

The Applied Biology major focuses on the practical uses of basic biological information within two thematic concentrations: Environmental Biology and Human Biology & Health Sciences. A biological sciences major provides opportunities for students to study the building blocks of life as they take classes in evolution, genetics, microbiology, plant biology and zoology. Completing this major earns you professional certifications and will prepare you to be a professional biologist.

RECOMMENDED FOUR-YEAR PLAN

First Year

<i>First Semester • 15 - 16 Credit Hours</i>	<i>Second Semester • 15 Credit Hours</i>
ENG 111 English Composition (3)	BIO 116 Biological Concepts: Structure, Function, Cellular and Molecular Biology (4)
BIO 115 Biological Concepts: Eco, Evo, Genetics and Diversity (4)	CHM 142 College Chemistry II (3)
CHM 141/R College Chemistry I (3-4)	CHM 145 College Chemistry II Lab (2)
CHM 144 College Chemistry I Lab (2)	MTH 151 Calculus I (5) or STA 261 Statistics (4)
MPF IIA Creative Arts (3)	MPF III Global Perspectives (3)

Freshmen are strongly encouraged to take UNV 101 their first semester.

Second Year

<i>First Semester • 14 - 15 Credit Hours</i>	<i>Second Semester • 14 - 15 Credit Hours</i>
BIO 203 Intro to Cell Biology (3)	BIO 206 Evolutionary Biology (3) or BIO 209 Fundamentals of Ecology (3)
CHM 241 Organic Chemistry I (3) and CHM 244 Organic Chemistry I Lab (2) or CHM 231 Fundamentals of Organic Chemistry (4)	CHM 242 Organic Chemistry II (3) and CHM 245 Organic Chemistry II Lab (2) or ELECTIVE (if CHM 231 was taken) (5)
BSC 292 Applied Bio Sophomore Seminar (1)	MAJOR Tool Course 2 (3)*
MAJOR Tool Course 1 (3)*	MPF III Global Perspective (3)

Third Year

<i>First Semester • 17 Credit Hours</i>	<i>Second Semester • 16 Credit Hours</i>
BIO 201 Human Anatomy (4)	BIO 342 Genetics (3)
PHY 161 Physics for Life Sci I with Lab (4)	CHM 332 Outlines of Biochemistry (3)
MAJOR Professional Course 1 (3)*	CHM 332L Outlines of Biochemistry Lab (1)
MPF IIC Social Sciences (3)	MPF IIB Humanities (3)
MPF-AW Advanced Writing (3)	MAJOR Tool Course 3 (3)*
	MAJOR Tool Course 4 (3)*

Fourth Year

<i>First Semester • 16 Credit Hours</i>	<i>Second Semester • 15 Credit Hours</i>
BIO 305 Human Physiology (4)	BSC 492 Applied Bio Senior Seminar (1)
MAJOR Tool Course 5 (3)*	MAJOR Tool Course 6 (3)*
MAJOR Professional Course 2 (3)*	MAJOR Professional Course 3 (3)*
MP-IP Intercultural Perspectives (3)	CAPSTONE or ELECTIVE if senior capstone fulfilled by Professional Course 2 (3)*
ELECTIVE Elective (3)	ELECTIVE Elective (3)

* Professional and Tool Courses should be chosen in consultation with a faculty advisor

This planning sheet does not guarantee offer of classes in any given semester; please consult with an Advisor to schedule your classes appropriately. Your degree audit is your official program record.

CAREER OPTIONS

The Applied Biology major includes two professional certificates and a “tool” requirement. Students in the Human Biology & Health Sciences concentration will be ready for employment in biomedical sciences at Q Labs, Children’s Hospital Medical Center, MedPace and other employers involved in healthcare and biotechnology. This concentration also prepares students to attend professional schools in the health sciences. Graduates are qualified for careers such as:

- Lab Technicians
- Research Assistants
- Science Teachers
- Pharmaceutical Sales Representatives
- Science Teachers
- Technical Writers

GRADUATION REQUIREMENTS

Students must earn a minimum of 124 credit hours and achieve an overall GPA of 2.0 in order to qualify for graduation. Students should consult with their DAR and advisor to ensure that all degree requirements are met prior to graduation.

<http://bulletin.miamioh.edu/liberal-arts-applied-science/applied-biology-bs/>

TOOL REQUIREMENT

The Applied Biology major includes elective hours and requires the completion of a “tool” requirement - a non-biology minor or certificate that provides students with additional skills that are useful to professional biologists. Students can self-design a tool, with departmental approval. Tools in the Applied Biology major include:

- Commerce Minor
- Data Intelligence Minor
- Forensic Investigation Minor
- Psychological Sciences Minor
- GIS Certificate

CONTACT INFORMATION

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ABBREVIATION KEY

MP-EL = Experiential Learning

MPF I = English Composition

MPF IIC = Social Science

MPF V = Mathematics, Formal Reasoning, Technology

MPT = Thematic Sequence

MP-AW = Advanced Writing

MPF = Global Miami Plan Foundation

MPF IIB = Humanities

MPF IV = Natural Science

MP-IP = Intercultural Perspectives

MPF IIA = Creative Arts

MPF III = Global Perspectives