**

This course is a survey of popular music throughout the world. Through the study of specific cultures and repertoires, students will explore and engage in popular music in various cultural contexts in the United States, Europe, Asia, Africa and Latin America. The goal is to give students a broad understanding of what exactly is popular music, how it can be defined, and the differences and similarities amongst diverse popular music traditions. IIA, IIB, IIIB. CAS-B.

**MUS 189. Great Ideas in Western Music. (3) (MPF)**

Development of a sequential listening skill and a descriptive vocabulary used in a study of the style of Western Art Music from Middle Ages through 20th century. IIA, IIB. CAS-B.

**MUS 201. Theory of Music III. (3)**

A study of music's structural elements and their usage, directed toward intelligent interpretation and informed performance. MUS 201 covers modulation, chromatic harmony, tonality in popular music, and traditional tonal forms. Recommend taking concurrently with MUS 251. Required of music majors and open to all students with permission of instructor.

Prerequisite: MUS 102.

**MUS 202. Theory of Music IV. (3)**

A study of music's structural elements and their usage, directed toward intelligent interpretation and informed performance. MUS 202 covers post-tonal techniques used in music of the twentieth century and beyond, including pitch-centricity, pitch-class sets, serialism, and sonic experimentalism. Final project is a researched analysis of a complete piece as part of Departmental Assessment Plan. Recommend taking concurrently with MUS 252. Required of music majors and open to all students with permission of instructor. Prerequisite: MUS 201.

**MUS 204. Brazilian Culture Through Music and Film. (3) (MPF)**

Through music and film this course raises questions about national identity, history, social, religious, and ethnic diversity in Brazil. IIA, IIB, IIIB. CAS-B.

Cross-listed with FST 204 and POR 204.

**MUS 206. Tracking Sounds: A History of Film Music. (3) (MPF)**

This course traces the technological developments, socio-political and economic trends, and musical styles that have shaped film music history from the end of the nineteenth century to today. The chronological trajectory of the course considers music in the silent film era (1895-1928), the early sound era (1928-1934), the Hollywood "Golden Age" (1935-1959), the New American Cinema (1960-1976), 1970s Eclecticism and Classicism, and postmodern film of the video and digital age since the 1980s. The course consistently engages film, animated features and film musicals produced in the United States, as well as international film from Germany, France, Russia, England and Japan. Students will watch and listen to clips of films in class and will periodically be expected to view and listen to entire films on their own. As an interdisciplinary course intended for students interested in both film and music studies, students do not need knowledge of music notation or theory. IIA, IIB.

**MUS 211. History of Western Music. (3) (MPF)**

History of Western music from antiquity to the present placed in global context. Music and society; analysis of representative styles from scores. IIA.

Prerequisite: MUS 201-202 or permission of instructor.

**MUS 212. History of Western Music. (3)**

History of Western music from antiquity to the present placed in global context. Music and society; analysis of representative styles from scores.

Prerequisite: MUS 201-202 or permission of instructor.

**MUS 215. Class Voice for Music Theatre. (2)**

Study of basic principles of singing, including posture, breath control, vocal freedom, resonance, and diction designed to prepare for private study. Class approach combines lecture with group and individual singing. Semester repertoire is at the discretion of the instructor and includes a minimum of three songs (memorized). Students are required to give a jury for the voice faculty as a part of semester evaluation.

Prerequisite: admission in the Music Theatre minor.

**MUS 216. Applied Voice for Music Theatre. (1; maximum 2)**

Study of principles of singing, including posture, breath control, vocal freedom, resonance, and diction. Semester repertoire is at the discretion of the instructor and includes a minimum of five songs (memorized). Students are required to give a jury for the voice faculty as a part of semester evaluation.

Prerequisite: MUS 215.

**MUS 218. Beginning Guitar. (1)**

Covers basic technique for guitar as it applies to melodic playing and accompaniment of popular songs with different strumming techniques. Includes tablature reading, tuning the guitar, playing by ear, improvisation, and efficient practicing habits.

**MUS 218A. Intermediate Guitar. (1)**

Requires a solid base of technique. The course introduces note reading, finger-picking and bar chords.

**MUS 221. Music Technologies. (3) (MPF)**

Introduces students to the fundamentals of music technology in the context of its historical and cultural use. Scientific foundations of acoustics, digital audio, and audio engineering as well as technical skills for music production and notation will be addressed. Participants will learn the skills-based foundations of music technology through hands-on projects. Critical discussion will consider the social impact of contemporary and historical systems of recording, notation, and dissemination. Applications in the fields of interaction design, music entertainment, game design, digital signal processing, electrical engineering, music education, acoustics, and mass communications will be explored. IIA, V.

Cross-listed with IMS.

**MUS 222. Music Education Technology. (1)**

This is a project-based course designed to develop knowledge and skills in the use of technology in the music classroom, including: productivity and utility software, computer assisted instruction, and presentation technologies. Principles of learning theory and instructional design theory will be applied to the development of instructional units in music education. Legal and ethical issues in technology use (notably copyright law) will also be explored. Open only to music education majors.

Co-requisite: MUS 221.

**MUS 225. And the Beat Goes On. . . The History of Rock and Roll. (3) (MPF)**

This survey of Rock and Roll examines the roles the genre has played in the American imagination since the 1950s, and the perception and reception of the genre through time. It focuses on the ways that Rock fits into the narratives on American culture, gender and race, examining this music through the lens of politics, aesthetics, and society. The course progresses through the changing landscape of Rock from its roots in American popular culture in the early 20th century, continuing to the present day. The discussion continues through Metal and Hard Rock, to punk and disco, and much more. Students will learn to identify the formal, harmonic, rhythmic and textual characteristics that distinguish Rock subgenres. Through readings, films, demonstrations, class discussions and activities, and a great deal of music, this course explores the history of Rock and Roll, placing in context the musical, political and social forces that shaped its evolution and revolution. IIA, IIB.

**MUS 226. Improving Reading through the Music Content Area. (3)**

This course provides pre-service music teachers with reading and writing strategies to help solve problems encountered in grades K-12. Language Art skills and strategies are taught to help students communicate more effectively across the curriculum, addressing the Common Core. Required for all students in the Bachelor of Music curriculum in music education (Instrumental and Choral/General emphases).

**MUS 231. Class Instruments (Brass). (1)**

Class instruction in brass instruments of the symphony orchestra and band. Open to music majors only.

**MUS 232A. Class Instruments (Woodwinds I). (1)**

Class instruction in woodwind instruments of the symphony orchestra and band. Open to music majors only.

**MUS 232B. Class Instruments (Woodwinds II). (1)**

Continuation of MUS 232.A.

**MUS 233. Class Instruments (Percussion). (1)**

Class instruction in percussion instruments of the symphony orchestra and band. Open to music majors only.

**MUS 234A. Class Instruments (Strings I). (1)**

Class instruction in string instruments of the symphony orchestra and guitar. Open to music majors only.

**MUS 234B. Class Instruments (Strings II). (1)**

Continuation of MUS 234.A.

**MUS 235. Lyric Diction. (2)**

Study of phonetic structure of English and Latin as applied to singing. Instruction and practice in pronunciation and articulation. Study and performance of examples from vocal literature.

**MUS 236. Lyric Diction. (2)**

Study of phonetic structure of German, Italian, and French as applied to singing. Instruction and practice in pronunciation and articulation. Study and performance of examples from vocal literature. Even-numbered Spring Semesters only.

Prerequisite: MUS 235.

**MUS 239. Alexander Technique. (1)**

Introduction to the Alexander Technique. Basic anatomy, body-mapping and principles of the Technique (coordination of the self with efficiency and ease) are explored in group lessons and in application to creative activity. Course is offered for credit/no-credit only. Open to Theatre and music majors only.

Cross-listed with THE 239.

**MUS 242. Applied Music. (2)**

You must audition to qualify for studio lessons in applied music. Study in applied music consists of one-hour private lessons, given weekly, and periodic studio classes.

**MUS 242A. Applied Music Voice- SO. (2)**

Continuation of study of principles of singing. Repertoire requirement for 242A is four songs in two languages (memorized) each semester; for 244A is six songs in two languages (memorized) each semester.

Prerequisite: two semesters of 142A or 144A and successful completion of the sophomore-standing examination.

**MUS 242B. Applied Music Piano- SO. (2)**

More advanced level study of materials, including technical exercises and repertory classifications in 142.B and 144.B; preparation for junior standing examination. Different repertoire assigned, learned, and performed each semester.

Prerequisite: passage of the sophomore standing examination.

**MUS 242C. Applied Guitar- SO. (2)**

Applied guitar is the study of the classical guitar, in which the student applies the study of technique and literature to music from all periods.

**MUS 242D. Applied Music Flute- SO. (2)**

Continuation of tone studies. Orchestral studies (memorized).

Anderson op. 15, op. 30, and op. 63; Etudes of Boehm, Altes.

Participation in two class recitals or equivalent. J.S. Bach Sonatas, Suite in B Minor; Hindemith Sonata; Henze Sonatina; Faure Fantasie; Mozart Concerti; Blavet Concerto in A minor; and works of comparable difficulty.

**MUS 242E. Applied Music Clarinet- SO. (2)**

Works by Mercadante, Arnold, Cahuzac, Finzi, Lutoslawski, or equivalent. French conservatory contest solos. Orchestral excerpts. All scales and additional technical work.

**MUS 242F. Applied Music Saxophone- SO. (2)**

Mule Etudes after Terschak and after Ferling. Pieces by Handel, Ibert, Glazounov, etc. Technical exercises.

**MUS 242G. Applied Music Oboe- SO. (2)**

Further refinement of tone and development of musicality.

Reedmaking. All Major & Minor (3 forms) Scales in broken 3rds.

7th Arpeggios. Sonatas from Barret Oboe Method. Selected duets.

Pieces: Hindemith Sonata, Britten Metamorphoses after Ovid, Handel Concerto in G Minor, Vivaldi Concerti, Marcello Concerto.

**MUS 242H. Applied Music Bassoon- SO. (2)**

Continuation of technical studies and basic elements of playing.

Ferling 48 Famous Studies, Vivaldi Concerto in D, Handel Sonatas.

**MUS 242I. Applied Music Trumpet- SO. (2)**

Concentration upon embouchure development using Schlossberg,

Daily Drills; Irons, 27 Groups of Exercises; and others. Study of

transposition and applications of basic technical skills in Sasche,

MUS 100 Etudes or Caffarelli, MUS 100 Studi Melodici; Hering

28 Etudes, or equivalent in difficulty. Solo repertoire. Technique:

all major and minor scales and arpeggios; single, double, and

triple articulations in Arban, Complete Method for Trumpet; and

Schlossberg, Daily Drills.

**MUS 242J. Applied Music French Horn- SO. (2)**

Continuation of major-minor scales, transposition, and above basic

studies. Begin orchestral excerpt studies. Etudes from Pottag-

Andraud Method Book 2, Maxime-Alphonse Book 4, Gallay 12 Grand

Caprices. Solos by Beethoven, Richard Strauss, Franz Strauss, others.

**MUS 242K. Applied Music Trombone- SO. (2)**

Continued emphasis on tone production, articulation, and basic

musicianship. Blazhevich Studies in Clefs; Bordogni-Rochut Melodious

Etudes Vol. I and II; Schroeder MUS 170 Foundation Studies for Cello

Vol. I. Solos by Galliard, de la Nux, Blazhevich.

**MUS 242L. Applied Music Euphonium- SO. (2)**

Continuation of above studies. Example: Rochut Melodius Etudes,

Kopprasch Sixty Selected Studies, solo works of difficulty of Galliard

Sonatas One Through Six, Corelli Sonata VIII, Barat Andante and

Allegro, Mozart Concerto No. 1.

**MUS 242M. Applied Music Tuba- SO. (2)**

Continuation of above studies. Example: Kopprasch Sixty Selected

Studies, Cimera 73 Advanced Studies, solo works of the difficulty of

Haddad Suite, Corelli Sonata in F Major, Mozart Horn Concerto No. 3,

Beethoven-Bell Variations on a Theme by Handel.

**MUS 242N. Applied Music Percussion- SO. (2)**

Timpani: tone production, types of articulations, interval tuning, cross

sticking, roll development, analysis of physical properties of drum

sticks, sight reading. Method books: Modern Method for Timpani,

Saul Goodman; Timpani Method, Alfred Frieze. Keyboard instruments:

advanced techniques and repertoire for four mallet, vibraphone

techniques (e.g., chord studies, muffling, improvisation studies).

Method book: Vibraphone Technique, David Friedman.

**MUS 242O. Applied Music Violin- SO. (2)**

Violin studies. Baroque, classical, and romantic concerti and sonatas,

and other solo compositions.

**MUS 242P. Applied Music Viola- SO. (2)**

Scales: double stops, broken thirds. Etudes: Kreutzer, Bruni, Schrädieck. Repertoire level: J.C. Bach, Stamitz, Handel Concerto, Bach, Solo Suites in D Minor, C Major, Hummel Fantasy.

**MUS 242R. Applied Music Cello- SO. (2)**

Technical facility in scales, arpeggios. Studies: sonatas, concerti, and solo pieces of the baroque, classical, and romantic repertoire. Baroque solo suites. Orchestral repertoire.

**MUS 242S. Applied Music String Bass- SO. (2)**

Technical facility in scales, arpeggios. Studies: sonatas, concerti, and solo pieces of baroque, classical, and romantic repertoire. Baroque solo suites. Orchestral repertoire.

**MUS 242T. Applied Music Harp- SO. (2)**

Continued technical studies and etudes including Bach-Grandjany Etudes for Harp, Dizi 48 Etudes Vol. 1. Salzedo Suite of Eight Dances, Naderman Sonatinas, Debussy Premiere Arabesque, Salzedo Quietude and Introspection, A.L. David Album of Solo Pieces Vol. 1 & 2.

**MUS 244. Applied Music. (3-4)**

You must audition to qualify for studio lessons in applied music. Study in applied music consists of one-hour private lessons, given weekly, and periodic studio classes.

**MUS 244A. Applied Music Voice- SO. (3-4)**

Continuation of study of principles of singing. Repertoire requirement for 242.A is four songs in two languages (memorized) each semester; for 244.A is six songs in two languages (memorized) each semester. Prerequisite: two semesters of 142A or 144A and successful completion of the sophomore-standing examination.

**MUS 244B. Applied Music Piano- SO. (3-4)**

More advanced level study of materials, including technical exercises and repertoire classifications in 142.B and 144.B; preparation for junior standing examination. Different repertoire assigned, learned, and performed each semester. Prerequisite: passage of the sophomore standing examination.

**MUS 244C. Applied Guitar- SO. (3)**

Applied guitar is the study of the classical guitar, in which the student applies the study of technique and literature to music from all periods.

**MUS 244D. Applied Music Flute- SO. (3-4)**

Continuation of tone studies. Orchestral studies (memorized). Anderson op. 15, op. 30, and op. 63; Etudes of Boehm, Altes. Participation in two class recitals or equivalent. J.S. Bach Sonatas, Suite in B Minor; Hindemith Sonata; Henze Sonatina; Faure Fantasie; Mozart Concerti; Blavet Concerto in A minor; and works of comparable difficulty.

**MUS 244E. Applied Music Clarinet- SO. (3-4)**

Works by Mercadante, Arnold, Cahuzac, Finzi, Lutoslawski, or equivalent. French conservatory contest solos. Orchestral excerpts. All scales and additional technical work.

**MUS 244F. Applied Music Saxophone- SO. (3-4)**

Mule Etudes after Terschak and after Ferling. Pieces by Handel, Ibert, Glazounov, etc. Technical exercises.

**MUS 244G. Applied Music Oboe- SO. (3-4)**

Further refinement of tone and development of musicality. Reedmaking. All Major & Minor (3 forms) Scales in broken 3rds. 7th Arpeggios. Sonatas from Barret Oboe Method. Selected duets. Pieces: Hindemith Sonata, Britten Metamorphoses after Ovid, Handel Concerto in G Minor, Vivaldi Concerti, Marcello Concerto.

**MUS 244H. Applied Music Bassoon- SO. (3-4)**

Continuation of technical studies and basic elements of playing. Ferling 48 Famous Studies, Vivaldi Concerto in D, Handel Sonatas.

**MUS 244I. Applied Music Trumpet- SO. (3-4)**

Concentration upon embouchure development using Schlossberg, Daily Drills; Irons, 27 Groups of Exercises; and others. Study of transposition and applications of basic technical skills in Sasche, MUS 100 Etudes or Caffarelli, MUS 100 Studi Melodici; Hering 28 Etudes, or equivalent in difficulty. Solo repertoire. Technique: all major and minor scales and arpeggios; single, double, and triple articulations in Arban, Complete Method for Trumpet; and Schlossberg, Daily Drills.

**MUS 244J. Applied Music French Horn- SO. (3-4)**

Continuation of major-minor scales, transposition, and above basic studies. Begin orchestral excerpt studies. Etudes from Pottag-Andraud Method Book 2, Maxime-Alphonse Book 4, Gallay 12 Grand Caprices. Solos by Beethoven, Richard Strauss, Franz Strauss, others.

**MUS 244K. Applied Music Trombone- SO. (3-4)**

244K Applied Music Trombone- SO (304 Continued emphasis on tone production, articulation, and basic musicianship. Blazhevich Studies in Clefs; Bordogni-Rochut Melodious Etudes Vol. I and II; Schroeder MUS 170 Foundation Studies for Cello Vol. I. Solos by Galliard, de la Nux, Blazhevich.

**MUS 244L. Applied Music Euphonium- SO. (3-4)**

Continuation of above studies. Example: Rochut Melodious Etudes, Kopprasch Sixty Selected Studies, solo works of difficulty of Galliard Sonatas One Through Six, Corelli Sonata VIII, Barat Andante and Allegro, Mozart Concerto No. 1.

**MUS 244M. Applied Music Tuba- SO. (3-4)**

Continuation of above studies. Example: Kopprasch Sixty Selected Studies, Cimera 73 Advanced Studies, solo works of the difficulty of Haddad Suite, Corelli Sonata in F Major, Mozart Horn Concerto No. 3, Beethoven-Bell Variations on a Theme by Handel.

**MUS 244N. Applied Music Percussion- SO. (3-4)**

Timpani: tone production, types of articulations, interval tuning, cross sticking, roll development, analysis of physical properties of drum sticks, sight reading. Method books: Modern Method for Timpani, Saul Goodman; Timpani Method, Alfred Friese. Keyboard instruments: advanced techniques and repertoire for four mallet, vibraphone techniques (e.g., chord studies, muffling, improvisation studies). Method book: Vibraphone Technique, David Friedman.

**MUS 244O. Applied Music Violin- SO. (3-4)**

Violin studies. Baroque, classical, and romantic concerti and sonatas, and other solo compositions.

**MUS 244P. Applied Music Viola- SO. (3-4)**

Scales: double stops, broken thirds. Etudes: Kreutzer, Bruni, Schrädieck. Repertoire level: J.C. Bach, Stamitz, Handel Concerto, Bach, Solo Suites in D Minor, C Major, Hummel Fantasy.

**MUS 244R. Applied Music Cello- SO. (3-4)**

Technical facility in scales, arpeggios. Studies: sonatas, concerti, and solo pieces of the baroque, classical, and romantic repertoire. Baroque solo suites. Orchestral repertoire.

**MUS 244S. Applied Music String Bass- SO. (3-4)**

Technical facility in scales, arpeggios. Studies: sonatas, concerti, and solo pieces of baroque, classical, and romantic repertoire. Baroque solo suites. Orchestral repertoire.

**MUS 244T. Applied Music Harp- SO. (3-4)**

Continued technical studies and etudes including Bach-Grandjany Etudes for Harp, Dizi 48 Etudes Vol. 1. Salzedo Suite of Eight Dances, Naderman Sonatinas, Debussy Premiere Arabesque, Salzedo Quietude and Introspection, A.L. David Album of Solo Pieces Vol. 1 & 2.

**MUS 244Z. Applied Music-Composition. (3)**

Composers will work directly with Miami University composition faculty and student performers to realize their compositions. Lesson content will include review of works in progress, discussion of relevant repertoire and current compositional trends, and preparation for upcoming performance opportunities.

**MUS 249. Classroom Instruments: World Percussion. (1)**

Development of necessary expertise to use percussion instruments in general music classrooms and choral settings. Even-numbered Spring Semesters only.

**MUS 251. Theory of Music: Aural Skills III. (1)**

Practice in rhythmic and melodic reading of music and its reproduction through singing, dictation, and contextual listening of musical excerpts. Content is correlated with MUS 201. Required of music majors in the BM in Music Education, BM in Performance, and BM in Composition. Recommend taking concurrently with MUS 201. Prerequisite: MUS 152.

**MUS 252. Theory of Music: Aural Skills IV. (1)**

Practice in rhythmic and melodic reading of music and its reproduction through singing, dictation, and contextual listening of musical excerpts. Content is correlated with MUS 202. Required of music majors in the BM in Music Education, BM in Performance, and BM in Composition. Recommend taking concurrently with MUS 202. Prerequisite: MUS 251.

**MUS 260. Functional Piano III. (1)**

Early intermediate level group piano instruction for music majors preparing to meet piano proficiency requirement. Open to music majors only. Prerequisite: MUS 161 or permission of instructor.

**MUS 261. Functional Piano IV. (1)**

Intermediate level group piano instruction for music majors preparing to meet piano proficiency requirement. Students will fulfill the piano proficiency requirement by passing the final examination. Open to music majors only. Prerequisite: MUS 260 or permission of instructor.

**MUS 262. Jazz Improvisation I. (1)**

Study of the basic principles of instrumental improvisation in jazz, including developing a melodic idea in real time, chord notation, chord/scale relationships, and solo transcription. Prerequisite: MUS 101 or 119.

**MUS 275. Sophomore Practicum in Music Education. (1)**

An examination of music education school curricula, pre-K through 12; musicianship for music educators; planning for instruction; observation and participation in public school music classes; career counseling. Prerequisite: completion of MUS 175 or permission of instructor.

**MUS 277. Independent Studies. (0-5)****MUS 285. Introduction to African American Music. (3) (MPF, MPT)**

A general survey of traditional West African music and its offsprings in America from slavery to the early 1990s. Major emphasis is placed on the contributory, sociological settings for significant musical forms and styles. IC, IIA, IIB, IIIB.

Prerequisite: MUS/AMS 135 or MUS 185.

Cross-listed with AMS.

**MUS 287. Enter the Diva: Women in Music. (3) (MPF)**

American women in music from 1900 to present. Women have made considerable contributions to the various genres and traditions that define American music. From popular forms to concert music there are numerous women who have constructed a musical discourse that chronicles their experiences in America and their conceptions of womanhood. This course is designed to chronicle the experiences of these women musicians and vocalists and discuss their musical approaches. Discussions include traditional music practices as well as contemporary popular music styles. IC, IIA, IIB.

Prerequisite: MUS 135, 185 or 189, or permission of instructor.

Cross-listed with WGS.

**MUS 301. Counterpoint. (3) (MPT)**

Writing of species counterpoint and its application to common practice harmony. Project compositions in the style and smaller forms of 18th century polyphony.

Prerequisite: MUS 201.

**MUS 304. Electronic Music. (3)**

Electronic music history, literature, styles, and studio techniques with emphasis on original expression using digital, editing, multi-track recording, and basic synthesis concepts. Designed for the undergraduate junior or senior, but open to all students. Formal music training not required.

Cross-listed with IMS 304.

**MUS 306. Advanced Electronic Music. (3)**

Advanced Electronic Music offers an in-depth look at the music studio environment. The course focuses on Ableton Live as the primary Digital Audio Workstation (DAW) and touches on a few other free music apps. Class time is devoted to learning practical skills such as the use of microphones, studio hardware use, and mixing and mastering. Also introduced is Max-for-Live, a relatively simple programming environment that greatly expands on the capabilities of Ableton Live. Synthesis is covered from both a theoretical and practical perspective, including the use of the Doepfer analog modular synthesizer. A survey of historical and contemporary practice in the field will provide the basis for exploring analytical and critical techniques.

Prerequisites: MUS/IMS 221 or MUS 304/IMS 304 or permission of instructor.

Cross-listed with IMS 306.

**MUS 308. Audio Recording Techniques. (3)**

This course will teach students the steps required to successfully complete a multi-track recording and mixing project. Students will learn microphone techniques, the signal flow of the recording console and patch bay, signal level management, proper creation of headphone (cue) mixes, and other tasks necessary for basic multi-track recording projects. Students must plan and execute multiple recording sessions and create a final mix of the recorded tracks.

Prerequisites: MUS 221 and MUS 304.

**MUS 340. Internship. (0-20)****MUS 342A. Applied Music Voice- JR. (2)**

Study of advanced singing technique; increased emphasis on literature and performance. Repertoire requirement for 342A is five songs in three languages (memorized) each semester; for 344A is literature for the junior recital.

Prerequisite: two semesters of 242A or 244A and successful completion of junior-standing examination.

**MUS 342B. Applied Music Piano- JR. (2)**

Increasing presumption of student responsibility for mastering notational details and technical exercises. Emphasizes study of qualities of expressive depth and variety. May include preparation of junior and Thematic Sequence recitals.

**MUS 342C. Applied Guitar- JR. (2)**

Applied guitar is the study of the classical guitar, in which the student applies the study of technique and literature to music from all periods.

**MUS 342D. Applied Music Flute- JR. (2)**

Tone studies, orchestral studies (memorized). Etudes of Genzmer, Jean, Boehm. Participation in two class recitals or equivalent; J.S. Bach Sonatas, Hue Fantasie, Griffes Poem, Burton Sonatina, Copland Duo, Hindemith Acht Stucke, Ibert Piece, Martin Ballade, and works of comparable difficulty.

**MUS 342E. Applied Music Clarinet- JR. (2)**

Jeanjean Etudes, Cavallini 30 Caprices. Works by Spohr, Stravinsky, Debussy, Rossini, Bernstein, Poulenc, or equivalent. Orchestral excerpts. Transposition.

**MUS 342F. Applied Music Saxophone- JR. (2)**

Mule Etudes after Boehm, Tershak et Fursteneau; Lang Altissimo Etudes. Pieces by Maurice, Heiden, Bozza, Debussy, Noda, etc. Jazz style studies. Chamber music.

**MUS 342G. Applied Music Oboe- JR. (2)**

Continuation of technical studies. Reedmaking. Study of English horn. Grand Studies from Barret Oboe Method. Pieces: J.S. Bach Sonata in G Minor, BWV MUS 1020, Hummel Adagio, Theme and Variations, Saint-Saens Sonata, Mozart Concert.

**MUS 342H. Applied Music Bassoon- JR. (2)**

Piard Arpeggio Studies, Stadio Orchestral Studies, Orefici Melodic Studies, Saint-Saens Sonata, Etler Sonata or works of comparable difficulty including some study of contemporary music for bassoon.

**MUS 342I. Applied Music Trumpet- JR. (2)**

Continuation of embouchure development in Schlossberg, Daily Drills; study of etudes by Sasche, Paudert, Concone, Bordogni, Vannetelbosch, Arban, Hering, Clarke, and others; continued study of solo literature; introduction of orchestral trumpet parts.

**MUS 342J. Applied Music French Horn- JR. (2)**

Continuation of orchestral studies, problems in basic technique. Etudes by Gallay, Mueller, Maxime-Alphonse Book 5. Solo literature by Steven, Porter, Schumann, Dukas, Haydn, unaccompanied solo studies.

**MUS 342K. Applied Music Trombone- JR. (2)**

Blazhevich Studies in Clefs; Schroeder MUS 170 Foundation Studies for Cello Vol. I; Bach Cello Suites. Solos by Handel, Marcello, Bozza, Hindemith. Orchestral excerpts.

**MUS 342L. Applied Music Euphonium- JR. (2)**

Continuation of above studies. Example: Handel aria con Variazioni, Schlossberg Daily Drills and Technical Studies, Cimera Concerto, Ropartz Andante and Allegro.

**MUS 342M. Applied Music Tuba- JR. (2)**

Continuation of above studies. Transposition studies. Solo works of the difficulty of Lebedev Concerto for Tuba, Presser Concerto, Mozart Horn Concerto, Hogg Sonatina, Benciscutto Concertino.

**MUS 342N. Applied Music Percussion- JR. (2)**

Advanced studies and development of recital repertory keyboard instruments: contemporary repertory including concertos and unaccompanied works by Stout, Abe, Stevens, and others. Snare Drum: advanced repertory for concert and rudimental styles, works by Benson, Colgrass, and others. Timpani: repertory from works by Beck, Hinger, Carter, and others.

**MUS 342O. Applied Music Violin- JR. (2)**

Violin studies. Baroque, classical, romantic, and contemporary concerti, sonatas, and solo pieces. Preparation of a half recital required of performance majors.

**MUS 342P. Applied Music Viola- JR. (2)**

Scales. Etudes: Kreutzer, Sevcik, op. 8, Campagnoli. Repertoire level: Bloch, Suite Habraique, Bach, Gamba Sonatas, Regner, Suites.

**MUS 342R. Applied Music Cello- JR. (2)**

Advanced studies. Sonatas, concerti, and solo pieces of the baroque, classical, romantic, and early 20th century repertoire. Orchestral studies. Chamber music studies.

**MUS 342S. Applied Music String Bass- JR. (2)**

Advanced studies. Sonatas, concerti, and solo pieces of baroque, classical, romantic, and early 20th century repertoire. Orchestral studies. Chamber music studies.

**MUS 342T. Applied Music Harp- JR. (2)**

Continuation of technical studies and etudes. Dussek Sonata in C Minor, Handel-Salzedo Harmonious Blacksmith, Debussy Danses Sacree et Profane. Preparation for junior recital.

**MUS 344. Applied Music. (3-4)**

You must audition to qualify for studio lessons in applied music. Study in applied music consists of one-hour private lessons, given weekly, and periodic studio classes.

**MUS 344A. Applied Music Voice- JR. (3-4)**

Study of advanced singing technique; increased emphasis on literature and performance. Repertoire requirement for 342A is five songs in three languages (memorized) each semester; for 344A is literature for the junior recital.

Prerequisite: two semesters of 242A or 244A and successful completion of junior-standing examination.

**MUS 344B. Applied Music Piano- JR. (3-4)**

Increasing presumption of student responsibility for mastering notational details and technical exercises. Emphasizes study of qualities of expressive depth and variety. May include preparation of junior and Thematic Sequence recitals.

**MUS 344C. Applied Guitar- JR. (3)**

Applied guitar is the study of the classical guitar, in which the student applies the study of technique and literature to music from all periods.

**MUS 344D. Applied Music Flute- JR. (3-4)**

Tone studies, orchestral studies (memorized). Etudes of Genzmer, Jean, Boehm. Participation in two class recitals or equivalent; J.S. Bach Sonatas, Hue Fantasie, Griffes Poem, Burton Sonatina, Copland Duo, Hindemith Acht Stucke, Ibert Piece, Martin Ballade, and works of comparable difficulty.

**MUS 344E. Applied Music Clarinet- JR. (3-4)**

Jeanjean Etudes, Cavallini 30 Caprices. Works by Spohr, Stravinsky, Debussy, Rossini, Bernstein, Poulenc, or equivalent. Orchestral excerpts. Transposition.

**MUS 344F. Applied Music Saxophone- JR. (3-4)**

Mule Etudes after Boehm, Tershak et Fursteneau; Lang Altissimo Etudes. Pieces by Maurice, Heiden, Bozza, Debussy, Noda, etc. Jazz style studies. Chamber music.

**MUS 344G. Applied Music Oboe- JR. (3-4)**

Continuation of technical studies. Reedmaking. Study of English horn. Grand Studies from Barret Oboe Method. Pieces: J.S. Bach Sonata in G Minor, BWV MUS 1020, Hummel Adagio, Theme and Variations, Saint-Saens Sonata, Mozart Concert.

**MUS 344H. Applied Music Bassoon- JR. (3-4)**

Piard Arpeggio Studies, Stadio Orchestral Studies, Orefici Melodic Studies, Saint-Saens Sonata, Etler Sonata or works of comparable difficulty including some study of contemporary music for bassoon.

**MUS 344I. Applied Music Trumpet- JR. (3-4)**

Continuation of embouchure development in Schlossberg, Daily Drills; study of etudes by Sasche, Paudert, Concone, Bordogni, Vannetelbosch, Arban, Hering, Clarke, and others; continued study of solo literature; introduction of orchestral trumpet parts.

**MUS 344J. Applied Music French Horn- JR. (3-4)**

Continuation of orchestral studies, problems in basic technique. Etudes by Gallay, Mueller, Maxime-Alphonse Book 5. Solo literature by Steven, Porter, Schumann, Dukas, Haydn, unaccompanied solo studies.

**MUS 344K. Applied Music Trombone- JR. (3-4)**

Blazhevich Studies in Clefs; Schroeder MUS 170 Foundation Studies for Cello Vol. I; Bach Cello Suites. Solos by Handel, Marcello, Bozza, Hindemith. Orchestral excerpts.

**MUS 344L. Applied Music Euphonium- JR. (3-4)**

Continuation of above studies. Example: Handel aria con Variazioni, Schlossberg Daily Drills and Technical Studies, Cimera Concerto, Ropartz Andante and Allegro.

**MUS 344M. Applied Music Tuba- JR. (3-4)**

Continuation of above studies. Transposition studies. Solo works of the difficulty of Lebedev Concerto for Tuba, Presser Concerto, Mozart Horn Concerto, Hogg Sonatina, Benicriscutto Concertino.

**MUS 344N. Applied Music Percussion- JR. (3-4)**

Advanced studies and development of recital repertory keyboard instruments: contemporary repertory including concertos and unaccompanied works by Stout, Abe, Stevens, and others. Snare Drum: advanced repertory for concert and rudimental styles, works by Benson, Colgrass, and others. Timpani: repertory from works by Beck, Hinger, Carter, and others.

**MUS 344O. Applied Music Violin- JR. (3-4)**

Violin studies. Baroque, classical, romantic, and contemporary concerti, sonatas, and solo pieces. Preparation of a half recital required of performance majors.

**MUS 344P. Applied Music Viola- JR. (3-4)**

Scales. Etudes: Kreutzer, Sevcik, op. 8, Campagnoli. Repertoire level: Bloch, Suite Habraique, Bach, Gamba Sonatas, Reger, Suites.

**MUS 344R. Applied Music Cello- JR. (3-4)**

Advanced studies. Sonatas, concerti, and solo pieces of the baroque, classical, romantic, and early 20th century repertoire. Orchestral studies. Chamber music studies.

**MUS 344S. Applied Music String Bass- JR. (3-4)**

Advanced studies. Sonatas, concerti, and solo pieces of baroque, classical, romantic, and early 20th century repertoire. Orchestral studies. Chamber music studies.

**MUS 344T. Applied Music Harp- JR. (3-4)**

Continuation of technical studies and etudes. Dussek Sonata in C Minor, Handel-Salzedo Harmonious Blacksmith, Debussy Danses Sacree et Profane. Preparation for junior recital.

**MUS 344Z. Applied Music-Composition. (3)**

Composers will work directly with Miami University composition faculty and student performers to realize their compositions. Lesson content will include review of works in progress, discussion of relevant repertoire and current compositional trends, and preparation for upcoming performance opportunities.

**MUS 345. Elementary General Music for Instrumental Music Education Majors. (1)**

Introduction to music teaching techniques appropriate for effective teaching of general music at early childhood and elementary levels.

**MUS 351. Choral Techniques. (2)**

Methods, materials, and techniques for teaching choral ensembles at the secondary level. Overview of choral literature appropriate for secondary level choirs.

Prerequisite: MUS 202 or permission of instructor.

**MUS 352. Conducting I. (2)**

Principles of baton technique, instrumental transpositions, study of musical factors involved in leading instrumental and choral ensembles, and score study.

Prerequisite: completion of all first- and second-year music courses.

**MUS 354. Conducting II. (2)**

Continuation and refinement of conducting technique, score study, and rehearsal technique, utilizing repertoire appropriate to secondary school ensembles.

**MUS 355. General Music Teaching Techniques: Early Childhood and Elementary. (3)**

Music teaching techniques appropriate for effective teaching of general music at early childhood, elementary, and middle school levels.

Prerequisite: completion of MUS 175, 275.

**MUS 356. Secondary General Music Techniques. (2)**

Music education techniques appropriate for effective teaching of secondary-level general music courses.

Prerequisite: MUS 175, 275.

**MUS 358. Marching Band Techniques. (2)**

Techniques of marching band procedure, materials, problems, and administration.

**MUS 359. Instrumental Methods- Elementary and Secondary. (4)**

The teaching of elementary and secondary instrumental music, including bands and orchestras. Includes foundation/organization of beginning and advanced programs; literature selection; rehearsal techniques; goals, program objectives, student perception and performance; arranging for chamber groups; classroom management; clinical experience.

Prerequisite: completion of all instrumental music education degree work through first five semesters.

**MUS 370. Orchestration. (3)**

An introduction to the technique of scoring for a variety of instruments and instrumental combinations. Students will learn instrument ranges and transpositions, timbre qualities, idiomatic writing, and arranging for ensembles of varying sizes. Involves analyses of works from various eras of instrumental music and exercises in scoring technique for individual instruments and ensembles. The role of extended techniques in contemporary practice will be highlighted. These techniques will be presented during class discussions and incorporated in written exercises.

Prerequisite: MUS 202.

**MUS 377. Independent Studies. (0-5)****MUS 381. Music for Games. (3)**

Music for Games (a) examines the theory and traditions of background or incidental music in various media, (b) discusses how to put theory into practice within game design, and (c) places new music into new games. Students create their own music for their own games or for games of colleagues. Unity is the preferred software platform.

Prerequisite: IMS 221.

Cross-listed with IMS.

**MUS 385. The Roots of Black Music: Blues, Gospel and Soul. (3) (MPT)**

Development of these music genres in America. In-depth analysis of stylistic differences and musical and cultural relationships between each. IC.

Prerequisite: MUS/AMS 285 or permission of instructor.

**MUS 386. The History and Development of Hip Hop Culture in America. (3) (MPT)**

Surveys development of the Hip Hop culture (rapping, graffiti art, breaking, DJing) from black vernacular forms in Africa and America. IC.

Prerequisite: MUS/AMS 285, MUS 385 or permission of instructor.

Cross-listed with AMS.

**MUS 401/MUS 501. Advanced Studies in Music Theory. (3)**

Topics-oriented course in music theory. For the advanced undergraduate with a strong background in music theory or as an elective for the music graduate student. May be repeated providing the repetition covers a different subject area. Sample topics: History of Theory, Theory Pedagogy, 16th Century Vocal Counterpoint, Larger Contrapuntal Forms of the 18th Century.

Prerequisite: MUS 252, 302.

**MUS 403/MUS 503. Orchestra Literature. (3)**

Introduction to the standard repertoire of orchestra literature, the masterworks, the composers and their compositions, and the stylistic practices associated with the different historical periods. The course comprises in-class demonstrations, analysis, extensive listening, and attendance at outside musical events.

Prerequisites: MUS 101, MUS 102, MUS 211, MUS 212 or permission of instructor.

**MUS 404/MUS 504. Wind Band Ensemble Literature. (3)**

A survey of wind/band ensemble literature from the Middle Ages to the present, with particular emphasis on the accepted masterworks of the genre.

**MUS 405/MUS 505. Choral Literature. (3)**

Literature of choral music from early Middle Ages to the present.

Prerequisite: MUS 201-202 and 311-312, or junior standing and permission of instructor.

**MUS 412/MUS 512. Reed Making for Bassoon and Oboe. (1)**

Study of construction and design of the double reed.

Co-requisite: Applied Music in Oboe and/or Bassoon; open to majors/minors only.

**MUS 415/MUS 515. You Say You Want a Revolution: Rock and Roll and the Cultural Revolution of the 1960s. (3)**

This course focuses on the cultural revolution of the 1960s through the prism of Rock and Roll. It looks at the earliest history of Rock and the musical and cultural forces that led to its development, from the black-oriented R&B style of the 1950s to the many manifestations of Rock culture in the 1960s. It investigates at Rock as a force of change in the prevailing cultural paradigm, embracing the elements of a cultural revolution. Through readings, films, interviews, demonstrations, class discussions and activities, and lots and lots of music, this course explores Rock in the 1960s as a cultural phenomenon and a vehicle for social change, placing in context the musical, political and social forces that shaped its evolution and revolution.

**MUS 419/MUS 519. Supervised Teaching in Music. (12)**

Planned and supervised learning experience in which students demonstrate the knowledge, skills, abilities, and values appropriate to the teaching of students in educational settings. Frequent conferences with university supervisors and cooperating teachers. Completion of junior level courses work in music and music education with a cumulative GPA of 2.5 or a GPA of 2.80 in all music courses counting only one ensemble per semester.

**MUS 420/MUS 520. Vocal Coaching. (1)**

Preparation of solo vocal repertoire.

Prerequisite: permission of instructor.

**MUS 422/MUS 522. Professional Growth in Orff-Schulwerk. (1)**

This course is designed students in the Bachelor of Music or Master of Music curriculum in music education, as well as area music teachers seeking graduate credit for professional development. The Orff-Schulwerk approach for teaching music to children is experienced through participation in four workshops featuring national and local clinicians who specialize in this pedagogy.

**MUS 425/MUS 525. Grand Night: The Great American Songbook. (1)**

This course is designed to introduce the student to performance skills needed for success in popular vocal repertoire. Students will learn through staging, score preparation, movement, and instruction in popular musical style. Students will employ an integration of these learned skills through performance.

**MUS 426/MUS 526. Opera Production. (0-1)**

Participation in a public production of an opera or opera scenes.

Prerequisite: permission of instructor.

**MUS 430/MUS 530. Piano Pedagogy. (2)**

Study of contemporary methodologies for teaching beginning, elementary, and early intermediate level piano students. Assignments and lectures include critical analysis of teaching materials; considerations for literature selection; the business aspect of operating an independent studio; the use of piano lab and technology in teaching group classes. Observations of individual lessons and group piano classes are required. Open to piano majors or by permission of instructor.

**MUS 433. String Instrument Pedagogy. (1)**

Fundamental problems involved in teaching string instruments. Critical analysis of teaching materials. Observation and practice in private teaching required of all string majors. Even-numbered Spring Semesters only.

Prerequisite: senior standing in applied music.

**MUS 442. Applied Music. (1-2)**

You must audition to qualify for studio lessons in applied music. Study in applied music consists of one-hour private lessons, given weekly, and periodic studio classes.

**MUS 442A. Applied Music Voice- SR. (2)**

Continuation of advanced singing technique. Repertoire requirement is literature for the senior recital.

Prerequisite: two semesters of 342A or 344A.

**MUS 442B. Applied Music Piano- SR. (2)**

Most challenging undergraduate course of piano study. Emphasizes quick memorization of repertoire, physical ease in performance, and while respecting the composers' wishes, development of maximum variety and spontaneity of expressive style. Preparation of the senior recital as well as further polishing technical exercises.

**MUS 442C. Applied Guitar- SR. (2)**

Applied guitar is the study of the classical guitar, in which the student applies the study of technique and literature to music from all periods.

**MUS 442D. Applied Music Flute- SR. (2)**

Tone studies, orchestral studies (memorized). Participation in one class recital, presentation of senior recital. Bozza 14 Arabesques, Anderson Virtuoso Studies, Jolivet Chant du Linos, Nielson Concerto, Prokofiev Sonata, Dutilleux Sonatina, J.S. Bach Partita in A Minor, Messiaen Le Merle Noir, Ibert Concerto, Schubert Introduction and Variations, and works of comparable difficulty.

**MUS 442E. Applied Music Clarinet- SR. (2)**

Applied Music Emphasis on repertoire. Works by Copland, Berg, Verdi, Manevich, Francaix, Nielsen, or equivalent. Contemporary techniques. Orchestral excerpts. Clarinet with electronics. Senior recital.

**MUS 442F. Applied Music Saxophone- JR. (2)**

Etudes by Lacour and Bozza. Pieces by Desenclos, Dubois, Bonneau, etc. Contemporary saxophone techniques. Chamber music. Orchestral excerpts. Preparation of senior recital.

**MUS 442G. Applied Music Oboe- SR. (2)**

Orchestral studies. Study of baroque ornamentation. Study of Oboe d'amore. Oboe pedagogy. Ferling 48 Famous Studies. Pieces: Schumann Romances, Poulenc Sonata, Dutilleux Sonata, Mozart Oboe Quartet, Strauss Concerto. Selected contemporary works. Preparation of recital program.

**MUS 442H. Applied Music Bassoon- SR. (2)**

Coverage of important orchestral literature and teaching materials, studies by Bozza, Bitsch, and Bianchi, Mozart and Weber Concerti, or works of comparable difficulty. Chamber music literature. Preparation of senior recital.

**MUS 442I. Applied Music Trumpet- SR. (2)**

Study of more advanced etudes including Charlier, 36 Etudes transcendentales; Brandt, Etudes for the Orchestral Trumpeter, Part II; and others. Solo literature by Barat, Bozza, Handel, Haydn, Hummel, Hindemith, Kennan, Latham, Riisager, Torelli, and others. Study of orchestral trumpet parts. Preparation of senior recital.

**MUS 442J. Applied Music French Horn- SR. (2)**

Further orchestral studies. Advanced etudes: Maxime-Alphonse Book 6, Reynolds 48 Etudes, Barboteu. Solo literature: Jacob, Strauss, Bozza, Reynolds, Gliere. Preparation of senior recital.

**MUS 442K. Applied Music Trombone- SR. (2)**

Couillaud 30 Modern Etudes; Bitsch 15 Rhythmical Etudes; Bach Cello Suites. Solos by Milhaud, Serocki, Tomasi, Creston. Orchestral excerpts. Preparation of senior recital.

**MUS 442L. Applied Music Euphonium- SR. (2)**

Preparation of recital. Solo works of the difficulty of Busser Variations in D Flat Major, Tuthill Concerto, Hindemith Sonata for Trombone, Corelli Sonata in D Minor.

**MUS 442M. Applied Music Tuba- SR. (2)**

Preparation of recital. Solo works of the difficulty of Persichetti Serenade No. 12, Vaughan Williams Concerto for Tuba, Vivaldi Concerto in A Minor, Wilder Sonata, orchestral excerpts. Preparation of senior recital.

**MUS 442N. Applied Music Percussion- SR. (2)**

Afro-Indo-Latin percussion methods: from books by Morales, Sabanovich, and Reed. Drum set: from books by Chapin, Reed, Latham, Soph, and Erskine. Orchestral excerpts. Repertoire for senior recital.

**MUS 442O. Applied Music Violin- SR. (1-2)**

Advanced technical studies. Preparation of senior recital including composition of all major styles.

**MUS 442P. Applied Music Scales Viola- SR. (1-2)**

Etudes: Rode, Kreutzer. Repertoire level: Weber, Andante and Rondo Ungarese, Hindemith, Der Schwanendreher, Bartok, Concerto, Walton, Concerto, Brahms, Sonatas, Schubert, 'Arpeggione' Sonata.

**MUS 442R. Applied Music Cello- SR. (1-2)**

Advanced studies. Compositions of all major periods. Contemporary performance practices. Orchestral and chamber music studies.

**MUS 442S. Applied Music String Bass- SR. (1-2)**

Advanced studies. Compositions of all major periods. Contemporary performance practices. Orchestral and chamber music studies.

**MUS 442T. Applied Music Harp- SR. (2)**

Etudes and technical studies. Mozart Concerto in C Major for Flute and Harp, Ravel Introduction and Allegro. Solos such as Pescetti Sonata in C Minor, Salzedo Whirlwind and Scintillation.

**MUS 444. Applied Music. (3-4)**

You must audition to qualify for studio lessons in applied music. Study in applied music consists of one-hour private lessons, given weekly, and periodic studio classes.

**MUS 444A. Applied Music Voice- SR. (3-4)**

Continuation of advanced singing technique. Repertoire requirement is literature for the senior recital.

Prerequisite: two semesters of 342A or 344A.

**MUS 444B. Applied Music Piano- SR. (3-4)**

Most challenging undergraduate course of piano study. Emphasizes quick memorization of repertoire, physical ease in performance, and while respecting the composers' wishes, development of maximum variety and spontaneity of expressive style. Preparation of the senior recital as well as further polishing technical exercises.

**MUS 444C. Applied Guitar- SR. (3)**

Applied guitar is the study of the classical guitar, in which the student applies the study of technique and literature to music from all periods.

**MUS 444D. Applied Music Flute- SR. (3-4)**

Tone studies, orchestral studies (memorized). Participation in one class recital, presentation of senior recital. Bozza 14 Arabesques, Anderson Virtuoso Studies, Jolivet Chant du Linos, Nielson Concerto, Prokofieff Sonata, Dutilleux Sonatina, J.S. Bach Partita in A Minor, Messiaen Le Merle Noir, Ibert Concerto, Schubert Introduction and Variations, and works of comparable difficulty.

**MUS 444E. Applied Music Clarinet- SR. (3-4)**

Emphasis on repertoire. Works by Copland, Berg, Verdi, Manevich, Francaix, Nielsen, or equivalent. Contemporary techniques. Orchestral excerpts. Clarinet with electronics. Senior recital.

**MUS 444F. Applied Music Saxophone- SR. (3-4)**

Etudes by Lacour and Bozza. Pieces by Desenclos, Dubois, Bonneau, etc. Contemporary saxophone techniques. Chamber music. Orchestral excerpts. Preparation of senior recital.

**MUS 444G. Applied Music Oboe- SR. (3-4)**

Orchestral studies. Study of baroque ornamentation. Study of Oboe d'amore. Oboe pedagogy. Ferling 48 Famous Studies. Pieces: Schumann Romances, Poulenc Sonata, Dutilleux Sonata, Mozart Oboe Quartet, Strauss Concerto. Selected contemporary works. Preparation of recital program.

**MUS 444H. Applied Music Bassoon- SR. (3-4)**

Coverage of important orchestral literature and teaching materials, studies by Bozza, Bitsch, and Bianchi, Mozart and Weber Concerti, or works of comparable difficulty. Chamber music literature. Preparation of senior recital.

**MUS 444I. Applied Music Trumpet- SR. (3-4)**

Study of more advanced etudes including Charlier, 36 Etudes transcendentales; Brandt, Etudes for the Orchestral Trumpeter, Part II; and others. Solo literature by Barat, Bozza, Handel, Haydn, Hummel, Hindemith, Kennan, Latham, Riisager, Torelli, and others. Study of orchestral trumpet parts. Preparation of senior recital.

**MUS 444J. Applied Music French Horn- SR. (3-4)**

Further orchestral studies. Advanced etudes: Maxime-Alphonse Book 6, Reynolds 48 Etudes, Barboteu. Solo literature: Jacob, Strauss, Bozza, Reynolds, Gliere. Preparation of senior recital.

**MUS 444K. Applied Music Trombone- SR. (3-4)**

Couillaud 30 Modern Etudes; Bitsch 15 Rhythmical Etudes; Bach Cello Suites. Solos by Milhaud, Serocki, Tomasi, Creston. Orchestral excerpts. Preparation of senior recital.

**MUS 444L. Applied Music Euphonium- SR. (3-4)**

Preparation of recital. Solo works of the difficulty of Busser Variations in D Flat Major, Tuthill Concerto, Hindemith Sonata for Trombone, Corelli Sonata in D Minor.

**MUS 444M. Applied Music Tuba- SR. (3-4)**

Preparation of recital. Solo works of the difficulty of Persichetti Serenade No. 12, Vaughan Williams Concerto for Tuba, Vivaldi Concerto in A Minor, Wilder Sonata, orchestral excerpts. Preparation of senior recital.

**MUS 444N. Applied Music Percussion- SR. (3-4)**

Afro-Indo-Latin percussion methods: from books by Morales, Sabanovich, and Reed. Drum set: from books by Chapin, Reed, Latham, Soph, and Erskine. Orchestral excerpts. Repertoire for senior recital.

**MUS 444O. Applied Music Violin- SR. (3-4)**

Advanced technical studies. Preparation of senior recital including composition of all major styles.

**MUS 444P. Applied Music Scales Viola- SR. (3-4)**

Etudes: Rode, Kreutzer. Repertoire level: Weber, Andante and Rondo Ungarese, Hindemith, Der Schwanendreher, Bartok, Concerto, Walton, Concerto, Brahms, Sonatas, Schubert, 'Arpeggione' Sonata.

**MUS 444R. Applied Music Cello- SR. (3-4)**

Advanced studies. Compositions of all major periods. Contemporary performance practices. Orchestral and chamber music studies.

**MUS 444S. Applied Music String Bass- SR. (3-4)**

Advanced studies. Compositions of all major periods. Contemporary performance practices. Orchestral and chamber music studies.

**MUS 444T. Applied Music Harp- SR. (3-4)**

Etudes and technical studies. Mozart Concerto in C Major for Flute and Harp, Ravel Introduction and Allegro. Solos such as Pescetti Sonata in C Minor, Salzedo Whirlwind and Scintillation.

**MUS 444Z. Applied Music-Composition. (3)**

Composers will work directly with Miami University composition faculty and student performers to realize their compositions. Lesson content will include review of works in progress, discussion of relevant repertoire and current compositional trends, and preparation for upcoming performance opportunities.

**MUS 451/MUS 551. Advanced Aural Skills I. (1)**

Required of all music performance majors. Continuation of MUS 251-252, with addition of atonal and jazz idioms.

Prerequisite: MUS 251-252.

**MUS 452/MUS 552. Advanced Aural Skills II. (1)**

Required of all music performance majors. Continuation of MUS 251-252, with addition of atonal and jazz idioms.

Prerequisite: MUS 251-252.

**MUS 454/MUS 554. Guitar Repertory and Pedagogy. (2)**

This course is designed for students in the Bachelor of Music and Master of Music curriculum in guitar performance, as well as guitar majors in the B.A. and Music Education curricula. It explores guitar repertory, examining the most important composers and pieces for the instrument, in solo, chamber and orchestral contexts. It also examines current teaching methods and materials for the guitar.

**MUS 456/MUS 556. Vocal Pedagogy. (2)**

Structure and function of the singing voice. Techniques for teaching voice. Overview of solo vocal materials for young singers.

Prerequisite: MUS 235; two semesters of class or applied voice.

**MUS 457/MUS 557. Piano Literature. (3)**

Survey of solo piano literature from 1700 to the present. Historical and analytical approach to periods and styles.  
Prerequisite: MUS 189 and 202.

**MUS 458/MUS 558. Piano Literature. (3)**

Survey of solo piano literature from 1700 to the present. Historical and analytical approach to periods and styles.  
Prerequisite: MUS 189 and 202.

**MUS 460/MUS 560. Methodologies in Ethnomusicology. (3) (MPC)**

This course is dedicated to the study of the diversity of ways the world's peoples make and study music. The course provides an introduction to the discipline of ethnomusicology, offering an overview of its development and concentrating on methods, from fieldwork and interviewing through researching and writing. It will include an exploration of many musical genres, while at the same time exposing students to cultural, historical, and music theoretical approaches to the study of performance, composition, improvisation, and other practices. The ability to read music is not required.

**MUS 461/MUS 561. American Music. (3)**

Music in American cultural life, including all levels and types of cultivated and vernacular expressions. Native American musical traditions through our present musical diversity.  
Prerequisites: MUS 201-202, MUS 311-312, or permission of instructor.

**MUS 463/MUS 563. Orchestra Conducting. (3)**

Principles of manual technique, organology, study of musical factors involved in leading orchestras of various sizes, and score study.  
Prerequisite: MUS 352 or permission of instructor.

**MUS 475. Senior Practicum in Music Education. (3) (MPC)**

Assessment, synthesis, critical analysis, and evaluation of undergraduate experiences relative to the following areas of music education: philosophy, ethics, and standards of the profession.  
Prerequisite: completion of all third-year courses in music education degree program or permission of instructor.

**MUS 477. Independent Studies. (0-5)**

**MUS 481. Advanced Studies in Special Subjects. (1-4)**  
Opportunity for qualified upperclass, graduate, and special students to pursue individual research. Approval of department chair required.

**MUS 482. Advanced Studies in Special Subjects. (1-4)**

Opportunity for qualified upperclass, graduate, and special students to pursue individual research. Approval of department chair required.

**MUS 490/MUS 590. Special Topics in Music. (1-4; maximum 12)**

Focused study of topics relating to music history, music education, music literature, or music theory, including the study of genres, pedagogy, the history of styles, and the analysis of music. May be repeated for credit when content changes.

**MUS 493. Capstone/Senior Recital: Preparation and Performance. (3) (MPC)**

Preparation and performance of a senior recital. Topics studied include creative, artistic, and technical aspects of performance preparation; theoretical, analytical, historical, and aesthetic aspects of the works being performed; and the relation between your performance and the public. Perform all or part of the prepared recital in a venue outside the university setting.  
Co-requisite: MUS 442 or 444.

**MUS 494. Senior Recital. (0)**

Performance of senior degree recital.  
Prerequisite: MUS 493.

**MUS 610. Special Project. (1-12; maximum 12)**

Conference course offering opportunity for work in specialized areas. Course may be repeated for credit.

**MUS 611. Research Project. (3-4)**

Research paper in areas related to student's major. Required for majors in performance and music education.

**MUS 621. Graduate Research in Music. (3)**

Bibliography and research methodology applied to selected historical subjects.  
Prerequisite: graduate standing in music.

**MUS 622. Teaching Elementary Music: Theory and Practice. (3)**

This course examines the nature of elementary general music (preK-6) with emphasis on curricular issues/approaches, child development, and learning theories as they affect teaching strategies and materials. The development of children's musicianship, creativity, and thinking skills.

**MUS 623. Integrating Multiculturalism into Music Curriculum. (3)**

Examines issues, approaches, and applications of teaching PreK-12th grade music classrooms utilizing music of diverse cultures. Emphasis on instructional models and hands-on experiences with selected world cultures (West African, Latin American, American Indian, Indonesian) will provide limited depth rather than breadth.  
Prerequisite: bachelor's degree in music education.

**MUS 626. Foundations of Music Education. (3)**

Intensive study of historical perspectives in music education, psychological and social foundations, philosophical and aesthetic rationale for music programs, and research skills using scholarly resources.

**MUS 627. Recent Developments in Music Education. (3)**

Intensive study of the scope and sequence of curricular offerings in music and impact on pedagogy in music classrooms. Survey of technology, music of other cultures, current issues in music education, and administrative aspects of school music programs.

**MUS 628. Research Problems in Music Education. (3)**

Research techniques applied to selected problems in vocal and instrumental teaching and supervision. Survey of research literature and procedures, use of library resources, and interpretation of results.

**MUS 630. Advanced Ensemble. (0-2; maximum 8)**

Participation in choral, orchestral, or chamber music groups, with emphasis on techniques of coaching. May be repeated for credit; maximum of 8 hours towards degree.  
Prerequisite: bachelor's degree in music or equivalent and permission of instructor.

**MUS 630A. Collegiate Chorale. (1-2)**

Participation in choral, orchestra, or chamber music groups, with emphasis on techniques of coaching. May be repeated for credit, maximum of 8 hours towards degree.  
Prerequisite: bachelor's degree in music or equivalent and permission of instructor.

**MUS 630B. Men's Glee Club. (1-2)**

Membership: 75. May be repeated for credit.

**MUS 630C. Symphony Orchestra. (1-2)**

Open to all students by audition only. Membership: 80 string, wind, and percussion players. Study and performance of main symphonic literature. May be repeated for credit.

**MUS 630D. Choraliers. (1-2)**

Women's chorus. Membership: 80. May be repeated for credit.

**MUS 630E. Marching Band. (1-2)**

Membership: 200 wind and percussion players. May be repeated for credit.

**MUS 630F. Symphonic Band. (1-2)**

Membership: 72 wind and percussion players. May be repeated for credit.

**MUS 630G. Wind Ensemble. (1-2)**

Membership: 55 wind and percussion players. May be repeated for credit.

**MUS 630H. Chamber Music Brass. (1)**

Participation in the performance of brass chamber music with such groups as French horn quartet, trumpet trio and quartet, brass quintet, trombone quartet. May be repeated for credit.

**MUS 630I. Chamber Music Strings. (1)**

Study and performance of major chamber works for string quartets, string trios and string quartets, and compositions for strings with piano and other instruments. May be repeated for credit.

**MUS 630J. Chamber Music Piano. (1)**

Open to all students by audition only. Contemporary jazz ensemble literature is covered in this performance group. Two sections are available: advanced and intermediate. May be repeated for credit.

**MUS 630M. Miami University Percussion Ensemble. (1)**

Open to all with necessary proficiency. Admittance determined by audition or instructor recommendation. Study and performance of literature for varied combinations of percussion instruments. Literature ranges from percussion ensemble classics to pop arrangements. May be repeated for credit.

**MUS 630N. Steel Band. (1-2)**

Open to all students by audition only. Two sections are available: advanced and beginner. Advanced ensemble focuses on performance of steel band literature; beginner ensemble is for students with little or no experience playing steel drum instruments. May be repeated for credit.

**MUS 630Q. Chamber Singers. (1-2)**

Chamber choir; 20-25 mixed voices. Auditions open to all students. May be repeated for credit.

**MUS 630R. Chamber Winds. (1)****MUS 630Z. Internship: Brass Quintet. (1)**

Interpretation of choral music in large and small forms; emphasis on choral literature for school groups. Summer only.

**MUS 640. Internship. (0-12; maximum 12)****MUS 642. Applied Music. (1-2)**

Individual instruction for graduate students in music in the major performing medium. May be repeated for credit. Prerequisite: approval of graduate music faculty.

**MUS 642C. Applied Guitar. (2)**

Applied guitar is the study of the classical guitar, in which the student applies the study of technique and literature to music from all periods.

**MUS 644. Applied Music. (2-4; maximum 16)**

Same as MUS 642. Required of all applied music majors at graduate level. Course may be repeated for credit.

**MUS 645. Concepts In Music History. (3)**

Investigates philosophies and methodologies of teaching and learning music history in the 21st century. Study of the current postmodern musical culture placed within the disciplinary contexts of new musicology, ethnomusicology, and traditional musicology. Case studies investigate the interconnections between postmodernity, musicology, and ethnomusicology.

**MUS 661. Graduate Analysis. (3)**

Investigation of music literature from analytic view. Pieces from 18th through 20th centuries studied with respect to structure and compositional technique.

Prerequisite: successful completion of Music Theory Diagnostic Examination or permission of instructor.

**MUS 677. Independent Studies. (0-5)****MUS 682. Repertory. (2; maximum 4)**

Preparation of extensive and balanced repertory of compositions. Course may be repeated for credit.

Prerequisite: MUS 642 or MUS 644 and permission of instructor.

**MUS 684. Repertory. (4)**

Same as MUS 682.

**MUS 690. Graduate Recital. (1-2)**

Public performance of a solo recital of professional caliber. Required of all applied music majors at the graduate level.

Prerequisite: approval of graduate music faculty.

## Nonprofit and Community Studies (NCS)

**NCS 201. Theories of Civic Leadership and Democracy. (3)**

Critical introduction to the study of community, democracy, and civic leadership. Draws widely from several scholarly fields (including political science, philosophy, economics, international development and civic engagement), placing particular emphasis on the various ways that scholars and practitioners conceptualize "community" and "democracy" and the ways that theories of democratic citizenship can inform the actions and practices of individuals, leaders, and groups within communities.

**NCS 202. Introduction to Nonprofits and NGOs. (3)**

Overview of the history, organization, and functions of nonprofits and NGOs, one of the largest sectors of the United State workforce. Visiting professionals from community agencies provide local connections and context, and service-learning experience allows students to engage and learn in additional environments.

**NCS 270. Special Topics in Community Studies. (1-6; maximum 9)**

An examination of a contemporary problem/issue in community studies through some combination of research, readings, discussion, and experiential learning. Topics will vary according to need and interest. This class may be repeated for credit provided different topics are studied.

**NCS 277. Independent Studies. (0-5)****NCS 301. Community-Based Practicum I. (3)**

Placement with an appropriate community or government agency where students apply their skills and learn new ones. Preparatory classroom component, regular reflection assignments, and community project required.

Prerequisite: NCS 202.

**NCS 302. Community-Based Practicum II. (3)**

Placement with an appropriate community or government agency where students apply their skills and learn new ones. Preparatory classroom component, regular reflection assignments, and community project required.

Prerequisite: NCS 301.

**NCS 340. Internship. (0-20)****NCS 377. Independent Studies. (0-5)****NCS 401. Capstone in Nonprofit and Community Studies. (3) (MPT, MPC)**

Focuses on the production of a senior project in collaboration with an appropriate community partner. As part of the Global Miami Plan, it emphasizes sharing of ideas, synthesis, and critical, informed action and reflection, and includes student initiative in defining and investigating problems or projects. Culminates in a public presentation for community and university members. IC.

Prerequisite: 96 hours registered or earned (senior standing).

## Naval Science (NSC)

**NSC 101. Introduction to Naval Science. (2)**

Introduction to the naval profession and concepts of seapower. Emphasis on mission, organization, and warfare components of the Navy and Marine Corps. Covers naval courtesy and customs, military justice, and leadership. Note: Mandatory for incoming NROTC freshmen (except MECEP & STA-21). NROTC students that have satisfactorily completed at least three years of Naval Science course work in the NJROTC or MCJROTC may request exemption from NSC 101. Normally offered only in the fall semester.

**NSC 110. Naval Science Laboratory. (1; maximum 2)**

Provides orientation to the naval service and NROTC program from the perspective of a member of a structured battalion organization. Includes close order drill and guest speakers with discussion on various Navy-oriented topics. For midshipmen pursuing a commission in the naval service. Mandatory for NROTC students in their freshman year.

Prerequisite: admission to the NROTC program.

**NSC 125. Marine Corps Intro to Tactical Leadership. (1; maximum 2)**

Trains and educates first-year students on the basics of small unit leadership. There is no expectation of military or Reserve Officer Training Corps experience. During the conduct of this course you will be trained on officership foundations of military service, to include: Marine Corps history, physical fitness, uniform wear, land navigation, and small unit tactics. You will be evaluated based on academic performance and practical application.

Co-requisite: NSC 110.

**NSC 177. Independent Studies. (0-5)****NSC 202. Sea Power and Maritime Affairs Seminar. (3) (MPT)**

Investigates history, needs, and characteristics of seapower and its effect on the maritime affairs of our nation and the rest of the world. Fulfills requirements for NSC 1 and NSC 2 thematic sequences. Interested students not affiliated with the NROTC unit should contact the NSC 202 instructor as early as possible. Note: Normally offered only in the spring semester.

**NSC 210. Naval Science Laboratory. (1; maximum 2)**

Provides fundamental training and experience in management and leadership techniques. Provides instruction on close order drill and naval officer career areas and responsibilities. For midshipmen pursuing a commission in the naval service. Mandatory for NROTC students in their sophomore year.

Prerequisite: Admission to the NROTC program.

**NSC 211. Leadership and Management. (3)**

Introduction to the principles of leadership and management, with an emphasis on their application by a commissioned officer in the U.S. Navy or Marine Corps. Note: Limited seating for non-NROTC students. Normally offered only in the fall semester.

Prerequisite: Sophomore standing or greater.

**NSC 225. Marine Corps Tactical Leadership I. (1; maximum 2)**

Trains and educates second-year students on the basics of small unit leadership. There is no requirement for military or Reserve Officer Training Corps experience, however, familiarization of concepts from NSC 125 is recommended. During the conduct of this course you will learn the basics of the tactical planning process, patrolling operations, and land navigation. You will be evaluated based on academic performance and practical application of concepts from this course and NSC 125.

Co-requisite: NSC 210.

**NSC 277. Independent Studies. (0-5)****NSC 301. Navigation. (3) (MPT)**

Introduction to the art and science of navigation. Includes lectures and practical work on piloting, dead reckoning, electronic navigation, piloting procedures, associated equipment and publications, and knowledge of environmental factors affecting operations at sea. Note: Normally offered only in the spring semester.

**NSC 302. Naval Operations and Seamanship. (3) (MPT)**

Naval Operations and Seamanship is an advanced naval science course which builds on NSC 301. The course material includes underway watchstanding, ship-handling, naval force composition, operations, and strategy. NSC 302 contains elements from the following Professional Core Competencies: Naval Orientation and Officership, Leadership and Ethics, Sea power and Naval History, Technical Foundations, and Naval Warfare. Note: Normally offered only in the fall semester.

**NSC 303. Naval Ship Systems I. (3)**

Study of theory and operation of steam turbine, gas turbine, diesel, and nuclear propulsion systems in the framework of engineering thermodynamics. Introduction to flotation and stability theory, ship compartmentation, interior communication, and damage control in modern naval ships. Note: Normally offered only in the spring semester.

**NSC 310. Naval Science Laboratory. (1; maximum 2)**

Provides intermediate level management training and leadership experience through practical application of management techniques. For midshipmen pursuing a commission in the naval service. Mandatory for NROTC students in their junior year. Prerequisite: Admission to the NROTC program.

**NSC 311. Evolution of Warfare. (3) (MPT)**

Historical developments of the principles of war, strands of war, and variables of war from 500 B.C. to the present. This is not a dedicated history class however, the use of battlefield and historical studies is integral to understanding how warfare has developed throughout time. Note: Normally offered only in the fall semester of odd numbered years.

**NSC 325. Marine Corps Tactical Leadership II. (1; maximum 2)**

Trains and educates third-year students on the basics of small unit leadership. There is no requirement for military or Reserve Officer Training Corps experience, however, familiarization of concepts from NSC 125 and NSC 225 is highly recommended. During the conduct of this course, you will learn the basics of moral reasoning, fire support planning, operational terms and graphics, and fitness reports. You will be evaluated based on academic performance and practical application of concepts from this course, NSC 125, and NSC 225. Co-requisite: NSC 310.

**NSC 377. Independent Studies. (0-5)****NSC 402. Leadership and Ethics. (3) (MPC)**

This course focuses on ethical theory, Naval Law, and morality in warfare in order to provide future naval leaders with a sound moral leadership foundation for "real life" military decision making. Note: This course is normally offered in the spring semester. Prerequisite: Senior standing and prior completion of NSC 211.

**NSC 403. Naval Ship Systems II. (3)**

Investigation and evaluation of principles of weapons, mechanical and electronic systems used in delivery of ordinance, methods of fire control, and missile guidance theory. Note: Normally offered only in the fall semester.

**NSC 410. Naval Science Laboratory. (1; maximum 2)**

Provides upper level management training and leadership experience through practical application of management techniques. For midshipmen pursuing a commission in the naval service. Mandatory for NROTC students in their senior year and beyond. Prerequisite: Admission to the NROTC program.

**NSC 411. Fundamentals of Maneuver Warfare. (3) (MPT)**

Prepares future military officers and other leaders for service by studying modern tactical principles, current military developments, and other aspects of warfare and their interactions with and influences on maneuver warfare doctrine. Specific focus on the United States Marine Corps as the premier maneuver warfighting organization. Study also includes historical influences on tactical, operational, and strategic levels of maneuver warfare practices in the current and future operating environments. Note: Normally offered only in the fall semester of even numbered years.

**NSC 425. Marine Corps Tactical Leadership III. (1; maximum 2)**

Concluding course trains and educates prospective military officers in the high standards of leadership and development required for commissioned service. During the conduct of this course, you will be challenged to practice and hone your leadership technique. You will be evaluated on your leadership skills as you are presented with a series of challenging scenarios related to small unit tactical operations and critical thinking. You will be evaluated based on academic performance and practical application of concepts from NSC 125, NSC 225, and NSC 325. Co-requisite: NSC 410.

**NSC 477. Independent Studies. (0-5)**

## Nursing (NSG)

**NSG 177. Independent Studies. (0-5)****NSG 251. Therapeutic Communication in Nursing. (3)**

Examines and develops skills in communication that the nurse uses in working with clients across the lifespan and with other health care professionals. Consideration is given to factors affecting the nurse-client relationship, including self-awareness and cultural awareness. Theory and evidence are examined as foundations for therapeutic communication in nursing practice. (BSN program) Prerequisite: sophomore standing as a baccalaureate nursing student.

**NSG 252. Foundations of Professional Nursing. (3)**

Introduces the student to the role of the nurse as a partner in health promotion with others within the health care system. Nursing is studied in light of its historical roots, educational trends, professional/political power, theory and research, and the profession's role in the changing health care delivery system. Major theories, concepts, trends, and issues that impact the nursing profession today are addressed. Applications of theories regarding socialization into the professional role are emphasized. (BSN program) Prerequisite: sophomore standing as a baccalaureate nursing student.

**NSG 261. Health and Physical Assessment. (3)**

Designed to develop transcultural health assessment skills across the life span. Content and practice focuses on developing cognitive and psychomotor skills associated with obtaining a complete data base through history taking and physical assessments. Students will identify assessment findings that fall outside accepted parameters of normal for pediatric, adult, geriatric and pregnant populations. Lec/Lab. (BSN program). Prerequisites: BIO 171, BIO 172, MBI 161 and CHM 131.

**NSG 262. Fundamentals of Professional Nursing Practice. (4)**

Develops skills in nursing therapeutics and evidence based practice to promote holistic health. Through use of critical thinking skills, students will apply psychomotor skills and nursing therapeutic interventions. Laboratory. Prerequisite: sophomore standing as a baccalaureate nursing student (BSN program).

**NSG 263. Community Health Nursing. (3)**

Develop nursing skills in assessment, program planning and interventions to promote the health of communities and vulnerable populations. Builds a foundation for designing nursing strategies for individuals, families and populations by integrating health promotion and disease prevention concepts, nursing and public health theory.

**NSG 277. Independent Studies. (0-5)****NSG 301. Theory-Based Nursing Practice. (3)**

This course is the transitional course in the educational trajectory from technical to professional nursing. The educational experiences build upon your knowledge from interdisciplinary prerequisite and technical level nursing courses. Students are introduced to major theories, concepts, trends, and social policy issues that impact the nursing profession today as well as influence its future. Role socialization, application, and integration of theoretical concepts into the professional role are emphasized. The profession's historical roots, education trends, and role evolution, theory and research focus, health and social policy power issues are examined in light of the nation's changing health care delivery system. NSG 301 is specifically designed for the Miami University Advanced Writing requirement, with assignments speaking to various types of writing used by nurses. ADVW. (Open to all nursing and non-nursing majors). Prerequisite: Miami Plan Foundation I English.

**NSG 302. Intermediate Clinical Nursing Practicum. (3)**

This course provides students with a concentrated clinical experience at a local health care facility that will focus on improving their skills to plan, implement, and evaluate the nursing care they provide. Students care for a group of clients over consecutive days and have a nurse mentor thus fostering collegial and interdisciplinary relationships. The faculty member will evaluate the student more in-depth in the application of knowledge, selection of priorities and consistency of care. (Elective for BSN). Prerequisite: NSG 261 and 262.

**NSG 311. Health Promotion Across the Lifespan. (3)**

Helps baccalaureate nursing students shift their focus from illness-oriented care to wellness and health promotion. Students are introduced to content about assessment for wellness and intervention for health promotion throughout the life span. Open to all majors.

**NSG 313. Assessment of the Well Individual. (2)**

Facilitates development of physical assessment skills appropriate to performing a screening physical examination as part of a comprehensive nursing assessment. Content and practice focuses on developing student's ability to obtain a complete data base, identify physical assessment findings that fall outside accepted parameters of normal, and analyze data to formulate nursing diagnoses. (RN-BSN program)

**NSG 317. Teaching Strategies in Health Care. (3)**

Designed to develop knowledge and skill in teaching clients and their families on a one-to-one basis as well as in group situations. Content related to theories of learning, assessment of learning needs, teaching strategies, and evaluation of teaching explored in detail. Emphasizes the role of a nurse as a teacher. Employs experiential teaching strategies. Students learn to teach by experimenting with different teaching strategies, as well as by modeling techniques used by the instructor. (Required for RN-BSN program, elective for BSN) Open to all majors.

**NSG 321. U. S. Health Care System and Culture. (3)**

This course is designed to provide the student with an overview regarding factors that influence health care systems in the United States. A seminar/discussion format will be used to help students examine the culture of health care, various health care delivery systems, as well as roles of providers of care and key stakeholders. Students will also explore select contemporary and legal/ethical issues that arise in the evolving health care system. Open to all majors.

Prerequisite: junior standing.

**NSG 325. Problem-Based Approaches in Nursing. (1)**

The course uses problem-based approaches to foster critical thinking skills for the provision of safe, effective nursing care. It incorporates strategies to analyze complex nursing applications.

Prerequisites: NSG 251 and NSG 252 or permission of the Instructor.

**NSG 331. Introduction to Nursing Research. (3)**

Provides foundation for systematic study of nursing and health related problems using research process. Emphasis is placed on critiquing published studies, understanding the research process, using evidenced based literature and developing skills in research utilization in the practice setting. (RN-BSN program)

**NSG 340. Internship. (0-20)****NSG 341. Caring and Terminal Illness. (3)**

Elective course that explores concepts of professional nursing care in relation to terminal illness. Foci include symptom control, family support, attitudes toward death and dying, and concept of biomedical ethics. (BSN and RN-BSN program)

**NSG 343. Health Care Informatics. (3)**

Designed to give experience with issues and use of health care information management systems. Progresses from history and description of hospital and computer-based systems to clinical bedside practice, research, education, and administrative application. Community and institution-based systems are discussed as well as ergonomics and software/hardware selection.

**NSG 349. Introduction to Principles of Pharmacology in Nursing Practice. (3)**

Introduces the student to the nursing application of basic pharmacology throughout the lifespan. Emphasis is placed on the application of pharmacological knowledge through clinical decision making in nursing practice. (BSN program)

Prerequisites: NSG 251, NSG 252, and NSG 261.

**NSG 351. Nursing of Childbearing Family. (3)**

Examines theory and evidence based practice as the basis for planning care for the childbearing family. Emphasis is placed on health promotion integration for families in transition, acknowledging physiological, sociocultural, political and economic forces within the health care system. (BSN program)

Prerequisite: junior standing as a baccalaureate nursing student.

Co-requisite: NSG 352.

**NSG 352. Childbearing Family Clinical. (2)**

Addresses the nursing role as provider of care for childbearing families. Theoretical principles and evidence based practice are applied to the planning of and providing care for the childbearing family. Emphasis is placed on health promotion integration for childbearing families (BSN program).

Prerequisite: junior standing as a baccalaureate nursing student.

Co-requisite: NSG 351.

**NSG 353. Nursing Care of Adult Clients with Health Alterations I. (3)**

Examines holistic nursing care of adults. Emphasis is on therapeutic nursing care to promote, maintain, and restore health in adults within the context of the family and community. Focus is on medical-surgical health alterations common to adults.

Prerequisite: junior standing as a baccalaureate nursing student (BSN program).

Co-requisite: NSG 354.

**NSG 354. Nursing Care of Adult Clients with Health Alterations I-Clinical. (3)**

Addresses providing holistic nursing care to adults and their families in a variety of settings. Students will focus on health promotion, risk reduction, and health restoration activities in examining medical-surgical health alterations common to adults.

Prerequisite: junior standing as a baccalaureate nursing student (BSN program).

Co-requisite: NSG 353.

**NSG 361. Nursing Care of Adult Clients with Health Alterations II. (3)**

Examines holistic nursing care of adults and their families. Emphasis is on therapeutic nursing care to promote, maintain, and restore health in adults within the context of the family and community. Focuses on medical-surgical health alterations common to adults (BSN program).

Prerequisite: junior standing as a baccalaureate nursing student.

Co-requisite: NSG 362.

**NSG 362. Nursing Care of Adult Clients with Health Alterations II-Clinical. (3)**

Addresses providing holistic nursing care to adults and their families in a variety of settings. Students will focus on health promotion, risk reduction, and health restoration activities in examining medical-surgical health alterations common to adults (BSN program).

Prerequisite: junior standing as a baccalaureate nursing student.

Co-requisite: NSG 361.

**NSG 363. Nursing Care of Children. (3)**

Examines theory and evidence based practice as the basis for planning nursing care for the child within the context of family and community. Emphasis is placed on health promotion, psychological and physiological needs as well as the dynamic interplay of culture, socioeconomic, ethical and legal issues, and spiritual beliefs.

Prerequisite: junior standing as a baccalaureate nursing student (BSN program).

Co-requisite: NSG 364.

**NSG 364. Nursing Care of Children-Clinical. (2)**

Addresses application of theory and evidence based practice in caring for the child within the context of family and community. Emphasis is placed on health promotion, psychological and physiological needs as well as the dynamic interplay of culture, socioeconomic, ethical and legal issues, and spiritual beliefs. (BSN program)

Prerequisite: junior standing as a baccalaureate nursing student.

**NSG 365. Nursing Research. (2-3)**

This course introduces the baccalaureate nursing student to the research process and its application in the discipline of nursing. Emphasis will be placed on critiquing published studies, understanding the research process, and developing skills to apply research findings in the practice setting.

**NSG 377. Independent Studies. (0-5)****NSG 402. The Professional Nurse Leader. (3)**

Synthesizes roles and responsibilities of the baccalaureate nurse by establishing a theoretical foundation for developing leadership skills applicable in all areas of the health care system. (BSN and RN-BSN programs)

**NSG 418. Perspectives of Chronic Disease. (3)**

Examines complex health problems that affect individuals and families across the lifespan. Students analyze the multiple factors contributing to major chronic health problems of contemporary American society. Emphasis is given to the way in which individuals as members of families and other social groups adapt to the trajectory of the disease process. The course also examines the role of the nurse as a member of the interdisciplinary team that provides services for disease prevention, health restoration, and rehabilitation. Open to all majors.

**NSG 420. Focused Practicum in Baccalaureate and Expanded Nursing Roles. (2)**

In this clinical course, students will design their own practicum experience in which they will work with a preceptor in a role appropriate to the Bachelors or Masters prepared nurse. Students will negotiate with faculty and preceptors to develop experiences and activities that will meet their own learning needs. Roles selected could include, but not be limited to leadership, research, health promotion, cultural diversity exploration, specialized inpatient or outpatient care, advanced practice nursing, or community activism.

Prerequisites: NSG 301, 311, 313 and 331.

**NSG 430. Community Health Nursing. (4)**

This course provides a theoretical background and a practicum experience in community health nursing. The course is based on the synthesis of evidence-based practice, nursing theory, and on the physical, behavioral and public health sciences. Emphasis is on the promotion and maintenance of the health of populations. The course assists students to recognize and analyze the interrelationship among individuals, families, population groups and the community in determining the health status of each with a special focus on vulnerable populations. The practicum allows students to apply theory to practice. Open only to RN-BSN students. IC.

Prerequisite or Co-requisite: MBI 361.

**NSG 432. Population Focused Nursing Care- Clinical. (2)**

Students apply theory and principles of population-focused care to examine public health issues of vulnerable or disenfranchised populations. Using data, information technology and input from community members, students design, implement and evaluate evidence-based nursing interventions.

**NSG 435. Challenges in Health Care Delivery. (3) (MPC)**

Provides opportunity to synthesize and apply accumulated knowledge to a specific topic or project related to health care delivery. Students with varying academic and experiential backgrounds work in small groups to research and analyze a topic or situation from various perspectives. Each group develops one of the following: a position paper, a manuscript ready for submission for publication, or a plan for action relative to a specific situation or problem. Open to all majors.

Prerequisite: senior standing.

**NSG 441. Health and Aging: Current Perspectives and Issues. (3)**

This elective course examines issues of health status and health care delivery for the older population. Topics include perceptions of health, major health problems in later life, strategies for working with older persons experiencing functional and sensory changes of aging, patterns of health-services utilization, projected health needs, and ethical issues related to health care for the elderly. (BSN and RN-BSN programs)

**NSG 451. Nursing Care of Clients Experiencing Mental Health Disorders and Their Families. (3)**

Examines theory and evidence based practice in the nursing care of clients experiencing mental health disorders and their families. Emphasizes application of the nursing process and therapeutic communication skills in the promotion of mental health. Concepts of group dynamics and family systems are addressed. (BSN program)  
Prerequisite: junior or senior standing as a baccalaureate nursing student.

Co-requisite: NSG 452.

**NSG 452. Nursing Care of Clients Experiencing Mental Health Disorders and Their Families-Clinical. (3)**

Addresses providing care to clients experiencing mental health disorders and their families in a variety of settings. Emphasis is on application of the nursing process and therapeutic communication skills. Promotion of mental health, concepts of group dynamics and family systems are addressed. (BSN program)  
Prerequisite: junior or senior standing as a baccalaureate nursing student.

Co-requisite: NSG 451.

**NSG 461. Nursing Care of Older Adults. (3)**

Examines holistic nursing care of the aging client. Health and wellness needs of the older adult and the impact of aging on the individual, family, and community are evaluated. Focus is on promoting functional ability and quality of life of the older adult. (BSN program)  
Prerequisite: junior or senior standing as a baccalaureate nursing student.

**NSG 463. Nursing Care of Clients Experiencing Multi-System Health Alterations. (3)**

Examines multi-system health alterations that affect individuals and families across the life span. Students will synthesize prior learning as they analyze the multiple factors contributing to major health alterations. Emphasizes the way in which individuals as members of families and other social groups adapt to the trajectory of the disease process and complex health alterations. The student is guided to examine the role of the nurse as a member of the interdisciplinary team that provides services for disease prevention, health restoration and rehabilitation. (BSN program)

Prerequisite: second semester senior standing as a baccalaureate nursing student.

Co-requisite: NSG 464.

**NSG 464. Nursing Care of Clients Experiencing Multi-System Health Alterations-Clinical. (5)**

Addresses providing care to groups of clients with multi-system health alterations and their families. Focuses on refining clinical decision making skills, implementing evidence-based interventions, and measuring client outcomes in evaluating the therapeutic effectiveness of care provided. Facilitates the transition from student to graduate nurse through preceptored experiences and faculty guidance. (BSN program)

Prerequisite: second semester senior standing as a baccalaureate nursing student.

Co-requisite: NSG 463.

**NSG 465. Nursing Senior Seminar. (2)**

Seminar course designed to assist the graduating senior nursing student to transition from student role to registered nurse (RN) role. The course utilizes a nationally normed standardized testing product in preparation for the RN licensure examination. This course focuses on assisting the student to evaluate his/her results and develop individualized remediation plans to foster success on the licensure examination. The course incorporates a comprehensive review.  
Prerequisite: last semester of senior BSN program.

**NSG 477. Independent Studies. (0-5)**

## Philosophy (PHL)

**Note:** Except where specific prerequisites are stated, all 100-, 200-, and 300-level courses are open to any student. 300-level courses without prerequisites require a higher degree of sophistication than lower level courses, but do not presuppose prior course work.

**Note:** All PHL courses satisfy CAS-B-PHL except PHL 273 and PHL 373 (CAS-E).

**PHL 103. Society and the Individual. (3) (MPF)**

A study of the relationship between human beings and the societies in which they live and of the implications different perspectives on this relationship have for a view of social justice. We investigate this relation in terms of its political, economic, social, ethical, and epistemological dimensions. Introduces fundamental questions of philosophy and basic reasoning skills, methodologies, and concepts used by philosophers. Students are prepared for further work in philosophy and develop skills in critical thinking, reading, and writing for any area of learning. IIB. CAS-B.

**PHL 104. Purpose or Chance in the Universe. (3) (MPF, MPT)**

Is the present universe the result of purpose or chance? Positions and arguments on this question by scientists and philosophers at different points in Western history are studied. In this inquiry, special attention is paid to recent developments in scientific cosmology that throws important new light on the question. Whether the results of the inquiry support purpose or chance more strongly is considered. Introduces fundamental questions of philosophy and basic reasoning skills, methodologies, and concepts used by philosophers. Students are prepared for further work in philosophy and develop skills in critical thinking, reading, and writing for any area of learning. IIB. CAS-B.

**PHL 105. Theories of Human Nature. (3) (MPF, MPT)**

There have been various ways that human beings have understood themselves and their place in nature. Every conception of the self embodies a conception of what can be known, of how we ought to live, of what values we ought to hold, and to what extent we are free. We consider various conceptions of the person in light of these questions. Introduces fundamental questions of philosophy and basic reasoning skills, methodologies, and concepts used by philosophers. Students are prepared for further work in philosophy and develop skills in critical thinking, reading, and writing for any area of learning. IIB. CAS-B.

**PHL 106. Thought and Culture of India. (3) (MPF)**

Examines India's history and civilization, philosophies and religions, arts and literature, science and technology as a culture's self-understanding and self-expression of its ideas, values, and ways of thinking. Comparisons made between Indian and other ways of thought and modes of living. IIB. CAS-B.

**PHL 131. Introduction to Ethics. (3) (MPF, MPT)**

Introduces students to, and cultivates, ethical reasoning. The course will foster students' capacity to recognize ethical issues and situations, to understand different ethical perspectives and concepts, and to engage in ethical deliberation. Students will have opportunities to analyze concrete situations and human conduct in relation to ethical principles, ideas, and frameworks and thereby to reflect more deeply on their own values and on the social context of ethical obligations and ethical dilemmas. Course topics may include the nature of our responsibilities to ourselves and to others, confrontations between the rights of an individual and those of society, and consideration of what it means to lead a good life. The course aims to enrich students' ability to see themselves as ethical actors in the world. (This course is the first course in the Ethics thematic sequence and counts toward the minor in Ethics, Society, and Culture.) IIB. CAS-B.

**PHL 177. Independent Studies. (0-5)****PHL 205. Science and Culture. (3)**

Study of science and scientific method as it relates to its social and cultural contexts. Cultural, aesthetic, ethical, and social dimensions of science.

**PHL 241. Philosophy of Art. (3)**

Introduction to basic notions of aesthetics, such as the definition of art, truth in the arts, characterization of aesthetic experience, etc. through examination of specific philosophies and problem areas. Readings may range from classical to contemporary thinkers.

**PHL 245. Writing Philosophy. (3)**

Provides philosophy majors with the reading, writing, and reasoning skills necessary for the successful presentation of philosophical ideas in written work, with writing oriented toward both specialized (philosophically experienced and disciplinarily appropriate) and non-specialized (non-philosophical) audiences. The course will have a rotating philosophical topic around which readings will be structured and will be writing intensive. ADVW.

**PHL 263. Informal Logic. (3) (MPT)**

Informal analysis of discourse, especially argument, with the aim of improving understanding, criticism, evaluation, and construction of arguments in significant contexts.

**PHL 265. Confronting Death. (3) (MPT)**

Explores philosophical approaches to death and dying. What does human mortality mean for how we should live? Topics might range from suicide, grief, and euthanasia to the immortality of the soul. Ideas will be taken up through a variety of sources, including history, literature, and film.

**PHL 273. Formal Logic. (4) (MPF, MPT)**

Survey of elementary logical systems: Aristotelian, boolean, sentential, quantified. Scientific method and issues in the philosophy of logic may be included. V. CAS-E.

**PHL 277. Independent Studies. (0-5)****PHL 286. Data, Ethics, and Society. (3)**

A historical, cultural, and philosophical introduction to key ethical and political problems in a world increasingly saturated with data. Examines rapidly changing and disquieting issues such as privacy and surveillance, intellectual property, and identity. Addresses the ethical issues that may arise from data collection, production, management, and use in scientific study, policy development, social justice debates, and economic applications. Students will develop critical skills to reflect upon, evaluate, and navigate issues they may encounter in a variety of environments impacted by data. CAS-B. Prerequisites: STA/ISA 125 or STA 261 or STA 301. Cross-listed with HST/GIC.

**PHL 301. Ancient Philosophy. (4) (MPT)**

Survey of ancient philosophical thought covering pre-Socratics, Socrates, Plato, Aristotle, and Hellenistic philosophy. Problems discussed include the nature of being and becoming, monism and pluralism, knowledge, value, and society. Emphasis given to philosophies of Plato and Aristotle. Prerequisite: PHL 103, 104, 105, 131 or 221.

**PHL 302. Modern Philosophy. (4) (MPT)**

Philosophical study of the development of philosophy at the beginning of modern period, Descartes to Kant. Both the interrelationship of points within each philosopher's thought and the change of thought from earlier philosophers to later ones are emphasized. Specific issues for study include relation of thought and reality, knowledge and opinion, truth and appearance, value. Prerequisite: PHL 103, 104, 105, 131 or 221.

**PHL 310. Special Topics. (1-4; maximum 8)**

Treatment of selected topics or philosophers.

**PHL 311. Ethical Theory. (4)**

Topical and historical in-depth study of classical and contemporary ethical theories. Addresses such questions as the following: What are the fundamental principles of moral action? Can such principles be justified? What moral theories are most adequate and why? What constitutes the well-lived life? Are persons moral agents? What is the relationship between morality and happiness? What is the relationship between freedom and morality? Why be moral? Prerequisite: PHL 131.

**PHL 312. Contemporary Moral Problems. (4) (MPT)**

Moral argument and bases of moral decision. Discussion of such issues as sexuality, career and professional ethics, environmental responsibility, individual conscience and authority, abortion, suicide, and war. Prior completion of PHL 131 is recommended.

**PHL 321. Problems of Metaphysics and Knowledge. (3) (MPT)**

Critical examination of the nature of reality and our knowledge of it. Sample topics include relation of mind to body, freedom and determinism, whether the world is fundamentally material or mental, nature and extent of our knowledge of the world.

Prerequisite: at least one prior class in philosophy or permission of the instructor.

**PHL 331. Political Philosophy. (3)**

Inquiry into values and principles of government, justice and law, rights and responsibilities, freedom and power, violence and revolution.

**PHL 335. Philosophy of Law. (4)**

Philosophical study of some problems arising in law. Problems discussed include: concept of law and its relation to morality; logic of legal reasoning; legal rights, duties, responsibility, punishment, fault, voluntariness, etc.

**PHL 340. Internship. (0-20)****PHL 355. Feminist Theory. (3) (MPT)**

Examination of major writing by contemporary feminist thinkers. Traditional philosophical questions, such as justice, freedom, nature of a person, and relationship of an individual to society, are raised in context relevant to both male and female students. Cross-listed with WGS.

**PHL 360. Interdisciplinary Special Topics. (1-4; maximum 8)**

Course of study on selected topic examined from perspective of two or more disciplines.

**PHL 373. Symbolic Logic. (4) (MPT)**

Study of standard notation, principles of inference, formal systems, methods of proof. Chief attention given to first-order predicate logic. Some focus placed on the philosophy of logic. CAS-E.

**PHL 375. Medical Ethics. (4) (MPT)**

Purpose of course is to think together in an informed and critical manner about selected issues in the field of health care. Attempt made with each issue addressed to consider distinctive interests and perspectives of physicians, nurses, patients, and the public. Issues considered include physician/patient relationships; lying, truth-telling, paternalism, and trust; death and dying, including suicide, euthanasia, and treatment of defective newborns; treatment of mental illness and patient rights; allocating scarce resources; nature of health and purposes of medicine.

Prerequisite: Prior completion of one course in philosophy; PHL 131 is recommended.

**PHL 376. Environmental Philosophy. (4) (MPT)**

Critical study of metaphysical, epistemological, and moral problems associated with questions of ecology and humankind's relation to natural environment. Considers such issues as conceptions of nature, character and impact of various forms of technology, relations of environment and economics, environmentalism and justice, and environmental ethics.

**PHL 377. Independent Studies. (0-5)****PHL 394. Existentialism. (3) (MPT)**

This course will explore the ways that the concept of human existence becomes a distinct theme for philosophical reflection in the late 19th and early 20th centuries. The central question of the school of thought that has come to be known as Existentialism, 'what it means to be,' will drive our own inquiry. The course will consider the philosophical, aesthetic, and political dimensions of existentialism and address core themes such as freedom, death, subjectivity, and self-creation. The course will cover 19th precursors to Existentialism (such as Kierkegaard and Nietzsche), and an array of 20th century thinkers (such as Camus, Heidegger, Sartre, and Beauvoir). CAS-B.

**PHL 402/PHL 502. 19th Century Philosophy. (4)**

Detailed study of advances in philosophy attempted by major philosophers of the 19th century. Emphasis on solutions they offered to problems of early modern thought and to foundations laid for important developments in 20th century thinking. Course may follow philosophical systems of leading philosophers (e.g., Hegel, Feuerbach, Marx) or it may proceed topically (e.g., dialectics, alienation in Hegel, Marx, Kierkegaard).

Prerequisite: PHL 302.

**PHL 404. What is Philosophy?. (3) (MPC)**

Addresses the questions of the nature and ends of philosophy. The capstone course offers both a culmination of a philosophical education through a discussion of various philosophical views on the meta-question of the nature of philosophy, and a culmination of a liberal education through a comparison of philosophy with other fields of inquiry.

Prerequisite: 9 hours of completed philosophy courses and senior status.

**PHL 410/PHL 510. Special Topics. (1-4)**

Seminar treatment of selected topics or philosophers. New topics at student initiative.

**PHL 411/PHL 511. Advanced Ethical Theories. (4)**

Critical discussion of recent works in ethics.

Prerequisite: PHL 131.

**PHL 420/PHL 520. Seminar in Twentieth Century Philosophy. (4; maximum 8)**

Examination of one or more twentieth century philosophical figure (e.g., Heidegger, Wittgenstein, Foucault) and/or study of key philosophical issues of the twentieth century (such as being, language, power, action).

**PHL 430/PHL 530. Seminar in Ancient or Medieval Philosophy. (4)**

Intensive study of a major topic (e.g., universals, knowledge and perception, the human soul, God, morality, language and reality) or work of a major philosopher (e.g., Socrates, Plato, Aristotle, Plotinus, Augustine, Anselm, Aquinas) of ancient or medieval period. Repeatable with different content up to two times.

**PHL 440/PHL 540. Seminar in Modern Philosophy. (4)**

Intensive study of philosophy of one major philosopher of early modern period, e.g., Spinoza, Descartes, Leibniz, Berkeley, Hume, Kant, or a topical study in the philosophy of the period. Repeatable with different content up to two times.

**PHL 450/PHL 550. Seminar in Contemporary Philosophy. (4)**

Examination of one or more contemporary philosophical figure or philosophical issue in any area of current philosophical research. Repeatable with different content up to three times.

**PHL 459/PHL 559. Political Philosophy Seminar. (4)**

Intensive study of a major political philosopher (e.g. Marx, Arendt, or Rawls) or intensive study of a focused theme in political philosophy (e.g., power, equality, freedom, or justice) and/or critical discussion of the texts and major work of a particular historical set of political philosophers.

**PHL 470/PHL 570. Advanced Aesthetics. (4)**

Selected topics in advanced study of philosophy of art. Topics may include film aesthetics, philosophy of tragedy, metaphysics of the novel, aesthetic formalism. Repeatable with different content up to three times. Prior completion of PHL 241 recommended.

**PHL 477. Independent Studies. (0-5)****PHL 480. Independent Reading for Departmental Honors. (1-6)**

To earn departmental honors, a student must complete two semesters of independent reading courses.

**PHL 493/PHL 593. Phenomenological Method. (4)**

Theoretical study of method in phenomenology as exemplified in the works of the major figures of the movement.

**PHL 494/PHL 594. Philosophy of Mind. (4)**

Selected topics or authors, historical or contemporary. Topics include such problems as personal identity and individuation, the self, mind/body problems, the will, thought and cognition, perception, philosophy and psychology. Prior completion of PHL 221 is recommended.

**PHL 496/PHL 596. Epistemology. (4)**

Analysis of such concepts as knowledge, belief, certainty, evidence, truth, perception. Prior completion of PHL 221 recommended.

**PHL 600. Independent Reading Philosophy. (1-6; maximum 12)**

Intensive study of a group of problems in a limited field or of particular philosophers or of particular schools of philosophy.

**PHL 601. Practicum in Teaching Philosophy. (2)**

Introduces graduate students to the pedagogy of philosophy by practicing and reflecting upon the fundamentals of grading, teaching, giving a lecture, directing a discussion group and preparing a syllabus as these activities specifically apply to the discipline.

**PHL 610. Research Seminar. (3-4)**

Each student will take one paper written for a philosophy course and develop it into a length and quality suitable for publication in a scholarly journal. Members of the seminar will read each of these papers and suitable parts of its bibliography in order to critique the paper and assist its progress toward publication.

**PHL 620. Advanced Topics in Philosophy. (3-4; maximum 14)**

Advanced graduate level seminar in philosophy, may treat an individual philosopher, philosophical time period, or philosophical topic. Repeatable up to 4 times with different content.

## Physics (PHY)

### Notes:

1. Consult the physics placement guide for assistance in selecting beginning courses.
2. Contact the department chair or chief departmental advisor for appropriate physics course selection if you receive Advanced Placement credit in physics.
3. A student who receives credit for a higher level lecture or laboratory sequence, e.g., PHY 191 or PHY 192, may not receive credit concurrently or subsequently for a lower level sequence

except that, with departmental permission, a student may concurrently or subsequently receive credit for courses numbered PHY 111 through PHY 141. A student may transfer from an introductory physics sequence to a lower numbered sequence at the end of the first semester, i.e., PHY 191 to PHY 111 through PHY 141.

**PHY 101. Physics and Society. (3) (MPF)**

Introduction of fundamental principles of physics and discussion of the interaction of science and society, both today and in the past. Provides skills in thinking critically about societal problems which have a scientific or technological component. IVB. CAS-D.

**PHY 103. Concepts in Physics Laboratory. (1) (MPF)**

Laboratory course illustrating the basic concepts of physics. For the general student; complements physics lecture offerings at the nonspecialist level. IVB, LAB. CAS-D/LAB.

Prerequisite: registration in or prior completion of PHY 101, 111, 118, 121, 131, or 141.

**PHY 111. Astronomy and Space Physics. (3) (MPF, MPT)**

Study of space exploration, astrophysics, astronomy, and cosmology. IVB. CAS-D.

**PHY 118. Introduction to Atmospheric Science. (3) (MPF)**

Introductory survey of a broad range of atmospheric phenomena with emphasis on how they can affect our lives and mankind's impact on a changing atmospheric environment. Quantitative, illustrative, and mostly non-mathematical approach to processes that pertain to such topics as composition of the atmosphere, global climate, large-scale weather systems, and the nature of violent storms. Develops skills in the areas of problem solving (using charts instead of equations) and elementary weather forecasting. IVB. CAS-D.

**PHY 121. Energy and Environment. (3) (MPF)**

Application of physics principles and models to societal uses of energy. Includes mechanics, electricity and magnetism, thermodynamics, and atomic and nuclear physics. Energy topics include resources, environmental problems, global atmospheric challenges, nuclear power, solar energy, alternative energy systems, and energy conservation. Algebraic skills are required but no previous course in physics is needed. IVB. CAS-D.

**PHY 131. Physics for Music. (3) (MPF)**

Introduction to the basic physics of sound within the context of music. Production, transmission, and reception of sound waves; traditional and electronic musical instruments; physics of sound reproduction. IVB. CAS-D.

**PHY 141. Physics in Sports. (3) (MPF)**

Various aspects of a dozen or more sports are treated using the laws of physics. Provides the non-science student with insight into principles governing motion, dynamics, and other elements of physics in sports. IVB. CAS-D.

**PHY 161. Physics for the Life Sciences with Laboratory I. (4) (MPF)**

This is a quantitative introduction to the basic physical laws of nature. Classical mechanics and thermal physics are emphasized. Concepts are developed through lectures, demonstrations, computer simulations, laboratory activities, and problem solving. Qualitative reasoning is emphasized and quantitative problem-solving skills are developed. Algebra and trigonometry are used. No previous physics course is required. IVB. CAS-D-LAB.

Prerequisite: ACT Math sub score 26 or SAT Math sub score 610 or Math Placement Test score of 16 or MTH 104 or MTH 123 or MTH 125.

**PHY 162. Physics for the Life Sciences with Laboratory II. (4) (MPF)**

A quantitative introduction to the basic physical laws of nature. Oscillations, waves, electromagnetism, and quantum physics are emphasized. Concepts are developed through lectures, demonstrations, computer simulations, laboratory activities, and problem solving. Qualitative reasoning is emphasized and quantitative problem-solving skills are developed. Algebra and trigonometry are used. IVB. CAS-D-LAB.  
Prerequisite: PHY 161 or equivalent.

**PHY 177. Independent Studies. (0-5)****PHY 185. Experiencing The Physical World. (1)**

An optional demonstration/ experiment/ modeling course designed to provide enrichment for students enrolled in PHY 191 or PHY 192.

**PHY 191. General Physics with Laboratory I. (5) (MPF)**

This is a quantitative introduction to the basic physical laws of nature. Classical mechanics and quantum physics are emphasized. Concepts are developed through lectures, demonstrations, computer simulations, laboratory activities, and problem solving. Qualitative reasoning is emphasized and quantitative problem-solving skills are developed. Concepts from differential and integral calculus are developed and used. No previous physics course is required. IVB. CAS-D-LAB.

4 Lec. 1 Lab.

Co-requisite: MTH 151 or equivalent.

**PHY 192. General Physics with Laboratory II. (5)**

This is a quantitative introduction to the basic physical laws of nature. Thermal physics, electromagnetism, and relativity are emphasized. Concepts are developed through lectures, demonstrations, computer simulations, laboratory activities, and problem solving. Qualitative reasoning is emphasized and quantitative problem-solving skills are developed. Concepts from differential and integral calculus are developed and used. CAS-D-LAB.

4 Lec. 1 Lab.

Prerequisite: MTH 151 or equivalent, PHY 191 or equivalent.

Co-requisite: MTH 249, MTH 251 or equivalent.

**PHY 211. Observational Foundations of Astronomy. (3) (MPT)**

Describes and investigates many of the pivotal observations in the development of astronomy. Through a largely historical development, the contexts of these observations are discussed and the impact of these observations on the fundamental theories of astronomy is described.

Prerequisite: PHY 111.

**PHY 215. Physics by Inquiry. (3)**

For middle and adolescent level education majors seeking licensure in science. Emphasizes scientific inquiry in an activity-based, cooperative-learning approach. Goals are to develop basic physical concepts and the scientific reasoning skills necessary to apply them to the natural world and to serve as a model for the transfer of the methods of inquiry-based instruction and authentic assessment to the precollege classroom. Topics selected from properties of matter, thermodynamics, electricity, optics, kinematics, and astronomy. Assessments include laboratory notebook and journal writing, discussion, and developing and teaching inquiry lessons.

Prerequisite: one year of physical science or permission of instructor.

**PHY 277. Independent Studies. (0-5)****PHY 281. Contemporary Physics I: Foundations. (3) (MPT)**

Third course in a sequence that begins with two semesters expounding the visions of Newton, Schrodinger, Boltzmann, Maxwell, and Einstein. Incorporates a focus approach that emphasizes Nobel prize-winning physics occurring within the lifetime of the student. Presently, the foci are the scanning tunneling microscope, high-Tc superconductivity, and the "standard model" for particle physics. Topics include quantum mechanics in three dimensions, solid state physics, quantum optics, and particle physics.

Prerequisite: PHY 192.

Co-requisite: MTH 252 (or permission of instructor).

**PHY 282. Contemporary Physics II: Frontiers. (3)**

Designed for students in physics, engineering physics, and biological physics at the sophomore level; topics may be of interest to students in related disciplines. Explores and explains scientific principles and technological advances making quantum science and resulting technologies qualitatively and quantitatively different from the large scale. Covers enabling tools and techniques from atomic, molecular, condensed matter, and particle physics, as well as advances in nanotechnology, quantum optics, and biophysics.

Prerequisite: PHY 281.

**PHY 286. Introduction to Computational Physics. (3) (MPT)**

Lecture-laboratory course on use of computers in analyzing physical systems. Topics of study come from classical mechanics, electromagnetism, statistical physics, and quantum mechanics.

Prerequisite: PHY 192, MTH 251.

**PHY 292. Electronic Instrumentation. (2) (MPT)**

Theory and application of electronic instrumentation for scientists with emphasis on data acquisition and analysis with microcomputers.

Prerequisite: PHY 192.

Co-requisite: PHY 294.

**PHY 293. Contemporary Physics Laboratory. (2) (MPT)**

Accompanies PHY 282 Contemporary Physics II. Incorporates a focus approach that emphasizes Nobel prize-winning physics research occurring within the lifetime of the student. Presently, the foci are the scanning tunneling microscope, high-Tc superconductivity, and the 'standard model' for particle physics. CAS-D/LAB.

Prerequisite: PHY 192.

Co-requisite: PHY 282.

**PHY 294. Laboratory in Electronic Instrumentation. (2) (MPT)**

Laboratory experience in the use of electrical and electronic instruments, application of transducers and data acquisition equipment. Use of computer in analyzing data and interfacing computer with experiments.

Co-requisite: PHY 292.

**PHY 311. Contemporary Astronomy. (3) (MPT)**

Study of topics of current interest in astronomy, including the most recent and important observations and theories.

Prerequisite: PHY 111 and PHY 211.

**PHY 340. Internship. (0-20)****PHY 377. Independent Studies. (0-5)****PHY 400/PHY 500. Physics Seminar. (1; maximum 4)**

Weekly physics colloquium series presenting guest speakers on topics of interest to scientific community. Required of all graduate students in residence. Offered for credit/no-credit only.

Prerequisite: PHY 192 or equivalent or permission of faculty in charge.

**PHY 401. Physics Assessment Examination. (0)**

Standardized assessment examination for physics majors.  
Prerequisites: PHY282 and senior standing.

**PHY 410. Topics in Physics Seminar. (1-3; maximum 12)**

Directed study in selected topics in physics. Includes reading, research, writing, reporting, and discussion.

**PHY 421/PHY 521. Molecular and Cellular Biophysics. (4)**

Introduction to physical phenomena acting on molecular and cellular size scales, including transport properties; thermodynamics and statistical mechanics of reactions; self-assembly; and fluctuations. Development of physical models for biological systems and phenomena, including cooperative behavior in macromolecules; enzyme activity; molecular motors and machines; energy transduction; and nerve transmission.

Prerequisite: PHY 162 or PHY 192, MTH 252, or permission of instructor.

**PHY 422/PHY 522. Physics for Medicine and Biology. (4)**

Introduction to biophysical phenomena, especially on the cellular and tissue size scales, including materials and fluid mechanics; transport phenomena; and electromagnetic phenomena. Introduction to physical methods used in medicine and biology, including methods of signal and image analysis; use of tissue-light interactions; ultrasound, x-ray, and NMR imaging; and nuclear medicine.

Prerequisites: PHY 292, PHY 294; and MTH 252.

**PHY 427/PHY 527. Nano-scale Science and Technology. (3)**

Designed for advanced undergraduate and graduate students in physics, chemistry, and engineering. Explains the scientific principles and the technological advantages that make nanoscience and technology qualitatively and quantitatively different from the large scale. Covers the enabling tools, the techniques, and the nano-materials that are involved in nanotechnology. Also, covers the potential impact of nanotechnology in human health, energy, manufacturing, and other aspects of life of a modern society. A weekly lab meeting gives hands-on experimental work to fabricate micro-structures in a Cleanroom facility. Recommended prerequisite: PHY 293.

Prerequisite: PHY 162 or PHY 192.

**PHY 430/PHY 530. Topics in Physics. (1-4; maximum 12)**

Study of topics of current interest in physics beyond the coverage in other course offerings.

Prerequisite: senior or graduate standing in physics or permission of instructor.

**PHY 431/PHY 531. Elementary Particle Physics. (3)**

Summary of Summarizes known particles and their properties, and uses relativistic and non-relativistic quantum mechanics to describe their interaction. Quantum field theory and Feynman diagrams are discussed with emphasis on quantum electrodynamics.

Prerequisite: instructor permission.

**PHY 437/PHY 537. Intermediate Thermodynamics and Introduction to Statistical Physics. (4)**

Development of formal thermodynamics including first, second, and third laws, thermodynamic potentials, Maxwell's relations, phase transitions, and illustrative applications of thermodynamics. Introduction to kinetic theory approach to behavior of systems not in equilibrium, Boltzmann Equation, and transport processes. Development of statistical mechanics and ensemble approach to equilibrium statistical thermodynamics. Pre- or co-requisite: PHY 483/PHY 583 or permission of instructor.

Prerequisite: PHY 281.

**PHY 440. Research. (1-4; maximum 12)**

Undergraduate research projects with direction of faculty member.  
Prerequisite: permission of instructor.

**PHY 441/PHY 541. Optics and Laser Physics. (4)**

Lecture and laboratory course covering all aspects of lasers and their applications. Teaches basics of physical and geometrical optics and atomic physics in detail to understand the design, operation, and application of lasers. Topics include gaussian beams, cavity design, rate equation models of laser gain media, different types of lasers, and nonlinear optics.

Prerequisite: PHY 281, PHY 293, or permission of instructor.

**PHY 442/PHY 542. Spectroscopy of Atoms and Molecules. (4)**

Survey of the structure of atoms and molecules, using optical spectroscopy as a tool. Lecture reviews the quantum theory of atoms and molecules, including solutions to the Schrodinger equation, spectroscopic notation, transition rates, and selection rules. Laboratory examines a variety of light sources, with increasing resolution. Zeeman, fine structure, and hyperfine structure, in particular, are considered. Emphasis on laboratory investigation. Pre- or co-requisite: PHY 483/PHY 583.

Prerequisite: PHY 281, PHY 293, or permission of instructor.

**PHY 451/PHY 551. Classical Mechanics. (4)**

Mechanics, nonrelativistic and relativistic, of particles, systems of particles, and rigid bodies treated by Newtonian, Lagrangian, and Hamiltonian methods using vector and matrix analysis and calculus of variations. Pre- or co-requisite: PHY 483/PHY 583 or permission of instructor.

**PHY 461/PHY 561. Electromagnetic Theory. (4)**

Mathematically quantitative lecture and problem course in theory of electromagnetism. Topics include multipole fields, electromagnetic field equations, electromagnetic waves, reflection and refraction, radiating systems, classical electron theory, spherical waves, interference phenomena, and diffraction theory.

Prerequisite or Co-requisite: PHY 483/PHY 583 or permission of instructor.

**PHY 467. Seismology. (3)**

Active learning course on seismology covering theory and application. Topics will include elastic wave propagation, reflection/refraction seismology, waveform modeling, tomography plate kinematics, and time series analysis. Applications will focus on earthquakes and large-scale tectonics.

Prerequisites: MTH 151 or MTH 153; PHY 161 or PHY 162 or PHY 191 PHY 192; or consent of instructor.

Cross-listed with GLG.

**PHY 471/PHY 571. Advanced Electronics. (3)**

Applications of solid state electronic devices and circuits. Includes laboratory experience with discrete devices, integrated circuits, and transducers, and their application to measurements in research situations.

Prerequisite: PHY 281, PHY 292, PHY 294.

**PHY 477. Independent Studies. (0-5)****PHY 480. Departmental Honors. (1-6; maximum 6)**

Departmental honors may be taken for a minimum of four semester hours and a maximum total of six semester hours, in one or more semesters of the student's senior year.

**PHY 481/PHY 581. Gravitation and Spacetime. (3)**

Beginning with the Lorentz invariance of Maxwell's equations, a relativistic theory of motion is described for inertial reference frames. This forms a framework for discussing Einstein's theory of gravitation. Prerequisite: PHY 483/PHY 583 or instructor permission.

**PHY 483/PHY 583. Mathematical Methods in Physics. (4)**

Discusses mathematical methods applicable to classical mechanics, quantum mechanics, and electromagnetism. Develops problem-solving skills by applying material from introductory math and physics classes along with new mathematical techniques. Allows for modeling of systems at a deeper level. Emphasizes the use of mathematics to model physical systems and methods of solutions to the differential equations of physics.

Prerequisite: PHY 281; MTH 222, MTH 252.

**PHY 486/PHY 586. Advanced Computational Physics. (3)**

Develops computational skills necessary to apply mathematics and physics to the investigation and solution of non-analytic problems of physical interest. Topics will include, but are not limited to, celestial mechanics, fluid mechanics, and quantum mechanics. The physical basis of these topics can often be understood at the undergraduate level, but require sophisticated computational methods for their actual solution. This course will develop and apply those methods. Prerequisite: PHY 286 and PHY 483/PHY 583.

**PHY 488A. Research Capstone in Physics. (3)**

Research experience in physics.

**PHY 488B. Research Capstone in Physics. (3)**

Research experience in physics.

**PHY 491/PHY 591. Introduction to Quantum Mechanics I. (4)**

Introduction to the quantum theory and its application to physical systems. Pre- or co-requisite: PHY 483/PHY 583, or permission of instructor.

Prerequisite: PHY 281.

**PHY 610. Research. (1-10; maximum 10)**

Independent research projects in theoretical or experimental physics.

**PHY 620. Topics in Modern Physics. (1-4; maximum 10)**

Study of various topics of interest in physics not covered in formal course offerings.

Prerequisite: Permission of instructor.

**PHY 623. Solid State Physics. (3)**

Introduction to advanced concepts of solid state physics. Discussions center on the motion of electrons in more or less periodic structures, and the resulting properties. Topics include phonons, semiconductors, magnetism, superconductors, and nuclear methods.

Prerequisite: PHY 691 or permission of instructor.

**PHY 642. Advanced Kinetic Theory and Statistical Mechanics. (4)**

Transport theory of gases; Chapman-Enskog development. Classical and quantum statistical mechanics with applications to many-particle systems.

**PHY 651. Quantum and Nonlinear Optics. (3)**

The basics of electromagnetic interactions with matter are covered, including quantum and semiclassical theories of the laser, cavity quantum-electrodynamics, harmonic generation and down-conversion, the cooling and trapping of atoms, and quantum information theory.

Prerequisite: PHY 691 or instructor permission.

**PHY 671. Electromagnetism. (4)**

Electromagnetic theory and applications.

Prerequisite: PHY 461/PHY 561 or permission of instructor.

**PHY 677. Independent Studies. (0-5)****PHY 691. Modern Quantum Physics. (4)**

Fundamental concepts of quantum mechanics and the mathematical techniques of Schrodinger and Heisenberg. Computer solution of quantum mechanical problems.

Prerequisite: PHY 491/PHY 591 or permission of instructor.

**PHY 692. Modern Quantum Physics. (4)**

Fundamental concepts of quantum mechanics and the mathematical techniques of Schrodinger and Heisenberg. Computer solution of quantum mechanical problems.

Prerequisite: PHY 691.

**PHY 700. Research for Master's Thesis. (1-12; maximum 12)**

## Political Science (POL)

**Note:** All POL courses satisfy CAS-C-POL.

**POL 140. Topics in Contemporary Politics. (1-3; maximum 4)**

Examination of contemporary political events, with focus on national or state elections, major national or international events, or important themes in current public affairs. Emphasis on illuminating current events through insights from scholarship. Credit cannot be applied to majors or minors in Department of Political Science.

**POL 142. American Politics and Diversity. (3) (MPF)**

Foundations and operations of the American political system, with emphasis on "the people" and how they belong to, challenge, and change the system. How the competing values of unity and diversity influence American politics. IC, IIC. CAS-C.

**POL 160. The Challenge of Public Leadership. (1; maximum 3)**

This course is an introduction to theories and frameworks for understanding the nature and challenges of "public leadership". Students will be exposed to milieu in which elected, appointed, and group leaders develop and practice leadership skills. Several "profiles of public leaders" will serve to illustrate how notable figures have responded to the "challenge of public leadership".

**POL 177. Independent Studies. (0-5)****POL 201. Political Thinking. (3)**

Examination of ideas that justify or challenge political orders, such as nationalism, totalitarianism, militarism, anarchism, capitalism, socialism, communism, liberalism, conservatism, feminism, elitism, and democracy.

**POL 220. Movies and Politics. (2)**

Course uses popular films and television clips to introduce important political issues and processes to a broad set of students. The movies for this course will focus on the actors, issues, and processes that are involved in politics. Offered credit/no credit.

**POL 221. Comparative Politics. (3) (MPF)**

Comparative introduction to the development, governmental structures, and political processes of societies in modern world. Case studies used to relate theories to actual problems and governing strategies in contemporary political systems. IIC, IIIB. CAS-C.

**POL 241. American Political System. (3) (MPF, MPT)**

Theories and methods of political analysis applied to the American political system. Political beliefs, behavior, institutions, and public policies in the American case will be examined. IIC. CAS-C. CAS-QL.

**POL 254. Introduction to Russian and Eurasian Studies. (3)**

Examines the major developments that have shaped Russian and Eurasian Culture, society and politics over the last millennium. The course incorporates perspectives from the social sciences, humanities and the fine arts. IIB. ADVW. CAS-B.  
Cross-listed with ATH/CLS/HST/ITS/REL/RUS.

**POL 261. Public Administration. (3) (MPT)**

Introduction to public administration as a field of study and a major component of government; bureaucratic behavior and bureaucracy as formal organization; structures, settings, functions, and personnel of bureaucratic organizations and their effects on public policy and public service delivery.

**POL 268. State and Local Government and Politics. (3)**

Introduction to the study of state and local government and politics with special emphasis on Ohio government and politics. Topics include state/local government fiscal relations, issues of service delivery among state, county, city, village, and township governments, and the political economy of state and local revenues and expenditures. Examines American federalism as it impacts sub-national government and politics including inter-state and substate regionalism and political actors--legislative, gubernatorial, and judicial - that affect state and local politics, as well as specific policy issues (e.g., education, economic development, and public safety).

**POL 270. Current World Problems. (1; maximum 6)**

Examination of major international problems, with special attention to basic forces in world politics and relationship of these forces to present international problems.  
Cross-listed with SOC.

**POL 271. World Politics. (3) (MPF, MPT)**

Introduction to international politics, with emphasis on factors and processes producing harmony and conflict in interactions within the international system. IIC, IIIB. CAS-C.

**POL 277. Independent Studies. (0-5)****POL 302. Classical Political Philosophy. (3)**

Study of the development of such notions as law, justice, obligation, and right of revolution through analyses of significant political philosophers from Plato to Rousseau.  
Prerequisite: POL 201.

**POL 303. Modern Political Philosophy. (3) (MPT)**

Study of the development of the concept of the unalienated, autonomous person and consequences for political philosophy and political economy, as dealt with by Rousseau, Kant, Hegel, Marx, classical economists, and British Utilitarians.  
Prerequisite: POL 201.

**POL 306. Applied Research Methods. (3)**

Use of quantitative analysis in the public sector; consideration of the methodology of applied research. Special emphasis on research design and data-gathering techniques, including survey research, aggregate data analysis, cost-benefit analysis, and planning. CAS-QL.  
Prerequisite: POL 241 or POL 261.

**POL 307. Public Opinion Laboratory. (0-4; maximum 6)**

Practice in the execution of survey research with attention to questionnaire construction, sampling, interviewing, data coding, and data analysis. Discussion of ethical issues surrounding polls and the role of polling in a democratic polity.  
Prerequisite: permission of instructor and department chair.

**POL 308. Introduction to Programming and Scripting for Data Analytics. (3)**

Introduction to computer programming concepts used for solving mathematical problems and manipulating data. Control structures, functions, formatted input/output, character and string processing, arrays, procedural and functional programming, basic elements of object-oriented programming. Emphasis on programming languages in high demand for data analytics.  
Prerequisites: STA 261 or STA 301 or ISA 225 or POL 306.  
Cross-listed with STA.

**POL 309. Building, Managing and Exploring Data Sets in Analytics. (3)**

Techniques for constructing, downloading, cleaning, combining, extracting and manipulating data sets to prepare them for statistical analysis and visualization. Emphasis on programming languages used in data analytics and structured query language.  
Prerequisites: STA/POL 308; STA 363 or ISA 291 or POL 306; MTH 133 or ISA/STA 250.  
Cross-listed with POL.

**POL 321L. Comparative European Pol:Lux. (3)****POL 330. Topics in Comparative Politics. (3; maximum 9)**

Topics course in comparative politics. The topics course may cover institutions, processes, policy, leaders and governments, in a comparative context. CAS-C.  
Prerequisite: POL 221.

**POL 331. Communism and Soviet Politics, 1917-1991. (3) (MPT)**

Origin and development of Russian model, evolution of Russian political and revolutionary cultures, contribution of Marxism and Leninism to Russian and international revolutionary politics.  
Prerequisite: POL 221.

**POL 332. Post-Soviet Russian Politics. (3) (MPT)**

Analysis of Soviet political system with special attention to its development, roles of the Communist Party and Soviet government, emphasizing decision-making process, legal system, and civil rights.  
Prerequisite: POL 221.

**POL 333. Politics of Western Europe. (3)**

Comparative survey of social and cultural bases of politics, organization of political interests, style of political leadership, decision-making processes, governmental bureaucracies, and political strategies of social and economic change in major political systems of Western Europe.  
Prerequisite: POL 221.

**POL 334. Politics of Eastern Europe. (3) (MPT)**

Survey of political systems in the nations of Eastern Europe in the period since World War II. Focus on the cultural, social and historical peculiarities of the region, as well as the processes that reshaped the region in the post-communist era.  
Prerequisite: POL 221.

**POL 336. Politics of the Middle East. (3)**

Comparative survey and analysis of political systems and politics in the Middle East. Includes examination of selected states, non-states actors, international organizations, and key events in the region.  
Prerequisite: POL 221.

**POL 337. Politics of Latin America. (3) (MPT)**

Diachronic analysis of Latin American political, social, and economic structures and processes, with special emphasis on the study of how the interrelationship between them crystallizes into democratic and authoritarian regimes and how tensions underlying these regimes produce further changes.

Prerequisite: POL 221.

**POL 338. Contemporary African Politics. (3)**

An overview of major issues in African politics and the international politics of Africa. Its scope is "Africa south of the Sahara" and is intended to appeal to a variety of interests, from global and continental to modernization, gender and Marxist theories of development, conflict, inequality, and underdevelopment.

Prerequisite: POL 221.

Cross-listed with BWS 339.

**POL 339. Nationalism, Islam and Democracy in Arab Politics. (3)**

The origins, ideas, and socio-political impact of Arab nationalism and Islam. The convergence and divergence of these forces, as well as developments in particular places and cases.

Prerequisite: POL 221.

**POL 340. Internship. (0-20)****POL 343. American Presidency. (3) (MPT)**

Evolution of the presidency, its powers and restraints; organizing and using White House staff; executive decision-making; contemporary views of the office.

Prerequisite: POL 241.

**POL 344. U.S. Congress. (3) (MPT)**

Sociology and politics of legislative process; legislative recruitment, structure and influence of the committee system, impact of party leadership, and nature of legislative decision-making.

Prerequisite: POL 241.

**POL 345. National Issues. (3)**

Examination of major contemporary domestic national issues, especially pollution, health care, inflation and recession, crime, income distribution, poverty, federal budget.

Prerequisite: POL 241.

**POL 346. Global Gender Politics. (3) (MPT)**

Examination of the role of women in political participation, political protest, and political and economic development worldwide. Explores the usefulness of gender as a conceptual tool for comparative analysis, and uses case study material from the developed and developing world to examine how women's involvement in politics both shapes and is shaped by various political contexts.

Prerequisite: POL 221.

Cross-listed with WGS.

**POL 348. Gender Politics & Policy in the United States. (3)**

Addresses the role of gender in American politics. Topics include the history of women's rights in American politics, differences between the political behavior of men and women, the role of gender in elections and in leadership, and current policies that affect women.

Prerequisite: POL 241 or WGS 201.

Cross-listed with WGS 348.

**POL 351. Criminal Justice. (3)**

Survey and analysis of major components of the system of criminal justice with emphasis on law enforcement, judicial process, and corrections.

Prerequisite: POL 241.

**POL 352. Constitutional Law and Politics. (3) (MPT)**

Supreme Court as a legal and political institution; leading judicial decisions with respect to separation of powers and federalism.

Prerequisite: POL 241.

**POL 353. Constitutional Rights and Liberties. (3) (MPT)**

Leading cases and related materials on the Bill of Rights and 14th Amendment.

Prerequisite: POL 241.

**POL 356. Mass Media and Politics. (3) (MPT)**

Mass media, especially television, in politics in the United States, with comparisons to nature, roles, and impacts on politics of the mass media in other countries. Emphasis given to mass media as instruments of political communication and opinion leadership, and as tools of political influence and control.

Prerequisite: POL 241.

**POL 357. Politics of Organized Interests. (3)**

Nature, functions, organizations, and activities of interest groups in the American political system with a comparative analysis of interest groups in other political systems.

Prerequisite: POL 241.

**POL 358. Political Parties in American Politics. (3)**

Political parties are integral to democracy. Without parties in government, chaotic voting would prevail within Congress, extreme interest groups would enjoy disproportionate influence, and accountability for failed public policies would be almost impossible to establish. Without parties in the electoral arena, many citizens would have little information about political candidates or issues, voter turnout would be lower, incumbency advantage would be greater than it already is, and there would be no clear framework for debates concerning different public policy proposals. In short, parties are essential to the health of democracy. That being said, at times parties also impede representation, stall political change, and adversely impact minority groups in society. In this course, we will evaluate the benefits and costs associated with party-based politics in the United States, examine how parties have evolved overtime, and assess how changes in the party system may impact the health of democracy in the future.

Prerequisite: POL 241.

**POL 359. U.S. Campaigns and Elections. (3)**

This course is an introduction to the processes and impact of political campaigns. Our primary goal over the next several weeks is to systematically examine elections in the United States. We will act as social science researchers to answer some interesting questions: What is the role of voters, campaigns and elections in a democracy? Why are campaigns and elections important in a democracy? We will examine in detail how voters decide to choose a representative. We will examine election campaigns, focusing specifically on whether campaigns matter, how they can be studied systematically, and how candidates strategize in modern elections.

Prerequisite: POL 241.

**POL 362. Public Management, Leadership, and Administrative Politics. (3) (MPT)**

Study of contemporary public management and leadership in government, and the political economy of public sector agencies. Emphasis on the politics and economics of administrative reform, innovation, and policy management in public sector organizations including the dynamics of bureaucratic decision making and administrative behavior at the micro and macro levels of analysis.

Prerequisite: POL 241 or POL 261.

**POL 363. Administrative Law. (3)**

Administrative law and procedures; legislative delegation of power; administrative rule making, promulgation and enforcement; scope and constraints; appeals; controlling administrative discretion; public participation and access to information.  
Prerequisite: POL 241 or POL 261.

**POL 364. Federalism and Intergovernmental Relations. (3) (MPT)**

Power and policymaking in the American federal system. Problems in managing, coordinating, and administering intergovernmental system, with case studies on fiscal federalism and grants management, intergovernmental coordination, interstate relations, and federal reorganization.  
Prerequisite: POL 241 or POL 261.

**POL 370. Topics in International Relations. (3; maximum 9)**

Topics course in international relations. CAS-C.  
Prerequisite: POL 271.

**POL 373. American Foreign Policy. (3) (MPT)**

Theoretical and case studies in the formulation and conduct of American foreign policy; analysis of the role of personality, intelligence gathering, decision making, and diplomacy in the execution of foreign policy.  
Prerequisite: POL 271.

**POL 374. Foreign Policy Analysis. (3)**

Study of foreign policy analysis as a subdiscipline of political science, including the study of foreign policy making and implementation at the individual, domestic and international system levels of analysis.  
POL 271.

**POL 376. U.S. National Security Policy. (3) (MPT)**

Examination of U.S. national security and defense requirements, the defense policymaking process, U.S. national security interests in the post-Cold War era, the roles for nuclear weapons, new security issues, and the continuing tensions of searching for security in a democratic polity.  
Prerequisite: POL 271.

**POL 377. Independent Studies. (0-5)****POL 378. Latin America: The Region and the World. (3) (MPT)**

Examination of the economic and political relations among Latin American nations and between Latin America and the industrialized world.  
Prerequisite: POL 221 or POL 271.

**POL 381. Global Governance. (3) (MPT)**

Examines different approaches and institutional arrangements for promoting international cooperation and managing conflict, with special emphasis on developments within the United Nations system, the growth of transgovernmental cooperation, and the grassroots activities of nongovernmental organizations.  
Prerequisite: POL 271.

**POL 382. International Law. (3) (MPT)**

Nature and principles of international law, with special emphasis on changing concepts and conflicting claims in the development of rules for the world community.  
Prerequisite: POL 271.

**POL 387. International Security Issues. (3) (MPT)**

Comparative analysis of international security issues, with emphasis on military security concerns and international peacekeeping, and nontraditional security concerns such as human security, food security and resource security.  
Prerequisite: POL 271.

**POL 399D. The Balkans: HST, POL and Cult. (6)**

Cross-listed with HST 399D.

**POL 406. Public Policy Analysis Laboratory. (2)**

Practice in organizing a policy research team, preparing and presenting an applied policy research project. Practice in the application of program evaluation design, document analysis, interviewing, primary and secondary data collection, data analysis, legislative research, implementation analysis, organizational analysis, benefit-cost analysis, cost effectiveness analysis, and other applied policy research techniques and issues covered in POL 466/POL 566. Required for public administration majors, POL 466/POL 566 Capstone.

Prerequisites: POL 261, 306, and senior standing or permission of instructor.

Co-requisite: POL 466/POL 566 required.

**POL 411/POL 511. American Political Thought. (3) (MPC)**

Examines how traditions of liberalism, republicanism, and religion have shaped American political ideas and culture. Attention to the thought of the Founding, Lincoln's refounding, feminism, and African-American political thought.

Prerequisites: POL 201.

**POL 419/POL 519. Civil Society and Modern Politics. (3) (MPC)**

Capstone that discusses the nature of modern civil society, including a discussion of its nature, its historical origins, the problems that threaten its continued existence, and the possible solutions that might be used to preserve and maintain it.

Prerequisite: POL 201 or POL 241.

**POL 423/POL 523. European Union: Politics and Policies. (3) (MPC)**

Exploration of the development, structure, and operation of the EC as well as its main policies and their effects on governments, business organizations, and other interests operating in the EC. Examines the interface between politics and economic activity within the EC and its role as a principal economic partner of the U.S., an emerging security actor, and the world's most developed example of regional integration.

Prerequisite: POL 221.

**POL 426. Inside Washington. (8)**

Engages students in an intensive study of the contemporary Washington, D.C. - government institutions, public officials, journalists, consultants, staff, and interest groups - through reading, lecture, on-site observations, expert presentations, discussion, research, writing, and internships. Program conducted in Washington, DC.

Prerequisite: permission of instructor.

Cross-listed with JRN/MAC.

**POL 427. Inside Washington Semester Experience. (4; maximum 4)**

Intensive study of the contemporary Washington community-government institutions, public officials, journalists, consultants, staff, and interest groups-through reading, lecture, onsite observations, expert presentations, discussion, research, and writing. Program conducted in Washington.

Prerequisites: permission of instructor.

Co-requisites: JRN/MAC/POL 454; JRN/MAC/POL 377 or 477; JRN/MAC/POL 340.

Cross-listed with JRN/MAC.

**POL 430/POL 530. Seminar on Comparative Political Systems. (3; maximum 6)**

Students will examine various issues related to the functioning of modern political systems through readings, oral presentations and discussions. They will also write about the relevant literatures and compare specific cases, regions and historical periods. Topics will vary but will include The Rule of Law, modes of governance in authoritarian and hybrid regimes, the empirical and conceptual dimensions of democratic consolidation and democratic collapse, the impact of leadership on domestic and international politics, and the institutional design of different types of political systems.  
Prerequisite: POL 221 and POL 241.

**POL 437. Cyberlaw. (3)**

Introduces the student to the legal issues surrounding e-commerce and cyberspace. Will develop awareness as to how the internet functions; the legal restrictions and limitations placed upon providers of internet service and those who do business on the internet; also explores issues raised in the area of intellectual property and information privacy.

**POL 440/POL 540. Havighurst Colloquium. (3)**

Exploration of significant issues related to Russian and post communist affairs. Each semester focuses on a central theme or topic that is examined through presentations, readings, research, discussion, and writing. May be repeated once for credit with only 3 hours counting towards the history major.  
Cross-listed with CLS 436; ATH 436/ATH 536, HST 436/HST 536, REL 470A, and RUS 436/RUS 536.

**POL 454. The Washington Community. (3-4; maximum 4)**

This course focuses on the Washington, D.C., as a complex political-social system that is both the seat of American democracy and a metropolis plagued with typical urban problems. In this class, students will complement their study of the formal political and media systems in the "Inside Washington" course by focusing on the development and behavior of constituent communities within the city of Washington.  
Cross-listed with JRN/MAC.

**POL 459/POL 559. Capstone Seminar on the American Political System. (3) (MPC)**

Examination of broad themes on the American political system through readings, research, writing, presentations, and discussions. Topics vary.  
Prerequisite: POL 241.

**POL 459G. Practical Politics in the U.S.. (3)****POL 460/POL 560. Seminar on Public Administration and Policy Analysis. (3)**

Readings, research, reports, and discussion on selected topics and problems.  
Prerequisite: POL 261.

**POL 466/POL 566. Public Policy Analysis. (3) (MPC)**

Final course in the public administration required core. Study of the stages of policy process including problem definition, policy formulation, implementation, impact, evaluation, and termination, and the role of the policy analyst in these processes.  
Prerequisite: POL 261, 306, and senior standing or permission of instructor.  
Co-requisite: POL 406 required.

**POL 467/POL 567. Public Budgeting. (3) (MPT)**

Theories and techniques of the role of the modern budget in determination of public policy, in administrative planning, control of government operations, and intergovernmental relations.  
Prerequisite: POL 261.

**POL 468/POL 568. Public Personnel Administration. (3) (MPT)**

Influence of social and political values on public service concepts and institutions. Analysis of the decline of the spoils system and development of civil service. Problems, challenges, and prospects in managing human resources in the public sector at national, state, and local levels, including public service unions, civil liberties of public employees, equal opportunity, affirmative action, health and safety and public productivity.  
Prerequisite: POL 261.

**POL 471. The International System. (3) (MPC)**

Provides opportunity to think critically about the meaning and implications of theories and concepts that have been introduced in their prior course work. Students encouraged to think carefully about how one might conduct research that is designed to test and assess the applicability of these theories and concepts to the international system, past and present. One basic focal point of the class is to think carefully about how well some of the traditional theories about international relations apply to the contemporary international arena.  
Prerequisite: POL 271 and open to senior political science and diplomacy and foreign affairs/diplomacy and global politics majors and to those who have completed an appropriate Thematic Sequence, or permission of instructor.

**POL 477. Independent Studies. (0-5)****POL 487. Individual Lives and International Politics. (3) (MPC)**

Students consider the ways in which personal lives are interwoven into the political lives of nations and the world. Through the use of autobiographies, political histories of 20th century world affairs, and primary documents, students explore the interaction of individual lives and international politics. Students construct their own political autobiographies in partial fulfillment of Capstone requirements.  
Prerequisite: POL 271 and senior standing and at least one course in international or comparative politics in the Department of Political Science.

**POL 489/POL 589. Conflict Management in a Divided World. (3) (MPC)**

Focuses on devising ways to manage contemporary conflicts. Possible areas for investigation include international trade and investment, arms proliferation, ethnic strife, refugees, and immigration. Partners with senior capstone and designed as an exercise in collaborative learning to examine the underlying causes of a particular conflict, explore the different alternatives for managing and/or resolving it, and develop a set of constructive recommendations and a plan for implementation.  
Prerequisite: POL 271.

**POL 601. Foundations of Political Analysis. (3)**

Study of the history, development and public contributions of the discipline of political science with a focus on key research themes that cut across sub-fields.

**POL 602. Research and Writing for Political Scientists. (2)**

Survey of the databases and search tools used in political science/policy research. Discussion of and instruction in different types of written documents produced by working political scientists. Students taking this course will also complete the requirements for certification in human subjects research.

**POL 603. Introduction to Quantitative Methods. (2)**

Introduction to statistical techniques in quantitative methods.  
Prerequisite: graduate standing in Political Science.  
Co-requisite: POL 604.

**POL 604. Public Policy Research. (2)**

Introduction to the practice of public policy research. Exploration of the political economy of public policy.  
Prerequisite: graduate standing in Political Science.  
Co-requisite: POL 603.

**POL 605. Writing Workshop for Final Project for Master's Degree. (1)****POL 606. Final Project for Master's Degree. (3)**

Directed research and writing of professional report on a subject to be determined in consultation with student's faculty supervisor.

**POL 630. Seminar: Comparative Political Systems. (4; maximum 8)**

Specific problems and topics in each seminar will vary.

**POL 640. Internship. (0-12; maximum 12)****POL 650. Seminar on the American Political System. (4; maximum 8)**

Selected topics and problems in the field of the American political system.

**POL 660. Seminar on Public Administration and Policy Analysis. (4; maximum 8)**

Selected topics and problems in the field of public administration and policy analysis.

**POL 670. Seminar on International Relations. (4; maximum 8)**

Selected topics and problems in the field of international relations.

**POL 677. Independent Studies. (0-5)****POL 695. Research Tutorial for Master's Degree. (4)**

Directed research on subject matter to be determined in consultation with student's adviser and director of tutorial.

**POL 700. Research for Master's Thesis. (1-12; maximum 12)****POL 710. Research on Political Theory and Methodology. (4; maximum 12)**

Advanced research on selected topics and problems in political theory and methodology.

**POL 730. Research on Comparative Political Systems. (4; maximum 12)**

Advanced research on selected topics and problems on comparative political systems.

**POL 750. Research on the American Political System. (4; maximum 12)**

Advanced research on selected topics and problems on the American political system. 750A The Presidency and Congress 750B State and Urban Politics 750C Law and Judicial Politics 750D Political Parties, Interest Groups, and Behavior.

**POL 760. Research on Public Administration and Policy Analysis. (4; maximum 12)**

Advanced research on selected topics and problems on public administration and policy analysis. Offered infrequently. 760A Research on Public Administration 760B Research on Public Policy Analysis.

**POL 770. Research on International Relations. (4; maximum 12)**

Advanced research on selected topics and problems on international relations. 770A International Politics 770B Foreign Policy.

**POL 780. Readings in Political Science. (1-4; maximum 4)**

Directed readings on selected topics in political science.

**POL 790. Directed Study in Political Science. (1-16; maximum 24)**

Directed and supervised study in doctoral student's major and minor fields of comprehensive examination preparation, including tutorials and reports.

Prerequisite: completion of field course credits for doctoral degree.

**POL 850. Research for Doctoral Dissertation. (1-16; maximum 60)**

## Portuguese (POR)

**POR 111. Accelerated Introduction to Portuguese. (4)**

Intensive language course that allows students to complete the equivalent of first-year Portuguese in one semester. For those with background in Spanish or another Romance language, this course concentrates on basic skills and prepares students for POR 211. Prerequisite: SPN 101, 102 or 111 or FRE 101, 102 or ITL 101, 102; or three years of a high school Romance language.

**POR 177. Independent Studies. (0-5)****POR 204. Brazilian Culture Through Music and Film. (3) (MPF)**

Through music and film this course raises questions about national identity, history, social, religious, and ethnic diversity in Brazil. IIA, IIB, IIIB. CAS-B.

Cross-listed with FST 204 and MUS 204.

**POR 211. Intermediate Portuguese. (4)**

Intensive language course that allows students to complete the equivalent of Portuguese in one semester. CAS-A.

Prerequisite: POR 111.

**POR 277. Independent Studies. (0-5)****POR 377. Independent Studies. (0-5)****POR 381. Afro-Brazilian Diaspora Through Film and Arts. (3)**

A focus on questions of gender, race, class and stereotypes in the African Lusophone countries. Taught in English. CAS-B-LIT.

Prerequisite: any literature course.

Cross-listed with ENG/BWS/FST.

**POR 383. Brazilian Women through Literature and Film. (3) (MPF)**

Addresses questions about gender, race, class and stereotype of women's bodies in 20th-century Brazil. IIB, IIIB. CAS-B.

Cross-listed with BWS/ENG/WGS/FST.

**POR 477. Independent Studies. (0-5)**

## Pre-Law Studies (PLW)

**PLW 101. Exploring Careers in Law I. (1)**

Explores the various areas of legal practice through guest legal practitioners and helps students considering a career in the legal profession develop an appreciation for the diversity of the legal field, the various career options available upon graduation from law school, what is required to prepare for admission to law school, and the core competencies required for law school success.

**PLW 201. Exploring Careers in Law II. (1)**

This one hour per week course will expose students to the skills and experiences used by lawyers in practice. Exploration of these skills will embrace a variety of disciplines and use a combination of case studies and guest speakers to both discuss and engage with these skills. Topics include: issue spotting, persuasion, advocacy, strategy, human behavior, mediation/ADR, negotiation and ethics.

**PLW 230. Mock Trial. (2; maximum 6)**

Practical experience in intercollegiate mock trial competition; requires travel to intercollegiate mock trial tournaments.  
Prerequisite: only members of mock trial team may enroll.

**PLW 401. Preparing for a Career in Law. (1)**

Prepares students to navigate the law school admissions process. Students reflect on their motivation for becoming a lawyer through preparing resumes and personal statements for their applications, and learn how to research law schools, prepare a law school list, and complete on-line applications.

## Premedical Studies (PMD)

**PMD 101. Explorations in Medicine. (1)**

Explores the various fields of medicine and helps students considering a career in the healthcare field develop a comprehensive plan of preparation for admission to medical school or other healthcare profession school. This professional development course is for all students considering a career in healthcare. Credit/no-credit only.

**PMD 210. Premedical Scholars Seminar: Discussions in healthcare. (1; maximum 4)**

This seminar offers students in the Premedical Scholars program the opportunity to identify, present, and discuss issues that will face future healthcare practitioners. May be taken multiple times. Credit/no-credit only. Open only to students in the Premedical Scholars Program.

**PMD 301. Preparing for a Career in Medicine. (1)**

Explores issues facing medical practitioners, encourages reflection on personal medical experiences and motivation for becoming a healthcare professional, and develops interviewing skills. The final product will be completion of a mock application to a healthcare professional school. This professional development course will be of interest to students applying to medical or other health profession school. Credit/no-credit only.

**PMD 340. Internship. (0-20)**

## Psychology (PSY)

**PSY 111. Introduction to Psychology. (3) (MPF)**

Introduction to content, methods, issues, and theories of psychology. Credit not granted to students who have earned credit in EDP 101. IIC. CAS-C.

**PSY 112. Foundational Experiences in Psychology. (1)**

Introduction to fundamental early experiences in psychological research and practice. Students will become familiar with important features of psychological research and how core skills of psychological science relate to academic and non-academic careers.  
Prerequisite or Co-requisite: PSY 111.

**PSY 112M. Foundational Experiences for Majors. (1)**

Introduction to fundamental early experiences in psychological research and practice. Students will become familiar with important features of psychological research and how core skills of psychological science relate to academic and non-academic careers.  
Prerequisite: PSY 111.

**PSY 159. Seminar in Neuroscience. (1)**

Provides an introduction to the field of neuroscience and includes discussions of experimental techniques and methodology and career opportunities in neuroscience, the interdisciplinary nature of the field, and the scientific method and the development and testing of hypotheses; will expose students to the synthesis of scientific literature in the field of neuroscience and to ways to effectively communicate this information to a broad audience.  
Cross-listed with BIO 159.

**PSY 177. Independent Studies. (0-5)****PSY 200. Selected Topics of Psychological Inquiry. (1-3; maximum 4)**

Selected topics emphasizing application of psychological principles and methods to contemporary issues. Information on topics to be offered each term is available in department office.

**PSY 210. Psychology Across Cultures. (3) (MPF)**

A topics course, focused on the examination of culture and cultural perspectives, within the United States and globally, as frameworks through which theories and findings of the field of psychology may be critically evaluated. IC, IIC, IIIB. CAS-C.

Prerequisite: PSY 111.

Cross-listed with AAA/BWS.

**PSY 211. Psychological Perspectives on Leadership and Pedagogy in the College Classroom. (2) (MPT)**

Prepares students to serve as discussion leaders in PSY 111. Students will learn about good pedagogical practices; resources offered by the university to support student learning; and intellectual development in college students.

Prerequisites: PSY 111 and permission of instructor.

**PSY 212. Practicum in Leadership and Pedagogy. (3) (MPT)**

Students will lead a 50-minute discussion section connected to PSY 111. Course participants will be provided ongoing supervision to facilitate their development as discussion leaders and leaders in the undergraduate community in supporting student learning; and intellectual development.

Prerequisites: PSY 111 and PSY 211.

**PSY 221. Social Psychology. (3)**

Theories and research findings of social psychology including social cognition, intergroup relations, social perception and judgment, social relationships, social influence and persuasion, and group processes.  
Prerequisite: PSY 111.

**PSY 231. Developmental Psychology. (3) (MPT)**

Psychological development over the lifespan; research and theory in physical, perceptual, cognitive, language, and socio-emotional development.

Prerequisite: PSY 111 or EDP 101.

**PSY 241. Personality. (3)**

Bases and acquisition of personality, emphasizing principles, theories, and research.

Prerequisite: PSY 111.

**PSY 242. Abnormal Psychology. (3) (MPT)**

In-depth survey of symptoms, causes, diagnosis, and treatment of major psychological disorders including functional and organic psychoses, neuroses, personality disorders, psychophysiological disorders, affective disorders and suicide, alcoholism and other drug use disorders, psychosexual deviations, mental retardation, and abnormal behaviors associated with childhood, adolescence, family, and old age.

Prerequisite: PSY 111.

**PSY 251. Introduction to Biopsychology. (3)**

Introduction to basic research and theory in physiological psychology: brain mechanisms and consciousness, memory, thought, emotion, and stress. Basic neurophysiology and neuroanatomy, as well as nervous system-endocrine system integration are included.

**PSY 271. Survey of Perception, Action, and Cognition. (3) (MPT)**

Introductory survey of topics in vision, audition, haptics, attention, memory, reasoning, written and spoken discourse, concepts, reasoning, decisions, and motor control.

**PSY 277. Independent Studies. (0-5)****PSY 293. Introduction to Psychological Statistics. (4)**

Provides an introduction to analyzing, interpreting, and reporting results in psychological research. It prepares students to analyze data. Topics include descriptive and inferential statistics. CAS-C. CAS-QL. Prerequisite: STA 261.

**PSY 294. Writing and Research Methods in Psychology. (4)**

Extends the foundation for research skill developed in PSY293, with an emphasis on the experimental method and other methodologies (survey, observation, etc.), as well as on scientific writing according to disciplinary conventions (APA style). The completion of this two-course sequence will prepare students for independent research and thorough understanding of upper-level course content.. ADVW. CAS-C. CAS-QL.CAS-W.

Prerequisite: PSY 293.

**PSY 313. Advancing in Leadership and Pedagogy. (1-3) (MPT)**

Students who have already led a discussion group as part of PSY 111 will have the opportunity to lead another discussion group and pursue a project of their own choosing that addresses a problem in which they have developed a significant interest as a result of previous work as a discussion leader.

Prerequisites: PSY 111, PSY 211, PSY 212 and permission of instructor.

**PSY 320. Advanced Topics In Psychology. (1-4; maximum 8)**

Advanced consideration of selected topics, emphasizing the application of psychological theories, principles, research and methods to focused phenomena, including contemporary issues.

Prerequisite: PSY 294.

**PSY 324. Advanced Social Psychology. (3)**

Advanced topics in contemporary social psychology.

Prerequisites: PSY 221 and PSY 294 or permission of instructor.

**PSY 325. Psychology of Prejudice and Minority Experience. (3)**

Consideration of psychological factors underlying prejudice toward racial, ethnic, and other minorities. Impact of prejudice and discrimination on members of minority groups. IC.

Prerequisite: PSY 221 and PSY 294.

**PSY 326. Psychology of Gender. (3)**

Review and integration of emerging theory and research about women and their behavior, with particular attention to uniquely female experiences throughout the life cycle and to the influences that affect women in contemporary society.

Prerequisites: PSY 221 and PSY 294.

Cross-listed with WGS.

**PSY 327. Intro to Social Cognition. (3)**

Consideration of cognitive factors underlying social interaction and thought. Discussions of how we encode, interpret, process, recall and respond to social stimuli.

Prerequisites: PSY 221 and PSY 294.

**PSY 331. Infant Development. (3)**

A survey of research and theory on physical, cognitive and social development in infancy.

Prerequisite: PSY 231 and PSY 294.

**PSY 332. Child Development. (3) (MPT)**

A survey of research and theory on physical, cognitive and social development in infancy and childhood.

Prerequisites: PSY 231 and PSY 294.

**PSY 333. Adolescent Development. (3) (MPT)**

Survey of research and theory on physical, cognitive, and social development in adolescence.

Prerequisites: PSY 231 and PSY 294.

**PSY 334. Adulthood and Aging. (3) (MPT)**

Psycho-social functioning across adulthood with a focus on middle and old age. Changes in and determinants of body structures and functions, motor skills, intelligence and cognition, personality, and social behavior.

Prerequisites: PSY 231 and PSY 294.

**PSY 340. Internship. (0-20)****PSY 343. Psychopathology. (3) (MPT)**

Physical, developmental, and social sources, symptoms, treatment, and prevention of abnormal behavior; emphasis on current research and theory.

Prerequisite: PSY 242.

Prerequisite or Co-requisite: PSY 294.

**PSY 345. Childhood Psychopathology and Developmental Disabilities. (3) (MPT)**

Study of children considered biologically, psychologically, and/or socio-culturally deviant. Psychological theory and practice are emphasized. Recommended: PSY 231.

Prerequisite or Co-requisite: PSY 294.

**PSY 350. Advanced Topics in Personality Theory and Research. (3)**

Topics in personality theory and research at an advanced undergraduate level.

Prerequisites: PSY 241 and PSY 294.

**PSY 351. Advanced Biopsychology. (4)**

Current theories and research in motivation, emotion, learning and memory, and/or sensation and perception. Laboratory includes anatomical dissections of sheep brains and experimentation in biopsychology, including behavioral research with rodents and analysis of prepared tissue samples.

3 Lec. 1 Lab.

Prerequisite: BIO 305 or (PSY 251 and PSY 294) or permission of instructor.

**PSY 352. Structured Research Experience in Behavioral Neuroscience. (3)**

This course is part of a year-long focused research experience for junior- and senior-level undergraduates. This course teaches students to engage with, interpret, and present findings from behavioral neuroscience experiments. Students will learn to interpret empirical literature related to a focused problem in behavioral neuroscience, develop a testable hypothesis based on that literature, design an ethical study to test the hypothesis, and learn the skills necessary to conduct the proposed research.

**PSY 356. Psychopharmacology. (3)**

Survey of the major classes of psychoactive drugs. In addition to behavioral and psychological effects, emphasis is placed on sites and mechanisms of drug action.

Prerequisite: PSY 251 or BIO 305 or permission of instructor.

**PSY 374. Psychology of Language and Thought. (3) (MPT)**

Provides an acquaintance with research and theory in thinking, communication, psycholinguistics, and relation of language to thought processes.

Prerequisite: PSY 271 and PSY 294.

**PSY 375. Laboratory in Perception, Action, and Cognition. (4)**

Students will conduct research projects inspired by current theories in perception, action, and/or cognition. This course will allow students to learn advanced laboratory techniques and methodologies, and further develop communication skills through oral and written presentations of their research.

3 Lec. 1 Lab.

Prerequisite: PSY 294.

**PSY 376. Psychology of Judgment, Decision Making, and Reasoning. (3)**

An exploration of the psychology of human judgment and decision making (JDM) and reasoning: what it means to interpret, evaluate, make inferences about and otherwise judge aspects of our world to make decisions and solve problems from the momentous to the mundane. Students participating in this seminar will develop a deep appreciation of central questions that have driven the field (e.g., the nature of rationality); the theories and methods used to tackle these questions; and the role of internal and external influences on how we make decisions and act upon them to achieve our goals.

**PSY 377. Independent Studies. (0-5)****PSY 394. Editorial and Publishing Processes in Psychology. (2)**

Introduces students to the editorial and publication processes in psychology. Students will gain skills such as manuscript preparation, peer review, drafting professional cover letters, responding to reviewer criticism, and making editorial decisions. The course is intended to prepare students for membership on the board of the department's undergraduate research journal.

Prerequisites: PSY 293 and PSY 294.

**PSY 400. Senior Honors in Psychology. (3)**

Focus on developing scientific writing and methodological skills for students pursuing an honors thesis within psychology.

Prerequisite: permission of instructor required.

**PSY 410. Capstone Seminar in Psychology: The Multiple Determinants of Behavior. (3) (MPC)**

Promotes the integration of the student's knowledge of psychology to a particular topic within psychology.

Prerequisite: PSY 294.

**PSY 420. Seminar in Social Psychology. (3; maximum 6)**

Intensive study of a major topic in the general area of social psychology. Topic may be from among the following areas: socialization, social cognition, person perception, attributions, attitudes and stereotyping, small group, intergroup and organizational process, prejudice and victimization.

Prerequisite: PSY 221 and PSY 294.

**PSY 430. Seminar in Developmental Psychology. (3; maximum 6)**

Current research and theory on topics in developmental psychology.

Prerequisites: PSY 231 and PSY 294.

**PSY 433/PSY 533. Advanced Developmental Psychology. (3)**

This course is an advanced examination of contemporary life span issues in human development.

Prerequisite: graduate level for graduate students and completion of PSY 293 and PSY 294 and one of the 400-level developmental courses.

**PSY 440/PSY 540. Special Topics in Psychopathology. (3; maximum 9)**

This course will offer students the opportunity to examine advanced topics in the study of child or adult psychopathology. Students will investigate in depth current research on the origins, developmental course, and outcomes associated with specific mental health problems in children or adults.

Prerequisites: PSY 242 and PSY 294.

**PSY 451/PSY 551. Cognitive Neuroscience. (3)**

Presents the modern science of understanding mechanisms of the mind in which cognitive theory is integrated with neuropsychological and neuroscientific evidence. Topics include the cognitive and biological bases of perception, attention, memory, language, hemispheric specialization, executive function, imagery, and consciousness. Techniques of cognitive science such as brain imaging (MRI, PET, ERP), the study of patient populations, and computational analyses will be integrated with content of the course.

Prerequisites: BIO 305 or PSY 294 and one of the following: PSY 251, PSY 271.

**PSY 456/PSY 556. Advanced Biological Bases of Behavior. (3)**

In depth discussion of the structure and function of the vertebrate nervous system, ranging from the cellular basis of neuronal activities to the physiological bases of motor control, sensory systems, motivated behaviors, higher mental processes, and disorders. This course is intended for graduate students and advanced neuroscience-focused undergraduates, with interests ranging from animal behavior to clinical disorders.

Prerequisites: (PSY 294 and (PSY 351 or PSY 356 or PSY 352 or PSY 451/PSY 551) and senior standing) or (BIO 305 and PSY 251 and senior standing) or permission of the instructor.

**PSY 458. Capstone in Neuroscience. (3) (MPC)**

Intensive study of a major topic in the field of Neuroscience, with the aim of the integration of the student's knowledge of Neuroscience to a particular topic within Neuroscience.

Prerequisites: PSY 251 and one of the following: PSY 294 OR BIO 305 OR (BOTH BIO 161 AND BIO 203).

**PSY 470. Seminar in Cognition. (3) (MPT)**

Intensive study of a major topic within the general area of human cognition. Topic may be drawn from the areas of perception, memory, decision making, psycholinguistics, intelligence, or learning.

Prerequisites: PSY 271 and PSY 294.

**PSY 473/PSY 573. Human Factors/Ergonomics. (4)**

Introduction to the field of human factors. Application of principles of experimental psychology toward the goal of optimizing relations between the individual and technological products and environments. Prerequisite: PSY 271 and PSY 294.

**PSY 474/PSY 574. Advanced Cognitive Processes. (3)**

Advanced introduction to central concepts in cognitive psychology. Primary topics include perception, attention, memory, categorization, skill acquisition and expertise, automaticity, decision making, visual imagery, and language. The neuroanatomical and neurophysiological implementation of basic cognitive processes will also be addressed. Prerequisites: PSY 271 and PSY 294 or instructor approval.

**PSY 477. Independent Studies. (0-5)****PSY 480. Independent Reading for Department Honors. (1-6; maximum 6)**

Prerequisite: PSY 294, senior standing and permission of instructor.

**PSY 485/PSY 585. History and Systems of Psychology. (3)**

History of psychology from its early philosophical forbearers, through its development within various sciences, to a stage of quasi-maturity in the systems of late 19th and 20th centuries.

**PSY 490. Capstone Experience in Psychology: Research Apprenticeship in Psychology. (1-3; maximum 6) (MPC)**

Allows students to integrate their work in psychology by participating in a specific faculty-directed research project. Minimum of three semester hours must be earned to meet the Capstone requirement. Prerequisite: PSY 294 and permission of instructor.

**PSY 595. Analysis of Variance for the Behavioral Scientist. (3)**

Detailed treatment of analysis of variance as used in contemporary psychological research. Prerequisite: permission of instructor.

**PSY 601. Statistics and Methods I. (3)**

Introduction to methodological issues and data analyses for applications in psychology. Topics include philosophy of science, the role of statistics, probability, sampling distributions and estimation, hypothesis testing, ways of collecting categorical data, shortcomings of and alternatives to hypothesis testing, Bayesian inference, correlation and causation, effect size and power, threats to internal validity, alternatives to quantitative analysis, ethical issues in research methodology, and computational methods of analysis. This is the first course in a two course sequence to be followed by PSY 602. Prerequisite: graduate standing in Psychology or permission of instructor.

**PSY 602. Statistics and Methods II. (3)**

A second course in the introduction to methodological design and analysis for applications in psychology. Topics include statistical assumptions and methodological consequences, one-way ANOVA, contrasts and trend analysis, factorial ANOVA, repeated measures designs, linear regression, causal modeling, ethics and alternatives to quantitative analysis. This is the second course in a two course sequence following PSY 601. Prerequisite: graduate standing in Psychology and PSY 601, or permission of instructor.

**PSY 603. Proseminar in Psychology I. (1)**

Overview of contemporary psychology.

**PSY 604. Proseminar in Psychology II. (1)**

Overview of contemporary psychology.

**PSY 605. Multicultural Topics in Clinical Psychology. (3)**

Provides an exploration of issues related to culture and diversity in clinical research, theory, and practice with the aim of facilitating students' cultural competence.

Prerequisites: Enrollment in a graduate program in the Department of Psychology and permission of instructor.

**PSY 620. Seminar in Experimental Psychology. (1-3)**

Current research and theory in topics from experimental psychology.

**PSY 630. Seminar in Social Psychology. (3; maximum 12)**

Current research and theory in topics from social psychology.

**PSY 640. Internship. (0-12; maximum 12)****PSY 643. Psychopathology. (1)**

Modules offered in five-week sprint mode. Individual modules offered irregularly. Illustrative modules: schizophrenic disorders, affective disorders, personality disorders, borderline syndrome, genetics of psychopathology, DSM-5, women and mental health, family-systems models, interpersonal models, child and adolescent psychopathology, childhood hyperactivity, developmental disabilities, eating disorders of childhood and adolescence. Prerequisite: permission of instructor.

**PSY 644. Methods of Assessment. (1)**

Modules offered in five-week sprint mode. Individual modules offered irregularly. Illustrative modules: MMPI, advanced MMPI, intellectual assessment, interpersonal diagnosis, family-systems approaches, children, adolescents, learning disabilities, the difficult child, school consultations. Prerequisite: either admission to clinical program or approval by clinical faculty, and permission of instructor.

**PSY 645. Intervention. (1)**

Modules offered in five-week sprint mode. Individual modules offered irregularly. Illustrative modules: interpersonal, cognitive-behavioral, marital, family-systems, group therapy; special issues in the treatment of women, children, and adolescents. Prerequisite: permission of instructor.

**PSY 6450. Clinical Supervision I. (1)**

First course of a two course sequence designed to introduce doctoral students to clinical supervision. Course covers topics such as supervision theory, models, and implementation. Prerequisite: permission of instructor.

**PSY 6451. Clinical Supervision II. (1)**

Second course of a two course sequence designed to introduce doctoral students to clinical supervision. Course covers topics such as advanced supervision theory, models, and implementation. Prerequisite: permission of instructor.

**PSY 645L. Consultation. (1)**

Module offered in five-week sprint mode, designed to introduce doctoral students to clinical, school, and community consultation. Course covers topics such as consultation theory, models, and implementation. Prerequisite: permission of instructor.

**PSY 646. Psychological Assessment I. (3)**

First course of a two course sequence designed to introduce doctoral students to psychological assessment. Course covers topics such as principles of psychological measurement, assessment issues with multi-cultural populations and the ethics of assessment. Contemporary theories of intelligence and use of the Wechsler Scales are also taught. Prerequisite: admission to clinical psychology program.

**PSY 647. Psychological Assessment II. (3)**

Second course of a two course sequence designed to introduce doctoral students to psychological assessment. Course covers topics such the diagnosis/assessment interface and specific assessment techniques such as interviewing, behavioral observations and measures such as personality, adaptive behavior and academic achievement are taught.

Prerequisite: admission to clinical psychology program and PSY 646.

**PSY 648. Developmental Psychopathology across the Lifespan. (3)**

Overview of etiology, phenomenology, course, diagnosis and correlates of psychopathology, with an emphasis on processes across the lifespan.

Prerequisite: either admission to the clinical program or approval by the clinical faculty and permission of the instructor.

**PSY 649. Ethics in Clinical Psychology. (3)**

Introduction to ethical theory and standards for the profession. Introduction to law and psychology. Issues in clinical and professional development.

Prerequisite: completion of PSY 648 or approval of the clinical faculty and permission of the instructor.

**PSY 650. Independent Reading. (1-5; maximum 20)**

Supervised, in-depth study of circumscribed area of psychology.

Prerequisite: permission of instructor.

**PSY 653. Adult Evidence-Based Clinical Intervention. (3)**

This course is intended to prepare students to utilize evidence-based principles in the practice of clinical psychology. This class blends theoretical and empirical readings with the practice of psychology.

Prerequisite: admission in the psychology department graduate program in clinical psychology or permission of the instructor.

**PSY 654. Affective Development. (3)**

Provides foundational and contemporary perspectives on the science of emotion and the science of lifespan development. For each of these separate literatures, a focus on evolutionary, biological, cognitive, social and cultural influence on both emotion and development will be incorporated. The course then provides an integrated perspective on understanding emotion from a developmental perspective.

Prerequisites: Graduate standing in Department of Psychology or permission of the instructor.

**PSY 660. Child/Adolescent Evidence-Based Clinical Intervention. (3)**

This course will cover both theory and technical skills to prepare students to implement evidence-based approaches with children/adolescents/families for common clinical problems (e.g., emotion regulation, conduct problems) and diagnoses (e.g., ADHD, anxiety, depression, autism) with a focus on cognitive-behavioral theory and developmental psychopathology framework.

**PSY 670. Graduate Clinical Psych Traineeship. (1-4; maximum 12)**

Supervised experience in psychological interventions in public and private agencies or settings. Includes both seminar meetings and on-site conferences.

Prerequisite: admission to clinical program, approval by clinical faculty, and permission of instructor.

**PSY 670A. Initial Clinical Psychology Traineeship. (1-4; maximum 12)**

Supervised experience in psychological interventions in public and private agencies or settings. Includes both seminar meetings and on-site conferences.

Prerequisite: admission to clinical program, approval by clinical faculty, and permission of instructor.

**PSY 670B. Advanced Clinical Psych Traineeship. (1-4; maximum 12)**

Supervised experience in psychological interventions in public and private agencies or settings.

Prerequisite: admission to clinical program, approval by clinical faculty, and permission of instructor.

**PSY 677. Independent Studies. (0-5)****PSY 680. Advanced Topics in Research Methods and Analysis for the Behavioral Scientist. (1-6; maximum 9)**

Current topics in statistical analysis and research methods in contemporary psychological research. Topics may include statistical modeling procedures, meta-analysis, program evaluation, non-parametric analysis, Bayesian analysis, mathematical modeling, and other advanced issues in quantitative research design and analysis.

**PSY 685. Practicum in the Teaching of Psychology. (3)**

Supervised experience in preparation and presentation of lectures, demonstrations, and evaluation in undergraduate psychology courses. Credit/no-credit only.

**PSY 690. Research Practicum I. (1-4; maximum 8)**

Student serves in apprentice relationship to faculty member on a program of research.

Prerequisite: permission of instructor.

**PSY 692. Research Practicum II. (1-3; maximum 6)**

Assistance at increased level of responsibility with ongoing faculty research projects.

Prerequisite: permission of instructor.

**PSY 694. Advanced Regression Analysis for Psychological Research. (3)**

Covers mediation, moderation, and multilevel modeling within the multiple regression framework with a focus on the relevance to applications within psychology.

**PSY 696. Structural Equation Modeling for the Behavioral Scientist. (3)**

An introduction to a set of multivariate techniques collectively known as structural equation modeling. Topics include review of correlation and multiple regression, as well as an introduction to path analysis, factor analysis, structural causal modeling, growth modeling, and person-centered statistical approaches.

**PSY 697. Theory and Practice of Narrative Research. (4)**

Provides an introduction to the application of social constructionist epistemology and narrative methodologies in psychological research. Also provides an overview of conceptual frameworks and an opportunity for students to apply knowledge.

Prerequisites: Graduate status and at least one previous graduate-level course in social science methodology.

**PSY 700. Research for Master's Thesis. (1-12; maximum 12)****PSY 710. Independent Research in Psychology. (1-16; maximum 30)**

Design and execution of an independent research project with faculty supervision.

**PSY 720. Advanced Seminar in Experimental Psychology. (1-4; maximum 18)**

Consideration of a specialized topic in depth from current research literature in experimental psychology.

Prerequisite: permission of instructor.

**PSY 730. Advanced Seminar in Social Psychology. (3-4; maximum 18)**

Consideration of a specialized topic in depth from current research literature in social psychology.

**PSY 740. Advanced Seminar in Clinical Psychology. (1-4; maximum 18)**

Consideration of specialized topics in clinical psychology.

Prerequisite: permission of instructor.

**PSY 750. Advanced Clinical Techniques. (1-4; maximum 24)**

Provides integration of theory and research in techniques of psychological intervention, with practicum experience in the application of these techniques.

Prerequisite: admission to clinical program, approval by clinical faculty, and permission of instructor.

**PSY 755. Continuing Clinical Supervision. (1-3; maximum 3)**

Provides ongoing supervision of cases in the Psychology Clinic after the end of PSY 750.

Prerequisite: permission of instructor.

**PSY 780. Seminar in Brain, Cognitive, and Developmental Science. (1; maximum 10)**

Introduces students to Brain and Developmental Science (BCD) graduate program to a broad spectrum of theories, research, and practical application of BCD science. Students will enhance their knowledge of BCD science by their participation in discussion of BCD faculty and student research. In addition, students will engage in discussing their dissertation research, practicing job talks, and acquiring tools to prepare them for non-academic professions.

Prerequisite: graduate student standing.

**PSY 840. Internship in Psychology. (1-6; maximum 12)**

Year-long internship in clinical or research setting. Required of clinical students, optional for others.

Prerequisite: permission of director of clinical training program or departmental chair.

**PSY 850. Research for Doctoral Dissertation. (1-16; maximum 60)**

Prerequisite: admission to candidacy for doctoral degree.

## Psychological Science (PSS)

**PSS 177. Independent Studies. (0-5)****PSS 211. Career Development in Psychology & Related Social Sciences. (2)**

What can you do with a degree in Psychological Science, Psychology, or a related Social Science major? Whether you plan to enter directly into the workforce after college or continue in graduate school in psychological science or a related field, this course will help you to explore careers, design a vocational plan, set goals, and develop strategies to make you ready for your professional life after college. Helping you develop professional competencies, this course will look at three key areas for you to focus upon while you are an undergraduate student: the ATTITUDE you need to have toward your studies, the KNOWLEDGE you need to be competitive, and the SKILLS you should attain to be marketable.

Cross-listed with ASO 211.

**PSS 277. Independent Studies. (0-5)****PSS 301. Introduction to Industrial and Organizational Psychology. (3)**

Introduction to basic topics in industrial and organizational psychology, including human resources, worker productivity and satisfaction, motivation, leadership, organizations, and job analysis.

Prerequisite: PSY 111 or equivalent, PSY 294.

**PSS 312. Drugs and Behavior. (3)**

This course covers the principles of drug actions in the nervous system and describes the effects of drugs on behavior. Focus is given to drugs that are commonly used in recreational and clinical settings.

Prerequisites: PSY 111, PSY 251 and PSY 294.

**PSS 315. Learning, Memory, and Behavior. (3)**

This course is an empirical and theoretical examination of the processes of learning, memory, and behavior, including the origin and history of concepts and theories in learning and memory. For learning, the focus will be on habituation, classical and operant conditioning, and behaviorist approaches. Although most of the research findings will come from animal experiments, the relevance of these findings and concepts to understanding human behavior will be discussed. For memory, the focus will be on human memory, cognition, and attention. Students will be introduced to artificial intelligence, neural networks, and processes of attention. Special attention will be paid throughout to neuroanatomical and neurophysiological substrates of learning, memory, and behavior.

Prerequisites: PSY 111, PSY 271 and PSY 294.

**PSS 320. Special Topics in Psychological Science. (3; maximum 6)**

Examination of selected topics, emphasizing the application of psychological theories, principles, research, and methods to focused phenomena, including contemporary issues.

Prerequisite: PSY 294.

**PSS 340. Internship. (0-20)****PSS 350. Introduction to Counseling Methods. (3)**

Introduction to Counseling will emphasize the scientific, experimental character of psychology in exploring how we perceive and respond to the world and how we are shaped by internal and external influences. We will look at historical theories and new research findings. By the end of the course, you should be able to better understand the professional roles, skills, and responsibilities of clinical and counseling psychologists, licensed professional counselors, and clinical social workers in American society and the current challenges/issues surrounding the mental health profession.

Prerequisites: PSY 111 or equivalent, PSY 293 and PSY 294.

**PSS 377. Independent Studies. (0-5)****PSS 401. Capstone in Psychological Science. (3; maximum 6) (MPC)**

As a culminating experience in the major, students will view a topic in psychology from a variety of lenses (for example, individual/identity level, psychosocial/group level, sociocultural, neurobiology/physiology, evolutionary/ethological). Seminar style sessions will include students on the planning and coordination of class activities, which will include writing and presenting research or research summaries for both professional and non-professional audiences.

Prerequisites: PSY 111 or equivalent, PSY 293 and PSY 294.

**PSS 420. Advanced Topics in Psychological Science. (3)**

Advanced consideration of selected topics in psychological science emphasizing the application of theories, principles, research, and methods to focused phenomena, including contemporary issues.

Prerequisites: PSY 111 or equivalent, PSY 293 and PSY 294.

**PSS 477. Independent Studies. (0-5)****Religion, Comparative (REL)****REL 101. Introduction to the Study of Religion. (3) (MPF, MPT)**

Introduction to the study of religion as a phenomenon of human culture. Various examples of religion are observed and compared in relationship to a thematic and methodological framework. IIB. CAS-B.

**REL 128. Religion, Science, and Origins. (3) (MPF)**

A team-taught, interdisciplinary introduction to the science behind the theory of evolution and to religious responses to that theory, including contemporary controversies around creation science and intelligent design. Multiple disciplinary perspectives are brought to bear, drawn from fields in both the natural sciences (such as biology) and the humanities (such as philosophy of science, sociology of knowledge, science studies, intellectual and cultural history, and comparative religion). IIB. CAS-B.

Cross-listed with BIO.

**REL 133. Imagining Russia. (3) (MPF)**

Survey of Russian history, society, politics, economy, literature, film, and arts from a variety of intellectual perspectives. Classroom lectures plus out of class cultural presentations. IIB, IIIB. CAS-B.

Cross-listed with RUS.

**REL 177. Independent Studies. (0-5)****REL 201. Methods for the Study of Religion. (3) (MPT)**

Classical and contemporary theories of the nature, origin, and function of religion in human society. Required for majors and minors in comparative religion. ADVW. CAS-W.

Prerequisite: sophomore standing.

**REL 203. Global Religions of India. (3) (MPF)**

Explores the major religions of India and their growth outside India. Asks how these religions have contributed to the religious pluralism of America. Also asks how Asian American and non-Asian American practitioners of these religions have changed the way that religion is practiced in India and other parts of Asia. IIB, IIIB. CAS-B.

Cross-listed with AAA.

**REL 223. Introduction to Buddhism. (3)**

Explores the development of Buddhism in India and South Asia. Examines the relationship between early Buddhist values and those of the larger culture in India, especially with regard to the importance of marriage, family, and accumulation of wealth. As Buddhism spread to Nepal, Tibet, Sri Lanka, Burma, and Thailand, it was transformed by and effected profound changes within these other cultures. These cultural interactions are explored.

**REL 226. Introduction to Islam. (3)**

Origin and early history and rapid spread of Islam as a world faith, development of Muslim theology and culture, major groups and thinkers, and problems and issues of the present.

**REL 232. The Development of Christianity: 100 to 451. (3)**

Development of Christianity and the interaction between religion, culture, society, and politics from second through fifth centuries. Cross-listed with HST.

**REL 233. History of Christian Thought. (3)**

A survey of the history of Christian thought that introduces the major intellectual issues throughout Christian history, including understandings of God, evil, human nature, and salvation. Examines the diversity in Christianity between and within Orthodox, Catholic, and Protestant traditions. Explores the interaction between intellectual developments and historical context.

Cross-listed with HST 233.

**REL 241. Religions of the American Peoples. (3) (MPT)**

An introduction to the Jewish, Eastern Orthodox, and Roman Catholic traditions with emphasis on their transition to and development in North America. IC. CAS-B.

Cross-listed with AMS.

**REL 254. Introduction to Russian and Eurasian Studies. (3) (MPF)**

Examines the major developments that have shaped Russian and Eurasian Culture, society and politics over the last millennium. The course incorporates perspectives from the social sciences, humanities and the fine arts. IIB. CAS-B.

Cross-listed with ATH/CLS/ITS/HST/POL/RUS.

**REL 275. Introduction to the Critical Study of Biblical Literature. (3) (MPF, MPT)**

Surveys origins, historical development, content of texts, both canonical & non-canonical, that contributed to the formation of the Bible against the background of the advent & continuing development of modern literary and historical-critical methods. IIB. CAS-B.

**REL 277. Independent Studies. (0-5)****REL 286. Global Jewish Civilization. (3) (MPF)**

How did the Jewish people persist through the vicissitudes of enslavement, conquest, dispersion, and return, over the course of three thousand years of history? In this course, we will study of the encounter between Jews and the cultures and lands in which they lived, through a consideration of Jewish sacred texts and literature, spanning the globe from Ancient Mesopotamia to modern America. IIB, IIIB. CAS-B.

**REL 312. Religions of the Old Testament/Hebrew Bible. (3) (MPT)**

Survey of religion in ancient Israel from the beginnings of the nation to 587 B.C.E. Draws upon discoveries in the ancient Near East illuminating history, culture, and religion of ancient Israel.

**REL 313. Marriage Across Cultures. (3)**

This class engages feminist theory and gender studies to explore the consequences of different types of marital formations (polygamous as well as monogamous) for the lives of women and men in selected Western and non-Western cultures. IC. CAS-B.

Cross-listed with WGS.

**REL 314. Social and Religious History of the Jewish People. (3) (MPF, MPT)**

Cultural, social, and religious history of Jews in Europe, America, and the Middle East since Enlightenment with emphasis on 20th century and in the context of the larger society and culture. IIB. CAS-B.

**REL 316. The Age of the Reformation. (3)**

The religious revolutions of the 16th century, both Protestant and Catholic, in their social, political, and religious contexts. Topics chosen from: medieval reform movements and heresies; popular religion; the debates about clerical celibacy, free will, and the priesthood; social discipline and the modern state; family and women; the missions to the New World; the witch craze and the Inquisition.

Cross-listed with HST 316.

**REL 331. Paul and the Beginnings of Christianity. (3)**

History, institutions, and thought of early Christianity in the first two centuries, C.E., including the letters of Paul and early interpreters of Paul.

**REL 332. The Development of Christianity: 100 to 451. (3)**

Development of Christianity and the interaction between religion, culture, society, and politics from second through fifth centuries.

**REL 333. Religion, Dress, and Status. (3) (MPT)**

Displays of status through constrictive dress and gender segregation will be explored with reference to religion, gender, and class. Course will explore the topic through selected case studies, several of which involve Islamic cultures.

Cross-listed with WGS.

**REL 334. Women's Religious Experiences in the Ancient Mediterranean World. (3) (MPT)**

Places women's lives and cultic experiences at the center, introducing a range of religious traditions from ancient Mesopotamia, ancient Israel, and Egypt, to Greece and Rome, as the database for an analysis of women's relationships to myths, temple cults, festivals, mystery rites, domestic cult, private and immigrant cults, and magic from the second millennium BCE to the 4th century CE. The course emphasizes the application of modern critical approaches to the ancient evidence including material culture and epigraphy.

**REL 336. Jesus and the Gospels. (3)**

Jesus and his message according to the gospel material studied critically in historical context.

**REL 337. Religions of Russia and Eurasia. (3)**

Explores the developments of religion in Russia from the tenth century to the present day. The course introduces students to Eastern Orthodox Christianity, the role of religion in Russia's history and culture as well as religious diversity in Russia and Central Asia.

**REL 338. Eastern Christianity. (3)**

An examination of the second largest Christian confession in the world today, though one that is largely unfamiliar to most Americans--the family of Eastern Orthodox Churches. Eastern Orthodoxy is the dominant religion in Russia and other parts of Eastern Europe, the Balkans, and the Middle East. This course will consider the history and contemporary map of Orthodoxy as well as examine its distinctive approaches to theology, spirituality, and worship (including icons).

**REL 340. Internship. (0-20)****REL 341. Protestantism and the Development of American Culture. (3) (MPT)**

History and symbolic structure of American Protestantism and its role in the development of American culture.

**REL 342. Religious Pluralism in Modern America. (3) (MPT)**

Historical and cultural analysis of religious communities of the U.S. of primarily non-European origin. Includes African American, Native American, Latino, and Middle Eastern and Asian traditions, including Islam. IC. CAS-B.

Cross-listed with AMS.

**REL 343. African-American Religions. (3)**

An historical survey of the formulation and expression of African-American religions from slavery to the present, including culturally specific forms of Christianity and Islam, as well as reinventions and reinterpretations of African traditions.

Cross-listed with BWS.

**REL 345. Women, Religion and Social Change in America. (3) (MPT)**

An exploration of various ways in which women lifted their own voices, engaged with societal issues, and constructed their communities and themselves through the institutions and frameworks of religion in America.

Cross-listed with AMS/WGS.

**REL 346. Issues in the Study of Native American Religions. (3) (MPT)**

This course focuses on the methods by which Native American religions have been studied and represented, and ways in which these methods and representations have been, and continue to be, critiqued.

Cross-listed with AMS.

**REL 355. Religion and Law. (3)**

Students will work with legal briefs, theories, and case studies drawn from a range of traditions, such as Islamic, Jewish, Hindu, and Christian, to examine how law and religion are constituted and used to construct, challenge, or complicate identities. Case studies will focus on controversial cases in the US and other parts of the world. Also analyzed will be the changes to law and religion brought by modernization such as the effects of secularization, technology and new media, colonial/post-colonialism, and human migration.

**REL 360. Interdisciplinary Special Topics. (1-4; maximum 8)**

Course of study on a selected topic examined from the perspective of two or more disciplines.

**REL 376. Global Militant Islamisms. (3)**

Introduces and examines the development of contemporary militant Islamist movements such as the Muslim Brotherhood, Hizbullah, Hamas, and the various manifestations of al-Qa'ida. Evaluates the changing interpretations of Islamic tradition, law, and religious practice each movement manifests. Particular attention is paid to a critical analysis of the writings and multimedia productions of these movements in response to modernization, secularization, and global historical and socioeconomic circumstances.

**REL 377. Independent Studies. (0-5)****REL 402/REL 502. Basic Structures in the History of Religions. (3) (MPC)**

Investigations of categories, types, and forms developed for the study of religions, such as the Sacred, the Holy, myth, initiation.

**REL 430/REL 530. Early Christian Literature and Religion. (4; maximum 4)**

Selected texts and/or themes of early Christianity studied critically in their historical and cultural context. Reading knowledge of Greek is desirable.

**REL 470A. Havighurst Colloquium. (3)**

Exploration of significant issues related to Russian and post communist affairs. Each semester focuses on a central theme or topic that is examined through presentations, readings, research, discussion, and writing. May be repeated once for credit with only 3 hours counting towards the history major.

Cross-listed with ATH/CLS/HST/RUS 436/RUS 536 and POL 440/POL 540.

**REL 477. Independent Studies. (0-5)****REL 480. Independent Reading for Departmental Honors. (1-6)****REL 670. Reading and Research in Religious Thought. (2-4; maximum 12)**

Intensive research in specialized areas.

**REL 677. Independent Studies. (0-5)****REL 680. Reading and Research in History of Religions. (2-4; maximum 12)**

Intensive research in specialized areas.

**REL 690. Reading and Research in Religion and Culture. (2-4; maximum 12)**

Intensive research in specialized areas.

**REL 700. Research for Master's Thesis. (1-10)**

## Russian (RUS)

**RUS 101. Beginner's Course. (4)**

Essentials of Russian language including rudiments of grammar, acquisition of a simple vocabulary, practice in reading and conversation, and simple written exercises.

**RUS 102. Beginner's Course. (4)**

Essentials of Russian language including rudiments of grammar, acquisition of a simple vocabulary, practice in reading and conversation, and simple written exercises.

**RUS 133. Imagining Russia. (3) (MPF)**

Survey of Russian history, society, politics, economy, literature, film, and arts from a variety of intellectual perspectives. Classroom lectures plus out of class cultural presentations. Taught in English. IIB, IIIB. CAS-B.

Cross-listed with REL.

**RUS 137. Russian Folklore. (3) (MPF, MPT)**

Introduction to Russian folklore, including study of the folk tale, charms and incantations, ceremonial poetry connected with the calendar, jokes, proverbs, folk ditties, wedding ceremonies, funeral customs, modern gestures, and graffiti. Some discussion devoted to Slavic pre-Christian society and survivals of pagan customs in the Christian era. Considerable treatment of comparative folklore worldwide. Taught in English. IIB. IIIB. CAS-B-LIT.

**RUS 177. Independent Studies. (0-5)****RUS 201. Intermediate Russian. (3) (MPT)**

Conversation, vocabulary building, readings, composition, grammar.

**RUS 202. Intermediate Russian. (3) (MPT)**

Conversation, vocabulary building, readings, composition, grammar. CAS-A.

**RUS 250. Topics in Russian Literature in English Translation. (3) (MPT)**

Treatment of selected works of Russian literature that suggest particular thematic problems. For nonspecialist with little or no background in Russian literature. Taught in English. CAS-B-LIT.

**RUS 254. Introduction to Russian and Eurasian Studies. (3) (MPF)**

Examines the major developments that have shaped Russian and Eurasian culture, society and politics over the last millenium. The course incorporates perspectives from the social sciences, humanities and the fine arts. Taught in English. IIB. ADVW. CAS-B.

Cross-listed with ATH/CLS/ITS/HST/POL/RUS.

**RUS 255. Russian Literature in English Translation From Pushkin to Dostoevsky. (3) (MPF, MPT)**

Examines works by Pushkin, Lermontov, Gogol, Turgenev, and Dostoevsky and a number of critical essays representative of a variety of viewpoints. Uses interdisciplinary approach that takes into account social, historical, political, religious, as well as literary factors. IIB. IIIB. CAS-B-LIT.

Cross-listed with ENG.

**RUS 256. Russian Literature in English Translation: From Tolstoy to Nabokov. (3) (MPF, MPT)**

Treatment of selected works of Russian literature (realism, modernism, post-modernism) with special attention to Tolstoy, Chekhov, Bunin, Sologub, Bulgakov, Babel and Nabokov. IIB, IIIB. CAS-B-LIT.

Cross-listed with ENG.

**RUS 257. Russian Literature in English Translation: From Pasternak to the Present. (3) (MPF, MPT)**

Treatment of major trends in the development of Russian literature since 1953. Examines works by Pasternak, Solzhenitsyn, Rasputin, Trifonov, and others. IIB, IIIB. CAS-B-LIT.

Cross-listed with ENG 267.

**RUS 263. Soviet & Post-Soviet Russian Cinema. (3) (MPT)**

Critical survey of directors, genres, and movements in Soviet cinema. Screening of films from Eisenstein to current directors. Lectures, discussion, and readings in English. CAS-B-LIT.

Cross-listed with FST.

**RUS 272. Cinemas and Cultures of Central and Eastern Europe. (3)**

Analyses the developments and trends in the cinemas and cultures in Central and Eastern Europe from 1945 to the present; reflects on the definition of filmmaking beyond national concepts. Global context is determined by the theoretical exploration of: 1) the geopolitical region of Germany as well as Central and Eastern Europe in dialog with Western Europe and the world; 2) cultural practices related to identity formation and aesthetic perception; 3) film production and reception among domestic and international audiences; and 4) the interplay of film cultures in the Cold War. Taught in English and all films have English subtitles. IIB. CAS-B.

Cross-listed with FST/GER.

**RUS 277. Independent Studies. (0-5)****RUS 301. Advanced Russian. (3) (MPT)**

Conversation, advanced composition, reading in Russian literature. Prerequisite: RUS 202.

**RUS 302. Advanced Russian. (3) (MPT)**

Conversation, advanced composition, reading in Russian literature. Prerequisite: RUS 202.

**RUS 311. Reading in Russian. (3)**

Enables students to develop fluency in reading Russian texts. Core readings for all students and supplemental readings according to individual interests.

Prerequisite: RUS 202 or equivalent.

**RUS 325. Russian Reception of Classical Culture. (3)**

Examines a variety of forms and poetic expressions in both modern (Russian) and ancient poetry. Introduces students to the way in which Russian literature and especially poetry responded to Greco-Roman antiquity. Analyzes how the study of classical antiquity, with its rich mythological tradition and history, represented to the Russian literary elite a window into the West and an opportunity to establish a Russian literary heritage within Western literary canon. All readings in English translation.

Cross-listed with CLS 325.

**RUS 340. Internship. (0-20)****RUS 377. Independent Studies. (0-5)****RUS 411. Advanced Conversation, Composition and Reading. (3)**

Practice in oral communication and composition at the advanced level.

Prerequisite: RUS 302.

**RUS 436/RUS 536. Havighurst Colloquium. (3)**

Exploration of significant issues related to Russian and post communist affairs. Each semester focuses on a central theme or topic that is examined through presentations, readings, research, discussion, and writing. May be repeated once for credit with only 3 hours counting towards the history major. Taught in English.

Cross-listed with ATH 436/ATH 536; CLS 436; HST 436/HST 536; POL 440/POL 540 and REL 470A.

**RUS 450. Topics in Russian Culture. (3; maximum 9)****RUS 477. Independent Studies. (0-5)****RUS 480. Departmental Honors. (1-6; maximum 6)**

May be taken in senior year.

Prerequisite: permission of instructor and department.

**RUS 677. Independent Studies. (0-5)**

## Social Justice Studies (SJS)

**Note:** all SJS courses will fulfill CAS-C-SOC/GTY.

**SJS 101. Elements of Social Justice. (1)**

The Elements of Social Justice is a one credit hour course which aims to raise students' awareness of social injustice, encourage them to view various situations through a social justice lens, and suggests how various ethical frames can be used to advocate for a socially just world.

**SJS 159. Creating Global Peace. (3) (MPF)**

Focuses on the study of peace, as represented across disciplinary boundaries and at local-to-global scales of analyses. Combines guest lectures, scholarly readings and other media, reflective writing and discussion, and a service-learning commitment that together explore different ways of thinking about peace, and 'peace' practices at global to local scales. IIC, IIIB. CAS-C.

Cross-listed with GEO.

**SJS 165. Introduction to Social Justice Studies. (3) (MPF)**

The Introduction to Social Justice provides a basis to understand, interpret, and solve social problems in fair, equitable, and just ways. IC, IIC, IIIB. CAS-C.

Cross-listed with SOC.

**SJS 177. Independent Studies. (0-5)****SJS 204. Introduction to Service-Learning. (3)**

Focuses on the integration of service and community engagement with academic goals as pedagogy. Students will learn how to identify authentic community needs and match them with academic goals. Students will participate in Service-Learning throughout the semester. Cross-listed with WST.

**SJS 215. EMPOWER I: Educational and Economic Justice and Service-Learning. (3)**

EMPOWER explores how educational and economic injustices impact communities and considers strategies for social change. This course contains a Service-Learning component. IC.

**SJS 216. EMPOWER II: The Intersections of Race, Class, and Education. (3)**

Builds on the concepts learned in EMPOWER I to further explore issues of race and class and how they intersect in education. This course contains a Service-Learning component. Recommended prerequisite: SJS 215.

**SJS 265. Critical Inquiry: Penny Lecture Series. (2)**

Weekly lectures given by different Black World Studies Affiliates. Credit/No Credit.

Cross-listed with BWS/SOC.

**SJS 277. Independent Studies. (0-5)****SJS 303. Life After Graduation: Careers in Sociology/Social Justice. (3)**

Explores a variety of career paths that use the skills acquired by sociology and social justice studies students while developing and honing those skills.

Cross-listed with SOC.

**SJS 304. Theory Into Action: Service-Learning. (3)**

Focuses on sustaining community and faculty partnerships as part of cultivating a culture of service and reflection through Service-Learning.

Prerequisite: SJS/WST 204 or instructor approved course.

Cross-listed with WST.

**SJS 323. Social Justice and Change. (3)**

Study of how social justice is realized through social change, focusing on the individual and collective actions of people fighting for their vision of a just world and a just future.

Prerequisites: SOC 151 or SOC 153 or SJS/SOC 165 or CRE 151 or DST/EDP/SOC 272.

Cross-listed with SOC.

**SJS 350. Topics in Justice Studies. (3; maximum 6)**

This is a special topics course in the broad areas of social justice and human rights. The specific topic addressed will differ depending on instructor and/or academic term.

Prerequisites: SOC 165/SJS 165, or permission of instructor.

**SJS 377. Independent Studies. (0-5)****SJS 419/SJS 519. Environment, Society & Justice. (3)**

Interdisciplinary studies of the underlying social aspects of environmental problems and issues. Topics include the unequal distribution of hazardous waste sites, the environmental impacts of war, vulnerability to disaster, the social construction of the environment, population growth, environmental movements, the political economy of the environment, and ecological modernization. Cross-listed with IES.

**SJS 470. Social/Political Activism. (3) (MPC)**

Provides students with the opportunity to explore how indigenous groups effect change in their communities.  
Prerequisite: SOC 151 or SOC 153 or SJS/SOC 165 or CRE 151.  
Cross-listed with BWS/DST/SOC.

**SJS 477. Independent Studies. (0-5)****SJS 487. Globalization, Social Justice and Human Rights. (3) (MPF)**

This course explores the theories, issues, debates, and pedagogy associated with globalization, social justice, and human rights. The course provides students with a unique opportunity to explore these topics within the classroom and, via internet and other technologies, across classrooms located around the globe. The student, through collaborative projects with peers around the world, will reflect upon how globalization shapes and transforms local communities and national cultures. IC, IIIB. CAS-C.

Prerequisites: GIC 101, SOC 151 or 152 or SJS/SOC 165.  
Cross-listed with GIC/SOC.

## Sociology (SOC)

**Prerequisite Notes:** A majority of upper level classes require the successful completion of either SOC 151 or SOC 153 or where indicated SOC 165/SJS 165 (where indicated), unless otherwise stated.

400-level courses require upper-class or graduate standing and 12 semester hours of sociology or six hours of sociology and six hours from the following: anthropology, economics, geography, gerontology, political science, psychology or social justice studies. Six of these hours must be advanced credit. Note specific prerequisite for SOC 440.

**SOC 151. Social Relations. (4) (MPF)**

Introduction to and application of the principles, methods, and major theoretical orientations of sociology in providing a basic understanding of the social aspects of human life. SOC 151 serves as a prerequisite for upper level sociology classes and as an entry course for the SOC major, SOC minors and SOC thematic sequences. Credit for the sociology major is NOT given for both SOC 151 and SOC 153. IIC. CAS-C.

**SOC 153. Sociology in a Global Context. (3) (MPF)**

Designed to develop the sociological imagination - an imagination that allows students to place themselves in a larger, ever-changing global world. Serves as a prerequisite for upper level sociology courses and as an entry course for the Sociology major, Sociology minors and thematic sequences. Credit for the sociology major is NOT given for both SOC 151 and SOC 153. IIC, IIIB. CAS-C.

**SOC 160. Selected Topics in Sociological Analysis. (2; maximum 4)**

Examination of selected issues employing sociological principles and methods. Credit not granted more than once for the same topic.  
Prerequisite: SOC 151.

**SOC 165. Introduction to Social Justice Studies. (3) (MPF)**

The Introduction to Social Justice provides a basis to understand, interpret, and solve social problems in fair, equitable, and just ways. IC, IIC, IIIB. CAS-C.  
Cross-listed with SJS.

**SOC 177. Independent Studies. (0-5)****SOC 201. Social Problems. (4) (MPT)**

Introduction to causes, context, policy, and prevention of selected social problems with particular emphasis on problems of conflict and inequality and problems of human progress. Primarily recommended for sophomores.

**SOC 202. Social Deviance. (3) (MPT)**

Sociological focus on drug use, sexual deviation, and alternative lifestyles and/or other socially defined deviant behaviors.

**SOC 203. Sociology of Gender. (3) (MPT)**

Description and analysis of gender in human society with special attention to constraints placed on both males and females by current socialization practices, and to issues in equality from historic as well as contemporary perspectives. IC. CAS-C.  
Cross-listed with WGS.

**SOC 208. The Rise of Industrialism in East Asia. (3) (MPF)**

Introduction to historic parameters, geographic variables, state policies, and sociocultural contexts of industrialism in East Asia (China, Japan, Korea, Taiwan, Hong Kong, and Singapore). IIC, IIIB. CAS-C.  
Cross-listed with GEO/ITS.

**SOC 221. Sexualities. (3)**

Introduction to the study of human sexual behavior with particular attention paid to the issues of gender development; premarital, marital, and post-marital sexual patterns; birth control; sexual dysfunction; cross-cultural sexual patterns; and alternative sexual lifestyles.  
Cross-listed with FSW/WGS.

**SOC 225. Work and Occupational Justice. (3)**

Introduction to the study of work, with an emphasis on the occupational structure, professions and professional powers, the employment relationship, and the institutional context in which work is done.

**SOC 257. Population. (3) (MPT)**

Examines population theory, characteristics, dynamics and policies, focusing on global processes and global inequality.

**SOC 258. Self and Society. (3)**

Examines how social groups and institutions influence human behavior at the individual level. Introduces students to various theoretical and methodological issues germane to understanding how individuals construct social meanings of their everyday lives.

**SOC 260A. Internship: An Introduction to Applied Sociology and Human Services. (1-4)**

Offers a foundation for those considering careers in applied sociology, human services, or similar fields. In addition to internship, student attends minimum of five special-topics seminars and participates in a concluding internship seminar. Available primarily on Middletown campus and only on credit/no-credit basis. Sociology majors may not substitute this course for any SOC 440 course.  
Prerequisite: written permission of instructor.

**SOC 262. Research Methods. (3) (MPT)**

Acquaints students with rationale underlying application of scientific methods in social research. Practical experience in problems of research and design and data collection. CAS-QL.

**SOC 265. Penny Lecture Series. (2)**

Weekly lectures given by different Black World Studies Affiliates.  
Credit/No Credit.  
Cross-listed with BWS/SJS.

**SOC 272. Introduction to Disability Studies. (3) (MPF, MPT)**

Explores the link between the social construction of disability and that of race, class, gender, ethnicity, and sexual orientation as they pertain to social justice in a multicultural and democratic society. Promotes critical analysis of dominant and nondominant perspectives on disability. IC, IIC. CAS-C.  
Cross-listed with EDP/DST.

**SOC 277. Independent Studies. (0-5)****SOC 279. African Americans in Sport. (3) (MPF)**

Socio-historical analysis of participation of African Americans in sport and society, and examination of the role sport has played in African Americans' integration into the larger society. Investigates the way the image of African Americans has been constructed and maintained through sporting practices. Sociological theories and concepts used to examine the impact of historical events, such as Reconstruction, black migration, and World Wars, on African American involvement in sport and other institutions. IC, IIC. CAS-C.  
Cross-listed with BWS/KNH.

**SOC 303. Life After Graduation: Careers in Sociology/Social Justice. (3)**

Explores a variety of career paths that use the skills acquired by sociology and social justice studies students while developing and honing those skills.  
Cross-listed with SJS.

**SOC 305. Introduction to the Sociology of Globalization. (3)**

Study of human societies in evolutionary and comparative perspective emphasizing sociocultural origins and consequences of social development. Special attention to contemporary issues in advanced industrial societies.  
Prerequisite: SOC 151 or SOC 153 or ITS 201.

**SOC 318. Social Forces and Aging. (3) (MPT)**

Examines the social forces that shape the diverse experiences of aging for individuals and the social structures in which they live. Particular emphasis is given to sociological issues such as age stratification, the life course, demographic change and its effects, and societal aging as a force in social change. IC.  
Prerequisite: SOC 151 or SOC 153 or SOC/SJS 165; or SOC/DST/EDP 272; or GTY 154.  
Cross-listed with GTY.

**SOC 323. Social Justice and Change. (3)**

Study of how social justice is realized through social change, focusing on the individual and collective actions of people fighting for their vision of a just world and a just future.  
Prerequisites: SOC 165 or SOC 151 or SOC 152 or CRE 151 or DST/EDP/SOC 272.  
Cross-listed with SJS.

**SOC 337L. Directed Research in European Studies. (3)**

Reading and research on selected social science topics. Emphasis on European language materials and data sources. Substantive focus chosen each semester by instructor.

**SOC 340. Internship. (0-20)****SOC 348. Race and Ethnic Relations. (3) (MPT)**

Description and analysis of emergence and trends of minority relations in the U.S. IC.  
Prerequisite: SOC 151 or SOC 153; or SOC/SJS 165; or CRE 151.  
Cross-listed with BWS.

**SOC 350. Topics in Justice Studies. (3; maximum 6)**

This is a special topics course in the broad areas of social justice and human rights. The specific topic addressed will differ depending on instructor and/or academic term.  
Prerequisite: SJS 165 or SOC 165 or permission of instructor.

**SOC 352. Criminology. (3) (MPT)**

Sociological analysis of theories, institutionalization, and social responses to crime and criminality.  
Prerequisite: SOC 151 or SOC 153; or SOC/SJS 165.

**SOC 357. Medical Sociology. (3)**

Sociological study of illness, patients, medical professionals, and problems inherent in the delivery of health care services.  
Prerequisites: SOC 151 or SOC 153; or SOC/SJS 165; or GTY 154.  
Cross-listed with GTY.

**SOC 358. The Sociology of Mental Disorders. (3)**

Study of social factors in cause, perpetuation, and treatment of emotional problems.  
Prerequisite: SOC 151 or SOC 153; or SOC/SJS 165.

**SOC 362. Family Poverty. (3)**

Examines definitions, theories, causes and consequences of family poverty in the U.S. Identifies the extent and degree of U.S. poverty and demographic characteristics of those who are poor or likely to become poor. Consideration given to programs that reduce poverty and/or its negative effects, including those practiced in the past, those now practiced, and those that offer promise for improving the economic and social status of those who are poor. Costs and benefits of welfare and welfare reform and strategies for preventing poverty among future generations also discussed and evaluated. IC.  
Cross-listed with BWS/FSW.

**SOC 363. Sociology of Families. (3)**

Analysis of the impact of social change on family systems and patterns, structures, dynamics, and social policy, with emphasis on differences by social strata and culture. Cross-listed with FSW 363  
Prerequisite: SOC 151 or SOC 153; or SOC/SJS 165.

**SOC 372. Social Stratification. (3) (MPT)**

Major theoretical approaches toward the study of social classes and social differentiation. Particular emphasis on the nature and consequences of stratification system within the United States. IC. CAS-C.  
Prerequisite: SOC 151 or SOC 153; or SOC/SJS 165.

**SOC 375. (Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice. (3)**

Explores what it means to be ally to/in/with the disability community in America. The course emphasizes identity formation and how that formation can inform the construction of the ally identity. Through deconstructing learned values, knowledge, and images of disability that mitigate ally behavior, students discover the micro and macro structures that support ally behavior. By exploring how social control and social change have worked in other civil rights movements, students understand the necessity of identifying and including allies in the disability movement for civil rights. IC. CAS-C.  
Cross-listed with DST/EDP/WGS.

**SOC 377. Independent Studies. (0-5)****SOC 409. Systems of Justice. (3) (MPT)**

Examines the history and practice of punishment in society. Surveys methods of punishment employed after conviction of criminals and delinquents.  
Prerequisite: SOC 151 or SOC 153, or SOC/SJS 165.

**SOC 410/SOC 510. Topics in Criminology. (3) (MPT)**

Selected topics in the sociological study of crime and delinquency.  
Prerequisite: Permission of instructor.

**SOC 412. Sociology of Law. (3)**

Introduction to law as a form of dispute resolution and a mechanism of social control. Examines the law as both an independent variable and a dependent variable by studying the relationship between law and other social institutions using sociological theory and sociological research.

Prerequisite: SOC 151 or SOC 153 or SOC/SJS 165.

**SOC 413. Juvenile Delinquency. (3) (MPT)**

Study of theories, definitions, and social construction of juvenile delinquency.

Prerequisite: SOC 151 or 152; or SOC/SJS 165.

**SOC 417. Economy and Society. (3) (MPT)**

Sociology of work relationships within the major social organizational and institutional settings complemented by the study of the more general structures and relations generated within the economy and society as viewed in a comparative and developmental perspective.

Prerequisite: SOC 151 or SOC 153; or SOC/SJS 165.

**SOC 421/SOC 521. Critical Race and Post-Colonial Studies. (3) (MPF)**

Utilizes critical sociology (intersectionality, critical race, and post-colonial theory) to investigate how race and social structures interact over time both within the U.S. and globally. Specifically the course examines the theories, research and policy associated with intersectional identities of race, class, gender, place and context. Finally, it investigates the role of intersectionality in (re)producing systems of inequality, privilege, and how they can be transformed. IIIB, IC.

Prerequisites: CRE 151, GIC 101, SJS 165 or SOC 151.

Cross-listed with GIC.

**SOC 435. Death Studies. (3) (MPT)**

Examines social processes involved in the meaning, management, and experience of death and dying. Analyzes death as it relates to social structure, patterns of social interactions, and human experience.

Prerequisite: SOC 151 or SOC 153; SOC/SJS 165; or GTY 154; or FSW 261.

Cross-listed with FSW.

**SOC 440. Internship in Sociology or Social Justice Studies. (1-16; maximum 16)**

Field placement in an agency, program, or organization which provides students with valuable work experience and an opportunity to apply their sociological imagination and/or social justice perspectives. Credit/no-credit only. A maximum of 4 credits can count toward the major or minor.

Prerequisite: SOC 151 or SOC 153 or SJS/SOC 165 and permission of instructor.

**SOC 440A. Internship - Applied Sociology. (1-16)**

Field placement in an agency, program, or organization needing applied sociological research which provides students with valuable work experience and an opportunity to use sociological knowledge to answer research questions or problems as defined by those entities. Credit/no-credit only. A maximum of 4 credits can count toward the major or minor.

Prerequisites: SOC 151 or SOC 153, SOC 262, and permission of instructor.

**SOC 440C. Internship in Criminology. (1-16)**

Field placement in an agency, program, or organization dealing with the administration of justice, including law enforcement, the judicial process, corrections, juvenile justice, and victim's services, which provides students with valuable work experience and an opportunity to apply sociological criminology. Credit/no-credit only. A maximum of 4 credits can count toward the major or minor.

Prerequisites: SOC 352, SOC 409, and permission of instructor.

**SOC 451. Family Violence. (3) (MPC)**

Analysis of research and theory on family violence, including physical abuse of children, sexual abuse, neglect, premarital abuse, wife abuse, gay/lesbian battering, elder abuse, prevention, and intervention. Basic framework is ecological/feminist, emphasizing an examination of family dynamics as well as broader historical, social, and patriarchal contexts.

Prerequisite: SOC 151 or SOC 153, or SOC/SJS 165.

Cross-listed with FSW/WGS.

**SOC 454/SOC 554. Formal Organization. (3)**

Sociological analysis of complex organizations. Topics include theories, types of organizations, basic characteristics of organizations, organizational change and conflict, interactions with environments, and research in organizations.

Prerequisite: SOC 151 or SOC 153; or SOC/SJS 165.

**SOC 459. Sociology Capstone. (3) (MPC)**

Involves review of the discipline of sociology and focuses on key issues including review of the tools of the discipline and the role of sociology in the student's future role as individual, employee, and citizen.

Prerequisite: must be sociology major with senior standing and have completed or currently are taking the methods and theory requirements.

**SOC 462. Applied Sociological Research. (3) (MPC)**

Provides basic skills needed to conduct applied sociological research. Emphasis on issues that need to be addressed in such research and processes used to answer questions.

Prerequisite: SOC 262.

**SOC 463. Gender and Aging. (3) (MPT)**

Examination of how gender constructions shape the aging process, with particular focus on how various social, psychological, physical, and cultural factors affect men, women, and transgendered persons differently as they grow older.

Prerequisite: SOC 151 or SOC 153; or SOC/SJS 165.

Cross-listed with WGS.

**SOC 470. Social/Political Activism. (3) (MPC)**

Provides students with the opportunity to explore how indigenous groups effect change in their communities.

Prerequisite: SOC 151 or SOC 153, or SOC/SJS 165, or CRE 151.

Cross-listed with BWS/DST/SJS.

**SOC 477. Independent Studies. (0-5)****SOC 480. Independent Reading for Departmental Honors. (1-6)****SOC 482. Sociological Theory. (4)**

General survey of the history and theories of society and social action arising out of social research since the 19th century.

Prerequisite: SOC 151 or SOC 153; or SOC/SJS 165.

**SOC 487. Globalization, Social Justice and Human Rights. (3) (MPF)**

This course explores the theories, issues, debates, and pedagogy associated with globalization, social justice, and human rights. The course provides students with a unique opportunity to explore these topics within the classroom and, via internet and other technologies, across classrooms located around the globe. The student, through collaborative projects with peers around the world, will reflect upon how globalization shapes and transforms local communities and national cultures. IC, IIIB. CAS-C.

Prerequisite: GIC 101, SOC 151 or SOC 153, or SOC/SJS 165.

Cross-listed with GIC/SJS.

**SOC 490/SOC 590. Current Issues in Sociology. (1-3; maximum 6)**

Selected topics of importance on contemporary sociology.

**SOC 677. Independent Studies. (0-5)**

## Spanish (SPN)

**Note:** All students must take the placement examination before enrolling in any Spanish course. Once placed, students may not skip a course in the sequence leading to SPN 202. Most of the courses listed below may be taken abroad (with Miami or other program) with pre-approval from the department.

**SPN 101. Beginner's Course. (4)**

Objectives: to read and understand ordinary Spanish without translation and to speak and write it with increasing ability.

**SPN 102. Beginner's Course. (4)**

Objectives: to read and understand ordinary Spanish without translation and to speak and write it with increasing ability.

Prerequisite: SPN 101.

**SPN 104. Beginner's Course Spanish Lab. (1; maximum 2)**

Laboratory course covering basic Spanish vocabulary and grammar, with the objective of reinforcing students' writing, speaking, reading, and listening skills.

Co-requisite: SPN 101 or SPN 102.

**SPN 111. Intensive Basic Spanish. (4)**

Covers same material as SPN 101, 102. For entering students whose high school background in Spanish has not included all the basic grammar and whose preparation for enrollment in 201 is deficient. Upon completion of SPN 111, students enroll in SPN 201. Credit earned in SPN 101 and/or 102 is considered duplication of credit. Prerequisite: enrollment determined by placement exam.

**SPN 177. Independent Studies. (0-5)****SPN 201. Second Year Spanish. (3)**

Intermediate Spanish grammar with a focus on speaking, writing short compositions and reading and discussion of selected texts with practice speaking and writing the language.

Prerequisite: SPN 102 or 111 or placement exam score.

**SPN 202. Second Year Spanish. (3)**

Intermediate Spanish grammar with a focus on speaking, writing short compositions and reading and discussion of selected texts with practice speaking and writing the language. CAS-A.

Prerequisite: SPN 201 or placement exam score.

**SPN 203. Spanish for Health Care Professions. (3)**

An intermediate level course geared towards students planning to work in the health care field. Designed to familiarize students with medical vocabulary and cultural issues they may encounter while working with Hispanic patients. Spanish 203 is also designed to further student's knowledge of Spanish grammar while continuing the development of speaking, reading and writing skills. Students earn graduation credit for 202 or 203, but not both.

Prerequisite: SPN 201 or placement exam score.

**SPN 204. Second Year Spanish Lab. (1; maximum 2)**

Laboratory course covering intermediate Spanish vocabulary and grammar, with the objective of reinforcing students' writing, speaking, reading, and listening skills.

Co-requisite: SPN 201 or SPN 202.

**SPN 211. Intensive Intermediate Spanish. (3)**

Continues the development of students' speaking, reading, listening and writing skills and enables students to complete the language requirement in a reduced time frame. Successful completion of SPN 211 would be the equivalent of SPN 202. Credit earned in SPN 201 and/or SPN 202 is considered duplication of credit. CAS-A. Prerequisite: enrollment determined by placement exam.

**SPN 241. Intermediate Conversational Spanish. (2)**

Intensive oral practice in simple face-to-face interactions involving exchange of personal information and routine social demands. Recommend prior completion of or registration in SPN 311. Credit/no-credit only.

Prerequisite: SPN 202 or 203 or 299D.

**SPN 242. Intermediate Conversational Spanish. (2)**

Intensive oral practice developing flexibility and fluency. Oral production developed on factual topics beyond personal information and routine social demands (narration, description of present, past, and future events). Credit/no-credit only. Recommend prior completion of or registration in SPN 311.

Prerequisite: SPN 241.

**SPN 277. Independent Studies. (0-5)****SPN 311. Grammar Review and Introductory Composition. (3)**

Continued development of basic grammatical proficiency in Spanish with an introduction to the fundamentals of writing in the Spanish language.

Prerequisite: SPN 202, SPN 203, SPN 211 or appropriate placement exam score.

**SPN 311L. Individualized Instruction Lab. (1)**

Laboratory course designed for Spanish Heritage Learners that covers Spanish 311 grammar, with the objective of reinforcing students' writing and reading skills.

Prerequisite: SPN 202.

Co-requisite: SPN 311.

**SPN 312. Introduction to Spanish Language/Linguistics. (3) (MPT)**

Introduction to Spanish phonetics, phonology, morphology, and syntax. May also include an introduction to other areas of linguistic inquiry, and the application of phonetics analysis to improve pronunciation in Spanish. CAS-E.

Prerequisite: SPN 311.

**SPN 315. Intro to Hispanic Literatures. (3) (MPF, MPT)**

Close reading and critical analysis of selected poetry, essay, narrative fiction, and drama from Spain and Latin America. IIB. CAS-B-LIT.

Prerequisite: SPN 311.

**SPN 316. Intermediate Spanish Composition. (3)**

Further development of essential grammar concepts of Spanish and the formal elements necessary to write Spanish with precision. Students are expected to perfect their understanding of grammar rules and to incorporate them into their writing. ADVW.  
Prerequisite: SPN 311.

**SPN 317. Business Spanish. (3)**

An introduction to the cultural and social organization of the Hispanic business world with an overview of the vocabulary and idioms necessary for doing business in Spain or Latin America.  
Prerequisite: SPN 311.

**SPN 318. Introduction to Hispanic Film. (3)**

This course is an introduction to film analysis in Spanish, and to the cinemas of Spain and Latin America. Students will learn the skill of shot by shot analysis, and also learn how to analyze Spanish and Latin American film within its historical and sociocultural contexts. Mandatory weekly screenings.  
Prerequisite: SPN 311.

**SPN 319. Exploring Spain Today (Cultural trip). (1)**

As part of MIAMIinSPAIN only, this course takes place for 7-8 days. Students visit some of the most prominent cultural and historically relevant enclaves in Spain, such as the Prado Museum in Madrid, the Sinangoge of Santa Maria la Blanca in Toledo, or the Alhambra in Granada, and experience first-hand other cultural manifestations of the country (traditional foods, community celebrations, music, etc.).  
Prerequisite: SPN 311.

**SPN 321. The Way of St. James. (2)**

This course takes place during ten days of the Summer Term, while hiking along the Way of St. James in Northern Spain, a UNESCO world heritage site. Independently of the academic component of the course, each participant may have a different personal approach to The Way. A traveling experience, not only physical but also emotional, The Way of St. James may become a religious pilgrimage, an introspective encounter with oneself, an individual challenge of biking around 30 miles or walking around 14 miles daily, or a cultural journey through a different space, and also a different time, as far back as the 11th century.  
Prerequisite: SPN 311.

**SPN 331. Spanish for Community Work. (3)**

An introduction to the Hispanic community with an examination of the achievements and challenges of this community at a national and local level. Designed to familiarize students with the necessary information and skills to be able to work effectively with a partnering organization in ways that benefit the local immigrant community. Spanish 331 is also designed to further students' oral proficiency through intensive oral practice. Students will participate in a 20-hour service-learning project as a part of this course.  
Prerequisite: SPN 311.

**SPN 332. Latin American Popular Culture. (3)**

Interprets and contextualizes elements of Latino and Latin American popular culture (art, music, food, and celebrity) in light of academic readings in Spanish and English that explore issues of hybridity, representation, commodification, and the quest for authenticity. Conducted in Spanish and English. DOES NOT COUNT FOR SPANISH MAJOR AND MINOR.  
Prerequisite: SPN 311 or permission of instructor.  
Cross-listed with LAS.

**SPN 340. Internship. (0-20)****SPN 341. Advanced Conversational Spanish. (3)**

Intensive oral practice through speeches, conversations, dramatizations. Recommend prior completion of or registration in SPN 316.  
Prerequisite: SPN 311 or permission of instructor.

**SPN 342. Advanced Conversational Spanish. (3)**

Intensive oral practice through speeches, conversations, dramatizations.  
Prerequisite: SPN 311.

**SPN 351. Cultural History of Spain I. (3) (MPT)**

Cultural history of Spain, through a historico-literary lens, from the Arab occupation of Al-Andalus through the Reconquest to Spain's "Golden Age" of the Early Modern Period. CAS-B-LIT.  
Prerequisite: SPN 315.

**SPN 352. Cultural History of Spain II. (3) (MPT)**

Cultural history of Spain from the 18th-century to the present, with an emphasis on 20th century Spain. CAB-B-LIT.  
Prerequisite: SPN 315 or permission of instructor.

**SPN 361. Spanish American Cultural History I. (3) (MPT)**

An overview, reflected in a variety of media, of indigenous cultures, their discovery and conquest by the Spanish, and the enduring consequences of the new social, political and artistic order developed during the 300-year colonial period. CAS-B-LIT.  
Prerequisite: SPN 315.

**SPN 362. Spanish American Cultural History II. (3) (MPT)**

Continued exploration of historical events surrounding the struggles for independence from Spain, the legacy of colonial institutions through the nineteenth-century, and the twentieth-century search for democracy and social justice. Specific literary readings and films will vary. CAS-B-LIT.  
Prerequisite: SPN 361 or permission of instructor.

**SPN 370. Topics in Hispanic Studies. (3; maximum 9)**

Varied topics in Hispanic Studies. Repeatable for up to 9 credit hours. Typically offered abroad.  
Prerequisite: SPN 311.

**SPN 377. Independent Studies. (0-5)****SPN 381. Spanish Language and Hispanic Culture I. (3) (MPT)**

Social history of the Spanish language, with emphasis on the social, cultural and political factors that have interacted with language variation and change to produce the complex linguistic tapestry we call 'Spanish'.  
Prerequisite: SPN 312.

**SPN 382. Spanish Language and Hispanic Culture II. (3) (MPT)**

Overview of several sociolinguistic issues as they relate to modern Spanish, such as regional and social variation, minority languages in the Spanish-speaking world, language and gender, language and the media, bilingualism, language choice, language maintenance and shift.  
Prerequisite: SPN 312.

**SPN 392. Language and the Latin American Diaspora. (3) (MPF)**

This is a course on the sociolinguistic manifestations of the Latin American diaspora, with concentration on the US and Spain as two parallel but not equal migratory contexts. Students will study the historic causes and social consequences of linguistic phenomena such as social bilingualism, language contact, language policy, and language in the mass media. Class work emphasizes the discursive analysis of original oral and written texts from immigrant communities and host societies. Taught in translation. IIIB.

**SPN 420. Selected Topics in Literature and Culture: Spain. (3)**

In-depth study of literary texts or films on a specific cultural theme. CAS-B-LIT.

Prerequisites: SPN 312 and (SPN 351 or SPN 361) and (SPN 352 or SPN 362).

**SPN 430. Selected Topics in Literature and Culture: Spanish America. (3)**

In-depth study of Latin American literary texts or films on a specific cultural theme. CAS-B-LIT.

Prerequisites: SPN 312 and (SPN 351 or SPN 361) and (SPN 352 or SPN 362).

**SPN 440. Selected Topics in Spanish Language and Hispanic Culture. (3)**

Explores linguistic issues in the Spanish-speaking world today, focusing on how they reflect economic, social and cultural tensions.

Prerequisite: SPN 315 AND SPN 381 or 382, or permission of instructor.

**SPN 450/SPN 550. Topics in Hispanic Culture and Language. (1-4; maximum 9)**

Intensive study of a special problem or topic, a specific period, author, genre, or movement in Hispanic culture; or special topics in Hispanic language or linguistics. CAS-B.

Prerequisites: SPN 312 and (SPN 351 or SPN 361) and (SPN 352 or SPN 362).

**SPN 451/SPN 551. Spanish Cultural Studies. (3)**

Focuses on one or more areas of Spanish narrative, visual and/or digital culture. May offer comparative approaches. Specific periods and texts may vary according to the instructor. CAS-B-LIT.

Prerequisites: SPN 312 and (SPN 351 or SPN 361) and (SPN 352 or SPN 362).

**SPN 454/SPN 554. Don Quixote. (3)**

Study of Miguel de Cervantes's masterpiece and first modern novel in the Western world. Current critical approaches studied as well. CAS-B-LIT. Prerequisites: SPN 312 and (SPN 351 or SPN 361) and (SPN 352 or SPN 362).

**SPN 461/SPN 561. Spanish American Film, Visual, and Digital Studies. (3)**

The study of film, video, and digital sources in Spanish American cultures. Students will hone critical and analytical skills while being exposed to the rich visual and audio production of Spanish American culture from cross-cultural perspectives. CAS-B-LIT.

Prerequisites: SPN 312 and (SPN 351 or SPN 361) and (SPN 352 or SPN 362).

**SPN 462/SPN 562. Contemporary Spanish American Literature. (3)**

Spanish American literature since the formation of the national states. Topics vary covering issues and authors from the nineteenth-century to the present. The readings may prioritize a specific literary genre (narrative, poetry, theatre) or favor a diverse generic approach to a topic. Blending textual and contextual readings and analysis, this course will delve into foundational socio-historical discourses under literary expressions. CAS-B-LIT.

Prerequisite: SPN 312 and (SPN 351 or SPN 361) and (SPN 352 or SPN 362).

**SPN 463/SPN 563. Spanish American Interdisciplinary Studies. (3)**

Interdisciplinary study of Spanish America, including cultural manifestations in politics, economy, history, anthropology, geography, religion, art, and languages CAS-B-LIT.

Prerequisites: SPN 312 and (SPN 351 or SPN 361) and (SPN 352 or SPN 362).

**SPN 477. Independent Studies. (0-5)****SPN 480. Independent Reading for Departmental Honors. (1-6)**

Departmental honors may be taken for a minimum of four semester hours and a maximum total of six semester hours in one or more semesters of the student's senior year.

**SPN 481/SPN 581. Spanish Phonology and Syntax. (3)**

Overview of the major theoretical approaches to Spanish phonology and syntax. Phonology includes the study of significant sound contrasts in Spanish, and their distribution and representation, as well as suprasegmental elements like syllable structure and stress assignment; syntax analyzes the theoretical basis of Spanish sentence structure.

Prerequisites: SPN 315 AND SPN 381 or 382, or permission of instructor.

**SPN 482/SPN 582. Language Variation in Spanish. (3)**

Study of different varieties of Spanish throughout the world, including the analysis of regional and social dialects. Exploration of the causes and consequences of language variation, including language contact, and social and situational factors.

Prerequisites: SPN 315 and SPN 381 or SPN 382, or permission of instructor.

**SPN 483/SPN 583. History of the Spanish Language. (3)**

History of Spanish from Latin to the present. Changes in phonology, morphosyntax, and lexicon. Comparative analysis of Spanish with other Romance languages, especially other varieties of Ibero-Romance.

Prerequisites: SPN 315 and SPN 381 or SPN 382, or permission of instructor.

**SPN 484/SPN 584. Second Language Acquisition: Spanish. (3)**

A theoretical study of factors influencing first and second language acquisition/learning with a concentration in Spanish.

Prerequisite: SPN 315 AND SPN 381 or 382, or permission of instructor.

**SPN 490. Issues in Hispanic Literature, Linguistics, or Culture. (3) (MPC)**

Intensive study, including reading and independent research in the Spanish language, on a topic in Spanish or Spanish American literature, culture or linguistics. Specific course content varies. May not be taken abroad; must be taken on campus.

Prerequisites: Senior standing and a declared major in Spanish.

**SPN 600. Seminar in Hispanic Language, Literature or Culture. (3; maximum 15)**

In-depth exploration of a specific theme/period/genre/issue in Spanish or Latin American literature, film or culture, or of a selected theme or issue of Spanish linguistics. Research intensive.

**SPN 677. Independent Studies. (0-5)****SPN 680. Independent Studies. (1-6; maximum 6)**

Independent study in Spanish literature and language.

**SPN 700. Research for Master's Thesis. (1-12; maximum 12)**

Prerequisite: graduate standing and approval of instructor.

## Speech Pathology & Audiology (SPA)

**Note:** All graduate courses require graduate standing and approval of instructor.

**SPA 101. Beginning ASL I. (4)**

This course will introduce conversationally relevant signs, fingerspelling, grammatical sign principles and background information related to deaf culture with the objective of teaching students to sign and understand ASL with increasing ability. Cross-listed with DST.

**SPA 102. Beginning ASL II. (4)**

The Beginning II course is a continuation of the Beginning ASL I course. This course will continue to introduce conversationally relevant signs, grammatical principles, and background information related to the Deaf culture with the objective of teaching students to sign and understand ASL with an increasing ability at the ACTFL proficiency intermediate low-mid level (Swender, Conrad, & Vicars, 2012). Swender, E., Conrad, D. J., & Vicars, R. (2012). ACTFL proficiency guidelines 2012. ACTFL, INC. Retrieved from <http://actflproficiencyguidelines2012.org>. Prerequisite: DST/SPA 101.

**SPA 127. Introduction to Communication Disorders. (3) (MPF, MPT)**

Overview of disorders of communication, special problems of speech, language and hearing impairments, and treatment. IIC. CAS-C.

**SPA 177. Independent Studies. (0-5)****SPA 201. Intermediate ASL I. (3)**

The Intermediate ASL I course is a continuation of the Beginning ASL II course. This course will continue to address conversationally relevant signs, grammatical principles, and background information related to the Deaf culture with the objective of teaching students to proficiently sign and understand ASL with an increasing ability dictated by the American Council on the Teaching of Foreign Languages' proficiency intermediate mid-high level. Prerequisite: SPA/DST 102. Cross-listed with DST.

**SPA 202. Intermediate American Sign Language II. (3)**

Intermediate ASL II is the fourth course in the American Sign Language curriculum. Students will continue to develop ASL communication skills receptively and expressively through continued vocabulary and grammar instruction. Deaf culture concepts will be expanded upon with course instruction presented primarily in ASL. In addition, students will partake in service learning opportunities so the student can partake in mastery of ASL and to become assimilated with Deaf culture values.

Prerequisite: DST/SPA 201 or equivalent.

Cross-listed with DST.

**SPA 210. Topics in Speech Pathology and Audiology. (3; maximum 6)**

Explores special topics in the fields of speech-language pathology and audiology.

Prerequisite: SPA 202.

**SPA 222. Anatomy and Physiology Speech Production. (3)**

Introduction to anatomical, physiological, and neurological characteristics of normal speech mechanisms; developmental embryology; and fundamental acoustics of speech.

Co-requisite: BIO 161.

**SPA 223. Theories of Language Development. (3) (MPF)**

Survey of the integration of scientific and theoretical knowledge about the normal acquisition of language from birth to adulthood. Introduction to the linguistic aspects of cultural, political, and environmental impacts on acquisition of language, relationship between English and coexistent languages, gender-related differences in conversational interactions, and the complex interaction of culture and language development. IIC. CAS-C.

**SPA 225. Foundations of Neurology. (3)**

Nature and treatment of speech and language disorders with involved structural and neurological components.

**SPA 233. Perspectives of the Human Face. (3) (MPF, MPT)**

Course describes basic concepts of growth and development of the human face and the resulting craniofacial anomalies (CFAs) that occur when this process is interrupted. The major causes of CFAs are explored, and the major genetic syndromes with CFAs are reviewed. Students learn how to identify CFAs and how to distinguish between normal racial and ethnic variation in facial appearance and anomalous facial appearance. Students also review the causes of CFAs and their impacts on affected individuals, and learn how to select strategies for helping persons with abnormal facial features to live normal lives. IIC.

**SPA 277. Independent Studies. (0-5)****SPA 293. Sophomore Seminar in Speech Pathology and Audiology. (1)**

Professional seminar for majors in speech pathology and audiology. Students learn observational techniques and observe at the Speech and Hearing Clinic.

Prerequisite: Sophomore standing (pre-major status).

**SPA 312. Deaf Culture: Global, National and Local Issues. (3) (MPF)**

Provides a comprehensive orientation to the Deaf and hard-of-hearing communities in continents around the globe. Students will learn the basic vocabulary and grammar of American Sign Language. Consideration will also be given to sign systems in Europe and the U.S. The students will be introduced to the sociolinguistic aspects of educational, political and environmental impacts on Deaf culture, identity, and language. IC, IIC, IIIB.  
Cross-listed with DST.

**SPA 316. Introduction to Audiology. (3)**

Topics include: physics of sound principles and techniques of audiometric testing, types of hearing loss, and treatments for hearing impairment.

Prerequisite: junior standing (major status).

**SPA 326. Aural Rehabilitation. (3)**

Discussion of skills and abilities associated with hearing loss, strategies used in hearing loss intervention including listening and speaking, sign language and hearing aid selection for children and adults.

Prerequisites: junior standing; major status; SPA 316.

**SPA 334. Clinical Phonetics and Articulation Disorders. (3)**

Sound structure of the English language, beginning and advanced transcription using international phonetic alphabet with clinical applications.

Prerequisite: junior standing; major status; SPA 223.

**SPA 340. Internship. (0-20)****SPA 377. Independent Studies. (0-5)****SPA 393. Junior Clinical Experience. (1)**

Professional seminar for majors in speech pathology and audiology. Focuses on counseling in speech pathology and audiology. Multicultural experiences in a variety of contexts. Credit/no-credit basis only.

**SPA 402. Counseling Strategies for Speech Pathologists and Audiologists. (3)**

Provides an understanding of counseling theory and practice as it relates to individuals with communication disorders. Consideration given to the psychological and psychosocial implications of communication disorders to individuals and their families.  
Prerequisite: senior standing; major status; SPA 127 or permission of instructor.

**SPA 413. Senior Seminar in Communication Disorders. (3) (MPC)**

Intensive study of current issues in communication disorders. Each topic builds on knowledge acquired in past courses. Emphasis on analysis of issues, ranging from ethical concerns to multicultural imperatives. Students work collaboratively in developing their topics culminating in oral presentations and written papers. Projects are showcased at a colloquium featuring a national authority. Written proceedings summarize student projects.

Prerequisite: senior standing; major status; Thematic Sequence in speech pathology and audiology, or permission of instructor.

**SPA 416/SPA 516. Research Design. (3)**

Basic principles of research in communication disorders incorporating research design and critical evaluation of clinical research in speech pathology and audiology.

Prerequisite: senior standing; major status; or permission of instructor.

**SPA 426/SPA 526. Language Disorders. (3)**

Etiology, diagnosis, and in-depth analysis of communication disorders in children.

Prerequisite: SPA 223, 334.

**SPA 427/SPA 527. Alternative Communication Systems for the Severely Handicapped. (3) (MPT)**

Overview of manual, graphic, and electronic systems used by individuals with severe communication disabilities.

Prerequisite: SPA 127 or SPA 233.

**SPA 435/SPA 535. Speech and Hearing Science. (3)**

History, current status, and future trends of the scientific aspects of speech production and reception.

Prerequisite: SPA 334.

**SPA 477. Independent Studies. (0-5)****SPA 493. Senior Seminar in Speech Pathology and Audiology. (2)**

Professional seminar and introduction to clinical practice for speech pathology and audiology majors. Information about the intervention process and practical application through supervised clinical work in the Miami University Speech & Hearing Clinic.

Prerequisite: SPA 293.

**SPA 605. Speech, Language, Pathology & Audiology in School Setting. (3-15; maximum 15)**

Externship for graduate students in speech/language pathology and audiology. Full-time experience with supervision of faculty and school speech/language pathologists or audiologists in selected school districts.

**SPA 614. Evidence Based Practice in Communication Sciences and Disorders. (3)**

This graduate level course integrates the fundamental concepts of evidence based practice (EBP) with research methodologies. The goal of this course is for students to directly apply EBP concepts to clinical practice in the area of speech-language pathology. Further, the final student product generated from this research course will fulfill part of the Graduate School requirement for a master of science degree.

Prerequisite: SPA 662.

**SPA 620. Advanced Clinical Practice. (1-8; maximum 16)**

Stuttering (adults), cleft palate, aphasia, cerebral palsy, and voice, hearing, or language disorders. Principles and techniques of examination, appraisal, and treatment supplemented by supervised experiences in Miami's Speech and Hearing Clinic and satellite clinics in the region.

**SPA 621. Neurogenic Language Disorders. (3)**

Advanced study in causes, management, and related research of adult aphasia.

Prerequisite: graduate standing and approval of instructor.

**SPA 622. Organic Speech Disorders: Voice Pathology. (3)**

Advanced study in causes, management, and research of voice disorders.

**SPA 625. Best Practices for the School-Based Speech-Language Pathologist. (2)**

This course provides graduate students with a thorough understanding of the roles and responsibilities of the school-based speech-language pathologist.

**SPA 626. Organization and Administration of Clinical Programs for Communication Disorders. (1)**

Organization and administration of clinical programs appropriate to specific employment settings.

Prerequisite: graduate standing in speech pathology or permission of instructor.

**SPA 627. Pediatric Language and Autism Spectrum Disorders. (3)**

Current trends of research and remediation procedures for language disorders. Individual diversity expressed in language learning through an exploration of the differing effects of various handicaps and cultural diversity.

Prerequisite: SPA 226.

**SPA 629. Organic Speech Disorders: Motor Speech Disorders. (2)**

Advanced study in causes, management, and related research of motor speech disorders.

**SPA 631. School Age Language and Literacy. (3)**

Assessment and treatment of communication delays and disorders in infants, toddlers, and preschool children.

**SPA 633. Phonological and Articulation Disorders. (3)**

Reviews assessment and intervention strategies relative to the effective clinical management of persons with disorders of phonology affecting communication and literacy. Its emphasis will be in the area of treatment with over two-thirds of the course content devoted to the clinical management process.

**SPA 641. Advanced Studies in Fluency Therapy. (2)**

Advanced study in management of fluency disorders.

**SPA 651. Dysphagia, Trachs and Vents. (3)**

Studies in the causes, evaluation, treatment, and selected research in feeding and swallowing disorders.

**SPA 653. Normal Deglutition Across the Lifespan. (1)**

The primary purposes of this course are to provided the student with an understanding of the anatomy, physiology and neurologic substrates of the structures and function of the aeryodigestive tract as related to oropharyngeal and esophageal phases of swallowing across the lifespan.

Prerequisite: SPA 672.

**SPA 660. Independent Project. (1-6; maximum 8)****SPA 662. Research in Speech Pathology and Audiology. (3)**

Advanced studies of research and statistical data collection in the area of communication disorders.

**SPA 671. Neurogenic Cognitive Disorders. (3)**

Advanced study in neuropathology, diagnosis, treatment, and research of adult neurogenic cognitive disorders.

Prerequisite: SPA 672.

**SPA 672. Fundamental Neuroscience for Speech-Language Pathologists. (1)**

Neuroanatomy of normal speech and hearing mechanisms and current research implications for speech therapy. This course will focus on the Knowledge and Skills in speech-language pathology standards for graduate student education in the degree program.

**SPA 673. Genetics & Syndromes. (1)**

Introduces students to basic genetic concepts, inheritance patterns, characteristics and etiology of major genetic syndromes. Provides students with brief identification, assessment and treatment options for 30 commonly encountered syndromes.

**SPA 677. Independent Studies. (0-5)****SPA 700. Research for Master's Thesis. (1-12; maximum 12)****SPA 711. Research In Speech Pathology. (1-12)**

Students pursuing the non-thesis option may register for these hours while working on a research project; however, these hours are typically taken during the second year of the program.

**SPA 720. Seminar in Speech Disorders. (1-2; maximum 8)**

Current professional problems of a selected topic explored through study of recent research, clinical literature, and individual student projects.

Prerequisite: six hours in 600-level speech pathology courses.

**SPA 750. Professional Field Experience. (1-10; maximum 20)**

Intern experiences for the advanced graduate student.

## Statistics (STA)

**Note:** *Service courses* do not count toward majors in the Department of Statistics or the Department of Mathematics. They may or may not count toward majors in other departments. Look carefully at your major requirements elsewhere in this Bulletin.

**STA 125. Introduction to Business Statistics. (3)**

This course provides an introduction to data, probability, sampling and its importance to analytical decision-making in business.

Upon successful completion of this course, students will have the foundational skills necessary to summarize data, describe relationships among variables, and conduct one-sample and two-sample statistical inference.

Prerequisites: MTH 102 or 104 or MTH 121 or MTH 151 or Math Placement score of 12 or higher or three years of college preparatory mathematics or permission of department chair.

Cross-listed with ISA.

**STA 147. First Year Seminar in Mathematics and Statistics. (1)**

Serves as an introduction to various areas of Mathematics and Statistics. Conducted in a seminar/lecture format, the course provides majors in the departments of Mathematics and Statistics with information about undergraduate research and career options as well as about departmental, College, and University resources and requirements. The course helps students plan how to make the most of their time at Miami, and establish a foundation for academic and co-curricular success.

Prerequisites: Completion of or enrollment in MTH 151 (or above) or permission of instructor.

Cross-listed with MTH 147.

**STA 177. Independent Studies. (0-5)****STA 250. Basic Math for Analytics. (3)**

Provides students with practical and applied foundational mathematics needed as background for success in data-driven decision making. Topics include sets, functions in single and multiple variables including logarithms, exponentials, and trigonometric; matrix algebra operations; introductory calculus concepts; and basic optimization principles necessary for data analysis. Introduction to applied software driven techniques is included in the course.

Prerequisites: MTH 102 or MTH 104 or MTH 121 or three years of college preparatory mathematics or permission of department chair.

Co-requisites: STA 261, ISA 225, or STA 301.

Cross-listed with ISA.

**STA 261. Statistics. (4) (MPF, MPT)**

Service course. Descriptive statistics, basic probability, random variables, binomial and normal probability distributions, tests of hypotheses, regression and correlation, analysis of variance. Emphasis on applications. Note: Credit for graduation will not be given for more than one of ISA 205, STA 261, STA 301, or STA 368. V. CAS-E.

**STA 271. Introduction to Actuarial Science. (1)**

Introduction to the actuarial profession and to the concepts and problems encountered by actuaries. Topics include the different types of insurance, probability's role in insurance, interest theory, mortality, annuities, pensions, reserves, life insurance, the different actuarial societies, and employment opportunities. Each class meeting will feature a guest lecturer from an area insurance company.

**STA 277. Independent Studies. (0-5)****STA 301. Applied Statistics. (3) (MPT)**

A first course in applied statistics including an introduction to probability, the development of estimation and hypothesis testing, and a focus on statistical methods and applications. Includes introduction to probability of events, random variable, binomial and normal distributions, mathematical expectation, sampling distributions, estimation, and hypothesis testing. Statistical methods include one and two sample procedures for means and proportions, chi-square tests, analysis of variance, and linear regression. Credit for graduation will not be given for more than one of ISA 205, STA 261, STA 301, or STA 368.

Prerequisite: MTH 151 or MTH 249 or MTH 251.

**STA 308. Introduction to Programming and Scripting for Data Analytics. (3)**

Introduction to computer programming concepts used for solving mathematical problems and manipulating data. Control structures, functions, formatted input/output, character and string processing, arrays, procedural and functional programming, basic elements of object-oriented programming. Emphasis on programming languages in high demand for data analytics.

Prerequisites: STA 261 or STA 301 or ISA 225 or POL 306.

Cross-listed with POL.

**STA 309. Building, Managing and Exploring Data Sets in Analytics. (3)**

Techniques for constructing, downloading, cleaning, combining, extracting and manipulating data sets to prepare them for statistical analysis and visualization. Emphasis on programming languages used in data analytics and structured query language.

Prerequisites: STA/POL 308; STA 363 or ISA 291 or POL 306; MTH 133 or ISA/STA 250.

Cross-listed with POL.

**STA 333. Nonparametric Statistics. (3) (MPT)**

Applied study of statistical techniques useful in estimating parameters of a population whose underlying distribution is unknown. Chi-square, runs, and association tests covered. CAS-QL. (For majors in the department, this course counts only toward the B.S. in Data Science and Statistics.)

Co-requisite: ISA 291 or STA 363.

Cross-listed with ISA.

**STA 340. Internship. (0-20)****STA 350. Topics in Statistics. (1-4; maximum 6)**

Topics in statistics that are extensions or applications of ideas covered in previous statistics courses. Previous statistics courses at the 2xx/3xx level is typically assumed.

**STA 363. Introduction to Statistical Modeling. (3) (MPT)**

Applications of statistics using regression and design of experiments techniques. Regression topics include simple linear regression, correlation, multiple regression and selection of the best model. Design topics include the completely randomized design, multiple comparisons, blocking and factorials. STA 363 may not be taken after credit has been earned for STA 463/STA 563. CAS-QL.

Prerequisite: STA 261 or STA 301 or STA 368 or ISA 205; or permission of instructor.

**STA 365. Statistical Monitoring and Design of Experiments. (3)**

Introduction to statistical methods for monitoring process data and data streams. Introduction to experimental design with applications in business analytics.

Prerequisite: ISA 205 or ISA 225 or STA 301 or STA 363 or equivalent.

Cross-listed with ISA.

**STA 368. Introduction to Statistics. (4) (MPT)**

Service course. Beginning course in statistics with emphasis on methods and applications. Probability, random variables, binomial and normal probability distributions, sampling distributions, statistical inference procedures, linear regression, analysis of variance and other data analysis methods. Note: Students with majors other than engineering should take STA 301 rather than STA 368. Engineering majors should check the degree requirements for their major to determine whether to take STA 301 or STA 368. Credit for graduation will not be given for more than one of ISA 205, STA 261, STA 301, or STA 368.

Prerequisite: MTH 151 or MTH 249 or MTH 251.

**STA 377. Independent Studies. (0-5)****STA 401/STA 501. Probability. (3)**

Development of probability theory with emphasis on how probability relates to statistical inference. Topics include review of probability basics, counting rules, Bayes Theorem, distribution function, expectation and variance of random variables and functions of random variables, moment generating function, moments, probability models for special random variables, joint distributions, maximum likelihood estimation, unbiasedness, distributions of functions of random variables, chi-square distribution, student's t distribution, F distribution, and sampling distributions of the sample mean and variance. Note: STA 501 may not be counted toward graduate degree programs in mathematics or statistics.

Prerequisite: STA 261, 301 or 368, or equivalent and Calculus II.

**STA 402/STA 502. Statistical Programming. (3)**

Introduction to the use of computers to process and analyze data. Techniques and strategies for managing, manipulating, and analyzing data are discussed. Emphasis is on the use of the SAS system. Statistical computing topics, such as random number generation, randomization tests, and Monte Carlo simulation, will be used to illustrate these programming ideas.

Prerequisite: A grade of C or better in ISA 291 or ISA/STA 333 or STA 363 or STA 463/STA 563 or STA 672; or STA graduate standing.

**STA 404/STA 504. Advanced Data Visualization. (3)**

Communicating clearly, efficiently, and in a visually compelling manner using data displays. Identifying appropriate displays based on various data characteristics/complexity, audiences, and goals. Using software to produce data displays. Integrating narratives and data displays. Critiquing visualizations based on design principles, statistical characteristics, and narrative quality. CAS-QL.  
Prerequisites: STA 261 or 301 or 368 or 671, or IMS 261, or ISA 205, or by permission of instructor.  
Cross-listed with IMS/JRN.

**STA 427/STA 527. Introduction to Bayesian Statistics. (3)**

Introduces the Bayesian approach to statistical inference for data analysis in a variety of applications. Topics include: comparison of Bayesian and frequentist methods, Bayesian model specification, prior specification, basics of decision theory, Markov Chain Monte Carlo, Bayes factor, empirical Bayes, hierarchical models, and use of computational software.  
Prerequisites: A grade of C or better in STA 462/STA 562 or STA 665, and STA 463/STA 563; or permission of instructor.

**STA 432. Survey Sampling in Business. (3) (MPT)**

Survey sampling with applications to problems of business research. Simple random sampling, systematic sampling, stratified random sampling, ratio estimation, and cluster sampling. (For majors in the department, this course counts only toward B.S. in statistics.)  
Prerequisite: ECO 301, ISA 305, STA 363, STA 401/STA 501 or STA 463/STA 563 or permission of instructor.  
Cross-listed with ISA.

**STA 450. Advanced Topics Statistics. (1-4; maximum 8)**

Topics in statistics that are extensions or applications of ideas covered in previous statistics courses. Previous statistics courses at the 4xx level is typically assumed.

**STA 462/STA 562. Inferential Statistics. (3)**

A study of estimation and hypothesis testing including a development of related probability ideas. Topics include derivation of the distribution of functions of random variables, point estimation methods, properties of point estimators, derivation of confidence interval formulas, and derivation of test statistics and critical regions for testing hypotheses.  
Prerequisite: MTH 252 with a grade of C or better and STA 363 with a grade of C or better and STA 401/STA 501 with a grade of C or better.

**STA 463/STA 563. Regression Analysis. (4)**

Linear regression model, theory of least squares, statistical inference procedures, general linear hypothesis, partial F tests, residual analysis, regression diagnostics, comparison of several regressions, model adequacy, and use of statistical computer packages.  
Prerequisite: MTH 222 with a grade of C or better and STA 363 with a grade of C or better and STA 401/STA 501 with a grade of C or better.

**STA 466/STA 566. Experimental Design Methods. (4)**

Experimental design concepts; completely randomized, randomized block, and Latin square designs; planned and multiple comparisons; analysis of variance and covariance; factorial and split-plot experiments; nested designs and variance components; fixed, random, and mixed effects models. Emphasis on applications and computer usage.  
Prerequisite: STA 463/STA 563 or ISA 291 with a grade of C or better.

**STA 467/STA 567. Statistical Learning. (3)**

Introduction to methods of statistical learning, with emphases on both theory and implementation. Topics include supervised and unsupervised learning methods, including linear and nonlinear models for regression and classification, additive models, recursive partitioning methods, neural networks, support vector machines, association rules, and cluster analysis; ensemble methods; and methods of model assessment and selection. Credit not awarded for both STA 467/STA 567 and ISA 491/ISA 591.  
Prerequisite: STA 463/STA 563 with a grade of C or better.

**STA 471/STA 571. Actuarial Exam Preparation Seminar: Probability. (1)**

Solution and discussion of challenging probability problems such as those found on the first actuarial exam.  
Prerequisite: STA 401/STA 501 or permission of instructor.

**STA 475. Data Analysis Practicum. (3) (MPC)**

The use of statistical data analysis to solve a variety of projects. Emphasis on integrating a broad spectrum of statistical methodology, presentation of results both oral and written, use of statistical computing packages to analyze and display data, and an introduction to the statistical literature. A term project involving student teams combines elements of all of the above. CAS-QL.  
Prerequisite: senior standing and STA 463/STA 563 or 363, or ISA 291 with a grade of C or better and at least one of STA 404/STA 504, STA 466/STA 566, STA 467/STA 567 or STA 483/STA 583.

**STA 477. Independent Studies. (0-5)****STA 480. Departmental Honors. (1-6; maximum 6)**

Departmental honors may be taken for a minimum of four semester hours and a maximum total of six semester hours in one or more semesters of student's senior year.

**STA 483/STA 583. Analysis of Forecasting Systems. (3)**

Introduction to quantitative prediction techniques using historical time series. Involves extensive use of interactive computing facilities in developing forecasting models and considers problems in design and updating of computerized forecasting systems. Credit not awarded for both STA 483/STA 583 and ISA 444.  
Prerequisite: A grade of C or better in STA 463/STA 563; a grade of C or better in STA 401/STA 501 and STA 363 or ISA 291.

**STA 600. Topics in Advanced Statistics. (1-4; maximum 10)**

Prerequisite: permission of department chair.

**STA 609. Probability and Statistics for Secondary School Teachers. (2-3)**

For high school teachers. Selection of topics, with emphasis on developing good intuition as well as good understanding of the logic of the subject. Emphasis upon applications. For students in mathematics and statistics programs, credit may only be applied to Master of Arts in Teaching. Summer only.  
Prerequisite: licensure in secondary school mathematics or permission of instructor.

**STA 615. Statistics for Criminal Justice. (3)**

This course provides an expedited instruction of statistical analyses used in the social sciences. Additionally, students will learn statistical analytic techniques applicable in a wide variety of criminal justice agency settings.  
Prerequisite: admission to the MS in Criminal Justice or permission of instructor.  
Cross-listed with CJS.

**STA 616. Communicating with Data. (3)**

Bridges the study of technical and computational tools to the audiences who need the results of this work. This course will span the entire process of developing a data analytic product from consultation with a client to implementing a solution to presenting the solution to the client. This course will address the fundamentals of effectively communicating with and about quantitative analyses. Topics include using data visualization to describe data; document descriptive, predictive, and prescriptive analytical methods for reproducibility; write professional white papers and technical reports; and ethical considerations related to writing and communication with data. Cross-listed with ISA.

**STA 635. Introduction to Predictive Analytics. (3)**

Introduction to foundational statistical methods and techniques relevant to predictive statistical modeling. Topics include simple and multiple linear regression models, logistic regression models, nonlinear regression, and classification and regression trees. Widely used statistical software packages will be introduced and used extensively in the course. Cross-listed with ISA.

**STA 637. Statistical Programming and Data Visualization. (3)**

Introduction to programming concepts, techniques and strategies for preparing, managing and displaying data in the context of statistical analyses. Topics include cleaning, combining, extracting and reshaping data sets; invoking statistical procedures and managing the results as data sets; creating appropriate production-quality tabular and graphical displays of data and results of analyses. Emphasis on widely used software packages for statistical analysis and visualization.

**STA 638. Predictive Analytics and Data Mining. (3)**

An in-depth look at predictive modeling using decision trees, neural networks, logistic regression and ensemble methods. Best practices for building, comparing, and implementing predictive models are presented. Other topics include unsupervised learning techniques such as cluster analysis, segmentation analysis, market basket, and sequence analysis. Emphasis on use of software and real-world applications. Cross-listed with ISA.

**STA 640. Internship. (0-12; maximum 12)****STA 650. Topics in Statistics. (1-4; maximum 8)**

Topics selected from an area of statistics. Prerequisite: permission of instructor.

**STA 660. Practicum in Data Analysis. (3)**

Supervised practice in consulting and statistical data analysis including use of computer programs. Maximum of six hours may be applied toward a degree in mathematics or statistics. Offered credit/no-credit basis only. Prerequisite: STA 566.

**STA 664. Theory of Statistics. (3)**

Topics from distribution theory, theory of estimation, theory of tests of hypothesis. Prerequisite: Graduate standing or permission of instructor.

**STA 665. Theory of Statistics. (3)**

Topics from distribution theory, theory of estimation, theory of tests of hypothesis. Prerequisite: STA 664 and graduate standing; or permission of instructor.

**STA 666. General Linear Models. (3)**

The theory of linear models used in regression and experimental design. Topics will include: multivariate normal distributions, quadratic form theory, general linear model theory and inference for both full and less than full rank models, estimability and estimable functions. Prerequisite: STA 463/STA 563.

**STA 667. An Introduction to Multivariate Statistical Analysis. (3)**

Study of multivariate normal distribution, estimation and tests of hypotheses for multivariate populations, principal components, factor analysis, discriminant analysis. Prerequisite: Graduate standing or permission of instructor.

**STA 671. Environmental Statistics. (3)**

Service course. Descriptive statistics, probability models, sampling distributions, estimation, hypothesis testing, regression and correlation analysis, elements of experimental design, and analysis of variance. Prerequisite: Graduate standing or permission of instructor.

**STA 672. Statistical Modeling and Study Design. (4)**

Introduction for graduate students to various methods of data analysis, forecasting, and building and use of computer simulation and optimization models for analysis and solution of environmental problems. Prerequisite: basic course in statistics and admission to IES or permission of instructor.

**STA 685. Biostatistics. (3)**

Introduction to statistical techniques used in biostatistics focusing on analysis of survival and lifetime data. Topics include nonparametric and parametric methods for estimation and comparison of survival distributions. Additional material chosen from clinical trials design and analysis, dose-response models, and risk estimation models. Prerequisite: Graduate standing or permission of instructor.

**STA 686. Quality Control and Industrial Statistics. (3)**

Introduction to theory and application of statistical procedures used in industry. Topics include quality control, control charts, acceptance sampling, process optimization techniques, evolutionary operations, response surface methodology, canonical and ridge analysis, method of steepest ascent, and first and second order models. Prerequisite: STA 463/STA 563 or permission of instructor.

## Strategic Communication (STC)

**Note:** MAC 143 is a requirement for all majors in the Department of Media, Journalism and Film.

**STC 135. Principles of Public Speaking. (3)**

Develops fundamentals of analyzing, organizing, adapting, and delivering ideas effectively in public contexts. Special emphasis placed upon informative and persuasive discourse.

**STC 136. Introduction to Interpersonal Communication. (3) (MPF)**

Introduction to major theories and empirical research regarding the role of interpersonal communication and related personal, contextual, and cultural variables in the development of various types of dyadic relationships. Does not count toward the strategic communication major. IIC. CAS-C.

**STC 177. Independent Studies. (0-5)****STC 201. Special Topics in Language Awareness. (3; maximum 9) (MPF)**

Introduces various ways of looking at language: sociological, psychological, and formal. Students study how language plays a role in every human activity, from gender and racial stereotyping to the development of automata. May be taken three times, with different topics. IIC.

Cross-listed with ENG 201.

**STC 205. American Film as Communication. (3)**

Introduction to the study of communication via American motion pictures. Focuses on analysis of technical and narrative elements found in motion pictures. Screening of films provides backdrop for discussing visual impact of motion pictures as significant form of mass communication.

Cross-listed with FST.

**STC 231. Small Group Communication. (3)**

Theoretical issues that affect communication between members of work teams, discussion groups, and decision-making bodies. Students study these theories and related research studies and work as members of student teams to analyze critically both the theoretical and practical implications of the theories and research studies.

**STC 239. Theories of Communication. (3) (MPT)**

Introduction to communication and rhetorical theories. Students completing this course should be able to demonstrate competence in understanding the various theories discussed and see how they fit in the field of communication.

**STC 259. Introduction to Strategic Communication and Public Relations. (3)**

Introduction to the use of communication to influence societal issues and the field of public relations. Focuses on the history and development of the discipline and analyzes the influence of strategic communication on society. Covers theory and research foundations as well as broad contexts of application such as social activists, corporate stakeholders, media, community, and political groups.

**STC 262. Empirical Research Methods. (3)**

Examination and application of concepts and contexts of contemporary communication research and methods of research that facilitate investigation of human communication processes. Emphasizes experience in data collection and using the computer as a research tool. CAS-Q.

Prerequisite: ISA 205 or STA 261 or STA 301.

**STC 277. Independent Studies. (0-5)****STC 339. Introduction to Organizational Communication. (3)**

Focuses on how communication affects organizational systems and performance. Introduces theories and issues central to the study of organizational communication. Emphasis given to the interrelationship of task performance, human interaction, and the improvement of communication within organizations.

**STC 340. Internship. (0-20)****STC 359. Strategic Communication Planning. (3)**

Introduction to the study of public relations and its influence on society. Analysis of the communication functions, theories, and processes of public relations and the publics involved in societal, political, business, and nonprofit contexts.

Prerequisite: STC 259.

**STC 377. Independent Studies. (0-5)****STC 431. Persuasion Theory and Research. (3)**

Examines the formation, change, and functions of attitudes and the link between attitudes and behavior. Emphasis placed on understanding relevant theory and research.

**STC 436. Intercultural Communication. (3)**

Examines similarities and differences among cultures and subcultures with regard to norms, values, and practices in verbal and nonverbal communication. Barriers, such as prejudice and ethnocentrism, to effective intercultural communication addressed. IC.

**STC 437. Advocacy in Contemporary America. (3) (MPC)**

Analyzes post-World War II public persuasion, including messages from a broad variety of media contexts.

**STC 439. Advanced Organizational Communication. (3) (MPC)**

Interpersonal, small group, and public communication are discussed within organizational context. The effects of personal and organizational values and behavior on communication and organizational activity are linked to the broader community. Course includes class discussion, team work, student presentations, and writing projects.

Prerequisite: STC 339 or permission of instructor.

**STC 450. Topics in Communication. (3; maximum 9)**

Study or research of issues and problems associated with communication under the guidance of a faculty member of the department.

Prerequisite: major status or permission of instructor.

**STC 459. Advanced Public Relations. (3) (MPC)**

This seminar course emphasizes public relations case study analysis. Students critically analyze issues drawn from social, political, business, and nonprofit cases. Student teams apply principles learned in this course and prior courses to work with clients using research and strategic analysis to create solutions to public relations challenges. Course format involves discussion, team work, and extensive written work.

Prerequisite: STC 359, or permission of instructor.

**STC 469. Public Relations Practicum. (1-2; maximum 8)**

Practical experience in public relations work. Cannot count for credit toward major in communication.

Prerequisite: PRSSA membership and permission of instructor.

**STC 477. Independent Studies. (0-5)****STC 478. Inside New York City- Study Away. (3)**

A three-week experience takes students "inside" New York City through field trips, guest speakers, panel discussions and an opportunity to job shadow in your area of specialization. Students will meet with industry leaders from every corner of the public relations, marketing, and advertising world from large agencies to small nonprofits and everything in between. In addition, students will get the full experience of NYC as they visit media headquarters, museums, and Broadway. Two weeks of lectures, discussions, and on-site visits are followed by one week of job shadowing a media professional - all in New York City.

Prerequisite: STC 259.

## Teacher Education (EDT)

### EDT 002. College Reading II. (3)

EDT 002 is a 3 non-degree credit hour course which is a credit/no credit class. Instruction focuses on learning and applying strategies in reading to improve comprehension. This course teaches reading as a thinking process to improve understanding of written material. Instruction focuses on applying effective reading/thinking strategies to increasingly difficult reading material, addressing effective vocabulary and reading study skills including synthesis, evaluation, and argumentation.

### EDT 110. Learning Strategies for College Success. (2)

Designed to teach study skills (reading, note-taking from texts and lectures, organizing and composing orally and in writing) necessary for student to function effectively at Miami University.

### EDT 177. Independent Studies. (0-5)

#### EDT 181. Physical Science. (4) (MPF)

Introduction to fundamental concepts and principles of physics, chemistry (181) astronomy, meteorology, and earth science (182). Basic and integrated processes of science as well as science concepts introduced and related to societal problems to promote understanding and interaction within a technological society. Encouraged to think critically, understand contexts of knowledge, and participate in scientific enterprise. 3 Lec.1 Lab. IVB, LAB.

#### EDT 182. Physical Science. (4) (MPF)

Introduction to fundamental concepts and principles of physics, chemistry (181) astronomy, meteorology, and earth science (182). Basic and integrated processes of science as well as science concepts introduced and related to societal problems to promote understanding and interaction within a technological society. Encouraged to think critically, understand contexts of knowledge, and participate in scientific enterprise. 3 Lec.1 Lab. IVB, LAB.

#### EDT 188. Creativity and Innovation in STEM Education. (3) (MPT)

The goal of this course is an introduction to STEM (Science, Technology, Engineering and Mathematics) Education and its basic principles of creativity and innovation. This course is the first course in the "Exploring STEM Education in Society" thematic sequence. This course will provide many opportunities for thinking critically, problem solving, and in-depth writing.

#### EDT 190. Introduction to Education. (3)

Introductory course combining classroom activities, technology experiences and school visits to assist students in deciding whether or not to pursue a teacher licensure program and to begin the professional preparation process.

#### EDT 202. Global Childhood Education: Diversity, Education & Society. (3) (MPF)

This course focuses on increasing awareness, sensitivity, and understanding of the diverse cultural, ethnic, linguistic, religious, and family backgrounds of children in education from broader perspectives. It provides students with an opportunity to explore the multicultural American society as well as the global communities. It starts by learning about ourselves that is a basic foundation to understand and respect others. It also offers a chance to see, feel, and think in a different way than we have ever had before. Such mental, emotional, and intellectual "bothering and challenging" is consistently planned and encouraged in this course in order to reexamine our taken-for-granted assumptions and expectations. This course discusses the critical issues by connecting them to application into educational practice and settings. Therefore, it attempts to incorporate the various meanings and concepts of social justice, equality, multiculturalism, diversity and globalization and internationalism into education. IIIB.

#### EDT 205. Race, Cultural Diversity, and Equity in Education. (3) (MPF)

This course will explore the complex relationship between race, cultural diversity, and inequity in education. It will interrogate the idea and construction of "race," and will examine how racial inequities are produced, maintained, and resisted in educational institutions. It will attend to diversity within groups by considering the dynamics of race as it intersects with gender, class, sexuality, dis/ability, language, and religion. The course will also analyze the historical and ongoing exclusion and marginalization of minoritized groups, and the hegemonic dominance and normalization of whiteness in education policies, curriculum and pedagogy, assessment and achievement, teacher and student identities, school and classroom spaces, and family and community engagements. It will employ various conceptual frameworks to look inside educational structures and cultures that sustain inequities and that challenge and remedy them. Finally, the course will provide students with opportunities to investigate these issues as they relate to their own experiences and communities. IC, IIIB.

#### EDT 212. Applied Philosophy for Education. (3)

This course is designed to provide preservice and inservice teachers with a foundational knowledge of philosophy, including epistemology, logic, and ethics, primarily to prepare them to teach social studies education in public schools.

#### EDT 221. Teaching English Language Learners in PK-12: Culture & Second Language Acquisition. (3) (MPF)

The first of three sequenced courses in the Teaching English Language Learners (TELLs) certificate, EDT221 TELLs in PK-12: Culture & SLA provides the theoretical foundations necessary for PK-12 teachers to work successfully with English Language Learners (ELLs) in the mainstream classroom. A field experience component, coupled with comprehensive case study assignments, enables teachers to obtain real-world understanding of the cultural and language development issues facing ELLs, their families and their teachers in schools. IIIB.

**EDT 225. Family School and Community Connections. (3)**

This course focuses on the theory and practice of joining families, communities, and schools to support student learning, development and success in education. Strategies to improve communication and collaboration are emphasized with a focus on family types, cultures, economic conditions, school systems, community services, political forces, advocacy groups, and other factors that impact children and their families. IC.

Cross-listed with FSW.

**EDT 246. Foundations of Language and Literacy. (3)**

Explores the foundations of language and literacy development as content background for effective language and literacy instruction, birth to age 21. Topics include theories of language and literacy development, history of reading and writing instruction, literacy and technology, cultural and linguistic aspects of literacy, and various perspectives and models of literacy learning. Note: Early Childhood education majors take 246E as part of block 1 and Middle Childhood education majors take 246M in the early field block. Integrated English/Language Arts majors take EDT 246A prior to EDT 346A. Prerequisite: admission to the program (for early and middle childhood majors).

**EDT 246A. Foundations of Language and Literacy. (3)****EDT 246E. Foundations of Language and Literacy. (3)****EDT 246M. Foundations of Language and Literacy. (3)****EDT 251. Research Skills and Strategies - Library & Internet. (2)**

Build research skills and improve your search strategies using current technology, online tools, and the Internet. Progress through the research process as you apply critical thinking to your information need. Develop skills in finding and evaluating information and citing sources. Learn to use library services and resources including the online catalog, research databases, and print and digital collections.

**EDT 252M. Early Field Experience: Middle Childhood. (3)**

Professional seminar for students admitted to a cohort in teacher education in the middle childhood licensure. Explores process of becoming a teacher and includes clinical and field experiences. Part of early field block.

Prerequisite: admission to and retention in middle childhood cohort.

**EDT 265. Mathematics: History and Technology. (3)**

A mathematics course for middle childhood education majors, using various technologies to investigate such topics as mathematical modeling, proportional reasoning, and historical development of math concepts.

Prerequisites: two of the following: MTH 115, MTH 116, MTH 151/153, MTH 217, MTH 218.

**EDT 272E. Introductory Child Development: PreBirth through Age 8. (3)**

Knowledge of early childhood development to facilitate optimal growth and learning in young children. Emphasis is on all domains and universal characteristics and needs of children and recognition of the unique and highly individualized characteristics and needs of each child within complex social, linguistic and cultural contexts. From current theory and research, advocacy of developmentally appropriate practices and strengthened family interactions. Focuses on NAEYC, standards, and diversity. Part of ECE Block 1.

Prerequisite: admission to ECE Program.

Co-requisites: EDT 315E and 246E.

**EDT 273. Prekindergarten Integrated Curriculum I. (3)**

Course for students who wish to become child care professionals, working with young children ages 0-5, not yet in kindergarten, in a variety of settings, including public, corporate and private child care centers and preschools. Topics include integration of learning experiences through preparation of safe and healthy environments, observation and assessment tools, behavior management, and adult interactions. Special needs of children are also considered. A 24-hour practicum in a diverse setting is required.

**EDT 274. Prekindergarten Integrated Curriculum II. (3)**

Course for students who wish to become child care professionals, working with young children ages 0-5, not yet in kindergarten, in a variety of settings, including public, corporate and private child care centers and preschools. Topics include development of appropriate curriculum through an integrated thematic approach and lesson planning in the arts, literacy, and content areas, including health, physical education, math, social studies and science. Parent/community involvement and special needs of children are also considered. Twenty-two hours of field work in diverse settings is required.

**EDT 277. Independent Studies. (0-5)****EDT 284. Writing for Educators. (3)**

This writing course is designed for prospective educators and those who want to strengthen their written voices. Students will develop and extend attitudes, habits, and skills that enable them to write with efficiency, clarity, and substance. In addition to writing in a number of genres, students will study the craft of successful writers to learn strategies that expand their own writing repertoire. A central feature of this course is peer response and one-to-one conferences with the instructor to help students learn to revise evolving writing into writing worth reading. ADVW.

Prerequisite: ENG 111 or equivalent.

**EDT 288. Ways of Thinking in STEM (Science, Technology, Engineering, and Mathematics) Education. (3)**

Over the course of human history, many theories have been developed to help us better understand our physical, biological, psychological, and social worlds. In the process of developing these theories, STEM professionals have used particular ways of observing natural phenomena - thinking, questioning, experimenting, and validating their observations, methods, and theories. This course is designed to help you understand the nature of scientific inquiry and scientific knowledge, mathematical reasoning, engineering and technological design, and the interactions among science, technology, engineering, mathematics and society. The overall goal of the course is to increase your appreciation for the ways of knowing in STEM and contributions of STEM to society in the past, present, and future.

**EDT 303. Community Based Practices: Learning Enhancement for Preschool Children from Low Income Families. (1-3; maximum 3)**

This course is designed for Miami students to learn how to enhance the learning of low income preschool children through technology based content instructions with various learning activities and experiences. The focus of the course is on Butler County preschool classrooms which include children with special needs and children from Latino and various different cultural backgrounds. Miami students will interact with young children in the preschool classroom, teach digital media (iPad) instructions with several contents such as math, social studies, or/and science with literacy components, support young children's parents, and collaborate with in-service teachers under the course instructor's close supervision.

**EDT 310. Applications of Peer Education. (1)**

Introduction to theories and methods of effective tutoring and peer education at college level.

Prerequisite: recommendation of faculty member and department chair in tutor's content area or permission of instructor.

**EDT 311. Educational Strategies for Non-Majors. (3)**

Curriculum, materials, and methods of teaching in K-12 schools; lesson planning, questioning strategies, cooperative learning, concept development, technology, evaluation, teaming, understanding learning styles and needs of learners and the teaching environment; teaching professionalism.

**EDT 315E. Teaching with Children's Literature Across the ECE Curriculum. (3)**

Focuses on selecting and using quality literature with young children, with emphasis on various genres and content areas, and provides methods of fostering literacy growth through literature for all early childhood learners, ages 3-8.

Prerequisite: admission to ECE program.

Co-requisite: EDT 272E and 246E in ECE Block 1.

**EDT 317E. Teaching Science: Early Childhood. (3)**

Basic principles, methods, curriculum trends, and materials for teaching science to children, ages 3-8. Laboratory and field experiences with children are integral to meeting course objectives. Prerequisite: retention in ECE cohort and successful completion of Block I in early childhood education.

**EDT 318E. Mathematics in Early Childhood. (3)**

Study of theory and principles regarding techniques and materials for facilitating the mathematics learning of children in early childhood; laboratory and field work integral to meeting course objectives, which are aligned with the Ohio model objectives and state and national standards for teaching and learning mathematics.

Prerequisite: retention in ECE cohort and successful completion of Block I in early childhood education.

**EDT 323. Teaching English Language Learners in PK-12: Instructional Theories & Practices. (3) (MPF)**

The second of three sequenced courses in the Teaching English Language Learners (TELLs) certificate, EDT 323 TELLs in PK-12: Instructional Theory & Practices provides the instructional foundations necessary for PK-12 teachers to work successfully with English Language Learners (ELLs) in the mainstream classroom. A field experience component, coupled with comprehensive case study assignments, enables teachers to obtain real-world understanding of the instructional and assessment issues facing ELLs and their teachers in schools. IIIB.

**EDT 340. Internship. (0-20)****EDT 346A. Reading Instruction for Adolescents. (3)**

Basic course in instructional principles and methods for reading and studying techniques in specific subject area courses taken by adolescents. Emphasis on strategies to improve reading comprehension and vocabulary. Laboratory and field experiences are an integral part of the course.

Prerequisite: EDT 246A and retention in adolescent integrated English/language arts cohort.

Co-requisite: EDT 427/EDT 527.

**EDT 346E. Teaching Language and Literacy Across the ECE Curriculum. (3)**

Teaching and integrating language, reading, and writing including planning, implementing, and reflecting on effective methods, materials and formal and informal assessment measures. Topics of study include cultural and linguistic diversity; literacy and technology; and organization of a learning environment to support literacy development in children ages 3 to 8 or preschool to third grade. Emphasis on strategies to improve reading comprehension, vocabulary, and written composition. Laboratory and field experiences are an integral part of the course.

Prerequisite: retention in ECE Program and successful completion of Block I in early childhood education.

**EDT 346M. Reading Instruction for Middle Grades. (3)**

Students expand and extend knowledge base from EDT 246.M; explore, study, apply, and assimilate new learning about effective reading and literacy strategies appropriate to development and needs of early adolescent learners (grades 4-9). Focuses on knowledge and skills necessary to make and apply appropriate programmatic and instructional decisions including knowledge of the early adolescent learner, reading and writing processes, instructional strategies, and integrating materials and learning environments. Laboratory and field experiences are an integral part of the course.

Prerequisite: retention in middle childhood cohort (part of fall semester middle childhood content methods block).

**EDT 362. Social Sciences for Teachers II. (4)**

Political and economic institutions and processes as related to the American experience. Emphasizes historical and contemporary interrelationships of economic and political institutions in American society.

**EDT 377. Independent Studies. (0-5)****EDT 399C. Families and Com in Mexico. (1-3)**

This is an Independent Study taken for either 1 or 3 credit hours that will focus on families and communities in Mexico.

**EDT 399L. Project-based Curriculum. (2)**

Students in EDT 399M will plan and develop a series lessons that incorporate thematic, project-based learning strategies within a cohesive theme. The lessons will then be taught to a group of elementary and middle school students in a real school setting during a summer camp.

**EDT 405/EDT 505. Advanced Science for the Elementary School Teacher. (3)**

Content course in physical science covering advanced study of selected areas of geology, physics, chemistry, and astronomy.

**EDT 415/EDT 515. Inquiry Into Life Science. (3)**

Provides students with the opportunity to explore the world of life science through inquiry using a thematic approach. Major themes include the nature of science, ecology, human biology, evolution, and taxonomy.

Prerequisites: successful completion of any entry-level life science course taught in biology or microbiology.

**EDT 417E. Teaching Social Studies in the Early Childhood. (3)**

Curriculum, materials, and methods of teaching social studies for ages 3-8. Focuses on developmentally appropriate curriculum and instructional practice, including play, small-group projects, open-ended questioning, group discussions, problem solving, cooperative learning, and inquiry experiences, as they apply to social studies. Prerequisite: successful completion of Block I in early childhood education.

**EDT 418. TESOL PK-12 Teaching Practicum. (1)**

The Teaching Practicum is the culminating experience in the TESOL undergraduate endorsement. Teacher Candidates will complete a minimum of 50 service learning hours under the supervision of a certified teacher holding a TESOL endorsement (or equivalent) and the Miami University practicum supervisor. All TESOL endorsement coursework must be completed and TESOL OAE taken before the Teacher Candidate is allowed to complete the experience. Prerequisites: EDT 221, EDT 323, EDT 425, ENG 219, and OAE taken.

**EDT 419A/EDT 519A. Teaching Internship- Adolescent. (1-16)**

Planned and supervised learning experiences in which students demonstrate knowledge, skills, abilities, and values appropriate to teaching in educational settings. Typically 15 weeks in the schools is required. Frequent conferences with university supervisors and cooperating teachers. Prerequisites: completion of all instructional procedures courses required in the licensure program; required GPA for licensure programs; at least 96 semester hours; and take the OAE content test.

**EDT 419E. Teaching Internship- Early Childhood. (15)**

Planned and supervised learning experiences in which students demonstrate knowledge, skills, abilities, and values appropriate to teaching in educational settings. Typically 15 weeks in the schools is required. Frequent conferences with university supervisors and cooperating teachers. Prerequisites: completion of all instructional procedures courses required in the licensure program, required GPA for licensure programs, at least 96 semester hours, and take the OAE content test.

**EDT 419M. Teaching Internship-Middle Childhood. (15)**

Planned and supervised learning experiences in which students demonstrate knowledge, skills, abilities, and values appropriate to teaching in educational settings. Typically 15 weeks in the schools is required. Frequent conferences with university supervisors and cooperating teachers. Prerequisites: completion of all instructional procedures courses required in the licensure program, required GPA for licensure programs, at least 96 semester hours, and take the OAE content test.

**EDT 421A/EDT 521A. Classroom Cultures, Community, and Climate. (3)**

This course focuses on strategies for building positive learning environments for students and teachers that support student cooperation, engagement, and achievement. Teacher candidates study and apply techniques intended to foster mutual respect and community-building in the classroom with emphasis on the first days of school and classroom technologies. Prerequisites: Admission to and retention in the language arts, mathematics, science, social studies, and foreign language cohorts (part of the adolescent methods block).

**EDT 421M. Classroom Management. (3)**

Systematic study of research and theories of classroom management with application to the student teacher's specific classroom management problems (grades 4-9). Prerequisite: Admission to and retention in middle childhood education cohort (part of the fall semester middle childhood methods block).

**EDT 422. Studies in Educational Issues. (3) (MPC)**

Each student or student team collaborates with instructor and peers to identify and conduct an investigation or complete a creative project that focuses on a specific problem or issue in education. Seminar course with primary emphasis on intensive reading, research, writing, and interaction in student-selected areas of study with opportunities for analysis and reflection. Includes discussions, team work, presentations, and writing projects. Culminating activity is an oral or written presentation or exhibition that demonstrates understanding or resolution of the issue or problem studied.

**EDT 423/EDT 523. Literature and Other Media for Adolescents. (3)**

Discusses evaluation of nonprint media, selection aids, censorship problems, and adolescent needs in half the semester and evaluation and criticism of literature in the other half. Prerequisite: junior or senior standing.

**EDT 424/EDT 524. Storytelling: Traditional and Contemporary. (2)**

Presents principles of storytelling and reading aloud to various age levels in schools and public libraries. Offers knowledge of selection sources, helps build repertoire of stories, and aids in development of storytelling techniques. Provides practical experience in storytelling with emphasis on use of nonprint media for children.

**EDT 425. Teaching English Language Learners in PK-12: Active Learning & Literacy. (3) (MPF)**

The third of three sequenced courses in the Teaching English Language Learners (TELLs) certificate, EDT425 TELLs in PK-12: Active Learning & Literacy provides the instructional foundations necessary for PK-12 teachers to work successfully with English Language Learners (ELLs) in the mainstream classroom. A field experience component, coupled with comprehensive case study assignments, enables teachers to obtain real-word understanding of the linguistic and literacy issues facing ELLs and their teachers in schools. IIB. Prerequisite: EDT 221 or EDT 323.

**EDT 427/EDT 527. Adolescent Language Arts I. (3)**

Curriculum, materials, and methods for teaching writing, grammar, usage, literature, speech, journalism, with emphasis on writing and journalism, including ethics and law surrounding school publications. Prerequisite: retention in your language arts cohort (part of language arts methods block).

**EDT 428/EDT 528. Adolescent Language Arts II. (3)**

Curriculum, materials, and methods for teaching writing, grammar, usage, literature, speech, journalism, and media with emphasis on literature and media. Prerequisite: retention in your language arts cohort and successful completion of all of the courses in the language arts methods block.

**EDT 429A/EDT 529A. Adolescent Mathematics I. (3)**

Use of curricula, materials, and teaching/assessment strategies for teaching mathematics in the middle childhood/junior high school years (grades 7-9). Prerequisite: retention in the math cohort (part of mathematics methods block).

**EDT 429M. Middle Childhood Mathematics. (3)**

Use of curricula, materials, and teaching/assessment strategies for teaching mathematics in the middle childhood/junior high school years (grades 4-9).

Prerequisites: retention in your math cohort.

**EDT 430/EDT 530. Adolescent Mathematics II. (3)**

Use of curricula, materials, and teaching/assessment strategies for teaching mathematics to adolescents in the senior high school years (grades 9-12).

Prerequisite: EDT 429A/EDT 529A and retention in your math cohort.

**EDT 431/EDT 531. Adolescent Science Methods I. (3)**

Fundamental principles, techniques, and materials of science teaching in grades 7-12.

Prerequisite: admission to and retention in science cohort.

**EDT 432/EDT 532. Adolescent Science Methods II. (3)**

Fundamental principles, techniques, and materials of science teaching in grades 7-12.

Prerequisite: EDT 431/EDT 531 and retention in science cohort.

**EDT 433/EDT 533. Adolescent Social Studies Methods I. (3)**

Introduction to social studies as a professional field, curriculum, materials, and methods of teaching grades 7-12; lesson planning, simulations, learning styles, current trends in social studies education.

Prerequisite: admission to and retention in social studies cohort.

**EDT 434/EDT 534. Adolescent Social Studies Methods II. (3)**

Materials, curriculum, methods, and standards for teaching social studies in grades 7-12; questioning strategies, cooperative learning, technology, unit development, evaluation, current trends in the social studies.

Prerequisite: retention in your social studies education cohort, including EDT 433/EDT 533 (part of social studies methods block).

**EDT 436. Middle Childhood Language Arts. (3)**

Methods, strategies, techniques, and attitudes for integrating the teaching of writing, grammar, usage, literature, and speech in grades 4-8.

Prerequisite: retention in the appropriate middle childhood cohort.

**EDT 439. Middle Childhood Social Studies. (3)**

Curricula, materials, and methods of teaching social studies in grades 4-9; lesson planning, simulations, learning style, current trends in teaching social studies.

Prerequisite: retention in your middle childhood social studies cohort.

**EDT 441. Middle Childhood Science. (3)**

Basic principles, methods, curriculum trends, and materials for teaching science to children, grades 4-9. Laboratory and field experiences with children are integral to meeting course objectives.

Prerequisite: retention in your middle childhood science cohort.

**EDT 442E. Phonics, Word Study, and Spelling Instruction in ECE. (3)**

Presents historical and research perspectives, word analysis concepts/terminology, and instructional methods of phonics and word recognition for early childhood, ages 3-8. Examines diagnostic and instructional procedures related to special needs of very low to high achieving readers.

Prerequisite: admission to and retention in early childhood cohort and successful completion of early field block.

**EDT 442M. Phonics and Reading Improvement for Middle Childhood. (3)**

Presents historical and research perspectives, word analysis concepts/terminology, and instructional methods of phonics and word recognition for middle childhood, grades 4-9. Examines diagnostic and instructional procedures related to special needs of very low to high achieving readers.

Prerequisite or Co-requisite: EDT 346M (retention in cohort and successful completion of early field block in middle childhood education).

**EDT 444/EDT 544. Language Teaching and Learning I. (3)**

The first of two courses preparing pre-K-12 foreign language teacher candidates to become critical and reflective professionals; to use theoretical underpinnings; to apply national standards, best practices, cutting edge curricula, current trends; and to infuse technology in teaching languages.

Prerequisite: retention in foreign language cohort.

**EDT 445/EDT 545. Language Teaching and Learning II. (3)**

The second of two courses preparing pre-K-12 foreign language teacher candidates to become critical and reflective professionals, to use theoretical underpinnings, to apply national standards, best-practices, cutting-edge curricula, current trends and to infuse technology in teaching languages.

Prerequisite: EDT 444/EDT 544 and Advanced Low score on the ACTFL Oral Proficiency Interview (OPI).

Co-requisite: EDT 446L/EDT 546L.

**EDT 446A/EDT 546A. Integrating Literacy Across the Content Areas. (3)**

Basic course in instructional principles and methods for integrating literacy across the content areas in grades 7-12. Part of methods block for mathematics, social studies, and science education majors.

**EDT 446L/EDT 546L. Reading in the Foreign Language. (3)**

Basic course in instructional principles and methods for teaching reading and study techniques in foreign language in secondary schools. Emphasis on developmental strategies to improve reading comprehension and vocabulary.

Prerequisite: admission to and retention in the foreign language cohort (part of methods block for foreign language education majors).

**EDT 448M. Reading Practicum for Middle Childhood. (3)**

Supervised experience in teaching a middle grade student having difficulty in reading. Emphasizes principles and methods for special needs instruction.

Prerequisite: EDT 346M.

**EDT 450/EDT 550. Special Problems. (1-3; maximum 6)**

Individual study or research of problems of learning, instruction, or curriculum with guidance of department faculty member.

Prerequisite: senior or graduate standing and written approval of instructor and department chair.

**EDT 452/EDT 552. Teaching Social Studies in the Intermediate Grades. (3)**

Topics include the content required to teach social studies in the intermediate grades as well as strategies, activities, and materials for developing pedagogical competencies. A field component is required.

Prerequisite: successful completion of an early childhood social studies methods course such as EDT 417E (one of the courses in the 4-5 endorsement for ECE students or for licensed ECE teachers).

**EDT 453/EDT 553. Practicum & Praxis Grades 4-5. (1)**

Topics include content required to teach language arts, mathematics, science, or social studies in the intermediate grades as well as strategies, activities, and materials for developing pedagogical competencies as reflected on the OAE Early Childhood Education Content Assessment ([www.oh.nesinc.com](http://www.oh.nesinc.com)) - test code 012. A field component of implementation of content and pedagogical knowledge is required, either in this course or in one or more of the following: EDT 405/EDT 505/505, EDT 452/EDT 552/552, or EDT 465/EDT 565/565. One of the courses in the 4-5 endorsement for ECE students or for licensed ECE teachers.

**EDT 455. Capstone Seminar: Comparative Education in Europe or China. (4)**

This class is conducted in both Oxford and Europe or China. Students spend time in classrooms abroad observing educational practices in another culture(s) for the purpose of identifying similarities and differences between the U.S. and other Europe or China. The class is approved to meet the capstone requirement. Format, themes, and topics may differ by section.

**EDT 457/EDT 557. Culturally Responsive Teaching. (3)**

The goal of this course is to assist preservice and in-service teachers to develop proficiency using culturally relevant pedagogy for culturally and linguistically diverse students. The course includes a study of the theoretical and practical foundations of effective teaching in diverse classroom environments. Ethnicity, gender, social class, religion and other issues are considered from multiple perspectives.

**EDT 461/EDT 561. Grant Writing Skills and Methods. (3)**

This graduate and permission only senior level course offering will introduce approved seniors and graduate students to systemic methods for reviewing "Requests for Funding Proposals" (RFP), creating pre-writing documents to support creating a grant application, and applying collaborative methods for writing quality grant applications to foundation, federal, state and community funding sources. Web-based sources for grant funding will be introduced. The course will introduce a 4 stage/32step process for analyzing complicated Requests for Funding Proposals (RFPs), supporting the grant application writing process and applying for funding. The course will include many recommendations for technology-supported grant application development and the final grant editing process. Novice and more experienced grant writers may work in writing teams to create and submit real grant applications on behalf of existing organizations, agencies, school districts or individual initiatives. This course is online.

**EDT 465/EDT 565. Learning and Teaching Mathematics in the Intermediate Grades. (3)**

Topics include the content required to teach mathematics in the intermediate grades as well as strategies, activities, and materials for developing pedagogical competencies. A field component is required. Prerequisite: successful completion of an early childhood mathematics methods course such as EDT 318E (one of the courses in 4-5 endorsement for ECE students or for licensed ECE teachers).

**EDT 466/EDT 566. Mathematics Misconception Diagnosis & Remediation. (3)**

Participants engage in deep analysis of classroom artifacts (e.g., video of classroom instruction, student work samples) to inform revision of teaching materials / curriculum to better support learning needs and interests of K-12 mathematics learners from diverse learning backgrounds and cultures.

Prerequisite: Junior or graduate standing or permission of course instructor.

**EDT 473E. Early Childhood Synthesis: Negotiating the Complexities of Teaching. (3)**

Synthesis of elements presented earlier in ECE program. Site-based experience is an integral part of the course, as students engage with the simultaneous elements of the child, culture, community, content/curriculum, mandates, pedagogies, personal identity, and the teaching life. Emphasis is on building relationships, developing ethical commitment, and on learning skills toward integrated-content project planning that is responsive to the needs, interests, and culture of the children, school, and community. Part of early childhood Block 3.

**EDT 474E. Classroom Management & Student Guidance in Early Childhood. (3)**

This is a course for early childhood educators that integrates the ways in which children learn and develop with the essential knowledge, skills, and dispositions teachers need in order to organize and manage the classroom context, guide student behavior, and promote effective relationships with students, families, colleagues, and other stakeholders. Topics examined in the course include: developmentally appropriate media, materials, and practices; classroom organization and management; student guidance; self-awareness; leadership of the classroom as social context; and contemporary issues in public education. Prerequisite: completion of Block I.

**EDT 477. Independent Studies. (0-5)****EDT 483/EDT 583. Educators as Activists: Preparing Educators and Allies for Forces Impacting Classrooms and Schools. (3)**

Teacher activism, broadly defined, will be explored using (a) historical perspectives from curriculum, educational policy, and civil rights and (b) current educational issues, such as educational corporatization, challenges to curricula, and educational equity. Students will study themes and perspectives on activism strategies in a variety of contexts, and will self-reflect on their own identities and educational settings to develop strategies for activism. Structural inequities in education will be emphasized and will serve as a conceptual framework for study.

**EDT 485. Outdoor Leadership in New Zealand. (3,6; maximum 6)**

This course will provide students with an opportunity to challenge and expand their traditional views of leadership and education in a diverse environment. The course will focus on four main principles: leadership, outdoor skill development, outdoor education, and cultural engagement. The course is comprised of three distinct experiences: 1) examining and discussing different theories/models in the classroom prior to the trip, 2) investigating the cultural diversity of New Zealand by participating in various cultural experiences in a Maori community and 3) putting theory and core skills (human, outdoor, & educational) into practice during multi-day backpacking and sea kayaking experiences throughout New Zealand.

**EDT 488. Grand Challenges in STEM Education. (3)**

This course is designed to engage students in a broad range of topics related to STEM. This course is designed as a culminating experience in a thematic sequence, bringing together big ideas around the grand challenges in STEM.

Prerequisite: EDT 188.

**EDT 495. Writing Information Books for Children. (3) (MPC)**

Drawing on content knowledge gained from coursework in major courses of study, students will each write an information book for a diverse community of children. As an authentic learning experience, the course will include the study of children's literature and writing for children, the creation of a writing community among participants, and development of ways to share the books globally.

**EDT 600. Independent Reading. (1-3; maximum 6)**

Planned reading in any field curriculum or instruction with guidance of a department faculty member.

Prerequisite: regular standing in graduate school, minimum of 10 hours in education, and approval of the plan of study by department chair.

**EDT 603. Language, Literacy and Culture. (3)**

Critical analysis of research and theory of language and literacy development and instruction with particular emphasis on the cognitive, linguistic, and socio-cultural factors that influence language and literacy learning and teaching.

Prerequisite: graduate standing or permission of instructor.

**EDT 606. Curriculum Innovation and Transformation through Understanding and Design. (3)**

This course is designed for educators interested in learning more about the curriculum in use in classrooms, schools, and community organizations, and the possibilities for shaping and transforming curriculum and teaching practices. The course will introduce students to important issues in curriculum theory and practice.

Cross-listed with EDL.

**EDT 610. Applied Studies in Classroom Teaching. (1-3; maximum 12)**

Practicum to meet specific classroom needs of the instructional staff of a school, school system, or group of subject area teachers. Structured after needs-assessment made.

Prerequisite: minimum of 10 semester hours of professional education courses.

**EDT 612. TESOL Educational Policies & Second Language Acquisition. (3)**

The first of four courses in the TESOL graduate endorsement program, EDT 612 TESOL Policies & SLA introduces licensed, generalist P-12 teachers to the educational public policies governing the education of English Language Learners and the ways school districts do and can meet these obligations. The course also provides P-12 teachers with the second language acquisition theories and models that will help them work successfully with their ELLs. Practical, comprehensive case study assignments enable teachers to take an in-depth look at the role teachers can take in informing and making language policy, as well as their essential role in the development of their ELLs' language.

**EDT 614. TESOL Instructional Methodologies. (3)**

The third of four courses in the TESOL graduate endorsement program, EDT 614 TESOL Instructional Methodologies aims at helping licensed, generalist P-12 teachers develop techniques, strategies and methodologies of teaching English Language Learners (ELLs) using sheltered instruction. The course also provides P-12 teachers with language proficiency and content assessment theories and practices that will help them better evaluate the progress of ELLs. Practical, comprehensive case study assignments enable teachers to reformulate their assessment and cultural understandings to create a culturally responsive and equitable environment for ELLs in their classrooms.

**EDT 616. Current Issues in TESOL. (3)**

The fourth of four courses in the TESOL graduate endorsement program, EDT 616 Current Issues in TESOL allows licensed, generalist P-12 teachers to delve more in depth into some topics or issues regarding English Language Learners (ELLs) that are critical to the profession. They will present their research to our professional learning community, as well as analyze their effectiveness in applying it to their own ELLs.

Prerequisite: EDT 612.

**EDT 618. TESOL Cultural Contexts & Assessment. (3)**

The second of four courses in the TESOL graduate endorsement program, EDT 618 TESOL Cultural Contexts & Assessment aims at helping licensed, generalist P-12 teachers develop awareness of the elusive and learned nature of culture, and its pervasive effects on schooling for ELLs. The course also provides P-12 teachers with language proficiency and content assessment theories and practices that will help them better evaluate the progress of their ELLs. Practical, comprehensive case study assignments enable teachers to reformulate their assessment and cultural understandings to create a culturally responsive and equitable environment for the ELLs in their classrooms.

**EDT 622. Improvement of Teaching in the Public School. (3)**

Advanced course in principles and practices for improving instruction in modern secondary schools with emphasis on research findings and innovation. Summer only.

Prerequisite: graduate standing, 15 hours in education, permission of instructor.

**EDT 625. Teaching Writing. (3)**

Advanced course in the teaching of writing, emphasizing procedures and strategies for teaching writing, development of students' own writing skills in a number of genres, readings in recent theory and practice of teaching writing, and case study research methods. Students must gain access to a K-12 classroom to complete their case study. Appropriate for both elementary and secondary school teachers across the curriculum.

**EDT 626. Teaching with Literature for Children. (3)**

Intensive study of children's literature and its use in literacy instruction. Topics include: critical analysis of literature, diversity of forms and genres, use of literature that represents various cultural identities and contexts, and support of literary discourse among students.

Prerequisite: Graduate standing or permission of instructor.

**EDT 632. Literacy Assessment and Instruction. (3)**

In-depth examination of classroom aspects of literacy assessment and instruction in reading and writing. Includes experience in assessing aspects of literacy development and analyzing assessment data to group students and design instruction for students with diverse needs (topics include: reading processes & miscue analysis, reading fluency, comprehension, literary response, and writing).

Prerequisite: graduate standing or permission of instructor.

**EDT 635. Clinical Literacy Practicum. (4)**

Advanced supervised practicum experience involving assessment and instruction of public school students experiencing reading and writing difficulties. Involves writing reports of assessment and instruction for tutees' parents and teachers.

Prerequisites: ALL reading endorsement requirements must be met prior to registering.

**EDT 636. Literacy and Leadership. (3)**

Theoretical and practical exploration of the roles of the reading specialist/literacy coach in supporting teachers and other education professionals in the planning, implementation and evaluation of effective literacy instruction. Designed as a practicum or internship to meet specific literacy coaching needs of instructional staff of a school, school system or group of subject area teachers.

Prerequisites: 18 credit hours of program requirements.

**EDT 642. Phonics and Reading Improvement for the Reading Teacher. (3)**

Examination of the principles and practices of literacy development using phonics as a component of reading and writing instruction. Focus on instructional strategies, materials, and programs aimed at teaching phonics and spelling targeting the specific needs of developing and struggling readers and writers.

Prerequisite: graduate standing or permission of instructor.

**EDT 643. Language and Discourse. (3)**

In-depth examination of linguistic and cultural aspects of diverse populations as they affect literacy learning and teaching. Includes practical applications of theories of language and discourse. Emphasis on designing classroom discourse environments and home and community connections to promote equity and foster language and literacy development of Pre-K-12 students with diverse backgrounds and needs.

Prerequisite: graduate standing or permission of instructor.

**EDT 646. Reading and Writing in Content Areas. (3)**

Examination of the research, theory, curricula, and methods for integrating the teaching of reading and writing across the disciplines such as mathematics, science, social studies.

Prerequisite: graduate standing or permission of instructor.

**EDT 648. Data-Informed Decision Making in Education. (3)**

Students in this class learn contemporary educational research methods and develop skills to plan and complete a systematic action research inquiry into educational practice. The class introduces students to research design, review of relevant literature, implementation, and evaluation.

Cross-listed with EDL.

**EDT 660. Seminar in Mathematics Education. (1-3; maximum 6)**

Current issues and research in mathematics education.

Prerequisites: certification or current enrollment in a certification program.

**EDT 663. Advanced Methods for Adolescent Mathematics. (3)**

Innovative activities, materials, and programs for junior high and high school mathematics. Curricular and instructional decision-making based upon study of current state and national recommendations and of current research. Emphasis on the teaching of problem solving (7-12).

Prerequisites: Teacher certification/licensure or permission of instructor.

**EDT 677. Independent Studies. (0-5)****EDT 689. Intprtn&Applctn of Res in Educ. (3)**

Interpretation and application of educational research methods, including comparison of alternative philosophies of research, ways of formulating hypotheses, and making research plans.

Prerequisite: Graduate standing.

**EDT 690. Graduate Capstone Experience in Education. (3)**

Provides students the opportunity to engage in a culminating project that demonstrates critical thinking, understanding contexts, and reflection and action using the course work and experiences from the graduate program. The end product of the individualized experience could include a research paper, journal manuscript, written comprehensive examination, professional portfolio with components indicative of a state/national master teacher portfolio, or other approved project. The project will also serve as part of the master's examination. It is expected that the student will have completed the majority of the courses in his or her program.

Prerequisite: completion of at least 12 graduate hours.

Co-requisite: submission for Institutional Review Board (IRB) approval within the first two weeks of the semester if conducting research with human subjects.

## Theatre (THE)

**THE 101. Introduction to Theatre: Drama and Analysis. (3) (MPF, MPT)**

Examination of drama and theatre production as modes of human expression. Students will explore myriad approaches to script analysis and theatre criticism within various historical and cultural contexts. IIA. CAS-B. Suggested co-requisite: THE 200.

**THE 107. The Theatre Major: an Introduction to Theatre Resources and Skills. (1)**

This course is an orientation to the resources, personnel, policies, production season, and student organizations in the theatre department as well as related resources across campus. Students will build a variety of skills necessary for success including time management, academic honesty and collaboration. Open to Theatre Majors only.

**THE 110A. Beginning Ballet. (2)**

Classical ballet technique. Work at the barre stressed. Cross-listed with KNH 110A.

**THE 110G. Beginning Modern Dance. (2)**

Technique stressed. Correct form and body placement along with flexibility and control covered. Cross-listed with KNH.

**THE 111A. Introduction to Ballroom Dancing-Men. (2)**

This is a foundational dance course that includes technical frames, patterns, musical rhythms and cultural contexts for competitive ballroom styles, e.g. American Smooth (waltz, and tango, Foxtrot), and American Rhythm (Cha cha, Swing and mambo). Students are required to attend 3 evening dances outside of the scheduled class time.

**THE 111B. Introduction to Ballroom Dancing-Women. (2)**

This is a foundational dance course that includes technical frames, patterns, musical rhythms and cultural contexts for competitive ballroom styles, e.g. American Smooth (waltz, and tango, Foxtrot), and American Rhythm (Cha cha, Swing and mambo). Students are required to attend 3 evening dances outside of the scheduled class time.

**THE 123. Acting for the Non-Major: Text and Performance. (3) (MPF)**

Introduction to the art of acting for the non-theatre major. Focuses on developing basic acting skills through improvisation and scene work; includes study of script analysis and acting theory. Credit cannot be applied to major degree in theatre. IIA, IIB.

**THE 131. Principles of Acting. (3)**

Introductory course examining performance as an essential component of theatre. Focuses on dynamics of building an effective ensemble. Introduces theories and principles of acting techniques including script analysis, characterization, and action. Open to theatre majors and minors only.

**THE 142. Theatre Organization and Communication. (1)**

This course is an introduction to theatre organizational structures with a particular emphasis on technical and production positions and their interface with performers. Beginning skills in organization, communication, and time management used in various theatre positions will be developed and evaluated.

**THE 151. Stage Makeup. (1)**

Principles and techniques of makeup for stage. Proper care and use of stage makeup products and related supplies projects in relation to character analysis and the actor's own facial features. Preparation for possible production makeup design or makeup crew opportunity.

**THE 177. Independent Studies. (0-5)****THE 191. Experiencing Theatre. (3) (MPF, MPT)**

This course introduces non-majors to all aspects of theatre arts through online lectures and assignments as well as weekly face-to-face class sessions. This course will help students appreciate the theatre--its role in our lives as well as the ways in which it is created. Credit cannot be applied to the theatre major or minor. IIA. CAS-B.

**THE 200. Production and Performance Practicum. (1; maximum 8)**

Open to all university students. Laboratory experience in performance, design, technical production, and management. Each student selects area of theatrical production to participate in for the semester. Involves a minimum of 40 hours per semester, arranged around student's schedule and demands within area of participation. Registration through consultation with theatre faculty member required.

**THE 210. The Theatrical Toolbox. (1-2; maximum 3)**

This course is designed to introduce students to a highly specialized skill/technique in theatre not offered in our permanent curriculum. A specific focus might include one of the following: stage combat, clowning, solo drama, puppetry, projection design or other. Course will be taught principally by visiting artists.

**THE 226. Acting Studio: Foundations. (4)**

Acting Studio: Foundations is the first half of a yearlong sequence designed for theatre majors desiring an intensive immersion in an acting studio. This course will build foundational skills in movement, voice and acting techniques.

Prerequisite: THE 131 or permission of instructor (Theatre Majors only; Theatre Minors by permission of instructor).

**THE 227. Acting Studio: Integrating Text. (4)**

Acting Studio: Integrating Text is the second half of a yearlong sequence designed for theatre majors desiring an intensive immersion in an acting studio. This course will build on the skills explored in Acting Studio: Foundations. The focus of this course will be scene study, including the speech skills necessary for the effective delivery of text. Theatre Majors only; Theatre Minors by permission of instructor.

Prerequisite: THE 226 or permission of instructor.

**THE 238. Playwriting Through Improvisation. (3-4; maximum 4)**

A class about the making of theatre from the actor's imagination. Introduces students to existing and emerging techniques of text creation through improvisation. We place our work in context to the art of theatre and the societies they come from through the study and analysis of existing works.

**THE 239. Alexander Technique. (1)**

Introduction to the Alexander Technique. Basic anatomy, body-mapping and principles of the Technique (coordination of the self with efficiency and ease) are explored in group lessons and in application to creative activity. Course is offered for credit/no credit only. Open to theatre and music majors only.

Cross-listed with MUS 239.

**THE 251. Visual Communication for the Theatre. (3)**

Fundamentals of the visual means of communication in theatre through the study of the elements and principles of design, establishment of compositional problems as they relate to theatre, and representation of design solutions through a variety of common media. Open to Theatre majors and minors, or by permission of instructor.

Prerequisite: THE 101.

**THE 253. Costume Fundamentals. (3)**

This course offers a practical exploration of the techniques used to realize the costume design including dyeing, pattern drafting, texture, and fashion history.

**THE 257. Stagecraft and Theatre Technologies. (3) (MPF, MPT)**

An introduction to the technologies involved in the conception and creation of visual environments that help tell theatrical stories. Topics include scenic construction, lighting instrumentation and control, and digital and traditional exploration of graphic representation of theatrical environments. IIA, V.

**THE 258. Scene Painting Fundamentals. (3)**

The course combines theory and practice of scenic art through study of and work with varying types of paints, dyes, and texturing techniques used in scenic painting. Layout tools and equipment are used to set up projects using fundamental and advanced painting techniques. Faux finishes are explored as parts of the basic requisite techniques.

**THE 261. Intermediate Ballet. (2)**

Intermediate Ballet expands upon the foundations of Beginning Ballet, the understanding of the basic positions and steps. The focus will be on mastering the basic positions and steps while introducing more complicated exercises both at the barre and the center. Center floor work will include the development and practice of adagio and allegro combinations as well as turns and leaps (jetes). Students will be given opportunities of perfecting their technique and musicality in longer sequences, both at the barre and center floor. A class dance will be learned and the techniques covered in the class will be applied. Students will also be given the opportunity of choreographing an individual phrase for the class dance. Ballet history is also explored as a source for understanding where certain traditions originated. The course also includes some outside written work and performance attendance to better provide a background necessary to the appreciation of dance as a creative art form.

Prerequisite: KNH 110A.

**THE 262. Intermediate Modern Dance. (2)**

Intermediate Modern Dance expands upon the fundamentals covered in Beginning Modern Dance and explores more deeply improving anatomical awareness, increasing strength and flexibility, expanding the modern dance vocabulary, and developing flow and dynamic range. The students will demonstrate, define, and perform demonstrating an understanding of these concepts. A class dance will be learned and students will also be responsible for choreographing a partner phrase for the class dance. The class will critique, discuss and analyze line, design, technique, choreography, and dynamic qualities through personal performance, class discussions, posted videos, and concert critiques. Along with discussing the blurring of lines between modern and contemporary dance, the course also includes some outside written work and performance attendance to better provide a background necessary to the appreciation of modern dance as a creative art form.

Prerequisite: KNH 110G.

**THE 271. Dance Theatre Practicum. (1; maximum 2)**

The course is designed for the student to experience rehearsing a dance for performance, possibly performing a dance in concert, as well as practical experience in the non-performing elements of dance production, including dance lighting, stage management, sound, set, and public relations. Students might also learn new or repertory choreography created by dance faculty or guest artists and are frequently active participants in the choreographic process. Students are also expected to complete pre- and post-production assignments. The Practicum provides students the opportunity to earn course credit while fulfilling a production assignment on a dance production. The emphasis of the course is on professional decorum and a willingness to become a valuable member of the production team. Open to all university students.

**THE 277. Independent Studies. (0-5)****THE 291. World Stages. (3)**

A survey of world stages that includes western theatre history and global performance practices. These courses introduce the student to theatre and performance as a social and cultural construction that is directly related to the place and time in which it occurs. Courses also explore the ramification and manifestation of internal and external influences on the theatre/performance of a given locale. Open to majors only.

Prerequisite: THE 101.

**THE 292. World Stages. (3)**

A survey of world stages that includes western theatre history and global performance practices. These courses introduce the student to theatre and performance as a social and cultural construction that is directly related to the place and time in which it occurs. Courses also explore the ramification and manifestation of internal and external influences on the theatre/performance of a given locale. Open to majors only.

Prerequisite: THE 291.

**THE 301. Professional Practice in Theatre. (1; maximum 2)**

This course is designed to prepare students to enter professional theatre. Students will meet throughout the semester with working theatre professionals/guest artists in a series of workshops, seminars, and intensives in order to learn more about how to interface with the profession following graduation.

Prerequisite: Junior standing or permission of instructor.

**THE 340. Internship. (0-20)****THE 342. Stage Management. (3)**

This course is an investigation of principles and techniques of stage management in theatrical production. Students will study the accepted practices used in professional companies, including the requirements and regulations established by Actors Equity Association and variations in practice with regard to educational, community, and regional companies. The course requires participation in departmental stage management activities, which require some evenings and weekends.

**THE 351. Dance History. (3)**

The course is designed to introduce the student to the vast discipline of dance. Students will view and read about dance as an art form and as a theatrical vehicle and become more aware of the analysis of form and style and elements of critique in the various genres of dance, most specifically ballet and modern/contemporary dance. The course will trace the American dance scene and its impact on and reflection of American culture.

**THE 352. Scenic Design. (3)**

Theory and principles of scenic design for stage. Conceptualization and communication of design ideas through script analysis, sketches, renderings, models, floor plans, and elevations.

Prerequisite: Sophomore standing or permission of instructor.

**THE 353. Costume Design. (3)**

Principles and theories of costume design for productions of theatre. Conceptualization and communication of design ideas through script analysis, sketches, fabric studies, and renderings.

Prerequisite: Sophomore standing or permission of instructor.

**THE 354. Lighting Design. (3)**

Theories and principles of lighting design for theatrical productions. Conceptualization and communication of design ideas through script analysis, light studies, light plots, and related projects.

**THE 377. Independent Studies. (0-5)****THE 393. Topics in Intercultural Perspectives and Global Theatre and Performance. (3; maximum 6) (MPT)**

May be offered with various focuses (including African, African American, Latin American, Asian American, feminist perspectives, as well as others) as it explores culture, race, gender and identity in performance. Emphasis on developing student appreciation of and critical response to drama and performance. This course is repeatable up to 6 credit hours. IC.

Prerequisite: THE 101 or THE 191.

**THE 394. Topics in Dramatic Literature and Cultural Performance. (3; maximum 6)**

Topics in Dramatic Literature and Cultural Performance is a topic-driven course in theatre. Possible topics may include a given playwright such as August Wilson; a given style in theatre such as Realism or Postmodernism; or an overall specific maker of theatre such as an actor, director, or dramaturg. Students will be required to write short papers, make a public presentation, and develop a final paper or project. The course is repeatable up to 6 credit hours.

Prerequisite: THE 101 or THE 191.

**THE 395. The Musical in American Culture. (3) (MPT)**

This course traces the development of the American Musical Theatre from 19th century popular entertainments to a unique institution in its own right. The changing shape of the musical will be explored in context of a growing and developing American culture, popular taste, and expression of personal and cultural identity.

**THE 398. London Theatre. (3)**

This course is an introduction to theatre in London. Students learn about London's rich theatrical history, attend performances of professional productions, and discuss them in their critical and cultural context. This course is offered as part of the Department of Theatre's study abroad program in London.

**THE 400. Advanced Production and Performance Practicum. (2; maximum 4)**

Practical experience in advanced design, engineering, technical production, and performance positions for major theatre productions. Independent study permit required.

Prerequisite: senior standing and permission of instructor.

**THE 416/THE 516. Dramaturgy. (3)**

This course provides an introduction to dramaturgy and, as such, merges theory and practice, the intellectual and the practical, and the oral and written components of theatre production. This course is designed to develop research, analysis, and communication skills through creative research projects, script analysis workshops, and oral presentations.

Prerequisite: THE 101 or permission of instructor.

**THE 418/THE 518. Playwriting. (3)**

Applied theory, technique, and practice of playwriting.

Prerequisite: (THE 418/THE 518 only) THE 101 or permission of instructor.

Cross-listed with ENG.

**THE 421/THE 521. Fundamentals of Directing. (3)**

Aesthetic principles, analysis, and exercises in composition, movement, gesture, sound, mood, rhythm, and leadership. Students should have completed four full semesters as a theatre major before matriculating in this course.

Prerequisites: THE 101, THE 131, THE 251, and junior standing.

**THE 422/THE 522. Politics and Ethics of Theatre and Performance: Representation, Race, Gender, Class and Sexuality. (3)**

An advanced course that foregrounds political and ethical questions in relation to theatre and performance in the areas of race, class, gender and sexuality.

Prerequisites: THE 291, THE 292 and Junior standing or permission of the instructor.

Cross-listed with WGS.

**THE 423/THE 523. Topics in Theatre and Performance Studies. (3)**

Provides upper-level undergraduate and graduate students with opportunities to investigate and analyze theoretical, cultural and creative contexts of theatre and performance studies.

**THE 424/THE 524. Topics in Applied Theatre, Practice, and Pedagogy. (3; maximum 6)**

Topics in Applied Theatre, Practice, and Pedagogy will explore creative methods in theatre and performance and their application in non-traditional settings such as the classroom, community, or other nonartistic venues. Prerequisite for THE 424/THE 524: junior status or permission of instructor.

**THE 432/THE 532. Acting Shakespeare. (3)**

Advanced acting class focusing on the particular demands of acting Shakespeare's text. Exploration of heightened language, verse structure, scansion, and text analysis for performance.

Prerequisites: THE 227.

**THE 437/THE 537. Auditions. (3)**

Preparation for entry into graduate schools, professional internships, or repertory companies for actors.

Prerequisite: THE 227 or permission of instructor.

**THE 439/THE 539. Special Techniques for the Actor. (3; maximum 6)**

Practical application and exercises in advanced skill areas such as, Alexander, Feldenkrais, circus skills, mask training, hand-to-hand combat, weapons, comedy, period movement. Topic varies.

**THE 441/THE 541. Methods and Styles of Play Directing. (3)**

Scene study and presentations in selected genres and styles. Focus on development of directorial concept, unity, and effect.

Prerequisite: THE 421/THE 521.

**THE 450/THE 550. Special Topics in Theatre Design and Technology. (3; maximum 6)**

Investigation of advanced topics or techniques in theatre design and technology. Might include areas such as design theory, specific design styles or approaches, rendering techniques, draping and patterning, costume crafts, digital technologies, welding, foam carving. Topic varies.

**THE 455. Tutorial in Advanced Problems. (1-6; maximum 6)**

Supervised execution in theatrical design problems and projects. May be repeated for credit within maximum. Independent study permit required.

Prerequisite: permission of instructor.

**THE 477. Independent Studies. (0-5)****THE 480. Independent Reading and Projects for Departmental Honors. (3-6; maximum 6)**

Departmental honors may be taken during the senior year.

Departmental approval required.

**THE 481/THE 581. Integrating Performance, Theory and Practice. (3; maximum 6) (MPC)**

This capstone will build an original creative performance from source material based on a particular topic, theme or method. Students will create an artistic product and explore ways to design, produce, write and perform as a collaborative team. Students will then assess their work within the larger contexts of art-making, community engagement or performance. Creative products resulting from this class may include an exhibit or installation, fashion show, evening of scenes, collaboratively devised performance, autobiographical solo performance, site specific performance, documentary performance, production dramaturgy or other formats. Students will learn to think like an artist and to think across disciplines. They will conduct research to better understand contexts, to understand how to apply a method, and to understand how research provides creative inspiration.

**THE 601. Research and Methodology. (3)**

Introduction to research with emphasis on problem solving, techniques of historical, critical, and descriptive bibliography. The course includes an application of critical research methodologies in theatre scholarship. Emphasis on the process of constructing a research project for departmental graduate conference.

Prerequisite: graduate standing.

**THE 605. Introduction to Theatre and Performance Theory. (3)**

Course provides student with introduction to current theoretical approaches to theatre and performance.

**THE 660. Independent Project. (1-4; maximum 8)****THE 677. Independent Studies. (0-5)****THE 700. Research for Master's Thesis. (1-8; maximum 12)****THE 703. Graduate Colloquium in Theatre Studies. (1)**

Graduate Colloquium in Theatre Studies is a one credit hour course that students take each semester during their MA residency in the Department of Theatre. The course is an introduction to the profession, an open symposia devoted to departmental and university lectures, attendance at regional and national conferences, field studies in the art of theatre and related fields, and opportunities to share research with present and future colleagues.

**THE 770. Directed Study in Theatre. (1-6; maximum 12)**

Directed study in selected topics in theatre history and drama, theory and criticism of drama and performance.

Prerequisite: graduate standing and permission of instructor.

**THE 780. Graduate Production Studio. (1-6; maximum 24)**

Directed performance and production in theatre and dramatic art. Credit/no-credit only.

Prerequisite: graduate standing and permission of instructor.

## University Studies (UNV)

**UNV 101. I Am Miami. (1)**

Through reflection, self-assessment and group discussions, students gain a sense of belonging at Miami, plan how to make the most of their time at Miami, and establish a foundation for academic and co-curricular success.

**UNV 171. First-Year Research Experience I. (1-3)**

This course will introduce students to the research enterprise in general, and research activities and resources at Miami, in particular. Furthermore, it allows students to discover the research process within a particular content area by participating in a hands-on research experience. The course serves a number of purposes, such as: providing orientation and overview of relevant university resources, exposing students to examples of ongoing research at the university, covering content material on how to design and conduct research, locating and retrieving source material for research projects, designing an appropriate study to address a research question, and socializing students within a community of scholars. It is expected that students will complete UNV 172 in the subsequent semester, after which they will be adequately trained to partake in supervised yet independent research or creative activity with a faculty mentor, or other similar endeavors of their choosing.

**UNV 172. First-Year Research Experience II. (1-3)**

This course continues the student's training and experience in conducting research in the relevant content area. Specifically, whereas the focus in UNV 171 was on the design of a research project, this semester will focus on the implementation of the project, as well as the subsequent data analysis and presentation of results. After completing this course, students will have conducted a research process from beginning to fruition, and will thus be adequately trained to partake in supervised yet independent research or creative activity with a faculty mentor. The course serves a number of purposes, such as: practicing careful data collection, preparing data and conducting appropriate analyses, professional writing according to the conventions of the discipline, professionally presenting research results in a variety of formats, and socializing students within a community of scholars.

Prerequisite: UNV 171.

**UNV 177. Independent Studies. (0-5)****UNV 377. Independent Studies. (0-5)**

## Western Program (WST)

**WST 110. Introduction to Contemporary Topics. (1)**

Draws on experiences of guest faculty and alumni speakers to model how engaged learning leads to informed action. Readings on the chosen focus emphasize an integrative perspective; students may repeat the course for credit when the topic changes.

**WST 120. Peer Leadership Practicum. (1)**

Trains students to take a leadership role in inquiry, peer education, and campus outreach.

**WST 177. Independent Studies. (0-5)****WST 201. Self and Place. (3) (MPF)**

Investigates various disciplinary models for how place and identity interact in American culture, and, specifically, how the local environment, including geographical location, ethnic traditions, and family traditions, impact our lives. Students draw upon their own life experiences to begin to formulate their intellectual interests. IIB. CAS-B.

**WST 204. Introduction to Service-Learning. (3)**

Focuses on the integration of service and community engagement with academic goals as pedagogy. Students will learn how to identify authentic community needs and match them with academic goals. Students will participate in Service-Learning throughout the semester. Cross-listed with SJS.

**WST 231. Interdisciplinary Inquiry. (3)**

Introduction to the relevance of interdisciplinary approaches to learning in the arts, humanities, social sciences, and sciences. Explores the process of inquiry-based discovery through instructor-generated inquiries, student-generated inquiries, and discipline-specific methods and techniques. Particular theme or topic will differ each semester. CAS-B-Other or CAS-C Other. CAS-W.

**WST 251. Individualized Studies Seminar. (1)**

Provides students with the tools to chart their personal plan of study.

**WST 277. Independent Studies. (0-5)****WST 301. Interdisciplinary Problems and Questions. (3)**

Considers a complex topic from multiple perspectives. Identifies the distinct vantage points offered by different fields of inquiry, including philosophical, aesthetic, scientific and historical discourse, with an emphasis on achieving an integrative understanding of the topic. Team-taught by two or more faculty members with different disciplinary and/or interdisciplinary expertise. CAS-B-Other or CAS-C Other.

**WST 304. Theory Into Action: Service-Learning. (3)**

Focuses on sustaining community and faculty partnerships as part of cultivating a culture of service and reflection through Service-Learning.

Prerequisite: SJS/WST 203 or instructor approved course.

Cross-listed with SJS.

**WST 321. Developing Interdisciplinary Projects: Exploring Ways of Knowing. (3)**

Investigates a complex topic with attention to methods and theoretical approaches from the sciences, social sciences, humanities, and the arts, emphasizing the tensions that emerge from the interplay of different sources of information. Students identify and critique distinctive approaches to integrate multiple perspectives on the course topic. CAS-B-Other or CAS-C Other.

**WST 322. Developing Interdisciplinary Projects: Art and Politics of Representation. (3)**

Investigates a complex topic with specific attention to developing competence in the analytical and rhetorical tools for interdisciplinary inquiry in the arts, humanities, sciences, and/or social sciences. Based on course topic, students identify and analyze representational practices (e.g., written texts, performances, new media, statistical surveys, scientific studies) to promote the development of creative strategies for representing and addressing complex problems and questions. CAS-B-Other or CAS-C Other.

**WST 340. Internship. (0-20)****WST 341. Interdisciplinary Synthesis and Action. (3)**

Integrates diverse methods of inquiry to assist the development of student outreach projects that synthesize learning about a complex topic. Working on their own or in teams, students develop action-based approaches with a strong aspect of public performance and/or engagement. EL. CAS-B-Other or CAS-C Other.

**WST 377. Independent Studies. (0-5)****WST 397. American Environmental History. (3)**

Introduction to human-natural environment relationships in English North America and the United States, ca. 1600 to present. Chronological and regional approach with emphasis upon political economy and the American conservationist/environmentalist movement.

Cross-listed with AMS 397 and HST 397.

**WST 421. Senior Project Proposal Workshop. (3)**

Supports student planning of senior project by focusing on proposal formulation, action plan, literature analysis, methodology, and project evaluation/assessment; culminates in public defense of full proposal with program faculty and students.

**WST 444. Senior Workshop and Project. (3) (MPC)**

Provides a forum in which students share with peers the process of writing, revising, researching, or otherwise executing the planned project. Work with direction of a faculty adviser. Students work individually or in teams to develop means of senior project delivery, e.g., by submission of research paper suitable for conference presentation or journal publication; theatrical or multimedia performance; gallery showing. Students present their research in a public form at the end of the spring semester.

Prerequisite: WST 421.

**WST 477. Independent Studies. (0-5)**

## Women's, Gender & Sexuality Studies (WGS)

**Note:** Cross-listed courses are available in Women's, Gender, and Sexuality Studies. For more information, consult the listing in the appropriate department.

**WGS 177. Independent Studies. (0-5)****WGS 201. Introduction to Women's Studies. (3) (MPF, MPT)**

Interdisciplinary introduction to the study of women which focuses on determinants and expressions of women's roles. IC, IIC, IIIB. CAS-C.

**WGS 202. Introduction to GLBT Studies. (3) (MPF)**

Introduction to the scholarly field of GLBT (Gay, Lesbian, Bisexual, Transgender) Studies. Provides the intellectual foundation for the further study of non-normative genders and sexualities. IC, IIB. CAS-B.

**WGS 203. Sociology of Gender. (3) (MPT)**

Description and analysis of gender in human society with special attention to constraints placed on both males and females by current socialization practices, and to issues in equality from historic as well as contemporary perspectives. IC. CAS-C.

Cross-listed with SOC.

**WGS 204. Gender, Science, & Technology. (3)**

WGS 204 will introduce students to the study of science and technology from the critical lens of interdisciplinary gender studies. We will explore questions such as: What does science tell us about the nature of sex or gender differences? How have ideas about gender and sexuality structured the basic practices and language of science and technology? What are feminist critiques of science and technology? How have women contributed to science (especially in contexts where they were barred from doing so)? And what does a feminist science look like? Why have women and people of color been, historically, underrepresented in STEM disciplines and what can be done to change this underrepresentation? CAS-QL.

**WGS 211. Writing with Purpose: Interdisciplinary Inquiry and Communication. (3)**

This is an intermediate level course which enables students to investigate and discuss interdisciplinary practices of knowledge creation and dissemination. Students will practice a variety of writing and other communication strategies necessary for the effective dissemination of ideas to interdisciplinary audiences and the general public, and can expect to gain experience in working with a wide spectrum of interdisciplinary research, tools and methods while engaging intellectually in interdisciplinary modes of thinking, reading, listening, and speaking. ADVW.

Cross-listed with AAA/AMS/BWS/LAS.

**WGS 221. Sexualities. (3)**

Introduction to the study of human sexual behavior with particular attention paid to the issues of gender development; premarital, marital, and post-marital sexual patterns; birth control; sexual dysfunction; cross-cultural sexual patterns; and alternative sexual lifestyles.

Cross-listed with FSW/SOC.

**WGS 232. Women Writers. (3) (MPT)**

Introduction to women's writing in English. Readings may include poetry, drama, fiction and non-fiction by women writers from various historical periods and national traditions. IC. CAS-B-LIT.

Cross-listed with ENG 232.

**WGS 235. Women in Antiquity. (3) (MPT)**

Study of the status of women in the Greek and Roman world from Bronze age through early centuries of Christianity conducted in light of literary, artistic, and archaeological evidence in order to increase knowledge and understanding of Greek and Roman family and social life and of our own society as well.

Cross-listed with CLS 235.

**WGS 237. GLBTQ Literature. (3) (MPF)**

Study of literature by and about sexual minorities, including gay, lesbian, bisexual, transgender and queer identities, cultural contexts, and social movements. IIB, IC. CAS-B-LIT.

Cross-listed with WGS.

**WGS 243. Women's Health Care: Problems and Practices. (3)**

Examines health and medical problems or concerns of women. Current controversial issues and misconceptions revealed in such topics as sexuality, rape, obstetrical and gynecological procedures, cancer detection and treatment, menopause, and psychotherapy. Women's health movement is introduced; health care delivery system scrutinized from the point of view of the female consumer. Cross-listed with KNH.

**WGS 277. Independent Studies. (0-5)****WGS 278. Women and (Dis)ability: Fictions and Contaminations of Identity. (3)**

Provides a critical analysis of the historical, sociological, cultural, media and educational images and representations of women with disabilities. Current research and theories from Disabilities Studies and Womens Studies will serve as the lenses for the exploration of disability as a social construct. The course will focus on exploration of oppressive social forces embedded in the re/presentations of and by women with disabilities which transform and complicate such images. Cross-listed with DST/EDP.

**WGS 287. Enter the Diva: Women in Music. (3) (MPF)**

American women in music from 1900 to present. Women have made considerable contributions to the various genres and traditions that define American music. From popular forms to concert music there are numerous women who have constructed a musical discourse that chronicles their experiences in America and their conceptions of womanhood. This course is designed to chronicle the experiences of these women musicians and vocalists and discuss their musical approaches. Discussions include traditional music practices as well as contemporary popular music styles. IIA, IIB. IC.

Prerequisite: MUS 135, 185 or 189, or permission of instructor. Cross-listed with MUS.

**WGS 301. Women and Difference: Intersections of Race, Class, and Sexuality. (3)**

Investigation of the interdisciplinary theoretical approaches to the interplay of race, class, gender, sexual orientation, and other aspects of social identity in women's lives; analysis of the ways social difference is defined, used, and experienced. Emphasis on feminist and womanist theories that take into account the interdependence of multiple categories of social difference. Open to majors and minors or other students with permission of instructor. IC.

Prerequisite: WGS 201.

**WGS 302. Geography and Gender. (3)**

This class adopts a geographic approach to the study of gender relations. The role of space and place in shaping the diversity of gender relations throughout the world will be considered. Through case studies the importance of gender relations in understanding a variety of issues will be stressed. Overall, we will explore how geography shapes gender relations and how gender produces a variety of geographies. IC.

Cross-listed with GEO.

**WGS 309. Native American Women. (3) (MPT)**

A survey of writings and film by and about Native American women. The objective of the course is to provide students with a broad overview of Native American perspectives on a variety of topics including indigenous viewpoints on research methods, environmental activism, politics and policy, and critical analysis. IC. CAS-C. Cross-listed with GEO.

**WGS 313. Marriage Across Cultures. (3)**

This class engages feminist theory and gender studies to explore the consequences of different types of marital formations (polygamous as well as monogamous) for the lives of women and men in selected Western and non-Western cultures. IC. CAS-B. Cross-listed with REL.

**WGS 325. Identity, Race, Gender, Class. (3) (MPT)**

Develops conceptual tools and critical perspectives that enable students to better understand and analyze the processes through which identities are constructed and experienced. Learning activities facilitate analysis of individual identities as experienced through the life cycle and across diverse cultural and subcultural contexts, and build a systematic understanding of the processes and dynamics through which identities and identity groups develop and interact. IC. CAS-C.

Cross-listed with ATH/BWS/LAS.

**WGS 326. Psychology of Gender. (3)**

Review and integration of emerging theory and research about women and their behavior, with particular attention to uniquely female experiences throughout the life cycle and to the influences that affect women in contemporary society.

Prerequisites: PSY 221 and PSY 294.

Cross-listed with PSY.

**WGS 333. Religion, Dress, and Status. (3) (MPT)**

Displays of status through constrictive dress and gender segregation will be explored with reference to religion, gender, and class. Course will explore the topic through selected case studies, several of which involve Islamic cultures.

Cross-listed with REL.

**WGS 336. Ancient Sexualities. (3)**

This course examines the written and visual evidence for ancient sexual practices, as well as ancient attitudes towards these practices as found in ancient law, philosophy, love poetry, novels, and other texts. Our reading of primary sources will be informed by modern writings on gender and sexuality. We will also engage with recent debates about the ideologies reflected in ancient codes of sexual conduct. Through a close reading of a variety of ancient Greek and Roman texts and images, together with contemporary interpretive readings, we will attempt to reach not only a fuller understanding of some central features of the cultures of Greece and Rome, but also, by holding up the mirror of antiquity to our own beliefs and practices, to arrive at a more critical consideration of how we think about sex and gender today.

Cross-listed with CLS.

**WGS 340. Internship. (0-20)****WGS 345. Women, Religion and Social Change in America. (3) (MPT)**

An exploration of various ways in which women lifted their own voices, engaged with societal issues, and constructed their communities and themselves through the institutions and frameworks of religion in America.

Cross-listed with AMS/REL.

**WGS 346. Global Gender Politics. (3) (MPT)**

Examination of the role of women in political participation, political protest, and political and economic development worldwide. Explores the usefulness of gender as a conceptual tool for comparative analysis, and uses case study material from the developed and developing world to examine how women's involvement in politics both shapes and is shaped by various political contexts.

Cross-listed with POL.

**WGS 348. Gender Politics & Policy in the United States. (3)**

Addresses the role of gender in American politics. Topics include the history of women's rights in American politics, differences between the political behavior of men and women, the role of gender in elections and in leadership, and current policies that affect women.

Prerequisite: POL 241 or WGS 201.

Cross-listed with POL.

**WGS 351. Cultural Politics of Gender and Sexuality in Asian/America. (3)**

Intensive interdisciplinary study of imaginative representations of the encounters between "Asia" and "America," broadly conceived, particularly the entangled relations among their diverse constituencies in the contexts of colonialism and globalization. Key topics include feminist critique of gendered violence and human rights issues; Euro-American militarism and sex tourism; the emergence of new categories of sex, gender, and kinship as lived experiences mediated by transnational consumer culture and institutional structures; masculinity and Asian diasporic nationalisms; pan-Asian movements against racism, colonialism, and neoliberalism both in Asia and the U.S.; and the emergence of new critical, artistic and aesthetic practices. IC.

Cross-listed with AAA/ENG.

**WGS 355. Feminist Theory. (3) (MPT)**

Examination of major writing by contemporary feminist thinkers. Traditional philosophical questions, such as justice, freedom, nature of a person, and relationship of an individual to society, are raised in context relevant to both male and female students.

Cross-listed with PHL.

**WGS 356. Women and Gender in Film. (3) (MPF)**

This course explores the construction of gender and representations of women in film in two contexts: in mainstream Hollywood cinema and in experimental and independent films. While not providing an extensive history of women in film, the course provides a sampling of iconic films—from early cinema to the present—to critically examine how women are portrayed throughout the twentieth century and in various genres, in films made by both men and women. Course readings engage theoretical and practical points of contact within cinema, including feminist film theory, postcolonial theory, psychoanalysis, queer theory, and critical race theory. IIB, IC. CAS-B. Cross-listed with ENG/FST.

**WGS 361. Couple Relationships: Diversity and Change. (3)**

Investigation of intimate couple relationships in their many diverse forms. Focuses on social and psychological factors influencing development and maintenance of such couple relationships as dating, cohabitation, and marriage. General principles are discussed as well as factors that are more specific to certain age groups, relationship types, or sociocultural settings. IC.

Prerequisite: three hours of social science.

Cross-listed with FSW.

**WGS 369. Sexuality, Youth, Education. (3)**

This interdisciplinary course utilizes insights from a variety of areas - such as literature, sociology, popular culture, law, and medicine - to analyze how contemporary discourses of sexuality are viewed from multiple perspectives. The course investigates how discourses of sexuality co-mingle with discourses of youth with special attention to the intersections of race, ethnicity, class, gender, nationality and ability. Working from a Critical Youth Studies (CYS) framework and similar theoretical positions, the course privileges scholarship and community-based educational models which foreground issues of equity, social justice, and youth participatory activism.

**WGS 370. Selected Topics in Women's Studies. (3)**

Examines specific aspects of women's roles, status, and experiences.

**WGS 375. (Dis)Ability Allies: To be or not to be? Developing Identity and Pride from Practice. (3)**

Explores what it means to be ally to/in/with the disability community in America. The course emphasizes identity formation and how that formation can inform the construction of the ally identity. Through deconstructing learned values, knowledge, and images of disability that mitigate ally behavior, students discover the micro and macro structures that support ally behavior. By exploring how social control and social change have worked in other civil rights movements, students understand the necessity of identifying and including allies in the disability movement for civil rights. IC. CAS-C.

Cross-listed with DST/EDP/SOC.

**WGS 377. Independent Studies. (0-5)****WGS 382. Women in American History. (3) (MPT)**

Survey of the history of women's lives and roles in American society from colonial period to present. Emphasis on examining women's individual and collective roles in private and public spheres and on exploring how specific economic and political transformations have affected women's lives. IC. CAS-B. Cross-listed with AMS and HST.

**WGS 383. Brazilian Women through Literature and Film. (3) (MPF)**

Addresses questions about gender, race, class and stereotype of women's bodies in 20th-century Brazil. IIB, IIB. CAS-B. Cross-listed with BWS/ENG/FST/POR.

**WGS 392. Sex and Gender in American Culture. (3) (MPT)**

Examination of change over time in the construction of sexual norms, attitudes, and behaviors in American culture, as well as of gender roles. Covers the period just prior to the Indian-European encounter to the present. IC. CAS-B.

Cross-listed with AMS/HST.

**WGS 401. The Role of Women in a Transforming Society. (3) (MPC)**

Review of current and historically significant feminist writings on the ways in which patriarchal structures of authority affect what students know about women's experiences. Students position themselves as creators of knowledge about women's experiences and as members of self-critical communities of activists who are transforming society and women's positions in that society. Includes readings, discussions, and individual and group projects. Students learn to celebrate similarities in experiences and perspectives, and to understand and appreciate differences.

Prerequisite: WGS 201 and at least 12 semester hours in WGS courses, or permission of instructor.

**WGS 402/WGS 502. Engaged Learning Practicum. (1-6; maximum 6)**

This course connects feminist theory and practice, and is designed around Service-Learning at a practicum site. The readings explore leadership, feminist grassroots organizing, service learning and civic engagement, feminist activism, and difference and cultural competence. Students will have the opportunity to translate the knowledge, skills, and critical thinking they have learned in the classroom to actual practice, to observe and work with professionals who are addressing women's/gender issues in the field, and to reflect on their own roles as future leaders and professionals.

Prerequisite: WGS 201 or 202 or 301.

Cross-listed with BWS.

**WGS 406. Indigenous Peoples and Their Sacred Lands. (3)**

An in depth look at topics related to policy and land management practices that impact indigenous peoples nationally, as well as internationally. The major focus of the various case studies is on designated sacred lands of Native American tribes within the United States. The course provides students with interdisciplinary training about indigenous cultures and human rights.

Cross-listed with GEO.

**WGS 422/WGS 522. Politics and Ethics of Theatre and Performance: Representation, Race, Gender, Class and Sexuality. (3)**

An advanced course that foregrounds political and ethical questions in relation to theatre and performance in the areas of race, class, gender and sexuality.

Prerequisites: THE 291, THE 292 and Junior standing or permission of the instructor.

Cross-listed with THE.

**WGS 432. Feminism and the Diaspora: U.S. Women of Color. (3)**

Concerns issues of language, history, geography, social-psychology, and culture for U.S. women of color (black, Asian-American, Latina, American Indian, and others). Includes works by and about women on gender, ethnicity, class, sexuality, and other differences. IC.

Cross-listed with BWS/ENG.

**WGS 435/WGS 535. Queer Theory. (3)**

Analysis of how gender and sexuality have informed our understandings of cultural texts and contexts. Emphasizes how discourses of gender and sexuality function within a variety of historical, cultural, and/or aesthetic traditions. IC.

Cross-listed with ENG.

**WGS 436/WGS 536. Women, Gender and the Environment. (3) (MPT)**

Seminar discussing literature on the role of women in their relationships with natural resources as advocates, practitioners, and scholars. Ideas on ecofeminism will be introduced from more-developed "north" and developing "south" perspectives, and then directed toward the study of gender and development, and participatory tools in gender analysis. IC. CAS-C.

Cross-listed with GEO.

**WGS 437/WGS 537. Black Feminist Theory. (3)**

Examines critical and theoretical issues in black feminism from slavery to the present. One of the central goals of the course is to interrogate race, gender, class, and sexuality in the context of black women's thoughts and experiences. The class will read, discuss and analyze a wide variety of texts including critical essays, films, selected fiction, print and visual media. IC.

Cross-listed with BWS/ENG.

**WGS 450/WGS 550. Topics in Women's History. (3; maximum 12) (MPT)**

In-depth study of a selected topic in the history of women, focusing on either a specific period and place, or a theme.

Cross-listed with HST.

**WGS 451/WGS 551. Family Violence. (3) (MPC)**

Analysis of research and theory on family violence, including physical abuse of children, sexual abuse, neglect, premarital abuse, wife abuse, gay/lesbian battering, elder abuse, prevention, and intervention. Basic framework is ecological/feminist, emphasizing an examination of family dynamics as well as broader historical, social, and patriarchal contexts.

Cross-listed with FSW/SOC.

**WGS 461. Gender, Sexuality and Media. (3) (MPT)**

Examines how media help to shape notions of gender in society, how gender ideologies influence mass media perspectives and practices, and how mediated representations may reinforce or challenge social hierarchies based in differences of gender, race, ethnicity, class and sexual orientation. IC.

Cross-listed with MAC.

**WGS 463/WGS 563. Gender and Aging. (3) (MPT)**

Examination of how gender constructions shape the aging process, with particular focus on how various social, psychological, physical, and cultural factors affect men, women, and transgendered persons differently as they grow older.

Prerequisite: GTY 154.

Cross-listed with SOC.

**WGS 470. Senior Thesis in Women's Studies. (3-4)**

Focuses on the production of the senior thesis. Senior theses may report the results of original research, critical analysis, activist work and/or creation of art, music, performance, fiction, or other forms. Periodic meetings provide a forum to discuss progress and problems, share with peers the process of framing and implementing a project, research, and writing, and practice presenting results. The course culminates in a public presentation of results.

Prerequisite: Senior capstone in WGS (WGS 401 or WGS 370E).

**WGS 475/WGS 575. Women, Gender Relations, and Sport. (3)**

Explores the meanings of women's participation in sport and physical activity using sociological, feminist, and cultural studies perspectives. Special consideration given to the ideological significance of sport in U.S. culture and ways in which sporting women accept and challenge contemporary gender relations. IC.

Prerequisite: junior or graduate standing.

Cross-listed with KNH.

**WGS 477. Independent Studies. (0-5)****WGS 601. Introduction To Women's Studies. (3)**

A seminar that focuses on Women's Studies as an academic project and a force for social change in the U.S., tracing its historical development and identifying some of its central issues. Readings, discussion, and assignments help students understand the impact of Women's Studies upon academia and upon their own lives.

**WGS 602. Feminist Theory & Methodology. (3)**

A seminar that investigates major research methods (empirical studies, case studies, ethnographies, rhetorical analyses, textual and historical studies) as they are theorized and practiced within contemporary feminism. As an interdisciplinary project, feminist academic research includes work from psychology, sociology, literary studies, languages, the arts, anthropology, philosophy, education, mathematics, political science and law, and the sciences. This seminar highlights the ways in which research methodology and theorizing are informed by feminist analyses of institutional power, social difference, and position of the researcher.

**WGS 677. Independent Studies. (0-5)****WGS 785. Theory Gender, Sex, Ed. (3)**

This course examines the multiple, changing meanings and political effects of gender and sexuality in various socio-cultural and educational contexts. It foregrounds analysis of how social institutions, such as education, the law, family and economy, and cultural representations, such as literary and popular media, shape competing concepts of gender and sexuality. The course readings and collective dialogue place particular attention on feminist scholarship on women, girls and sexual minorities.

Cross-listed with EDL 785.

# Awards, Scholarships, and Prizes

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These are presented to outstanding students who earn special recognition. Contact the department or organization for current information.

## Accountancy

**Accountancy Faculty Scholarship** to an undergraduate accountancy student

**Albers Accountancy Scholarship** to undergraduate minority students

**Andersen Alumni Accounting Scholarship** to seniors and graduate students

**Arthur H. Carter Scholarship** to undergraduate and graduate students

**BKD Accountancy Scholarship** to sophomore, junior, and minority students

**Dr. Gyan Chandra Memorial Scholarship** to an undergraduate student

**Deloitte & Touche Donald M. Lutz Memorial Scholarship** to a junior

**Deloitte & Touche Maureen R. Mushat Memorial Scholarship** to a junior

**Ernst & Young Accountancy Scholarship** to junior, senior, minority and graduate students

**Rolland L. Ewell Accountancy Scholarship** to graduate students

**Grant Thornton LLP Accountancy Scholarship** to a junior

**Harold W. Jasper Scholarship** to a graduate student

**KPMG Accountancy Scholarship** to junior, senior, minority, and graduate students

**Daniel Leshner Beta Alpha Psi Award** to an outstanding Beta Alpha Psi member

**Harry C. Lyle Scholarship** to an undergraduate student

**Ogden Excellence in Accounting Award** to a junior

**Joseph B. and Esther K. Paperman Memorial Scholarship** to a senior

**PwC Accountancy Scholarship** to a junior, seniors, a minority student, and a graduate student

**PwC Kelly Booms Memorial Scholarship** to seniors

**Rankin Accountancy Scholarship** to a graduate student

**William H. Schaefer Scholarship** to a graduate student

**Scott Schweinfurth & Margaret English Family Scholarship** to an undergraduate student

**C. Roger Stegmaier Accountancy Award** to an undergraduate student

**William D. Stiles/Deloitte & Touche Memorial Scholarship** to junior, senior, and graduate students

**William R. and Irene R. Vogel Memorial Scholarship** to a graduate student

**Jeffrey VonDeylen Family Scholarship** to an undergraduate student

**E. Ben Yager Scholarship** to an undergraduate student

## Anthropology

**Rebecca Jeanne Andrew Memorial Award**

**Carol E. Kist Student Awards**

## Architecture

**The Alpha Rho Chi Medal**

**The American Institute of Architects Henry Adams Medal**

**The American Institute of Architects Certificate of Merit**

**The Department of Architecture Scholastic Achievement Award**

**Barcus Technology Scholarship**

**Mildred Zurbrick Bishop Scholarship**

**Sterling Cook Scholarship Award**

**Fanning and Howey Presidential Scholarship**

**Rudolph Frankel Memorial Award**

**Sanford B. Friedman Scholarship**

**The Howard E. Gartner Architecture Scholarship**

**Herb Hodgman Scholarship**

**Warren & Nancy Howard Memorial Scholarship**

**Frank N. Meilan Memorial Scholarship**

**The Walter C. Pfeiffer Architecture Scholarship**

**Potter/Maxfield/Wertz Architectural Design Award**

**Richard H. and Leila Hentzen Smith Scholarship**

**URS Consultants Scholarship**

**Fred C. Whitcomb Scholarship in Interior Design**

**Charles E. and Elizabeth C. Stousland**

**John Weigand Founder's Scholarship in Interior Design**

**Joseph P. Veasey Award**

**Northwest Ohio Scholarship**

## Art

**Gertrude Davidson Brill Art Scholarship**

Button Gallery Art Award

Nancy Francis Cady Art Scholarship

Ceramics Award

Clive F. Getty Art History Scholarship

Edna Kelly Scholarship

Sterling Cook Scholarship Award

Arthur B. Damon Art Scholarship

Department of Art Scholarship

Walter Gross III Art Scholarship

Frances Hanson Christian Scholarship

Barbara Hershey Memorial Scholarship (photography)

Marston D. Hodgkin Art Scholarship

George R. And Galen Glasgow Hoxie Scholarship (alternates with music)

Vincent Inconiglios Art Scholarship

Jim Killy Art Scholarship

Sinisa Lenac Graduate Studio Award

Miami University Scholarship

National Woodcarvers Association Scholarship

Fred & Molly Pye Memorial Scholarship

Mary M. Quay Scholarship

The Tara Savage Art Supplement Award

Richard H. and Leila Hentzen Smith Scholarship

Western College Art Scholarship

Robert Wolfe Printmaker's Award

## Biology

Outstanding Master Student Awards

Outstanding Doctoral Student Awards

## Chemical, Paper and Biomedical Engineering

ABB First Endowed Scholarship

ABB Second Endowed Scholarship

Mark A. Akers/Crystal Tissue Endowed Scholarship

R. Michael Alberts Endowed Scholarship

Alumni Endowed Scholarship Award

Appleton Endowed Scholarship

William Beckett Endowed Scholarship

Beloit Corporation Endowed Scholarship

C. E. Brandon Endowed Scholarship

Philip S. and Virginia E. Cade Memorial Scholarship

Champion International Endowed Scholarship

Consolidated Papers Foundation Inc. Endowed Scholarship 1996

Consolidated Papers Foundation Inc. Endowed Scholarship 1998

William J. Copeland Endowed Scholarship

Domtar Endowed Scholarship

Georgia-Pacific Endowed Scholarship 1995

Georgia-Pacific Endowed Scholarship 1996

Georgia-Pacific Endowed Scholarship 1997

Georgia-Pacific Endowed Scholarship 1998

Georgia-Pacific Endowed Scholarship 1999

Georgia-Pacific Endowed Scholarship 2004

William O. Gutzwiller Endowed Scholarship

Hercules Incorporated Endowed Scholarship

Honeywell Corporation Endowed Scholarship

International Paper Company Endowed Scholarship

International Paper Company 2003 Endowed Scholarship

Charlene C. and George T. Jewett Endowed Scholarship

Kadant Linwood Tyler Memorial Endowed Scholarship

Kemira Chemicals Inc. Endowed Scholarship

Clemie McKinney Memorial Endowed Scholarship

Mead Westvaco Corporation Scholarship

Miami Valley PIMA Endowed Scholarship

Merwin Miller Memorial Endowed Scholarship

Nalco Chemical Company Endowed Scholarship

Newark Group Endowed Scholarship

Newpage Corp. Endowed Scholarship

Ohio TAPPI Endowed Scholarship

Ohio TAPPI Leadership Endowed Scholarship

OMNOVA Solutions Inc. Endowed Scholarships

OMNOVA Solutions Inc. Endowed Scholarship #2

Paperitalo Publications Scholarship

PCA-Tomahawk Mill Endowed Scholarship

Penford Products Endowed Scholarship

R. C. Peterson Honorary Endowed Scholarship

Pratt Industries Endowed Scholarship

Wyman C. Rutledge/Mead Corporation Endowed Scholarship

Vance C. Setterholm Endowed Scholarship

Simpson Paper Endowed Scholarship

Smurfit Stone Container Corp. Endowed Scholarship

Specialty Minerals Inc. Endowed Scholarship

TAPPI Paper Chase Endowed Scholarship

Tenneco Packaging Endowed Scholarship

Tenneco Packaging–Tomahawk Mill Endowed Scholarship

TEXO/Louis Lerner Endowed Scholarship

Stanley and Ruth Trosset Endowed Scholarship

Union Camp Corporation Endowed Scholarship

Voith Paper Technology Endowed Scholarship

Weyerhaeuser Company Endowed Scholarship 1991

Weyerhaeuser Company Endowed Scholarship 1995

Weyerhaeuser Company Endowed Scholarship 2005

Weyerhaeuser Company Endowed Scholarship 2013

Bob and Barbara Williams Leadership Endowed Scholarship

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## Chemistry and Biochemistry

Harvey Clayton Brill Scholarship

John H. Buckingham Scholarships

William Hale Charch Scholarship

Chemistry Department Graduate Fellowship

Class of 1996 Chemistry Scholarship

J.A. Coulter Scholarship

Joseph A. Culler Chemistry Scholarship

R. Thomas Davidson Graduate Award in Chemistry

Gervaise O. Frost Memorial Award

Elmer G. Gerwe Chemistry Scholarship

Walter and Catherine Gordon Chemistry Fund

David Hershey Memorial Scholarship

Lester E. Imboden MD & I. Nadean Imboden Scholarship Fund

James Hershberger Memorial Undergraduate Research Award

Anastas Karipides Memorial Scholarship

Lubrizol Chemistry Scholarships

Raymond and Vonna McBride Scholarships

J. Earl Pruden Scholarship

William Hartmann Schwarz Scholarship

Parke G. and Dorothy M. Smith Scholarship

Robert A. Stalzer Memorial Scholarship

Clyde E. and Alice W. Stiner Scholarship

Malcolm E. Switzer, M.D., Award

Robert W. and K. Ursula Votaw Scholarship

E. O. and B. V. Weidner Chemistry Scholarship

## Classics

**Bishop Prize in Latin**, in honor of Robert H. Bishop II, by alumni

**Bishop-Elliott Prize in Classical Humanities**, in memory of Robert H. Bishop II, class of 1831, and Professor Charles Elliott

**Elliott Prize in Greek**, in memory of Professor Charles Elliott, by John B. Smith, class of 1858

Henry Montgomery Classics Scholarship

Henry Montgomery Travel Award

Marilyn Wade-Duff Scholarship

## College of Creative Arts

The College of Creative Arts Divisional Scholarship

Walter L. Gross Jr. Family Fine Arts Scholarship

## Commerce

A. Alberta Holden Memorial Scholarship

Angus Family Commerce Scholarship

Commerce Advisory Council Scholarship

Commerce Scholarship

Fastenal Scholarship in Commerce

Theodore & Kathleen Light Commerce Scholarship

## Computer and Information Technology

CIT Alumni Award

Carl Bishop Information Technology Scholarship

Thatcher Computer and Information Technology Scholarship

## Computer Science and Software Engineering

**Accenture Alumni Scholarship**

**Cardinal Health Scholarship**

**Darrel and Wilma Grothen Scholarship**

**Disha Patel Scholarship**

**Drew and Elaine Foster Scholarship**

**Eli Lilly Miami Alumni Scholarship**

**Ernest and Susan Leffler Scholarship**

**Eve Richards Scholarship**

**General Edwin W. Rawlings Scholarship**

**Lawrence J. Prince Memorial Scholarship**

**Mark R. and Jennifer M. MacNaughton Family Scholarship**

**Richard and Nancy Linden Scholarship**

**Ronald and Mary Ann Kral Scholarship**

**WorldPay (Vantiv) Scholarship**

## Economics

**Hart-Noble-Hall Award in Macroeconomics** to a senior major with a strong interest in macro/monetary economics

**Gerald E. Flueckiger Award** to a senior economics major with a strong interest in microeconomics

**William McKinstry Award** to a senior majoring in business economics

**James E. Rees Memorial Scholarship Award** to an undergraduate major who demonstrates need, leadership traits, initiative, and academic performance

**Delbert A. Snider Award** to a graduating senior in international economics

**The George W. Thatcher Prize for Undergraduate Excellence in Economics** to a senior economics major

**Paul M. Vail Award** to a senior economics major

## Educational Psychology

**The Douglas R. Miller Scholarship Award** is awarded to a full time graduate student in the department of educational psychology who has distinguished themselves academically, and has generated substantial research work in the area of educational psychology.

**Special Education Scholarship Award (SESA)** is available to qualified undergraduate Special Education majors. The \$4,000 scholarship is awarded to incoming first-year students and is a four-year, renewable award. A limited number of scholarships are available each year.

**Special Education Regional Scholarship Award (SERSA)** is available to qualified undergraduate Special Education majors from the Hamilton and Middletown campuses. The \$4000 scholarship is

awarded to students that transfer to Oxford and have acquired at least 30 hours of instruction. The award is provided for two years only. A limited number of scholarships are available each year.

## Electrical and Computer Engineering

**CE Power Solutions Miami University Scholarship**

**ECE Academic Merit Scholarship**

**ECE Early Career Award** to a first or second year student

**ECE Academic Achievement Award**

**ECE Outstanding Service Award**

**ECE Outstanding Graduate Student Award**

## English

**The Robert Almy Awards in Critical Interpretation**

**Terry and Chris Baehr English Scholarship**

**Daniel and Margaret Bookwalter Sophomore Prizes in English**, by William G. and Margaret Bookwalter Pickrel, classes of '10 and '11

**The Nevin Clark Family Fund for the Capstone in English**

Composition Awards:

Reflective Analysis Award

Reflective Narrative Award

Literary Analysis Award

International Student Award (for essays written in ENG 108 or ENG 109)

Digital/Multimedia Composition Award (Sponsored by Bedford St. Martins)

Reflective Portfolio Award

**Craver-Overton Scholarship**

**Dean's Scholarships** to graduate assistants and associates whose records promise achievement in literary studies

**Clara Vance Fixmer Scholarship** (award alternates between Theatre and English departments)

**Carl R. Greer-Andrew D. Hepburn Senior Awards**, in honor of Dr. Hepburn, bequest of Carl R. Greer, class of '94

**Walter Havighurst Literary Prize**

**Carolyn W. Houtchens Scholarship**, in honor of the first woman professor in the department, to a scholar and researcher in the first year of M.A. program in literature

**Robert Kettler Memorial Scholarship**

**Jeffrey D. Keiner Scholarship for Study Abroad and Academic Enrichment**

**Bill Moeller Scholarship**

**Edward J. Montaine Jr. Awards in English**, in honor of Mr. Montaine, class of '42, bequest of Carl R. Greer, class of '94

**Outstanding Teacher Award** to graduate assistants and associates

**The Spiro Peterson Memorial Scholarship**

**Mary Jo Priest Awards for Professional Writing**

**Sinclair Award in Creative Writing** to the most promising new graduate student in the creative writing program

**Sinclair Fellowships** to graduate assistants and associates whose records promise achievement in literary studies

**Gordon D. and Mary S. Wilson Awards** for best graduate paper presented at a conference during the year and best published creative work

**Gordon D. and Mary S. Wilson Scholarship**

## Engineering Technology

**Armin J. Fleck Engineering Technology Scholarship**

**David W. Young Engineering Technology Award**

**David W. Young Engineering Technology Scholarship**

## Entrepreneurship

**Altman Internship Scholarship** - Summer Internship for Entrepreneurship students

**The Arthur Collins Scholarship**

**Entrepreneurship Scholarship** through the Marketing Department

**Golis Entrepreneurship Scholarship** - for an Entrepreneurship major or co-major in the San Francisco Entrepreneurship Program

**Social Entrepreneurship Intern Scholarship SEIS**

**Stephen Nelson Scholarship**

## Family Science and Social Work

**Family Science Scholarship** is awarded to incoming students who have declared Family Science as their major.

**FSW General Scholarship (\$4,000)** is awarded to current FSW majors in the Family Science, Social Work or MASW programs.

**Annitta Klipple Prize (\$200)** is awarded to the best all round undergraduate student in Family Science and Social Work. Student must be nominated by a FSW faculty member.

**MASW Miami Alumni Scholarship (\$3,000)** is awarded to Miami University graduates entering a Masters of Art in Social Work (MASW) program with preference given to graduates of FSW majors.

**Jane and Dessie Rees Graduate Student Scholarship (\$1,000)** is awarded to Miami University graduate student in the MASW program.

**Social Work Scholarship** is awarded to incoming students who have declared Social Work as their major.

**Elizabeth Caughey Stegmaier Scholarship** (award amount is equivalent to one semester of in-state tuition) is awarded to one Miami University undergraduate student who is majoring in Family Science or Social Work with preference given to juniors and seniors.

**Emma Waldhauer Family Studies and Social Work Scholarship (\$4,000)** is awarded to an undergraduate student majoring in Family Science or Social Work. Student must be nominated by a FSW faculty member.

**Fred Whitcomb Graduate Scholarship (\$1,000)** is awarded to Miami University graduate students in the Masters of Art in Social Work (MASW) program Student must be nominated by a Social Work faculty member.

## Finance

**J. Belden Dennison Award** for scholastic achievement, by the department

**Joseph C. Pillion Memorial Scholarship** to a senior finance major

## French

**Edgar Ewing Brandon Senior Prize in French**

**The Naomi Miller Cox Memorial Outstanding French Student Prize**

**The Charlotte Meyer Crawford Junior Scholarship**

**L.P. Irvin Award for Overseas Study**

**The W. Marion Miller Alumni Scholarship**

**The Cynthia Robinson First Memorial Scholarship**

**Laurence Harvey Skinner Junior Prize in French**

## Geography

**Henry M. Kendall Award** to an outstanding junior major

**Richard G. Lieberman Memorial Award** to an outstanding senior

**Arthur "Art" Limbird Award** to an outstanding sophomore major

## Geology & Environmental Earth Science

**Jack M. Brownstein** to a student attending the Geology Field Station based on merit and financial need

**Geology Graduate Student Professional Travel Fund** awards support graduate student travel to professional meetings

**Wayne D. Martin Field Fund**, awards for field travel and field research

**David L. Morrow Geology Field Study Fund** to a student attending the Geology Field Station, based on financial need

**Rocky Mountain Petroleum Geology Research Fund** awards support student field-based research/studies in Rocky Mountain region

**Wells Scholarship** to a student enrolled in GLG 411A/GLG 511A, for academic performance and need

## Gerontology

**Colonial Senior Services Research Award** to a graduate student for outstanding research or program development in long-term care

## Hamilton Campus

**John P. Williams Family Teacher Licensure Fund**

**Carl A. and Katharine Densford Dreves Scholarship**

**Dr. Bernard and Margaret Phelps Scholarship**

**Hamilton Campus Financial Aid Fund**

**Adeline Zoller Scholarship**

**Vaden and Grace Fitton Scholarship**

**John A. Shafer Scholarship**

**Nancy Sohngen Cottrell Scholar-Leader**

**Richard Fitton Scholar-Leader**

**Dr. Edward Kezur Financial Aid Fund**

**Harry T. Wilks Scholarship**

**U.S. Bancorp Scholarship**

**Karen S. House Scholar Leader Scholarship**

**Carl and Freda E. Jennewein Memorial Scholarship**

**Marian Hawk Peabody Scholarship**

**Miami Hamilton Upper Division Scholarship**

**Kathy Burton Memorial Scholarship**

**Russell W. Leedy Scholarship**

**Elizabeth H. Burgoon Scholarship**

**John L. Burgoon Scholarship**

**Dr. Howard and Connie Epstein Scholarship**

**Marge Addington Scholarship**

**T. Michael Smithson Scholarship**

**Winifred and John Dolibois Scholarship**

**Howell C. Lloyd Scholarship**

**James McBride Scholarship**

**Miami University Hamilton General Scholarship Fund**

**Grace Fitton Scholarship**

**Amvets Auxiliary Post 1983 Scholarship**

**Miami University Hamilton Faculty and Staff Scholarship**

**Miami Regionals Merit Scholarship - Hamilton**

**Hamilton Campus Study Abroad Scholarship**

**Dr. Robert Baer Award for Academic Achievement**

**Ted and Vada Shell Stanley/O'Tucks Scholarship**

**Harold Don Gabbard Family/O'Tucks Scholarship**

**Miami Hamilton Student Government Assn Leadership Schp**

**Huntington Parrish Scholarship**

**Winter Term Scholarship-Hamilton**

**John L. Thompson Scholarship**

**O'Tucks Expendable Scholarship**

**Blount Family Scholarship**

**ACDA/O'Tucks Scholarship**

**O'Tucks Endowed Scholarship**

**Donald and Loraine Gent/O'Tucks Scholarship**

**Joyce B. Thall/O'Tucks Scholarship**

**Vaden Fitton Hamilton Campus Scholarship**

**Olga F. Gmoser/O'Tucks Scholarship**

**Robert H. Rusbosin Student Leadership Award**

## History

**Mary Eleanor Brandon Lincoln Essay Award**

**A. Dane Ellis Scholarship**

**Fred Joyner History Scholarship**

**Boyd & Carol Shafer Scholarship**

**James Watson and Lois George McDonald Scholarship**

## Information Systems and Analytics

**Academic Excellence certificates** to an analytics minor and an information systems minor

**Cardinal Heath Scholarship** to outstanding students

**Center for Analytics and Data Science Scholarships** to undergraduate students

**Donald L. and Jane Dawley Management Information Systems Scholarship** to one or more ISA majors

**Ernst and Young Scholarships** to undergraduate students

**ISA Advisory Board Scholarship** to outstanding students

**KPMG Scholarships** to undergraduate students

**Roy Sandquist Family Department of Information Systems and Analytics Awards** to the outstanding senior major

## Integrative Studies

James E. Paulus Scholarship

Harry T. Wilks Scholarship in Integrative Studies

## Italian

Amira Akrabawi Giesecke Scholarship

Peter N. Pedroni Summer Language Institute in Italy Fund

Joseph A. Russo Scholarship

## Journalism

Emily Cordes Memorial Scholarship

The Michael Kelly Prize in Journalism

Lawler-Galeese Scholarship

Memorial Tournament Journalism Scholarship

Timothy J. Rogers Memorial Journalism Scholarship

## Justice and Community Studies

Cpl. Nicholas Olivas Valor Award

Criminal Justice Student Scholar Award

Student Opportunity Award-Criminal Justice

Women in Criminal Justice Award

## Kinesiology and Health

Kinesiology and Health Excellence Scholarship

M. Joan Popp Women's Physical Education Fund

Victoria L. Eby Memmel Scholarship

Hays Sports Study Scholarship

Bonnie Lynn Sollars Pickering Memorial Scholarship

Virginia Pierson Guinn Memorial Scholarship

Maxine J. Schurtz Scholarship

WRA-M. Phillips Grant

## Languages, Literatures, and Writing

Diana Royer Scholarship

Malcolm M. Sedam English Scholarship and Writing Award

## Management

Academic Achievement in Management and Leadership Award to a senior

Academic Achievement in Supply Chain and Operations Management Award to a senior

Frederick Puff Scholarship to a junior and senior Supply Chain & Operations Management major

Thomas W. Speh Innovation Scholarship to a junior Supply Chain and Operations Management major

## Marketing

Adelaide and Jeffrey Lazarus Retail Scholarship to two seniors

Charles and Annie Corbett Scholarship to an undergraduate student

Entrepreneurship Scholarship—Marketing to an undergraduate student

Marathon Ashland Petroleum LLC Scholarship to two undergraduate students of sophomore or junior status

## Mathematics and Statistics

J. Paul & John P. Albert Scholarship

Alumni Senior Prize

Zoltan Balogh Memorial Award in mathematics

Osmond Barton Prize in Mathematics

Robert F. and Mary Sexauer Beyerly Memorial Scholarship

The Halbert C. Christofferson Mathematics Education Awards

Cincinnati Chapter of the American Statistical Association Comer-Reynolds Memorial Awards in statistics

Eric Erickson Scholarship

Faculty Prize

Mary Jeanette and Clifford Harvey Scholarship

Koehler Prizes

Kenneth Last Scholarship

Frederick A. Luecker Scholarship

McFarland Prize in Mathematics

Ohio National Scholarship

Patterson Prizes

Pi Mu Epsilon Awards

Byron Smith Mathematics Award

Corwin Smith Prizes in Mathematics

Western and Southern Scholarship

Journal Award

Alberta L. Wolfe Fellowship

## Mechanical and Manufacturing Engineering

Robin A. David Award to a student for outstanding service in department laboratories.

**Mechanical and Manufacturing Engineering Department Scholarship Award** to an outstanding junior

**Mechanical and Manufacturing Engineering Department Service Award** up to two each year

**Mechanical and Manufacturing Engineering Scholarships** to freshmen

**Ken Shinn/SAE Engineering Scholarship** to a freshman

## Microbiology

**Dr. and Mrs. J.K. Bhattacharjee Microbiology Scholarship** to an undergraduate

**Donald C. Cox Awards** for excellence in graduate studies

**Lawrence Day Award** to a junior

**Fisher Award** to an outstanding undergraduate research proposal

**Edward Kezur Scholarship** to an upper-class pre-med student majoring in chemistry, microbiology, or zoology, \$1,000 scholarship

**Susan W. Rockwood Memorial Scholarship Award** to a female graduate student

**Orton K. Stark Awards** to a senior and a graduate student, plaques and cash awards

**Orton K. Stark Awards** to a first-year student, a sophomore, and a junior

## Middletown Campus

**W. Lynn Darbyshire Student Leadership Award**

**Harry and Ethel Brakeman Memorial Scholarship**

**Dale E. Converse Memorial Scholarship**

**Middletown Rotary Club Foundation Scholarship**

**Isidor A. Casper Memorial Scholarship**

**Cynthia Yang Memorial Scholarship**

**William C. and Mary E. Akers Scholarship**

**Roger and Ginny Dillman Scholarship**

**Audrey Canfield Neel Scholarship**

**Miriam Knoll Non-Traditional Student Scholarship**

**Miami University Middletown Faculty and Staff Scholarship**

**Venus and Ruth Maupin Scholarship**

**Miami University Middletown Community Service Scholarship**

**Mr/Mrs Daniel J. Whitner and Lillian J. Whitner Merit Schp**

**Ryan K. Green Memorial Scholarship**

**Roger W. Conner, AFID Scholarship**

**MUAA Middletown Area Chapter Scholarship**

**Bill and Barbara Howe Scholarship**

**Robert and Tina Breitenbach Social & Human Services Schp**

**Rosa Lean Lindsey Scholarship**

**Fusako M. Gelwick Scholarship At Miami University Middletown**

**Robert A. Gelwick Scholarship At Miami University Middletown**

**Greg Lansaw Memorial Leadership Scholarship**

**David and Janet Sauter Scholarship**

**Roland P. (Ron) and Ella M. Ely Scholarship at MUM**

**Arthur B. Casper Bridge Scholarship at MUM**

**Dr. James B. Ewers, Jr. Multicultural Scholarship at MUM**

**Sen. Barry and Marilee Levey Scholarship at Miami University**

**Miami Regionals Merit Scholarship - Middletown**

**Elke Sue Holt Merit Scholarship**

**Middletown Campus Need Based Scholarship**

**Winter Term Scholarship-Middletown**

**Dr. James R. Myers Regional Merit Scholarship**

**Dr. James R. Myers Continuing Student Scholarship**

**Robert Breitenbach/Middletown Rotary Club Fdn Leadership Scholarship**

**Paul and Linda Matus Service and Leadership Abroad Scholarship**

**Gardner Scholars**

**First to Fifty Scholarship**

**Ted Clark Award**

## Music

**Alice Mattmueller Alexander Memorial Voice Award**

**Alumni Music Award**

**George Barron Music Scholarship**

**Jeffrey J. Blank Scholarship**

**Nina J. Boyd Music Education Scholarship**

**Dr. Richard Cambridge Memorial Scholarship**

**Campus Owls Scholarship**

**Frances Cole Memorial Scholarship**

**Louise Glasgow and Eric E. Erickson Piano Scholarship**

**Cynthia Boeke Fisher Memorial Award**

**Pamela Fox Music History Award**

**Friends of Opera Award**

**Virginia Pierce Glick Music Education Scholarship**

**Darrell and Wilma Grothen Music Scholarship**

**The L. Eugene Hill Composition Prize**

**George R. and Galen Glasgow Hoxie Scholarship** (alternates with art)

**Jean Hartsock-Palmer Scholarship**

**Christopher B. Huff Memorial Award**

**Andrew Hummel Memorial Scholarship**

**Alberta Lutz Ittel Music Education Scholarship**

**Lacey/Strimple Highland Band and Drum Scholarship**

**Lois D. Lehmkuhl Owl Award**

**NFMC Herman and Mary Neuman Music Award**

**Ohio Music Teachers Association Scholarship**

**Piano Academic and Musical Achievement Award**

**Pam Eileen Poccia Award**

**Elizabeth Potteiger Cello Award**

**Presser Foundation Scholarship**

**Kapra MeridethQuain Memorial Scholarship**

**Nina Palmer Quay Memorial Scholarship**

**Mary Evans Rees Memorial Scholarship**

**Richard L. Schilling Music Education Scholarship**

**Dona Clare Sheley Presidential Scholarship**

**Steven Shumway String Scholarship**

**Richard A. Steuk Music Award**

**Clyde E. And Alice W. Stiner Scholarship**

**Jane Scott Hayes Telfair Music Education Scholarship**

**Tom & Carol Tierney Piano Award**

**Barbara J. Tuttle Memorial Scholarship**

**Walt & Marcia Wood Scholarship**

## Nursing

**Ruth Ann Busald Nursing Awards** to graduating B.S.N. students

**Carl and Katherine Densford Dreves Scholarships** to B.S.N students

**Marion L. Kagler and Kim Kagler Carroll Award** to a Hamilton campus B.S.N. student

**Jessie Myers-Eeles Scholarships** to B.S.N. students

**Marjorie Ryan/Ann Farnsley Fund**

**Coombs Family Memorial Scholarship**

**Joan McNelly Teckman Scholarship**

**Carolyn Turnbull Jaeger Nursing Scholarship**

**Eugenia M. Mills Scholarship**

**Nancy and David Stroupe Nursing Scholarship**

**Leo H. Munick, M.D. Scholarship in Nursing**

**Middletown Campus Scholarship in Nursing**

**Douglas and Anne McNeill Health Sciences Scholarship**

**Nursing Alumni Scholarship**

**Hall Family Scholarship**

**Philip Mynhier Nursing Scholarship**

**Kenneth and Bernice Kinnaird Nursing Scholarship**

**Marjorie A. Ryan Scholarship**

**Ken and Joan Frankel Nursing Scholarship**

## Philosophy

**Hall Prize in Philosophy** for best essay in philosophy

**Linda Singer Scholarship** to a junior or senior philosophy major

## Physics

**George and Carolyn Arfken Scholarship**

**Andrew Wolf Bylenga Scholarship**

**John E. Cocanougher Scholarship**

**Joseph A. Culler Prizes in Physics** for excellence in first- and second-year physics; bequest of Dr. Culler

**Drake Family Scholarship**

**R. L. Edwards Scholarship**

**Carl and Harriet Frische Scholarships** to entering students

**Hughes Memorial Scholarship**

**Dr. Benjamin Lee Memorial Scholarship**

**Philip A. and Cora G. Macklin Scholarship**

**William E. Shoupp Memorial Scholarship**

**John and Genny Snider Scholarship**

**Society of Physics Students Award** to a senior, a science book

**Robert W. and K. Ursula Votaw Presidential Scholarship**

## Political Science

**Atlee Pomerene Prize**

**Gary Best Memorial Scholarship**

**The Engel Prizes in Political Science**

Sara C. Glosik Scholarship

Irma Karmol Memorial Scholarship

David Koschik and Izumi Hara Student Enrichment Fund

Robert "Ron" Hall Undergraduate Student Enrichment Fund for the Study of U.S. Civil Liberties

The Ernst G. Siefert Capstone in Political Science

Howard White Awards in Government

David S. McLellan Award

Maher/Zouhary Undergraduate Fund

**Psychology**

The Elizabeth Burckhardt Capstone in Psychology

Patrick J. Capretta Memorial Scholarship, by alumni and friends

Clark Crannell Undergraduate Research Award, by alumni and friends

E. F. Patten Senior Prize in Psychology, by alumni and friends

Rich/Ivens Scholarship (alternates with sociology)

**Regional Campuses**

Zachary Kent Lutz Memorial Scholarship

Miami Veterans Legacy Scholarship Fund

David P. Rahm Regional Merit Scholarship

Regional Campus Study Abroad Support Scholarship

Catherine Herr Mulligan Scholarship

Miami Regionals Difference Scholarship

ELC Regional Study Abroad Opportunity Scholarship

Richard M. Sollman Financial Assistance Scholarship

Helen Gerrard Scholarship

E.A.W.M. Scholarship

Barbara Chappell Family Scholarship

Bishop Family Scholarship

College Credit Plus/SEOP Alumni Scholarship

Engineering Technology Opportunity Scholarship

Donald W. Watson Scholarship- Regional Campuses

Anna T. Hamilton Regional Urban Cohort Scholarship

Allen and Colleen Norris Scholarship

**Social and Behavioral Sciences**

Subedi Family Scholarship

**ROTC Awards, Air Force**

AFROTC sponsored awards: **AFROTC Valor Award, AFROTC Field Training awards (Distinguished Graduate Award, Superior Performer Award, "Ironman" Award, Warrior Spirit Award), AFROTC Achievement Award, AFROTC Commendation Award, Academic Honors Award, College Scholarship Recipient Ribbon, Physical Fitness Award, Recruiting Award, AFROTC Expert Marksmanship Award.**

Arnold Air Society Awards: **Arnold Air Society ribbon, Eagle Trophy ribbon, Hagan Trophy ribbon, LBJ Cup ribbon**

Awards from patriotic and aerospace organizations: **Air Force Association Award, Armed Forces Communication and Electronics Award, American Legion Award, American Veterans Award, Daughters of Founders and Patriots of America Award, Daughters of the American Revolution Award, Military Order of the Purple Heart Award, Military Order of the World Wars Medal, National Defense Industrial Association Award, National Defense Transportation Award, National Sojourners Award, Reserve Officers Association Award, Scottish Rite Southern Jurisdiction Award, Society of American Military Engineers Award, Society of the War of 1812 Award, Sons of the American Revolution Award, Veterans of Foreign Wars Award.**

Other awards: **Air Force Historical Foundation Award, Armed Forces Insurance Scholarship Award, Army and Air Force Mutual Aid Association AFROTC Scholarship, Col. Pat R. Paxton Memorial Award, First Command Educational Foundation Scholarship Award, Guy Pulliam Leadership Award, Lt. Col. Grissom Memorial Award, Lt. Col. Jay Smith Memorial Scholarship Award, Melissa Massaro Memorial Award, Order of Daedalians AFROTC Scholarship, United Services Automobile Association Scholarship Award, Wells Fargo Worldwide Bank Scholarship Award**

**ROTC Awards, Navy and Marine Corps**

**American Legion Military Excellence Awards** to a senior, junior, sophomore, and freshman with a military aptitude ranking within the top 25% of their respective class

**American Legion Scholarship Awards** to a senior, junior, sophomore, and freshman within the top 25% of their respective class academically

**American Veterans Award** to a senior who possesses scholastic excellence, a positive attitude, exemplary appearance, initiative, dependability, judgment, and confidence

**Donovan Black Memorial Scholarship** to sophomore and junior Marine-option midshipmen who excel in academic, physical and military performance

**Captain Frederick Brower Honorary Award** to a top Marine-option graduate, a Marine officer's sword and uniform stipend

**Burke Distinguished Senior Award**, in memory of Jane Doubet Burke, to a graduating female midshipman who demonstrates most

outstanding potential for commissioned service, an officer's sword or \$500

**Burke Distinguished Student Award**, in memory of Jane Doubet Burke, to a female junior, sophomore, or freshman midshipman who demonstrates highest qualities of scholarship, leadership, and devotion to duty, \$1,000 scholarship

**Cincinnati Navy League Award**, in honor of Senator Robert A. Taft Jr., to a senior chosen as the overall outstanding Navy-option midshipman, a Naval officer's sword

**Cincinnati Navy League Remembering Jack Schiff Award** to a graduating midshipman who started the NROTC program as a college program student and has demonstrated sustained outstanding performance

**Daughters of Founders and Patriots of America Award** to a sophomore student who shows leadership, patriotism and the most improvement in physical fitness

**Daughters of the American Revolution Award** to a senior who exhibits excellent dependability, good character, and leadership qualities

**CDR Theodore J. Ehlers Memorial Award** to a Navy-option senior who demonstrates superior performance and motivation toward a career as a Surface Warfare Officer, a Naval officer's sword

**Chief of Naval Operations Distinguished Graduate Award** to a graduating senior who demonstrates the highest standards of leadership, academic, and military performance

**James Clifford Garland Honorary Scholarship** to the outstanding member of the junior class who best embodies the highest qualities of leadership and commitment

**Colonel William R. Higgins Memorial Award** to the standout Marine-option who best exemplifies professionalism, achievement, and devotion to duty for other students to emulate

**Larry Holland Memorial Scholarship** to an undergraduate student planning to serve in the U.S. Navy

**Joseph T. Lukens Memorial Scholarship** to a Navy-option midshipman who excels in academic, physical and military performance

**Military Officers Association of America Award** to midshipmen who have demonstrated an exceptional level of leadership, initiative and responsibility

**Ohio Reserve Officers Association Awards** to a senior, junior, sophomore, and freshman for excellence in academic and military pursuits

**Outstanding Navy Graduate Award** to a top Navy option graduate who displays the highest ideals of academic and leadership excellence, a Naval officer's sword

**Reserve Officer Association League Award** to a midshipman who not only demonstrates excellent leadership and scholarship but also dedicates themselves to volunteerism in the community and University

**Sons of the American Revolution Award** to a midshipman who personifies the ideals upon which this Nation was founded

**Sons of the Union Veterans of the Civil War Award** to a midshipman who shows a high degree of patriotism to the Nation and has demonstrated a high degree of academic performance and leadership

**The USAA Spirit Award** to the student who displays the greatest spirit in the service of others

**Capt. Michael M. Vagedes Memorial Award** to a senior Marine-option midshipman possessing the most potential for service as an officer, a Marine officer's sword

**Veterans of Foreign Wars District Four Award** to a midshipman for academic and military excellence

## Sociology

**Betty Kent Scholarship**

**Rich/Ivens Scholarship** (alternates with psychology)

## Spanish

**Glenn A. Barr Scholarship in Spanish**

**L.P. Irvin Essay Prize in Spanish**

**Willis Knapp Jones Memorial Scholarship**

**Robert K. Newman Award for Excellence in Spanish**

**Timothy J. Rogers Memorial Scholarship**

## Teacher Education

**Annabel Cathcart McGuffey Miami Award** to an undergraduate student in social studies education

**Arlene D. Maurer McGuffey Scholarships** to juniors and/or seniors in early childhood education

**Barbara Carlisle Early Childhood Education Fund** to students in early childhood education

**David L. and Sallie A. Killian Scholarship** to an undergraduate student in teacher education

**Dickinson Thetford Guiper Scholarship to Student Teachers** to a student who is student teaching

**Don and Deborah Snyder Scholarships** to juniors and/or seniors in early childhood education

**Eileen Tway Memorial Fund** to graduate students in reading/language arts education

**EDT Travel Abroad Fund** to undergraduate students traveling abroad

**Georgina H. Silliman Scholarships** to outstanding undergraduate student in early childhood education

**Glenn and Betty Julian Graduate Student Teaching Award** to a graduate student in physics education

**Halbert C. Christofferson Scholarships** to outstanding juniors in mathematics education

**Harry T. Philips Memorial Scholarship** to outstanding senior in science education

**Hedrick Family Student Teaching Award** to undergraduate students awarded during student teaching

Jean K. Mate Memorial Scholarship to outstanding undergraduate student

**John A. Whitesel Scholarship** to outstanding senior student in teacher education

John E. Shank '75 Scholarship to outstanding undergraduate student in early childhood education

**Joyce A. Hagedorn Scholarships** to undergraduate students majoring in elementary education

**Kappa Delta Pi Scholarship** to undergraduate students in teacher education

**Kenneth Furrier Scholarship** to an outstanding student in the Urban Teaching Cohort

**Lester W. Maurer McGuffey Scholarships** to juniors and/or seniors in early childhood education

**M. F. Foss Teaching Excellence Prize** to an outstanding undergraduate student in teacher education

**Mary Ann Moorman McGuffey Scholarship** to an outstanding undergraduate student in early childhood education

Nancy Humbach Scholarship to outstanding junior or senior student in Teacher Education majoring in French, German, Latin, or Spanish education.

**Nancy Maurer Kole McGuffey Scholarships** to juniors and/or seniors in early childhood education

**Pearl May Corl English Award** to student preparing to teach English

**Peter C. and Nancy Maurer Kole Scholarship** to outstanding juniors or seniors in early childhood education

**Robert D. Hartung, Jr. and Nancy G. Hartung Math Education Scholarship** to juniors and/or seniors in integrated mathematics education

**Roseanna Van Gorden Prize** to Talawanda High School graduate in English education

**Sandra K. Hormel Scholarship** to undergraduate students in teacher education

**THA Foundation Scholarships** to outstanding students in early and/or middle childhood education

**Thomas L. Feeney Scholarship Fund** to students in teacher education

## Theatre

**Homer N. Abegglen Theatre Scholarship**

**Homer and Henrietta Abegglen Theatre Scholarship**

**Biz and Bob Campbell Theatre Scholarship**

**Bill Cosby Scholarship for the Performing Arts**

**Sherry Darling Theatre Award**

**Clara Vance Fixmer Scholarship** (with journalism)

**David Gallagher Playwriting Award**

**Loren Gates Memorial Theatre Scholarship**

**Hurst Family Scholarship for Theatre**

**Ronald C. Kern Scholarship in Theatre**

**Emmanuel Kladitis Theatre Scholarship**

**Mollie Weller Memorial Award**

**Willa S. Yeck Scholarship**

## Women's Studies

**The Mina Burckhardt Capstone in Women's Studies**

**Barbara E. Nicholson Prize**

**Women's Studies Essay Prize**

# Graduate Awards

## Award Information

Students must be admitted to the Graduate School with regular standing to be considered for a graduate award.

If the minimum undergraduate grade point average required for admission with regular standing is met, students may be appointed to a graduate assistantship for one semester with reappointment contingent upon achievement of a 3.00 graduate grade point average for that semester and satisfactory performance of graduate assistant duties. Students may not hold more than one graduate award for any given semester or academic year.

A graduate award holder cannot hold any other employment at Miami University during the term of the graduate award unless recommended by the department chair and approved by the Dean of the Graduate School via a graduate student petition. International students (those with F-1 and J-1 visas) are allowed to work a maximum of 20 hours per week while classes are in session (this includes assistantship duties). An international student who holds a graduate assistantship with duties of eight hours per week may request permission to hold additional employment as long as that employment does not exceed 12 hours per week.

A graduate assistantship award for one year involves no commitment for continued support by the university for subsequent years.

## To Apply for a Graduate Award

To receive a graduate award students must be recommended by the department following application and admission to the Graduate School. Contact the department to which you are applying for specific application requirements and deadlines. For a listing of graduate programs, visit the Graduate School website.

## Types of Awards

Most award recipients work in departments of their field of study. Graduate assistantships, however, are also available in other offices, such as the library, the Bernard B. Rinella Jr. Learning Center, university advancement, and intercollegiate athletics. Information is available from Academic Personnel Services, 513-529-6724, and the Graduate School, 513-529-3734.

Graduate assistantships are for holders of a baccalaureate degree seeking an advanced degree. The stipend associated with this award is for a maximum of half-time duties in two regular semesters. In addition to the stipend, graduate assistants receive up to 100% waiver of the instructional fee and 50% of the basic general fee for two semesters as determined by the department of appointment for the period of appointment and for the summer session immediately preceding or following the year of appointment. A tuition waiver and stipend for a graduate assistantship can vary with the work expectations proportionally. For instance, a student might receive half of a tuition waiver and half of a full stipend, and would be expected to work half the hours. See the Miami University Policy Library for additional information on stipends and waivers.

Students will also be required to pay reduced technology, facilities and metro fees. Fee increases will be determined at the June meeting

of the Board of Trustees. For additional information regarding fees, charges, and regulations regarding refunds see [MiamiOH.edu/OneStop](http://MiamiOH.edu/OneStop). Graduate assistants have two options for payment of fees: pay in full at the start of each semester, or use the payroll deduction program. Some programs have additional fees.

Graduate assistants must carry between 9 to 18 hours of graduate courses each semester. Full assistantship duties normally occupy 18 to 20 hours per week.

**Dissertation scholarships**, for doctoral candidates at dissertation stage, are service free and provide a stipend determined by the student's department. Dissertation scholars must enroll in between 9 to 18 hours of graduate courses each semester they receive the award. In addition to the stipend, graduate assistants receive 100% waiver of the instructional fee and 50% of the basic general fee for the period of appointment. You will also be required to pay the general fee (reduced), technology fee, facilities fee (including Armstrong Center), and transit fees. Fee increases will be determined at the June meeting of the Board of Trustees. For additional information regarding fees, charges, and regulations regarding refunds see the following link: [MiamiOH.edu/OneStop](http://MiamiOH.edu/OneStop). Fees must be paid in full at the start of each semester.

**Graduate summer scholarships** provide a tuition waiver and one scholarship payment during the summer term. The scholarship is awarded for a maximum of \$1,800 for the summer term, and there are no duties attached to the payment. Students with a one-semester appointment will receive a \$900 scholarship for the summer term. The scholarship is given to graduate assistants and dissertation scholars who hold awards for one or two semesters and meet the guidelines for these scholarships. See the Miami University Policy Library for additional information.

**Graduate grants-in-aid** are waivers of instructional fee and out-of-state tuition. There is no cash stipend. No duties are required. These grants are available for one or both semesters and/or summer terms to U.S. and international students who are in need of financial assistance, have strong academic records, and show considerable promise of future attainment. These grants are for students in continuous full-time study leading to a degree; they are not available to part-time students, CGS students, and students whose full-time study is limited to summer terms. Continuance or renewal of a grant is dependent upon satisfactory progress toward a degree. To apply for this grant, visit the Graduate School website or contact the Graduate School at [gradschool@miamioh.edu](mailto:gradschool@miamioh.edu). Students must apply for this award annually.

## Academic Responsibilities

Students must maintain satisfactory progress toward the degree in order to assure continuance as an award holder. Satisfactory progress means meeting minimum registration requirements, maintaining a cumulative grade point average of at least 3.00, and fulfilling academic requirements for the degree as determined by the department or program. Failure to achieve such progress may result in the revocation of the award. For more information see the Miami University Policy Library.

## Award Acceptance

The university adheres to the resolution adopted by the Council of Graduate Schools in the United States. The resolution provides that if

an award recipient accepts an award before April 15, the recipient will have complete freedom through April 15 to resign in order to accept another appointment. After April 15, however, the recipient may not accept another award without obtaining a formal release from the first commitment.

# University Officers, Deans, and Chairs

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## Board of Trustees

The Board of Trustees consists of nine voting members, up to six non-voting National Trustees and two student non-voting members. The nine voting members are appointed one each year for nine-year terms by the governor of Ohio, with the advice and consent of the Senate. A term expires on the last day of February of the year listed. National Trustees are appointed by the Board for 3-year terms (maximum two terms). The two student non-voting members are appointed for two-year staggered terms by the governor, with the advice and consent of the Senate. The date in parentheses indicates the year of appointment.

## Officers

**David H. Burdig**  
Chair

**Thomas W. Gunlock**  
Vice Chair

**Sandra Collins**  
Secretary

**Roderick Robinson**  
Treasurer

## Trustees

**2020 (2011) Mark E. Ridenour**

Sylvania, Ohio. B.S., Miami University.

**2021 (2012) Robert W. Shroder**

Warren, Ohio. B.S., Miami University; M.H.A., Xavier University.

**2022 (2011) David H. Budig**

Cincinnati, Ohio. B.S., Miami University.

**2023 (2013) Thomas W. Gunlock**

Centerville, Ohio. B.S., Miami University.

**2024 (2016) John C. Pascoe**

Worthington, Ohio. B.S., Miami University.

**2025 (2017) Sandra Collins**

Toledo, Ohio. B.S., M.S., J.D., Ohio State University.

**2026 (2017) Roderick Robinson**

Mason, Ohio. B.S., West Virginia University, Institute of Technology, M.B.A., University of Pennsylvania (Wharton).

**2027 (2018) Zachary Haines**

Cincinnati, Ohio. B.A., Miami University

## National Trustees

**2019 (2013) John W. Altman (National Trustee)**

Reno, NV. B.A., Miami University; M.A., Fuller Theological Seminary; L.H.D., Miami University, Phillips Graduate Institute, Sierra Nevada College.

**2019 (2013) Terry Hershey (National Trustee)**

Bonita Springs, FL. A.B., Miami; M.P.A., Northern Illinois University; M.B.A., Columbia University.

**2020 (2018) C. Michael Armstrong (National Trustee)**

Naples, FL. B.S., Miami university; LL.D., Pepperdine University, Loyola Marymount University, Shenandoah University, Miami University, Johns Hopkins University; D.Eng, Worcester Polytechnic Institute.

**2020 (2014) Robert Coletti (National Trustee)**

B.S. Miami University; J.D., University of Cincinnati.

**2020 (2014) Diane Perlmutter (National Trustee)**

Landrum, South Carolina, B.A., Miami University.

## Student Trustees

**2020 (2018) Megan Cremeans**

Somerset, Ohio.

## President's Executive Cabinet

**Gregory P. Crawford (2016)**

President; Professor, Physics  
B.S. Kent State University, 1987; M.A., 1988; Ph.D., 1991.

**Phyllis Callahan (1988)**

Provost and Executive Vice President for Academic Affairs;  
Professor, Biology  
B.S. Fairleigh Dickinson University, 1974; M.S., 1981; Ph.D., Rutgers University, 1986.

**David K. Creamer (2008)**

Senior Vice President for Finance and Business Services and Treasurer  
B.B.A., Ohio University, 1976; M.S., Kent State University, 1986; Ph.D., 1990.

**Jayne Brownell (2014)**

Vice President for Student Life  
B.A., Rutgers University, 1989; M.A., Columbia University, 1995; M.Ed., 1996, Ed.D., 2002.

**Thomas W. Herbert, III (2012)**

Senior Vice President for University Advancement and Executive Director of the Miami University Foundation  
B.A., Northwestern University, 1989; J.D., Illinois Institute of Technology.

**Michael Kabbaz (2011)**

Senior Vice President for Enrollment Management and Student Success  
B.S., Xavier University 1997; M.B.A., 2000.

**David Seidl (2018)**

Chief Information Officer and Vice President for Information Technology

B.S., Eastern Michigan University, 2000; M.L.S., 2002.

#### **Robin Parker (1994)**

General Counsel

B.S., Ohio State University, 1979; J.D., University of Tennessee, 1982.

#### **Cliff Peale (2017)**

Director of Executive Communications

B.A., Williams College, 1987; M.A., American University, 1991.

#### **Ted Pickerill (2005)**

Secretary to the Board of Trustees and Executive Assistant to the President

B.S. U.S. Naval Academy, 1984; M.A. Salve Regina University, 1992; M.B.A. University of Nebraska, 1998.

#### **David Saylor (2012)**

Director of Intercollegiate Athletics

B.A., Ohio Wesleyan University, 1991; M.A., University of Connecticut 1996.

#### **Ronald Scott (1988)**

Vice President for Institutional Diversity and Inclusion

B.A., Pennsylvania State University, 1973; M.S., University of Utah, 1980; Ph.D., University of Utah, 1984.

#### **Michele Gaither Sparks (2019)**

Vice President and Chief Communications and Marketing Officer

B.A., Asbury University, 1991.

#### **Randi Malcom Thomas (1989)**

Director of Institutional Relations

B.A., Miami University, 1988; M.A., 1990; J.D., Vanderbilt, 1993.

#### **Dawn Tsirelis (2011)**

Assistant to the President

B.A., Marietta College, 1989; M.B.A., University of Georgia, 1991.

## Deans

#### **College of Arts and Science**

Christopher Makaroff (1989)

Professor, Chemistry & Biochemistry

B.S., University of Michigan-Dearborn, 1981; Ph.D., Purdue University, 1986.

#### **College of Creative Arts**

Elizabeth Mullenix (2006)

Professor, Theatre

B.A., University of Vermont, 1988; M.A., University of Illinois, 1991; Ph.D., 1995.

#### **College of Education, Health and Society**

Michael Dantley (2015)

Professor, Educational Leadership

B.A., University of Pennsylvania, 1972; M.Ed., Miami University, 1976; Ed.D., University of Cincinnati, 1986..

#### **College of Engineering and Computing**

Marek Dollár (2000)

Professor, Engineering Science

B.S., Stanislaw Staszic (Poland), 1974; M.S., 1975; Ph.D., 1981.

#### **Farmer School of Business**

Marc Rubin (1990)

Professor, Accountancy

B.S., Miami University, 1975; M.A., University of Illinois, 1977; Ph.D., University of Texas, 1985.

#### **Graduate School**

James Oris (1986)

Dean/Associate Provost

Distinguished Professor of Biology

B.A., Wittenberg University, 1979; Ph.D., Michigan State University, 1985.

#### **University Librarian**

Jerome Conley (1992)

Dean, University Librarian and Associate Librarian

B.A., Indiana University, 1988; M.S.L.S., 1990.

#### **John E. Dolibois European Center**

Thierry Leterre (2009)

Professor, Political Science

B.A., Sorbonne University (France), 1984; M.A., University of Picardie

(France), 1985; M.A., Paris X University (France), 1988; Ph.D., Sorbonne University (France), 1999.

#### **Miami University Hamilton, Middletown and Voice of America**

#### **College of Liberal Arts & Applied Science**

Catherine Bishop-Clark (1989)

Dean/Associate Provost

Professor, Computer & Information Technology

B.S., University of Dayton, 1986; M.S., University of Cincinnati, 1989; Ed.D., 1994.

## Academic Departments and Chairs

#### **Accountancy**

Andrew Reffett (2008)

B.S., Purdue University, 1999; Ph.D., University of Illinois, 2007.

#### **Aerospace Studies**

Allison Galford, Lt. Colonel, USAF (2016)

B.S., United States Air Force Academy, 1998; M.S., George Mason University, 2006.

#### **Anthropology**

M. Cameron Hay-Rollins (2005)

B.A., Grinnell College, 1988; M.A., Emory University, 1992; Ph.D., Emory University, 1998.

#### **Architecture and Interior Design**

Graham Cairns (2018)

B.A., Liverpool John Moores University (UK), 1992; B. Arch, University of Lincolnshire and Humberside (UK), 1997; M.A., Hull School of Architecture, 1999; Ph.D., Escuela Tecnica Superior de Arquitectura de Madrid (Spain), 2005.

#### **Art**

Robert Robbins (2017)

B.F.A., The Columbus College of Art & Design, 1990; M.F.A., Yale University, 1992.

#### **Biological Sciences**

Paul Harding (2001)

B.S., Ohio University, 1987; M.S., 1990; Ph.D., 1990.

### **Biology**

Thomas Crist (1994)

B.A., McPherson College, 1982; M.S., Yale University, 1984; Ph.D., Utah State University, 1990.

### **Chemical, Paper and Biomedical Engineering**

Keith Horn (1995)

B.S., University of Kansas, 1995; Ph.D., University of Minnesota, 1999.

### **Chemistry and Biochemistry**

Michael Crowder (1995)

B.S., College of William & Mary, 1988; Ph.D., University of Virginia, 1993.

### **Classics**

Steven Tuck (2001)

B.A., Indiana University, 1986; Ph.D., University of Michigan, 1997.

### **Commerce**

Theodore B. Light (2003)

B.B.A., University of Cincinnati, 1974; M.B.A., 1975; Ph.D., 1993.

### **Comparative Religion**

James Hanges (1997)

B.A., Miami University, 1985; M.A., 1987; Ph.D., University of Chicago, 1999.

### **Computer and Information Technology**

Marianne Murphy (2014)

B.A., Youngstown State University, 1978; MBA, Kent State University, 1994; Ph.D., Arizona State University, 1997.

### **Computer Science and Software Engineering**

James Kiper (1986)

B.A., Olivet Nazarene College, 1975; M.S., Ohio State University, 1978; Ph.D., 1985.

### **Economics**

Melissa Thomasson (1998)

B.S., University of Puget Sound, 1992; M.A., University of Arizona, 1993; Ph.D., 1998.

### **Education and Society**

Garry Bowyer (1989)

B.S., Oklahoma State University, 1982; M.S., 1984; Ed.D., 1988.

### **Educational Leadership**

Thomas Poetter (1997)

B.A., Heidelberg College, 1985; M.A., Princeton Theological Seminary, 1988; Ph.D., Indiana University, 1994.

### **Educational Psychology**

Amity Noltemeyer (2010)

B.S., Xavier University, 2002; M.S., Miami University, 2003; Spec., Miami University, 2005; Ph.D., Kent State University, 2009.

### **Electrical and Computer Engineering**

Qihou Zhou (2002)

B.S., Harbin Institute of Technology (China), 1982; M.S., Pennsylvania State University, 1991; M.A., 1991; Ph.D., 1991.

### **Engineering Technology**

Ayodele Abatan (2006)

B.S., Ahmadu Bello University (Nigeria), 1971; M.S., Illinois, 1973; Ph.D., Virginia Polytechnic, 1976.

### **English**

Madelyn Detloff (2002)

B.A., University of Chicago, 1987; M.A., University of California, Santa Barbara, 1991; Ph.D., 1997.

### **Family Studies and Social Work**

Marie Elise Radina (2005)

B.A., Allegheny College, 1996; M.S., Miami University, 1998; Ph.D., University of Missouri, 2002.

### **Finance**

Joel Harper (2018)

B.B.A., Harding University, 1991; Ph.D., Oklahoma State University, 1996.

### **French and Italian**

Jonathan A. Strauss (1992)

B.A., Yale, 1982; M.A., New York, 1985; M.Phil., Yale, 1989; Ph.D., 1993.

### **Geography**

Marcia England (2007)

B.A., University of Washington, 1998; M.A., University of Washington, 2002; Ph.D., University of Kentucky, 2006.

### **Geology & Environmental Earth Science**

Elisabeth Widom (1997)

B.A., Cornell University, 1984; Ph.D., University of California, Santa Cruz, 1991.

### **German, Russian, Asian, and Middle Eastern Languages and Cultures**

Margaret Ziolkowski (1988)

B.A., Princeton University, 1973; M.A., Yale University, 1976; Ph.D., 1978.

### **Global and Intercultural Studies**

Walter Vanderbush (Interim) (1994)

B.A., College of Wooster, 1982; M.A., Northwestern University, 1989; Ph.D., 1993.

### **History**

Wietse de Boer (2003)

B.A. University of Amsterdam (The Netherlands), 1983; M.A., University of Amsterdam (The Netherlands), 1986; Ph.D., Erasmus Universiteit Rotterdam (The Netherlands), 1995.

### **Humanities and Creative Arts**

Roscoe Wilson (2003)

B.A., Wabash College, 1997; M.A., Purdue University, 1999; M.F.A., University of Wisconsin-Madison, 2002.

### **Information Systems & Analytics**

John Benamati (1997)

B.S., Indiana University of Pennsylvania, 1984; M.S., Marist College, 1987; Ph.D., University of Kentucky, 1997.

### **Interdisciplinary and Communication Studies**

Helene Androne (2002)

M.A.T., University of Washington, 1998, Ph.D., 2002.

### **Justice and Community Studies**

John Forren (2000)

B.A., University of Chicago, 1989; Ph.D., Johns Hopkins University, 2001.

### **Kinesiology and Health**

Helaine Alessio (1987)

B.S., Rutgers, 1981; M.S., Ithaca College, 1983; Ed.D., Maryland, 1986.

### **Languages, Literatures, and Writing**

Whitney Womack Smith (1998)

B.A., University of Missouri, 1991; M.A., University of Missouri, 1993; Ph.D., Purdue University, 1999.

### **Management**

Bryan Ashenbaum (2006)

B.S., Arizona State University, 1996; M.B.A., 2001; Ph.D., 2006.

### **Marketing**

Michael McCarthy (1993)

B.S., Rochester Institute of Technology, 1979; M.B.A., 1988; Ph.D., University of Pittsburgh, 1996.

### **Mathematical and Physical Sciences**

TBD.

### **Mathematics**

Patrick Dowling (1989)

B.S., University College (Dublin), 1979; M.S., 1980; Ph.D., Kent State University, 1986.

### **Mechanical and Manufacturing Engineering**

Amit Shukla (Interim) (2002)

B.S., Motilal Nehru Natl Inst Tech, 1996; M.S., University of Cincinnati, 1998; Ph.D., University of Cincinnati, 2002.

### **Media, Journalism & Film**

Bruce Drushel (1987)

B.A., Bowling Green State University, 1981; M.A., Ohio University, 1982; Ph.D., 1991.

### **Microbiology**

Luis Actis (1994)

M.S., Universidad de Cordoba (Spain), 1975; Ph.D., 1982.

### **Music**

Christopher Tanner (1996)

B.M., West Virginia University, 1993; M.Mus. Miami University, 1996; Ph.D., West Virginia University, 2000.

### **Naval Science**

Todd Bahlau, Captain, Navy (2018)

B.S., U.S. Naval Academy 1991; M.S., Troy University, 1992; M.A., Naval War College, 2012.

### **Nursing**

Brooke A. Flinders (2006)

B.S.N., Miami University, 2003, M.S.N., Frontier Nursing University, 2006, D.N.P., Frontier Nursing University, 2016.

### **Philosophy**

Elaine Miller (1998)

B.A., University of North Carolina, 1984; M.A., Boston College, 1993; Ph.D., De Paul University, 1998.

### **Physics**

Herbert Jaeger (1992)

M.S., Fachhochschule Dieburg (Germany), 1977; M.S., Oregon State University, 1984; Ph.D., 1987.

### **Political Science**

Bryan Marshall (2004)

B.A., University of Toledo, 1989; M.A., University of Toledo, 1992; Ph.D., Michigan State University, 1999.

### **Psychology**

Allen McConnell (2000)

B.A., University of Cincinnati, 1990; Ph.D., Indiana University, 1995.

### **Social and Behavioral Sciences**

Shubhasree Subedi (1989)

B.A. Delhi University (India), 1975; M.A. Jadavpur University (India), 1978; M.A. University of Akron, 1989; Ph.D., 1991.

### **Sociology and Gerontology**

Stephen Lippmann (2005)

B.A., University of New Hampshire, 1998; M.A., University of North Carolina-Chapel Hill, 2000; Ph.D., 2005.

### **Spanish and Portuguese**

Ryan Barilleaux (Interim) (1987)

B.A., University of Southwestern Louisiana, 1979; M.A., University of Southwestern Louisiana, 1980; Ph.D., University of Texas, 1983.

### **Speech Pathology and Audiology**

Susan Baker Brehm (2003)

B.S., Miami University, 1997; M.A., Miami University, 1999; Ph.D., University of Florida, 2003.

### **Statistics**

A. John Bailer (1988)

B.S., Miami University, 1982; M.A., University of North Carolina-Chapel Hill, 1984; Ph.D., 1986.

### **Teacher Education**

Brian Schultz (2017)

A.B., Psychology, Miami University, 1997; M.A.T., Miami University, 1999; Ph.D., University of Illinois – Chicago, 2005.

### **Theatre**

Julia Guichard (1998)

B.F.A., DePaul University, 1984; M.F.A., Pennsylvania State University, 1994.

For a list of current faculty, please visit the following website:

<http://www.units.MiamiOH.edu/academicpersonnel>

## **Graduate School**

### **James Oris (1986)**

Dean/Associate Provost

B.A., Wittenberg University, 1979; Ph.D., Michigan State University, 1985.

### **Rose Marie Ward (2002)**

Associate Dean for Graduate Admissions

B.S., Juniata College 1998; M.S., University of Rhode Island, 2001; Ph.D., University of Rhode Island, 2002.

### **Valerie O. Robinson (2006)**

Assistant Dean for Graduate Admissions

B.S., University of Cincinnati, 1998; M.S., Miami University, 2001; Ph.D., Miami University, 2014.

**Lou Ann Haines (2006)**

Assistant to the Dean and Associate Provost, Manager of Graduate Student Services.

## Graduate Council

The Graduate Council is composed of 12 faculty members elected by the graduate faculty and three graduate students selected by the Graduate Student Association. The council works with administrative officers in establishing policies and procedures affecting graduate education, reviewing new courses and curricula, and maintaining standards for all programs.

## Directors of Graduate Programs

### Accountancy

Dale Stoel (2007)

B.S., Purdue University, 1987; M.S., Purdue University, 1992; Ph.D., Ohio State University, 2006.

### Architecture and Interior Design

Craig Hinrichs (1985)

B.Arch., University of Nebraska, 1976; M.Phil, University of Manchester, 1987.

### Art

Ellen Price (1987)

B.A., Brooklyn College, 1980; M.F.A., Indiana University, 1986.

### Biology

Michelle Boone (2004)

B.S., Furman University, 1994; B.A., Furman University, 1994; Ph.D., University of Missouri, 2000.

### Biology and Biological Sciences - Project Dragonfly

Matteson, Kevin (2011)

B.A., Earlham College, 1999; M.S., Fordham University, 2005; Ph.D., Fordham University, 2007.

### Botany

Richard Moore (2005)

B.S., University of North Carolina, 1993; Ph.D. Penn State University, 1999.

### Business Administration

Kristine Reid (1999)

B.S., Miami University, 1978; M.B.A., Indiana University, 1980.

### Cell, Molecular, & Structural Biology

Lori Isaacson (1989)

B.S., College of Charleston, 1978; M.S., University of Georgia, 1982; Ph.D., Michigan State University, 1986.

### Chemical, Paper and Biomedical Engineering

Justin Saul (2011)

B.S., Purdue University, 1999; Ph.D., Case Western Reserve University, 2006.

### Chemistry and Biochemistry

Rick Page (2013)

B.S., California Polytechnic State University-San Luis Obispo, 2002; Ph.D., Florida State University, 2008.

### Computational Science & Engineering

Chi-Hao Cheng (2004)

B.S., National Chiao Tung University, 1991; M.S., University of Texas, 1996; Ph.D., 1998.

### Computer Science and Software Engineering

Eric Bachman (2001)

B.A., University of Cincinnati, 1983; M.S., Naval Postgraduate School, 1995; Ph.D., Naval Postgraduate School, 2000.

### Ecology, Evolution & Environmental Biology

Hank Stevens (2001)

B.A., University of New Hampshire, 1982; M.S., University of Pittsburgh, 1994; Ph.D., 1999.

### Economics

Melissa Thomasson (2013)

B.S., University of Puget Sound, 1992; M.A., University of Arizona, 1993; Ph.D., 1998.

### Educational Leadership

TBD.

### Educational Leadership - Student Affairs in Higher Education (SAHE)

Lisa Weems (2000)

B.A., University of Nebraska, 1993; M.A., Ohio State University, 1995; Ph.D., 2000.

### Educational Psychology

William Boone (2005)

B.S., Indiana University, 1982; M.S., University of Wisconsin, 1985; Ph.D., University of Chicago, 1991.

### English

Cynthia Klestinec (2007)

B.A., University of Georgia, 1994; M.A., University of Chicago, 1995; Ph.D., University of Chicago, 2001.

### English - Ohio Writing Project

Beth Rimer (2000)

B.S., Bowling Green State University, 1992; M.A., Miami University, 1999.

### Family Studies and Social Work

Anne Roma (2014)

B.A. University of Pennsylvania, 1993; M.S.W., San Jose State University, 1999; Ph.D., Case Western Reserve University, 2018.

### French and Italian

Audrey Wasser (2014)

B.A., Oberlin College, 1999; M.A., University of Florida, 2002; M.A., Cornell University, 2005; Ph.D., 2010.

### Geography

Jessica McCarty-Kern (2017)

B.A., Morehead State University, 2003; M.A., University of Maryland, 2005; Ph.D., 2009.

### Geology & Environmental Earth Science

John Rakovan (1998)

B.S., University of Illinois, 1988; M.S., University of Illinois-Chicago, 1990; Ph.D., SUNY-Stony Brook, 1996.

### History

Daniel Prior (2007)

B.A., Yale University, 1985; M.A., Indiana University, 1998; Ph.D., 2002.

### **Institute for the Environment and Sustainability (IES)**

Suzanne Zazycki (2011)  
B.S., Miami University, 1990; M.S., 1992; J.D., University of Toledo, 2003..

### **Kinesiology and Health**

Mark Walsh (2001)  
B.S., California State University-Los Angeles, 1991; M.S., California State University-Northridge, 1993; Ph.D., German Sport University Cologne, 2001.

### **Mathematics**

Paul B. Larson (2004)  
A.B., Dartmouth College, 1992; Ph.D., University of California, Berkeley, 1998.

### **Mechanical Engineering**

Kumar Singh (2006)  
B.S., Birla Institute of Technology, 1997; Ph.D., Louisiana State University, 2003.

### **Microbiology**

Mitchell Balish (2004)  
A.B., Washington University, 1991; Ph.D., Emory University, 1998.

### **Music**

Brenda Mitchell (1988)  
B.M., Arizona State University, 1976; M.Mus., 1982; D.M.A., 1994.

### **Philosophy**

Gaile Pohlhaus (2006)  
B.A., Sara Lawrence College, 1993; Ph.D., Stony Brook University, SUNY, 2003..

### **Physics**

Mahamud Khan (2013)  
B.S., Southern Illinois University, 2001; M.S., 2004; Ph.D., 2007.

### **Political Science**

Brian Danoff (2004)  
B.A., University of California-Santa Cruz, 1993; M.A., New School for Social Research, 1996; Ph.D., Rutgers University, 2003.

### **Psychology**

Christopher Wolfe (1989)  
B.A., Denison University, 1981; M.S., University of Bridgeport, 1984; M.S., University of Pittsburgh, 1987; Ph.D., 1989.

### **Sociology and Gerontology**

Jennifer M. Kinney (1998)  
B.A., Kent State University, 1982; M.A., Kent State University, 1985; Ph.D., Kent State University, 1987.

### **Spanish & Portuguese**

Luis Pradanos-Garcia (2013)  
B.A. University of Alcala, 2002; M.A., Texas Tech University, 2006; Ph.D., Texas Tech University, 2010.

### **Speech Pathology and Audiology**

Donna Scarborough (2003)  
B.S., University of Illinois, 1991; M.S., University of Louisville, 1993; Ph.D., University of Cincinnati, 2002.

### **Statistics**

Jing Zhang (2008)  
Ph.D., University of Missouri, 2008.

### **Teacher Education**

Thomas Misco (2006)  
B.A., University of Wisconsin-Madison, 1996; M.A. University of Iowa, 2000; Ph.D., University of Iowa, 2006.

### **Theatre**

Ann Elizabeth Armstrong (2001)  
B.A., The College of William and Mary, 1988; M.F.A., The University of Hawaii at Manoa, 1993; Ph.D., The University of Hawaii at Manoa, 2000.

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