# Department of Chemistry and Biochemistry

# MIAMI UNIVERSITY

# Departmental

# Governance and Procedures

# August 2009

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# MIAMI UNIVERSITY

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## GOVERNANCE AND PROCEDURES

This document is designed as a guide for the Department of Chemistry and Biochemistry and is a supplement to other procedural manuals, listed below, of Miami University.

Additional information pertaining to departmental governance and procedures is contained in the following publications, each of which is periodically revised:

Miami University, Regulations of the Board of Trustees

Miami University Official Publication, General Bulletin

Miami University Official Publication, Guidebook for New Students

Miami University Official Publication, Graduate Bulletin

Miami University, College of Arts and Science, Manual of Operations

Miami University, Graduate School, Graduate Awards Packet

Miami University, Graduate School, Handbook for Graduate Students & Faculty

Miami University, Policy and Information Manual (available on the worldwide web)

Miami University, Student Handbook

# Department of Chemistry and Biochemistry Current Faculty List August 2009

Chair and Professor
- Christopher A. Makaroff

Professors Emeritus and Emerita
- John Herbert Buckingham
- John Harold Eicher
- Harlan Edward Fiehler
- Gilbert Gordon

Professors/Lecturers/
- John Roscoe Grunwell III
- Jan Guy Jaworski
- Percy Meldrum Mundell
- Alice Chung-Phillips
- David Berry Phillips
- John Francis Sebastian
- Harriet Vyvyan Taylor

Professors
- Stacey Lowery Bretz
- James Allan Cox
- Michael Wade Crowder
- Neil David Danielson
- Ann Elizabeth Hagerman
- Gary A. Lorigan
- Michael A. Kennedy
- Michael Novak
- Gilbert Ellery Pacey
- Jerry Leon Sarquis
- Arlyne M. Sarquis (M)
- Andre Johann Sommer
- Robert Perry Stewart, Jr.
- Richard Timothy Taylor

Associate Professors
- S. Mark Cybulski
- James William Hershberger
- Alan David Isaacson
- Susan S. Marine (M)
- Thomas Leslie Riechel
- John Paul Williams (H)
- Shouzhong Zou

Assistant Professors
- Carole Dabney-Smith
- C. Scott Hartley
- David L. Tierney
- Blanton S. Tolbert
- Hong Wang

Visiting Assistant

Instructors
- Richard L. Bretz
- John W. Hawes
- Yasmin Jessa
- Janet Marshall
- Heeyoung Tai

Department of Chemistry and Biochemistry

Miami University

# DEPARTMENTAL

# GOVERNANCE AND PROCEDURES

## A. Departmental Organization

## PURPOSES, GOALS, AND SPECIFIC OBJECTIVES OF THE DEPARTMENT

To design undergraduate and graduate curricula that helps to meet students' needs in a wide range of general and professional programs and to provide high quality instruction in chemistry and biochemistry are our primary missions. A commitment to excellence must be expressed at all levels, from beginning undergraduate to advanced graduate instruction. In addition to its responsibility to chemistry and biochemistry majors, the Department supports other programs in such areas as the biological sciences, geology, physics, pre-medicine, pre-dentistry, medical technology, industrial technology, paper science, and environmental science and provides general education in chemistry. In all programs, full use is made of the supporting personnel and facilities.

A second aspect of our mission is to provide an academic environment that permits students to obtain a depth of knowledge, a scope of reason, and a breadth of vision that reflect imagination, adaptability, and enthusiasm. These dimensions make full use of the students' creative talents, induce the development of good professional ethics, and permit graduates to play more meaningful roles in the real world. Such an environment will be conducive to the continual self-development of both student and faculty.

The Department of Chemistry and Biochemistry is fully committed to the Miami Plan for Liberal Education. Courses are in place (see the Miami Bulletin) which offer students Foundation courses, Thematic Sequences, and Capstone Experiences. The Educational Policy Committee will review these offerings periodically and make recommendations.

The science of chemistry has assumed an increasingly important role in our society. It is now recognized as essential to our economic and cultural development as well as to our national security. The Department of Chemistry and Biochemistry is fully aware of its social, academic, and professional responsibilities that accompany this recognition.

The Department of Chemistry and Biochemistry began its Ph.D. program in September 1970. The venture was based on years of careful planning. The setting was provided by a competent and versatile faculty, a new building with excellent facilities, and a university administration cognizant of immediate and long-range needs. The faculty, united in purpose and fully aware of the task, eagerly accepted the challenge. The Department believed then and still believes that graduate study in chemistry and biochemistry must be taken to the doctoral level in order to perserve and advance the discipline itself. Such a program, based heavily on significant research, is essential to the recruitment of high-quality faculty and students, and thus to the very life of the Department. The doctoral program enriches and strengthens the master's program and the entire undergraduate program. Doctoral students, well-prepared in training and perspective, help to solve a broad range of scientific, social, economic, and environmental problems. The Department feels, therefore, that its doctoral program can make a strong contribution to the individual, to society, and to the profession.

**The Departmental activities are carefully planned in attempts to reach the following objectives:**

To continue to attract faculty capable both of obtaining external research grants, with interest in publishing research and attaining national and international reputations, and of contributing to the high-quality teaching program of the Department.

To provide students with opportunities to experience the science and art of independent research. Students thereby gain self-confidence and become increasingly eager to try new approaches for solving the wide range of problems arising from the rapidly changing demands of society.

To offer sound graduate programs at the master's and doctoral levels. Each graduate program is designed to meet individual professional needs. In order to maintain continuity and momentum, more graduate students of high quality must be attracted, the number and level of graduate appointments must be increased, graduate students must be prepared and encouraged to participate in teaching at the undergraduate level, additional summer support must be obtained for the graduate students, and additional postdoctoral research appointments must be procured.

**In planning to reach its objectives, the Department is aware of the following strengths and weaknesses in its program:**

The Department has a faculty of high quality and professional breadth which includes a wide range of research interests and permits competent instruction to students of many interests. Increased efforts to obtain grant support from outside the University are needed.

The Department gives highest priority to the academic welfare of its students. Small class sizes are maintained where feasible. Small research groups, with faculty working with students in the research laboratories, permit strong faculty-student interaction. Faculty-student interaction is also promoted by independent study programs, seminars, and extra-curricular meetings.

The University attracts high-quality undergraduate students. The Department must continuously revise and upgrade introductory-level courses that serve chemistry majors, other science majors, and the general student body. These courses must be targeted at the needs of these students and must provide the appropriate balance between the content, which is most important for chemistry majors, and the role of chemistry in society, which has great value to the nonscience majors. The curriculum must offer chemistry majors a wide choice of courses, especially at the senior level so that these students have considerable freedom to pursue special interests.

# Department of Chemistry and Biochemistry - Administrative Structure

## THE CHAIR

The Chair is the acknowledged leader of the department. The role of the leader is that of planner, coordinator, implementer, and administrator. In exercising leadership, the Chair must work in close harmony and communication with the members of the Department of Chemistry and Biochemistry, with other department chairs, and with appropriate collegiate and University administrators. The relationships must be based on mutual confidence, respect and support. The Chair must lead the Department in program and policy formulation and review; make decisions where appropriate under University, College and Departmental rules and policies; implement the rules and policies; implement the rules and policies of the University, College and Department; and reflect in the performance of his/her duties, University and collegiate policies and the results of the deliberative and decisional activities within the department--not personal predilections, or the pressures of individuals or small factions. The Chair is evaluated and selected following the procedures outlined by the College of Arts and Science as shown in Exhibit A, Parts 1 and 2, respectively.

## THE DEPARTMENT AND EXTERNAL RELATIONS

The Chair of the Department of Chemistry and Biochemistry is the prime representative of the Department in external relations. He/she is the main communicator of policy and problems between our Department, the administrative offices, and other support units. The Chair has prime responsibility for implementing within the Department of Chemistry and Biochemistry the regulations and policies of the University and the College, and for bringing to the attention of the University and College the policies, problems, needs and activities of the Department. Through this leadership, the Chair must bring together the University, College, and Departmental objectives and resources, and promote the strengths and abilities of the departmental faculty and staff in the best interest of the Department, College, and University. The Chair, within University policy, determines with the faculty, the role and extent of involvement outside the University proper of service and/or of discipline-related activities.

**EXHIBIT A**

# DEPARTMENT CHAIR EVALUATION AND SELECTION PROCEDURES (August 1993)

## PART 1. EVALUATION PROCEDURE

The CAS Committee to Evaluate Chairs and Program Directors is in charge of evaluating the chairs in the College. First year chairs are not evaluated. Second and fourth year chairs have a Formative evaluation. It is intended for use by the chair for self-improvement and is shared with the Dean but not with departmental faculty. Third and fifth year chairs have a Summative evaluation and the comments are shared with the Dean and departmental faculty. The Committee reserves the right to modify any comment which they feel identifies the evaluator. A chair who is not continuing may choose not to be evaluated.

The forms are sent to all members of the department at the rank of instructor and above. They are returned to the Dean in a confidential envelope which is provided. They are forwarded by the Dean to the Committee which prepares the report. The final Formative report is sent to the Dean and to the Chair. The Dean offers to meet with the Chair to discuss the results. The Summative report is sent by the Dean to the departmental faculty after the meeting with the Chair takes place.

## PART 2. SELECTION PROCEDURE

A. The incumbent Chair in the fall of his/her fourth year of service will be asked if he/she wishes to serve for an additional five-year term.

B. If the answer is "yes", after the Dean's meeting with the Chair about the Summative review (see Part A above) and distribution of this review to the faculty, the Dean asks any faculty member who so desires to make an appointment with him/her to discuss the possible reappointment of the Chair. After this process is complete, the Dean informs the Chair of his/her decision on the reappointment.

C. If the incumbent Chair resigns, is unable to continue to serve, does not wish to serve another term, or if the evaluation report is unfavorable, then the following procedure is used:

a. The Dean appoints a search committee, consisting of

1) three members of the department,
2) one member from a cognate discipline,
3) a Chair from a different cognate discipline,
4) one graduate student and one undergraduate student chosen by the department.

b. The Search Committee is informed whether there is to be a national search or whether, because of fiscal constraints, there must be an "inside" choice. In either case, affirmative action guidelines must be strictly followed.

c. The Search Committee establishes an interview schedule for each candidate which includes

1) meeting members of the department (according to department procedure),
2. the Dean of the College of Arts and Science,
3) the Provost,
4) Chairs of all cognate disciplines,
5) the Dean of the Graduate School, and
6) the Search Committee.

d. Evaluations of each candidate are solicited from each of the above.

e. The Search Committee provides the Dean and the Department with a qualitative evaluation of no more than three recommended candidates, and the Dean requests a recommendation from the Department concerning the candidates proposed by the Search Committee.

D. The Dean forwards to the Provost the name of his/her recommended candidate.

# THE DEPARTMENT AND INTERNAL GOVERNANCE

It should be emphasized that Departmental objectives, priorities, programs, curriculum, and other aspects of internal governance, are matters of Departmental deliberation, and decision by majority rule, except in specific cases when a majority of the members of the Department determine otherwise. The Chair shall maintain frequent communication with members of the Department throughout the year by means of formal Departmental Meetings, Discussion Meetings, Faculty Newsletters, and other written announcements.

Prior to each Academic Year, the Chair of the Department will distribute an annual calendar of departmental activities starting with the beginning of the school year in August. Regular Faculty Meetings (usually monthly during the Academic Year), Special Faculty Meetings, scheduled discussion meetings, and important committee meetings will be scheduled in order to avoid conflicts later in the school year. Important dates from the University Calendar are also included as reminders. Additions to and alterations of the Department Calendar are included in Faculty Newsletters. These Newsletters also include announcements, reports for the record, summaries of Departmental activities, and agenda for upcoming meetings. Occasional "Notes and Comments" are also prepared for the benefit of the graduate students in the Department. The Chair is free to select a tenured faculty member to serve as his/her Assistant.

## Policy Concerning Faculty Meetings

The Chair's responsibility in maintaining full communication with the Faculty must be stressed. In implementing Departmental policy and managing Departmental policy and managing daily operations, the Chair is confronted with decisions ranging from routine procedures to occasional long-term commitments allowing little time for deliberation or reflection. The Chair must strive for a balance between the one extreme of assuming complete administrative authority and the other extreme of developing every activity from a position of collective consideration, the Faculty acting in unanimity. The former method could lead to arbitrary, uninformed, and unilateral decisions, but to conclusions which may be clear, expeditious, and unambiguous. The latter method may become unnecessarily complex and disconcertingly inefficient, but such decisions allow full participation and maximum comprehension. In an effort to combine the advantages of both extremes, this Department, under its Chair, considers all matters affecting policy at its regular or special Faculty meetings, utilizing the input of individual faculty contributions, the consensus obtained from informal Faculty discussion meetings, reports from appropriate committees, and the advice of the Planning Committee.

Various discretionary and administrative decisions by the Chair are routinely placed on the Faculty Meeting Agenda for the combined purpose of imparting information and inviting Faculty advice and consent. Such reviews are not intended to become pro forma, but are intended to encourage constructive criticism. They are not invitations for reconsideration, ab initio, but afford a convenient forum for the consideration of alternatives and for future improvement.

Examples of such Agenda items include allocation of travel funds, allocation of teaching assistants, evaluation of potential new members of the Faculty, selection of special seminar speakers, and Departmental representation at professional meetings.

**Budgets, Staff, and Facilities** - Under the Chair's leadership, the Department as a whole shall decide its objectives, needs and priorities within University and College policy and resources. The Chair shall implement these decisions by developing and presenting budget, staff and facilities requests.

**Teaching Loads and Other Assignments** - Within the University and College policies, and the need to provide instruction to meet the degree requirements and interests of students, and to meet other University, College and professional obligations (advising, committees, research and the like), the criteria for assigning teaching loads and other tasks shall be determined by the Department. Once the policy and criteria have been determined, the Chair shall implement them and make the decisions of individual teaching loads and other assignments within the Department in as equitable a manner as possible.

## DEPARTMENT DIVISIONS

The Department of Chemistry and Biochemistry consists of six Departmental Divisions: Analytical, Biochemistry, Chemical Education, Inorganic, Organic, and Physical. Membership is based on the member's principal area of training and interest. Membership is self-declared. It is understood, however, that one who makes such a declaration should be actively engaged in teaching and/or research in that area.

Administratively, the Divisions will function autonomously in making appropriate recommendations for courses to be offered, teaching assignments for these courses, advising students, proctoring and grading diagnostic examinations, formulating and grading comprehensive or cumulative examinations and the like. The division coordinator will be appointed by the Chair of the Department of Chemistry and Biochemistry after consultation with each member of the appropriate division.

# BRANCH CAMPUSES

The mission at the branch campuses is oriented more toward teaching service courses and introductory A.B.-program chemistry courses rather than professional chemistry career courses. Research facilities as well as upper level students are limited. This means that only freshman and sophomore chemistry courses will generally be offered. However, some research equipment is provided, especially if it can serve the dual function of a teaching aid and research equipment. The libraries also reflect the technology programs at the branch campuses and the basic publications in chemistry are available as well as computer facilities.

The following items illustrate some of the duties and privileges of someone teaching at one of the branch campuses in relation to the Department of Chemistry and Biochemistry.

The primary function of the teacher at the branch campus is effective instruction and it is expected that the local administration will furnish supporting personnel for the related activities such as laboratory preparation and inventory logistics.

A close working relationship in an atmosphere of mutual exchange is expected with other members of the Department of Chemistry and Biochemistry. Insofar as is possible, the facilities of the Department of Chemistry and Biochemistry are available to branch campus faculty. Directing undergraduate research at the Oxford Campus is possible if appropriate laboratory space is available. Subject to attaining the appropriate Graduate Faculty status, directing graduate research is also possible.

Teaching assignments sometimes may be modified to accommodate faculty interested in teaching a course at the Oxford Campus, however, the principal duties will remain with the branch campus. For promotion or tenure considerations, the candidate at the branch campus must in general satisfy the same criteria as the faculty at the Oxford campus but since research publications and outside grant support have a higher priority at the Oxford campus, some modification in applying the criteria is assumed. However, a contribution of a creative nature beyond the basic duties is still expected whether it be in research, chemical education or some other professional related activity.

# COMMITTEES AND SPECIAL ASSIGNMENTS

The Department conducts its executive functions under the leadership of its Chair by means of fifteen standing committees and a Chair's Planning Committee, plus a variable number of special committees and assignments to manage special obligations and responsibilities.

Committee chairs and members are appointed and special assignments are made by the Chair of the Department after consultations with the individuals concerned so as to achieve a balance of appointments reflecting individual abilities, interests, and availability. Committee members and those with special assignments usually serve a minimum of one year and may be reappointed.

Committees hold regular or special meetings as necessary, hold open noon discussion meetings after scheduling with the Chair of the Department and present reports and/or recommendations at faculty meetings for discussion, approval, or review.

The following committee/special assignment charges and guidelines indicate their usual executive activities, and are subject to revision at regular faculty meetings.

## DEPARTMENTAL COMMITTEES

### I. EQUIPMENT AND SUPPLIES COMMITTEE

Annual survey of Departmental equipment needs

Establishment of priority lists of teaching and research equipment with faculty approval

Interact with the Manager on the preparation of the semi-annual Department orders of supplies

Procedures to encourage Faculty and staff to return regularly all unused items to the main service area/storeroom

## II. PROCEDURES AND RECORDS COMMITTEE

Collection, recording, and distribution of all written procedures and guidelines relating to governance and operation of the Department

Presentation of all preliminary governance documents to the Faculty at scheduled discussion meetings

Revision of all governance documents after seeking input from the Faculty, staff and students

Presentation of all procedural and governance documents to the Faculty for approval after having obtained apparent agreement through prior discussion and publication

Coordination of Department publicity and news items which are submitted in writing and are designed for external publicity; liaison with the Miami University Office of Public Information

Maintains enrollment/GPA statistics on departmental courses

## III. EDUCATIONAL POLICY COMMITTEE

Present to the Faculty all undergraduate course change requests

Schedule and conduct all discussion meetings on undergraduate curricula, etc.

Analyze our undergraduate curricula according to ACS certification requirements

Survey library, demonstration material, and audio-visual needs and holdings as they relate to undergraduate instruction

Present to the Faculty any special problems related to Branch Campus instruction

Long Range coordination and planning in all aspects of undergraduate instruction

Revision of curricula

## IV. SCHEDULING COMMITTEE

Communication of Faculty Teaching Assignments

Scheduling of class meeting times and places in liaison with the Registrar

New course offerings and revision of syllabi

Catalog copy and proofing for the College, the Graduate School, and the Registrar

## V. GRADUATE ADMISSIONS COMMITTEE

Inclusion of the entire Faculty in recruiting efforts

Consideration of new recruiting activities

Evaluation of our graduate student recruiting seminar program, special lectures, and publicity for the advanced degree programs

Formulation of a variety of recruitment letters which may be sent to potential students, chemistry faculty, and other contacts

Procurement and evaluation of academic records of prospective graduate students

Make recommendations to the Chair regarding eligibility of applicants for admission and support and communicate the Chair's decision to the Graduate School

Consideration of the role of part-time students in our program, specifically the possibility of industrial chemists obtaining advanced degrees on the basis of part-time study

Evaluation of potential sources of funds which might be used in recruiting

## VI. GRADUATE ADVISING COMMITTEE

Determination of the eligibility of graduate students to continue in their programs

Recommendation of graduate appointments of continuing students

Liaison with the Graduate School and Graduate Council

Coordination of diagnostic examinations for graduate students

Academic advising for graduate students prior to their selection of a Graduate Committee

Presentation of status reports on the progress of graduate students

Approve the Plan of Study recommended by a student's Graduate Committee

## VII. HONORS AND AWARDS COMMITTEE

Communication to the faculty of criteria for selection of students to receive honors and awards

Compilation and presentation to the faculty of academic ratings on students suggested for honors and awards

Proposal of nominees for honors, awards, and scholarships for faculty approval

Formulation of guidelines for courses leading to Departmental Honors, CHM 481 and 482, and Independent Reading in Chemistry 177, 277, 377, and 477

## VIII. LIBRARY COMMITTEE

Collection of requests for books and journals for the Brill Science Library

Establishment of priority lists of such requests when necessary

Recommendation on new purchases from those suggested by the University Libraries

Liaison with the Brill Science Library Building Committee

The Committee Chair serves as the Departmental Representative to the University Libraries

## IX. SAFETY/WASTE DISPOSAL COMMITTEE

Development of safety objectives and guidelines for the Department

Issuance of written safety information guidelines based on suggestions of the Miami University Department of Public Safety and the Committee on Chemical Safety of the American Chemical Society

Consultation on general safety information and education

Plan the annual safety workshop for new graduate assistants

## X. GENERAL CHEMISTRY COMMITTEE

Coordinate courses offered by the Department that serve as foundation courses in the University's liberal education requirement. For courses other than the CHM 140-series, textbook selections will parallel those regarding CHM 141, 142, 144, 145 except that (a) individual instructors will initiate the textbook selection and (b) a common text is not required. (See duties of the General Chemistry Coordinator for details on the textbook selection).

Coordinate focus sequences offered by the Department to meet the University's liberal education requirement. In this case, the divisions offering the courses will be responsible for all aspects of planning and administering individual courses in the sequence. The General Chemistry Committee's role is to work with the divisions to assure compliance to the spirit of the University Requirement; this involves assuring that any changes with syllabi are consistent with the objective of the sequences. Points of contention will be resolved by the faculty-as-a-whole or the Chair, depending on the nature of the situation.

Prepare petitions to the Liberal Education Council for approval of courses to meet the University's liberal education requirement.

Assist the General Chemistry Coordinator on any aspect of his/her charge (except CHM 141, 142 textbook selection) at the Coordinator's request.

The Committee is chaired by the General Chemistry Coordinator.

## XI. SENIOR STAFF APPOINTMENTS COMMITTEE

Advertisement of new academic positions

Screening and ranking of applications for positions

Presentation of potential candidates to the Faculty

Closing all files on applicants at the conclusion of a search

Liaison with the Miami University Affirmative Action/Equal Opportunity Office

## XII. COMPUTER COMMITTEE

Development of guidelines for the purchase, operation, and maintenance of Departmental Computers

Management of the William H. Schwarz Computer Laboratory

Consultation with the faculty on the use of computers in instruction and research

## XIII. UNDERGRADUATE RECRUITING COMMITTEE

Develop and coordinate all activities related to recruiting undergraduate students.

Initiate contact between the Department and applicants for undergraduate admission to Miami University who express an interest in Chemistry or Biochemistry.

Organize visits to the Department by students receiving undergraduate admission who express an interest in Chemistry or Biochemistry.

Interact with the Admissions Office to obtain lists of entering undergraduate students who are qualified for scholarships from funds administered by the Department. The Department Chair in consultation with the Committee Chair will make the scholarship recommendations.

Annually evaluate the perception of our A.B. and B.S. curricula by potential undergraduate majors.

## XIV. VOLWILER COMMITTEE

Serve as the Nomination Committee for the Volwiler Distinguished Research Professor in Chemistry.

Make recommendations to the Department Chair regarding the distribution of funds from the Endowment that are designated by the Provost for distribution to the Chemistry and Biochemistry faculty.

## XV. PROMOTION AND TENURE SUBCOMMITTEE

The membership of the Assistant to Associate Professor Promotion Committee consists of all faculty holding the rank of Associate or Full Professor. The membership of the Tenure Committee consists of all tenured faculty. Because of the large size of these two committees, the Chair will appoint a Promotion and Tenure Subcommittee to conduct the meetings of the full committees and to communicate with the candidates on behalf of the committees. The subcommittee will consist of a presentor for each candidate, chosen by the Chair in consultation with the candidate, from committee members in the candidate's division or campus, and a Chair of the subcommittee, also chosen by the Chair from the full Committee.

# SPECIAL ASSIGNMENTS

## Chief Departmental Adviser

Coordination of Faculty Advisers and advising for upperclass Chemistry and Biochemistry majors

Liaison with the Interdivisional Committee of Advisers and the College of Arts and Science Committee of Advisers

## General Chemistry Coordinator

Planning for the General Chemistry Program. This includes both the CHM 141, 142 and CHM 144, 145 sequences. Planning for the lecture courses will include proposing changes in the syllabi to the Educational Policy Committee which, in turn, can present such recommendations, or modifications, to the faculty. Changes proposed by the general chemistry instructors also must be routed to EPC via the Coordinator; these proposals should be accompanied by a review by the Coordinator. Planning for the laboratory courses includes selecting, scheduling, and developing experiments for CHM 144, 145.

Maintaining communication among the general chemistry faculty, staff and assistants

Assignment of Teaching Assistants within the general chemistry area

Liaison with the general chemistry service area/preparations room

Coordinate selection of the text for CHM 141, 142. Selection will be performed by a committee composed of the General Chemistry Coordinator (Chair), faculty members scheduled to teach CHM 141, 142 (including trailer sections) on the Oxford Campus, and a faculty member from the regional campuses (appointed by the Department Chair). Selection will be made by a process of collegial consensus without a formal vote. If a clear consensus is not reached (stalemate), the Department Chair will select the text from the top two or three texts being considered. The text will be used in all sections of the course on the Oxford Campus. The regional campuses may use a different text if they wish. Usually, the text will not be changed more often than every third year.

Chair the General Chemistry Committee

**Manager of Laboratories and Administrative Operations**

Recruiting, evaluating and supervision of the Departmental office/clerical staff

Recruiting, evaluating and supervision of the Departmental service/storeroom staff including all classified employees and student help

Monitoring the tracking of all departmental accounts

Responsible for the processing of all departmental purchases

Monitoring and maintaining departmental inventory records

Compilation of cost accounting studies on individual instructional experiments

Liaison with the Miami University Instrumentation Laboratory, Office of the Director of Purchasing and Central Services, Department of Public Safety and the Physical Facilities Department (Department of Chemistry and Biochemistry Point-of-Contact with these units)

**Assistant Chair**

Except for tasks related to faculty evaluation, the Assistant Chair can work with the Chair on any of his/her duties

Serves as Acting Chair whenever the Chair is unavailable for an extended period

# PROCEDURE FOR SELECTION OF A REPRESENTATIVE ON THE UNIVERSITY SENATE

1. The Chair issues a written call for nominations from the list of those eligible.

2. After one week, the nominations are closed. The Chair confirms the interest of the nominees.

3. A written ballot is prepared, distributed to the eligible list (except for the Chair) and collected by the Chair. A two-member committee selected by the Chair counts the ballots.

4. If a candidate does not receive a majority of the cast vote, run-off is held between the top two finishers.

5. The candidate who receives the greater vote is declared the representative. The Chair will only vote to break a tie in the run-off election.

6. A temporary vacancy (less than 6 months) will be filled by appointment by the Chair; for a longer period, the procedure outlined in points 1-5 will be followed.

# STUDENT PARTICIPATION IN GOVERNANCE

Both graduate and undergraduate participation in Departmental governance are encouraged but not required. Student input is particularly desired in matters concerning safety, honors, awards, seminars, graduate student recruiting, and course offerings.

Early in each academic year, graduate students in the Department elect two representatives to attend the Departmental Faculty Meetings, and one representative to the Graduate Student Association. Additional representation to departmental committees may be arranged by request.

Similarly, early in each academic year, the Chair may invite undergraduate students in the department to designate a representative to attend the Departmental Faculty meetings. The Miami Chemical Society may have the responsibility to elect/appoint such a suitable undergraduate representative. Additional or alternative representation may be arranged by request.

# ABRIDGED PARLIAMENTARY RULES TO GOVERN CHEMISTRY DEPARTMENT FACULTY MEETINGS

## WHAT MOTION IS IN ORDER?

The **MAIN MOTION** has the lowest precedence. Each of the other motions on the list below takes precedence over the one or more beneath it. Therefore, if the motion you wish to propose is **above** the one "on the floor", it is "in order", if it is below, it is "out of order". Motions underlined are not debatable.

| | |
|---|---|
| ADJOURN | majority |
| TABLE | two-thirds, voting members (UC Rule) |
| POINT OF ORDER/ REQUEST OF THE CHAIR | majority (only if objection) |
| PREVIOUS QUESTION | two-thirds |
| LIMIT DEBATE | two-thirds |
| POSTPONE DEFINITELY | majority |
| REFER TO A COMMITTEE | majority |
| AMEND | majority |
| POSTPONE INDEFINITELY | two-thirds, voting members |
| MAIN MOTION | majority |

A quorum shall consist of two-thirds of the eligible voting members. Voting members at Departmental Faculty Meetings shall be those members of the University Senate who are on at least one-third full-time assignment to the Department of Chemistry and Biochemistry. All other individuals, including students, appointed or invited to attend the Faculty Meetings, will be encouraged to participate and contribute, but shall not be voting members. The Manager of Laboratories and Administrative Operations will also normally attend meetings as a non-voting member.

Majority and two-thirds vote requirements for most motions shall be determined by those voting members currently expressing their vote, whereas the requirement for motions to table and to postpone indefinitely shall depend on a two-thirds vote of all eligible voting members. Additional Parliamentary Rules, when necessary, shall follow the latest revision of "Robert's Rules of Order". Minutes or summaries of meetings shall be kept on file, and available for inspection in the Main Office of the Department of Chemistry and Biochemistry.

Department of Chemistry and Biochemistry

Miami University

# DEPARTMENTAL

# GOVERNANCE AND PROCEDURES

## B. Faculty Governance and Procedures

## PROCEDURES FOR THE RECRUITING AND RECOMMENDATION OF NEW CHEMISTRY AND BIOCHEMISTRY FACULTY MEMBERS

I. Upon authorization for the hiring of a new faculty member, the position is first advertised by publication of a description of the position requesting an application including a **curriculum vitae** and three letters of recommendation. A firm deadline is announced in order to terminate the review of applications. Advertisements are routinely published in such periodicals as *The Miami Report, Chemical and Engineering News* and *The Chronicle of Higher Education* following the guidelines as an Equal Opportunity-Affirmative Action Employer. Announcement letters are also sent to chairs of chemistry departments offering doctoral degrees, selected from the ***ACS Directory of Graduate Research***.

II. Applications and letters are initially reviewed by the Chair of the Department and are acknowledged by a letter to the applicant and a card to each recommender. Correspondence is routed to the Senior Staff Recruiting Committee which, with the counsel of the Department Chair, decides to:

1. terminate further consideration, thereupon replying to the applicant with a letter of regret,

2. postpone action in the light of further deliberations,

3. consider as an active candidate. Individual files are prepared for applications placed in the second and third categories and are made available for reading by the Faculty.

III. The Senior Staff Recruiting Committee meets after the application deadline to prepare a ranked list of applicants, usually the top ten, for Faculty consideration. A special Faculty Meeting is called to discuss the ranked list of applicants and to make decisions with respect to candidates to be invited for an interview.

IV. The interview trip usually involves a detailed scheduling of interviews with the Administration, Chair of the Department, and the Chemistry and Biochemistry Faculty members, after which a second Faculty Meeting is held to discuss impressions derived from the interviews, and if favorable, to vote that the Chair of the Department recommend an appointment to the Administration.

## WORKLOADS AND RESOURCE ALLOCATION

### 1. WORKLOAD PLAN

The Department of Chemistry and Biochemistry recognizes that the primary duty of a faculty member at Miami University is teaching. It also is recognized that the teaching of chemistry and biochemistry includes both formal classroom instruction and mentoring of research/scholarly activity of undergraduates and graduate students. The plan detailed below reflects the varied nature of teaching within the Department. The objective is to provide for different emphases on formal classroom teaching and mentoring without creating inequalities in overall workload or in opportunity for recognition in the reward system.

The Academic Year workload in Chemistry and Biochemistry is divided into 8 assignment units (4 per semester). Each can be considered to be valued at 10 hours in the same sense that a 40 hour work week is considered standard. It is recognized that national surveys show that faculty work about 55 hours per week; hence, in real time, each assignment unit undoubtedly will receive more than 10 hours of effort by the faculty. The Chair will annually update a schedule of assignment units for individual courses and distribute it to faculty members.

Teaching assignments are made by the Chair with input from the Divisions of the Department and from individual faculty. The Analytical, Biochemistry, Inorganic, Organic, and Physical Chemistry Divisions, through their Coordinators, make recommendations regarding instructors for courses in their areas. Prior to departing from these recommendations, the Chair consults with the Division(s). Individual faculty can express preferences for assignments, especially for (but not restricted to) courses that are not covered by the Divisions. Faculty who are interested in teaching courses outside of the Department (Honors Courses, for example) may negotiate with the Chair to have such courses count as part of the Departmental Assignment; as an alternative they can be taught as voluntary overloads.

The Standard Assignment in the Department is 6 Units of classroom teaching per Academic Year. One Unit is assigned to service, and one is assigned to personal research/scholarly activity. The latter includes development of new teaching materials and new courses. It is expected that these scholarly activities will have products that can be evaluated by the Chair.

Within the Standard Assignment, faculty can receive reduced classroom teaching loads if they are involved in such activities as mentoring independent studies students; writing proposals for extramural funding of research, curriculum development, or departmental equipment; and/or carrying extraordinary service loads. Indeed, it is anticipated that most faculty will qualify for a reduction of classroom teaching of at least 1-2 units. To continue to receive this reduction for more than 2 years (except for one given for service), the activity must be successful. Mentoring should result in publications and presentations at meetings of results of the work, results of the

work, and proposals should either be funded or receive scores that merit re-submission. The Chair will meet annually with faculty to discuss whether reduction of the classroom teaching assignment is merited. As a guideline, publication of two papers over a three year period, submission of one proposal for extramural research funding per year, and presentation of an average of one paper per year at a conference are the minimum requirements to receive an assignment reduced to 4 units of classroom teaching.

A Classroom Teaching Enhanced Assignment may be made to faculty members whose scholarly activities do not meet the above guideline over a 3-year period. In this case, additional units of classroom teaching will be assigned, up to a maximum of 6.8 Units total (85% of the workload, the upper limit in the Report of the Regents Advisory Committee on Faculty Workload Standards and Guidelines, Approved Feb. 18, 1994), with service and scholarly activity each reduced to 0.6. This change should be made only after a discussion with the faculty member that is centered on his/her professional goals. It is assumed that this change of assignment will be by mutual agreement between the faculty member and the Chair. It is required that the additional classroom teaching be reflected in the formula used to calculate merit salary increases.

Faculty who are mentoring a large number of students, including postdoctoral researchers, are provided a Mentoring Enhanced Assignment. Because of costs associated with scholarly activity in Chemistry and Biochemistry, this classification can only be provided to faculty who have substantial extramural support of their programs. Exceptions are made for faculty in their first three years as an Assistant Professor and faculty writing renewal proposals on grants. Depending upon the size of their research programs, faculty in this category generally will receive 2-4 units of classroom teaching. The minimum classroom teaching assignment is 1.6 units (20% of the total assignment, which is a limit consistent with the guidelines in the above-cited Report). In addition to the funding record described above, a Mentoring Enhanced Assignment must be accompanied by publication of 1.5 papers per year in a refereed journal averaged over a two, three, or four year period at the discretion of the Chair. (Book chapters and other reports may be accepted by the Chair as a substitute for a journal article at his/her discretion) and one presentation or co-authorship per year of a paper at a national/international meeting.

Classroom teaching, therefore, can vary from 20% to 85% of a faculty member's workload. It is important to note that because of the importance of one-on-one teaching of graduate and undergraduate researchers in Chemistry and Biochemistry, this variation does not reflect a difference in commitment to overall teaching.

2. RESOURCE ALLOCATION

In response to the recognition of the importance of mentoring the research/scholarly activity of undergraduate and graduate students and to the cost of these activities, the Department provides some funds to faculty for supplies, services, and the like. This allocation is in

addition to that for the classroom teaching and the personal research/scholarly activity of the faculty. In addition, the graduate students working with a faculty member who are supported by funds administered by the Department (GAs and TAs assigned to teaching and fellowships/assistantships paid from gifts to the Department) are considered a resource. Research laboratory space is a third important resource.

The allocation plan is described in Table 1. The amount of the allocation cannot be specified because the highest priority in the budget provided by the State is to support the formal undergraduate laboratory courses. In addition, the Chair must reserve funds for emergencies such as equipment repair, for one-time only major expenses, and for special allocations related to undergraduate research, etc.

Each year, after receiving budget information from the College, the Chair will determine the amount available for each of the variables in Table 1. The faculty will be notified as soon as possible. At his/her discretion, the Chair may hold a Discussion Meeting regarding the budget and/or the resource allocation schedule.

An important point in Table 1 is that graduate students who are in the last year of their degree program are not counted against the limit on students supported by the Department. This allows faculty to recruit new students on a schedule that allows overlap with advanced students.

The assignment of space is a duty of the Chair. Here, it is recognized that the need for space is subject to the nature of the scholarly activity and to the future direction of a faculty member's program. Decisions on space require information that often is only available to the Chair.

All faculty will be eligible for faculty improvement leaves or assigned research leaves, and will receive a travel allocation for presentation(s) at professional meetings and conferences. To be eligible for Departmental summer research support, a faculty member must have or be actively seeking research funds.

Merit salary increase recommendations will be based on research productivity and teaching effectiveness consistent with individual faculty workload. Since scholarly activity and teaching will be a part of all faculty members' work assignments, each will be a significant component of evaluation of all faculty.

**TABLE 1. RESOURCE ALLOCATION BY WORKLOAD ASSIGNMENT**

| Category | Allocation from the State Budget (research/scholarly activity) | GA/TA |
|---|---|---|
| CTEA | x | 1* |
| SA | x + y | 1 |
| SA + mentoring | x + y▪ | 2 |
| MEA | x + y + z | 4 |

CTEA, Classroom Teaching Enhanced Assignment; SA, Standard Assignment; MEA, Mentoring Enhanced Assignment.

* If a faculty member in this category accepts a graduate student he/she will negotiate with the Chair for additional allocations.

▪ Additional allocation (up to z) for faculty in this category will depend on research activity and attempts to acquire outside funds.

**Notes:**

(1) x includes ordinary expenses related to an individual's scholarly activity whereas y and z are for support of students.

(2) An additional allocation is made on the basis of the cost of teaching various courses.

(3) Distribution of funds is at the discretion of the Chair; he/she will determine x, y, and z and can make additional allocations for compelling reasons.

(4) Students in their last year of graduate work do not count in the GA/TA distribution column.

(5) The GA/TA column refers to all students supported by departmental funds (teaching positions, fellowships/assistantships from gifts and the like).

(6) The allocation of space is the responsibility of the Chair.

DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY
COMPUTER USE STANDARDS

**Background**

Many departmentally controlled computers are used specifically for data collection or analysis for research projects. Most research data are not confidential according to MUPIM criteria mentioned below.

**Standards**

1. Use of computers in the Department of Chemistry and Biochemistry must adhere to the Miami University Policy and Information Manual (MUPIM), including Section 3.22, 'Confidential Information Policy', Section 16.6A 'Responsible Use of Computing Resources', and Section 15 'Research'.

2. The default procedures for computer use in the Department of Chemistry and Biochemistry are those outlined in MUPIM. Any computer accounts that contain confidential data (described on page 39 of MUPIM) must be accessed only by individuals authorized to use those data and must be protected by individual passwords.

3. The Chemistry and Biochemistry Computer Committee is constituted annually by the Chair of the Department. The Committee will determine whether investigators who are authorized to use a particular departmentally-controlled computer that supports data acquisition/analysis must have individual access control to use the computer for data acquisition/analysis, and whether such data may be stored permanently on the computer's hard drive. Computers that require individual access control are called 'restricted access computers'. The Department Chair will keep a record of the decisions of the Committee.

4. A Principal Investigator (PI) is the individual who has acquired internal or external funding that is supporting specific data acquisition and analysis. Each PI must have access to the data in any account on a University-owned computer that has data, the collection/analysis of which is/was supported by funds the PI acquired and to the data in any account on a computer over which he/she has primary control.

5. For any restricted access computer that an individual is authorized to use, he/she will be given password-restricted access upon request. Other individuals (e.g., the PI in the case of student access) may also have access to the data in such an account (see No. 4).

6. Administrative rights to departmentally-controlled computers may be granted to system administrators including TSR's by the relevant PI(s).

7. Any questions or requests not covered by 1-5 above should be brought to the Chair of the Department who will convey them to the Computer Committee for consideration and recommendations.

## Teaching and Teaching Evaluation

Teaching is evaluated to assist faculty in improving their teaching and progress toward promotion and tenure. The minimum requirements for tenured and untenured faculty are the same, although untenured faculty must have two peer evaluations during the probationary period.

The prime requisites for an effective teacher are intellectual competence, integrity, and independence; a willingness to consider suggestions and to cooperate in teaching activities; a spirit of scholarly inquiry that leads the teacher to develop and strengthen the content of courses in the light of developments in the field as well as to improve methods of presenting this material; a vital interest in teaching and working with students and, above all, the ability to stimulate their intellectual interest and enthusiasm. Every instructor is responsible for maintaining Good Teaching Practices as listed in the Academic Responsibilities and Academic Grievance Policy section of the Student Handbook.

The quality of teaching is admittedly difficult to evaluate. This evaluation is so important, however, that recommendations for an individual's promotion and tenure should include evidence drawn from both faculty and students. Faculty should be asked to evaluate the objectives, methods, and materials of courses that have been designed and taught by the individual. Students should be asked to evaluate the objectives, methods, and materials of courses that have been designed and taught by the individual. Students should be asked to evaluate the in-class performance of the individual. Evaluations of teaching effectiveness should also be drawn from faculty who have taught with the individual or have frequently observed classes taught by the individual. Wherever possible and appropriate, evaluations should also include evidence concerning the performance of students taught by the individual. Contributions of teaching that extend beyond courses and students taught by the individual should also be taken into consideration. Faculty members, for example, influence teaching beyond their classroom by designing courses and programs, or by writing and publishing textbooks. Evidence of this kind should be used in evaluating teaching. Finally, faculty members influence teaching in less tangible, but no less decisive, ways through counseling students and through informal conversations with colleagues and students. Due credit should be given to faculty members who exert an unusual effort in this function.

### Evaluation of Teaching

Candidates for tenure and promotion will be expected to describe carefully how the quality of their teaching has been evaluated (e.g., student evaluation of teaching , peer review, departmental surveys of former students) and how they have used these evaluations to improve the quality of instruction. Other evaluations of teaching can be included such as exit interviews, critiques of syllabi, self-evaluations, or letters from former students solicited by the Chair.

Various criteria that might be used to evaluate a teacher include the active participation in professional meetings and teachers' organizations; collecting ideas from other disciplines and other schools; reading and publishing in journals so as to acquire a national reputation as an educator;

developing a positive, professional approach through innovative change and course modification; inviting student and peer evaluation; and exhibiting enthusiasm and a willingness to show leadership in the Department.

Formative evaluation is an important component of evaluation of teaching. Within the Department, formative evaluation will generally occur in conjunction with another faculty member who serves as a mentor. A mentor will be chosen by a faculty member in consultation with the Chair. There are other Miami programs that can provide mentoring opportunities. Some examples are the Alumni Teaching Scholars and the Senior Faculty Program for Teaching Excellence.

Summative evaluation of teaching is based on several types of data including student evaluations. However, to support promotion of tenured and untenured faculty, data/evidence beyond student evaluations will be necessary. Evaluation materials that are particularly useful for promotion and tenure purposes include:

Copies of all recent student evaluations of any courses taught. The faculty member is encouraged to initiate additional evaluations in courses not routinely evaluated. Direct input from students may also be submitted.

Outlines of innovative curriculum and syllabus changes the faculty member has been instrumental in developing and examples of student work, i.e., teaching portfolios.

Results of standardized exams compared to norms.

Peer evaluation. If a faculty member wishes to have Peer Evaluation of Instruction, a written request should be submitted to the Chair. Peer Evaluation is required for tenure and promotion to Associate Professor.

Instructional grants obtained.

Evaluation of Independent Studies Courses. These should list titles and authors of M.S. and Ph.D. theses completed under the faculty member's direction together with the year of completion and the current occupation of each author and the results of undergraduate independent studies, including presentations, publications, honors theses, etc.

**Progress Towards Tenure**

Each candidate for tenure will annually prepare a document using the format of the Promotion and Tenure Guidelines. This document will be reviewed by the Tenure and Promotion Committee and a letter will be sent to each probationary faculty member summarizing the Tenure and Promotion Committee ▪s evaluation of their progress towards tenure.

**Student Evaluation of Teaching**

Student teaching evaluations are one component of the evaluation process. It is recognized that many factors influence teaching evaluations, including class size, majors vs. non-majors, elective vs. required courses, teaching styles, rapport with students, etc.

All faculty will have all of their classes evaluated by students, except as provided for in MUPIM 7.2.C.7, courses L5, or independent study courses. These evaluations shall be constructed in such a manner as to ensure credibility and integrity:

- The faculty member shall not administer his or her own evaluation. In accord with departmental/divisional procedures, a third party shall announce the evaluation, distribute the evaluation forms, and submit the forms for processing.
- The faculty member shall not receive any evaluation results until final grades for the semester have been submitted.

The appropriate teacher/course evaluation form is shown in Exhibit B.

Scheduling of student evaluations is best arranged by the instructor. The evaluation will be accomplished during a regular class session and not during a final examination period. Students will be given adequate time to complete the forms.

The completed forms will be given to the Chair who will arrange for computer-averaging of the results. The Chair shall hold the tabulations until after final grades have been assigned. He/she will then return them to the instructor. The Chair shall file a copy to use for calculating departmental averages. They also may be included as supporting evidence on teaching effectiveness for the committees on Promotion/Tenure/Retention and for aiding the evaluation of teaching performance of individual faculty.

# TEACHER/COURSE EVALUATION

PROFESSOR _____

COURSE _____ SECTION _____

SEMESTER _____ YEAR _____

## MARKING INSTRUCTIONS


- Use black or blue pen or a number 2 pencil.
- Make dark marks that fill the bubbles completely.
- Do not use pens with ink that soaks through the paper.
- Make no stray marks.

CORRECT MARK

INCORRECT MARKS

| | (0) POOR | (1) BELOW AVERAGE | (2) AVERAGE | (3) ABOVE AVERAGE | (4) EXCELLENT |
|---|---|---|---|---|---|
| 1. IN GENERAL, HOW WOULD YOU RATE THIS INSTRUCTOR AS A TEACHER? | 0 | 1 | 2 | 3 | 4 |
| 2. HOW WOULD YOU RATE THE EVALUATION AND TESTING OF STUDENTS IN THIS COURSE? | 0 | 1 | 2 | 3 | 4 |
| 3. HOW WOULD YOU RATE THIS COURSE IN TERMS OF ITS ORGANIZATION, CLARITY OF OBJECTIVES AND DIRECTIONS? | 0 | 1 | 2 | 3 | 4 |
| 4. HOW WOULD YOU RATE THE INTEREST, ENTHUSIASM, AND STIMULATION THE INSTRUCTOR BRINGS TO THIS COURSE? | 0 | 1 | 2 | 3 | 4 |
| 5. HOW WOULD YOU RATE THE INSTRUCTOR'S MANNER OF PRESENTATION AND ABILITY TO EXPLAIN IN A CLEAR AND UNDERSTANDABLE FASHION? | 0 | 1 | 2 | 3 | 4 |
| 6. HOW WOULD YOU RATE THE INSTRUCTOR'S ATTITUDE TOWARD STUDENTS (CONCERN, INTEREST, RESPECT)? | 0 | 1 | 2 | 3 | 4 |

Comments: Please feel free to comment about any of the preceding areas, or offer suggestions you might have for improving this course. Use the reverse side if you need additional space.

## PEER EVALUATION OF TEACHING

The peer evaluation is designed to provide information such as adherence to the course syllabus, judgment as to the appropriate level or depth of coverage of courses, the pacing of courses, the appropriateness of examinations, and the method of presentation. The goal is to provide assistance to faculty toward the goal of tenure and/or promotion. Each candidate for tenure shall have two peer reviews before the tenure decision is made; the first shall be done not later than the fifth semester at Miami.

### I. Peer Evaluation Committee

A. Consists of **three** chemistry faculty members

B. Maximum of **one** member of candidate's division

C. Candidates submit to Chair a list of **six** possible committee members

D. Chair appoints committee after discussion with candidate

E. Chair may choose member(s) not appearing on candidate's list

### II. Course Visits

A. Committee decides visit schedule based upon course syllabus provided by candidate

B. Peer evaluation visits should be distributed over the semester with a minimum of one visit per committee member in each third of the course. Each committee member makes a minimum of **three** unannounced visits to the candidate's class

C. Each committee member is responsible for obtaining handouts, problem sets, exams, etc., pertaining to his/her visits

### III. Committee Report

A. Committee writes joint report at conclusion of visits

B. If no consensus is reached, two reports are written

C. Report contains summary of responses to Peer Evaluation of Teaching Form (see attached page) and detailed written comments

D. Report is submitted to Chair within **two** weeks after final exam in candidate's course

E. Report is shared with candidate by Chair



Revised 2/99

F. Copy of report is submitted with candidate's other P&T documents

G. Candidate's response to report is included

H. Minimum of **two** peer evaluations for candidate

## IV. Post-Evaluation Mentoring

A. After the peer evaluators submit their report to the Chair, they are encouraged to discuss the report and other observations with the candidate. The purpose is to convey information to the candidate.

B. The Chair should also discuss the report with the candidate.

## PEER EVALUATION OF TEACHING COMMITTEE REPORT

Comment on each of the following areas:

1. Organization of lectures

2. Ability to explain clearly at students' level

3. Method of presentation

    a. Interest, enthusiasm
b. Audibility
c. Mannerisms

4. Response to students' questions

5. Syllabus/handouts/homework provided to students

6. Relationship of exams to lecture material/handouts/homework

7. Clarity as to basis for grading in course

8. Other comments



Revised 2/99

**Faculty Evaluation of GA/TA teaching**

1. Because faculty evaluations of GA/TA teaching are employed for the purposes of selecting graduate students for awards and teaching fellowships, improving graduate student teaching, and making teaching assignments, faculty members are required to fill out evaluation forms for each semester/term for which they have supervisory responsibilities. A memorandum reminding faculty to fill out evaluation forms, with forms attached, will be sent to each supervising faculty member by the Chemistry Office (as directed by the Chair, Graduate Advising Committee) during the break period following each semester. **(EXHIBIT L)**.

2. Faculty will return completed forms to the Departmental Secretary within two weeks.

3. Faculty should consider the comments regarding the GA/TA's made by the students on the Course Evaluation Form.

4. Completed forms will be kept in the Departmental Office. A student's evaluation can be obtained from the Departmental Secretary for perusal by that student and by the Chemistry Faculty. Supervisory faculty are urged to review evaluations with students and, if appropriate, to offer suggestions for improving the students' teaching performance.

**EXHIBIT L FACULTY EVALUATION OF TEACHING ASSISTANTS**
**Department of Chemistry and Biochemistry - Miami University**
**(to be filed with the Graduate Advising Committee within two weeks after the end of the semester for all of the Assistants by Supervisory Faculty)**

Name of Assistant _____

Name/Course # _____

Semester/Year _____

Date _____ Faculty Member Signature _____

The Assistant is to be rated on a scale of 1 - 5. Scale for rating: 5 = exceptional; 4 = above average; 3 = average; 2 = below average; 1 = unacceptable; NA = not applicable. The ratings should be performance based in comparison to other assistants in this and other courses. Comments should be added where appropriate.

1. ___ Responsibility. Promptness for assignments (labs, discussions, meetings, lectures, exams, grading sessions, etc.); reliability (grading finished and submitted on time); attention to safety and order of laboratory. Comments.

2. ___ Attitude. Reasonable office hours; involvement in student learning (attentive in lab, encourages discussion, admits lack of knowledge and finds answer). Comments.

3. ___ Cooperation. Collaboration with faculty and other assistants; reports on poor experiments; suggestions for improvements; response to criticism. Comments.

4. ___ Grading and Testing. Attentiveness in proctoring; accuracy, promptness and fairness in grading; ability to follow guidelines. Comments.

5. ___ Presentation and Communication. Effective communication to students; encouragement of discussion; response to questions. Comments.

6. ___ Grasp of the subject matter. Understanding of experiments and underlying principles. Comments.

7. ___ Overall evaluation. Would you be (5) eager, (4) happy, (3) willing, (2) reluctant, (1) unwilling to have this TA assist you in this course again? Comments.

Additional comments (attach additional pages if necessary):
**IF YOU WISH TO NOMINATE THIS ASSISTANT FOR THE OUTSTANDING GRADUATE ASSISTANT AWARD, SEND A COPY OF THIS FORM AND A LETTER OF NOMINATION TO THE CHAIR, HONORS AND AWARDS COMMITTEE CONCURRENT WITH FILING THIS FORM.**

**Guidelines and Criteria for Tenure and/or Promotion to Associate Professor**

A. Candidates whose tenure eligible appointment began before July 1, 2005:

- At time of application, the candidate must elect, in writing, either the "old process" (separate criteria for tenure and promotion to associate professor-two votes) or the "new process" (single criteria for tenure and promotion to associate professor)

- "Old process": the tenure criteria and the promotion to associate professor criteria may be found in Appendix A of the Miami University Policy and Information Manual; the tenure criteria is in 7.4.E. and the promotion to Associate criteria is in 7.7.C; the procedures for tenure are in 7.4 and 7.6, and those for promotion are in 7.5 and 7.6.

- "New process": the criteria is set forth in MUPIM 7.7 (for definitions of the criteria see 7.4.A), and the procedures are provided in 7.8 and 7.9.

B. For candidates whose appointment to a tenure eligible position began on or after July 1, 2005, the "new process" applies.

**Standards for Departmental Tenure Guidelines**

The Department of Chemistry and Biochemistry is committed to providing the candidate with as much helpful information and guidance as is practical and these Guidelines are offered as part of that commitment. Candidates are required to meet the criteria enumerated in the Miami University Policy and Information Manual (MUPIM) in order to garner a positive recommendation for tenure.

*MUPIM 7.4.E provides:*

*In order to secure and retain the most qualified faculty available the following all-University criteria, as demonstrated by suitable evidence, shall be used to make tenure judgments:*

1. *continuing achievement in high quality teaching and professional fulfillment of academic advising responsibilities;*
2. *research, scholarly and/or creative achievement of high quality and its prospective continuation;*
3. *continuing productive service as a professional to the department, the division, their respective campuses, the University, the professions, or society; and,*
4. *professional collegiality within the department, regional campus, division, and University community. Collegiality is not congeniality, but rather a quality manifested by behaviors such as willingness to serve on committees and perform work necessary to departmental operation, willingness to provide guidance and help to colleagues in their professional duties, respect for the ideas of others, and the conduct of one's professional life without prejudice toward others. The criterion of collegiality is evaluated only at the departmental level. Concerns respecting collegiality should be shared as promptly as possible with the individual whose behavior is questioned. Notice of uncollegiality must be given in writing no later than the next annual evaluation of the staff member's performance prepared after occurrence of the behavior considered uncollegial.*



It is difficult, if not impossible, to suggest quantitative guidelines for what is a qualitative assessment. Nonetheless, we have endeavored to do so. These Guidelines are aids rather than substitutes for the professional judgment of the candidate's colleagues. Thus, legalistic or formalistic interpretation or application of these Guidelines must be avoided. Achievement of the quantitative standards set forth

in these Guidelines does not ensure a positive recommendation for tenure, as tenure is primarily a qualitative assessment. Similarly, there may be cases that do not meet the quantitative standards set forth in the Guidelines, which merit a positive recommendation for tenure.

**Additional Evaluations for those under consideration for promotion, tenure and/or retention**

For those persons being considered for promotion and/or tenuring, the Chair shall request of the candidate the names of six prominent persons outside of Miami University and with whom the candidate has not previously worked. The candidate will provide his/her preference order to the Chair, who will not disclose this information to the Dean or the Promotion Committee. The Dean of the College of Arts and Sciences will select one as an external referee. On behalf of the Departmental Promotion Committee, the Chair will contact one more of these individuals for this purpose. The Chair will then contact the top choice of the candidate on the residual list. These referees will review and evaluate for the Department such papers, manuscripts and other materials as the candidate provides for that purpose. The results of these evaluations will be available at the Promotion/Tenure/Retention meetings. In addition, other letters may be solicited and presented. A minimum of three external referees is needed for the candidate's dossier.

For effective evaluation and to ensure the availability of all data to be considered by the College of Arts and Science and the University Committees on Promotion and Tenure, each faculty member should submit supporting evidence to be considered by the Department Promotion Committee. In general these data will be provided at the committee meeting by a Presenter of the individual being considered. The Presenter will be selected by the Chair of the Department of Chemistry and Biochemistry after consultation with the individual being considered. In the case of candidates being considered from the branch campuses, additional data will be sought from the branch Campus Coordinator who will also be invited to the final meeting for additional comments.

Preferably, the data supplied will follow the format suggested by the College of Arts and Sciences. Any supplemental information may follow the "Guidelines for the Reporting of Faculty Accomplishments," **Exhibit D.** However, except for the review letters, it is the candidate's responsibility to decide upon the material and the format for this packet. It is suggested that consultation with the Department Chair and College Dean be part of this decision process.

## Non-tenure Track Faculty Members with Continuing Appointments

Section 7.11 of the Miami University Policy and Information Manual describes several categories of Nontenure-Eligible Instructional Staff Positions, including instructors and lecturers. While the duties of and expectations for holders of such appointments are diverse, section 7.11C of MUPIM suggests that lecturers "should be as fully enfranchised as possible in the day-to-day life of the departments/programs with which they are affiliated." In this spirit, the Department of Chemistry and Biochemistry has formulated certain principles for recruiting, evaluating, retaining and supporting colleagues with these appointments.

1. Non-tenure track appointments should be part of academic planning where possible and coordinated by the Senior Staff Appointments Committee. In cases where the timeline for requesting and filling a new position of this nature is critical, the Chair may act in the interest of the Department.
2. The exact nature of the appointment, i.e. the mix of teaching, research and service components, is subject to negotiation with the Chair and can be revised during the term(s) of employment through the annual evaluation process.
3. In terms of service, holders of non-tenure track appointments are considered full members of the Department with voting privileges and eligibility for membership on all committees for which they are qualified.
4. Holders of non-tenure track appointments may declare membership in the various divisions as described on page A-8.
5. Holders of non-tenure track appointments will be evaluated annually using the College's annual report of professional activities. The data provided therein will be used to guide retention decisions.
6. Holders of non-tenure track appointments with teaching assignments will undergo evaluation of teaching as described on page B-5 and peer evaluation as described on pages B-9 through B-11.
7. Annual reappointment of holders of non-tenure track appointments will be at the discretion of the Chair. For lecturers, five-year renewal of contract will be at the recommendation of the promotion and tenure committee.
8. Holders of non-tenure track appointments are not eligible to vote on senior staff appointments.

**EXHIBIT D**

## SUGGESTIONS FOR THE REPORTING OF FACULTY ACCOMPLISHMENTS

The following may be used to supplement the format suggested by the College of Arts and Science.

**Supporting Data for the Committee on Promotion, Tenure, and Retention**

1. Demonstrated Teaching Ability

A. List of courses taught at

1. Freshman-Sophomore level
2. Junior-Senior level
3. Graduate level

B. Copies of all recent evaluations of any courses taught. The faculty member is encouraged to initiate additional evaluations in courses not routinely evaluated. Direct input from students may also be submitted.

C. Indicate any new teaching techniques. Submit outlines of innovative curriculum and syllabus changes the faculty member has been instrumental in developing.

D. List of titles and authors of M.S. and Ph.D. theses completed under the faculty member's direction together with the year of completion and the current occupation of each author.

E. If a faculty member wishes to have Peer Evaluation of Instruction, a written request should be submitted to the Chair. Peer Evaluation is required for tenure and promotion to Associate Professor and recommended for promotion to Full Professor.

2. Research

A. List of publications in standard format, including the title of the article and first and last page numbers. This list should be divided into the following categories:

1. Publications based on work done partially or completely at Miami University and published in refereed journals. This list should include manuscripts accepted for publication. ("Accepted" means that the editors have agreed to publish the

manuscript based on positive peer review.) Indicate Miami-based contribution if some authors are from off-campus. When there are authors other than students, describe your contributions to the work.

2. Manuscripts submitted for publication and based on research/scholarly pursuits at Miami University. Indicate dates of submission and current status.

3. Books and chapters published or in preparation. Please include title, publisher, a brief description, a summary of progress to date and reviewers comments (if available).

4. Book Reviews

5. Other Publications

B. One copy each of five recent publications or accepted manuscripts. For accepted manuscripts, indicate dates of submission and of acceptance.

C. List of special invited papers or lectures presented. Include type of meeting or lecture, nature of the presentation, title and date.

D. List of all individual and joint research proposals pending or funded by outside agencies. Include title, agency and date of submission.

E. List of current undergraduate and graduate research students and the degree for which they are studying along with the title of their current research.

F. Comments on the development of unique insights into significant research problems.

G. Brief descriptions of short-term and long-term research plans (not to exceed one page each).

3. <u>Professional</u> <u>Service</u>

A. Memberships in Professional Societies.

B. Professional writing - Editorships, special columns, book reviews.

C. Invited presentations or papers at national or international meetings.

D. Participation in national meetings - indicate special purposes for attendance. If papers are read at the meeting, indicate title, date and co-authors.

E. Invited seminars (recruiting seminars should be indicated under Departmental Service).

4. University Service (Committees)

A. Departmental

1. Committee assignments and chairing thereof.
2. Recruiting, including seminars given for this purpose.
3. Representation of Department at social affairs.
4. Supervision of common facilities and laboratories.
5. Student advising or counseling.

B. Divisional or University-wide Committees

1. Committee assignments and chairing thereof (give dates of appointment and by whom). Indicate average time per week devoted to each committee activity.

2. Memberships in University Senate, Council, University Boards, special task forces (indicate duration of membership).

5. Public Service

A. Public Service - non-remunerative such as membership on school board or other charitable or governmental bodies.

B. Public or Academic Service - remunerative consulting or writing.

C. Special Service - non-remunerative consulting, membership in professional organizations.

6. Other Items of Interest

## SOME CRITERIA AND CONDITIONS FOR PROMOTION TO SPECIFIC RANKS

### PROMOTION TO ASSOCIATE PROFESSOR

This promotion is recognition by the Department of the overall superior performance of the candidate.

-- The candidate should have established a solid research program with extensive publications in reviewed journals. The candidate should have actively pursued external research funds and had some success. The candidate should have established a reputation for scholarship.

-- The candidate should have demonstrated good teaching ability at all levels. Curriculum, courses, and experiment development are factors in teaching, but the main component is classroom performance. The candidate should have demonstrated the ability to mentor graduate students; however, it is recognized that the candidate may not have actually had a student complete a thesis or dissertation at the time.

-- The candidate should have demonstrated the capacity to perform major service tasks for the department.

## Preface to Departmental Policies for Promotion to Professor

Individuals are required to meet the criteria set forth in the Miami University Policy and Information Manual (MUPIM) and the College of Arts and Science Manual of Operations in order to garner a positive recommendation for promotion to the rank of professor.

**Guidelines and Criteria for Promotion to Professor**

A. Tenured Associate Professors whose appointment to a tenure eligible position began before July 1, 2005, and who apply for promotion to Professor before July 1, 2010:

   1. At time of application, candidate must elect, in writing, either the "old criteria" or the "new criteria".

      - "Old Criteria" may be found in Appendix A of MUPIM 7.7.B, and the procedures are provided in 7.5 and 7.6.

      - "New Criteria" may be found in Section 7.4.E of MUPIM, and the procedures are provided in 7.8 and 7.9.

B. For candidates whose appointment to a tenure eligible position began on or after July 1, 2005, and any person who applies for promotion to Professor on or after July 1, 2010, the "new criteria" applies.

There is no minimum time at the rank of associate professor required in order to be eligible for promotion to the rank of professor. (See MUPIM 7.5.B) Associate professors are entitled, upon request, to a formative promotion evaluation once per academic year. (See MUPIM 7.1.E.) The formative evaluation will be prepared by the department's promotion committee and by the chair (or only by the former if the chair is being evaluated). The evaluation will be based on 1) cumulative information provided by the individual concerning his or her teaching, research, and service, and 2) may include other relevant information. At the individual's discretion, the information provided may include his or her plans concerning teaching, research, and service that may help the promotion committee and chair provide useful guidance. Formative promotion evaluations are to guide the individual toward promotion and are not to be used for personnel or salary decisions.

MUPIM 7.7.B provides the following criteria for promotion to the rank of professor.

- Ordinarily, the faculty member must be an individual who will enhance the distinguished quality of this group (the faculty) and the academic reputation of the University.



- The faculty member must hold the earned doctor's degree from an accredited college or university or the equivalent of such a degree. (It is recognized that the equivalent of a

doctor's degree may involve specialized training, study, or experience that does not culminate in a doctorate).

- The individual must demonstrate excellence in two of the following three areas and must be considered to be competent in the third. The individual must have:

1. An established effectiveness as a teacher.
2. A record of continuous research, scholarly and/or creative achievement which has resulted in an established reputation within the profession.
3. Achieved distinction in the performance of administrative or other special services either on or off campus.

**The College of Arts and Science, because of its emphasis on both teaching and scholarship, holds to the expectation that to be promoted to professor a candidate must demonstrate excellence in teaching and scholarship. However, as noted in the College Manual, variations from this expectation are possible, but they must be the subject of special arrangements agreed to by the parties involved. Section 4.42 of the Manual contains procedures for obtaining these arrangements. Such arrangements are appropriate for faculty with work assignments that differ from the normal emphasis.**

It is difficult, if not impossible, to suggest quantitative guidelines for what is a qualitative assessment. Nonetheless, we have endeavored to do so. These guidelines are aids rather than substitutes for the professional judgment of the candidate's colleagues. Thus, legalistic or formalistic interpretation or application of these Guidelines must be avoided. Achievement of the quantitative standards set forth in these Guidelines does not ensure a positive recommendation for promotion, since promotion is primarily a qualitative assessment. Similarly, there may be cases that do not meet the quantitative standards set forth in the Guidelines that merit a positive recommendation for promotion to the rank of professor.

**PROMOTION TO FULL PROFESSOR**

Promotion to the Full Professorial rank must be based on excellence of performance in scholarly activities and teaching.

-- The candidate should have an outstanding reputation as a scholar and teacher. This can be recognized by the receipt of research or instructional awards; successful competition for grants; publication of textbooks, chapters or papers in refereed journals; invited lectures; outstanding evaluation from students, peers, and/or external reviewers.

-- The candidate should have demonstrated superior performance at major service responsibilities. The service criterion is subsidiary and would normally be expected to accompany the achievement in scholarship.

## RETENTION

Each year, during the Spring Semester, the Chair of the Department of Chemistry and Biochemistry and the Tenure Committee of the Department shall meet jointly to discuss the progress of all untenured members of the faculty. The meetings will be conducted by the Promotion and Tenure Subcommittee (cf. p. A-15). Each candidate's teaching, research and other contributions will be considered with a view toward the possibility of recommending the award of tenure at the end of the probationary period. Retention is also considered as part of the second, third, and fourth year evaluations. A simple majority vote, using a written and signed ballot, by the members of the Tenure Committee of the Department (in person or in absentia) shall be required for a recommendation of retention. Only signed ballots will be tallied.

The tally of votes on a candidate for retention shall be communicated only by the Chair and only to those directly concerned: the Dean and/or the Executive Director of the branch campus, if appropriate, the appropriate committee members, and the candidate under consideration.

A detailed letter summarizing the discussion shall be drafted by the Subcommittee subject to amendment by vote of the Tenure Committee, and likewise communicated. The Chair will write an individual letter, in accordance with University policy.

Because the Chair separately communicates his/her opinion, he/she does not participate in the vote. The Chair will, however, share his/her opinion of the candidate with the Committee.

## TENURE AND PROMOTION OF ASSISTANT PROFESSORS

Although the procedures are the same for candidates from all three Miami University campuses, the specific expectations for tenure are those laid out in the letter of understanding from the Chair to the candidate at the time the position is offered. In the Fall Semester of each candidate's sixth year, a simple majority vote, using a written and signed ballot, by the members of the Tenure Committee of the Department (in person or in absentia) shall be required for a recommendation of tenure. Only signed ballots will be tallied.

The tally of votes on a candidate for tenure shall be communicated only by the Chair and only to those directly concerned: the Dean and/or the Executive Director of the branch campus, if appropriate, the appropriate committee members, and the candidate under consideration. The authors of the official external letters of evaluation are informed of the outcome at the end of the tenure process.

A detailed letter summarizing the discussion shall be drafted by the Subcommittee subject to amendment by vote of the Tenure Committee, and likewise communicated. The Chair will write an individual letter, in accordance with University policy.

Because the Chair separately communicates his/her opinion, he/she does not participate in the vote. The Chair will, however, share his/her opinion of the candidate with the Committee.

## PROMOTION OF ASSOCIATE PROFESSORS

A similar but separate meeting of the Professors will be held to consider the contributions of and make promotion recommendations for the Associate Professors. A simple majority vote, using a written and signed ballot, by the Professors of the Department (in person or in absentia) shall be required for approval. Only signed ballots will be tallied.

## RELATED COMMITTEES

Additional committees may be appointed by the Chair of the Department of Chemistry and Biochemistry from time to time for the purpose of considering the promotion, tenure, and/or retention of other members of the Department engaged in teaching and/or research. These may include, for example, Adjunct, Emeritus, and Visiting Professors, Instructors, Assistant Instructors, Postdoctoral Teaching Fellows, and Research Associates.

### REPORTING OF THE PROMOTION, TENURE, AND RETENTION RECOMMENDATION

Following each meeting, the Department Chair shall report the outcome of each relevant discussion, together with any constructive criticism, to each individual whose progress was considered.

In the case of Faculty members approved for promotion, tenure and/or retention, appropriate data presentation, and comments will be revised and completed by the candidate and submitted directly to the Chair of the Department of Chemistry and Biochemistry. The Chair and the candidate will review the presentation to be certain all appropriate data have been included and the overall style is consistent with that required by the College of Arts and Science; however, the candidate is responsible for providing the necessary information (except external review letters) in the required format. The candidate is also advised to attend College workshops on Promotion and Tenure.

The Chair of the Department of Chemistry and Biochemistry will forward copies of the faculty recommendations for promotion and tenure to the Dean of the College of Arts and Science along with the Chair's comments and recommendations.

## MENTOR PROGRAM

In the Department of Chemistry and Biochemistry, the Department Chair will act as mentor for each tenure-track faculty member, orienting them to University, College of Arts and Science and Department policies and processes for promotion and tenure. The Dean, College of Arts and Science, or his/her representative provides information on the guidelines for promotion and tenure. The progress and accomplishments of each untenured faculty member are reviewed yearly by the department Tenure and Retention and Assistant to Associate Professor Promotion Committees. Based on these deliberations, the Department Chair will advise, encourage and assist each untenured member of the faculty in focusing his/her efforts toward the goals of tenure and promotion.

## COLLEGE OF ARTS AND SCIENCE GUIDELINES

Proposals for Promotion and/or Tenure should conform to the guidelines contained in the College Manual of Operations, Section 4.0.

## PT&R APPEALS PROCEDURE

The Candidate has ten working days to file a written appeal with the Department Chair. The appeal must delineate the reason(s) for requesting reconsideration and supply any new information on the candidate's teaching, research, and service.

If the appeal concerns action by the Committee, the Chair will provide copies of the appeal to the members of the Committee and reconvene the committee to decide whether or not to reconsider the candidate's credentials. If this vote is favorable (simple majority), the Committee will proceed with a reconsideration of the candidate and render a decision.

If the appeal concerns the Department Chair's decision, the Chair will consider the merits of the appeal, render a decision, and communicate it to the Committee.

Decisions on appeals should be made within five working days after receipt of the appeal.

## RECOMMENDATION OF FACULTY SALARY INCREASES

Each year following evaluation of the Annual Activities Report, the Chair may meet with the faculty member to discuss his/her performance. At that meeting a distribution of effort among the categories--research, teaching, and service--is determined. This distribution is used along with the rating by the Chair of performance in each area to arrive at salary recommendations for the subsequent year.

## GRADUATE FACULTY STANDING

Graduate Faculty is defined and determined by the appropriate committee of the Graduate School. Refer to graduate school manual for details.

## FACULTY TEACHING ASSIGNMENTS

During the first semester of an academic year, the Chair of the Department obtains information from three sources which will aid in assignment of teaching duties to faculty members.

First, the Divisions within the department meet to plan a list of their suggestions on courses to be offered during the following academic year together with suggested instructors for each course and/or section. These suggestions are based on pedagogical needs and curricular requirements. Enrollment may be projected at this time based on current trends and experience. Needs for course revision, textbook selection, and advice in scheduling may be considered at this time so that the divisions and committees concerned may resolve any problems before assignments and schedules are completed for the next academic year.

Second, the Chair of the Department may poll each faculty member regarding preferences among the introductory chemistry courses.

Third, the Chair of the Department obtains an "Individual Teaching Request" from each faculty member, which reflects the recommendation for teaching after a consideration of the total Departmental responsibilities as well as the total commitment: teaching, research, committee work, and service in the University and in the community.

These sources of input on teaching loads, together with listings of Departmental, College, and University Committee assignments, administrative appointments, and special service and/or research involvement, are used by the Chair of the Department in determining reasonable and equitable teaching assignments. Tentative assignments are then posted in the Departmental Office. After a few weeks to allow discussion and suggestions for improvement, revised teaching assignments are made. If agreement is not reached, the Chair shall hold an open discussion at a regular faculty meeting, at which time a vote will be taken to recommend action by the Chair. Additional changes are made only to correct for contingencies such as personnel changes or significant enrollment revisions.

## DEPARTMENTAL SUMMER APPOINTMENTS

A. Prospective summer teaching positions for informal courses shall be advertised to the Department faculty by the Department Chair.

B. Department faculty members shall apply for these teaching appointments in writing to the Department Chair, in accordance with a time schedule announced by the Department Chair.

C. These summer teaching appointments shall be made by the Department Chair in consultation with the Planning Committee and the individual faculty applicants. Priority in summer teaching opportunities shall be first to the Department faculty and then to outside instructors.

**Considerations (in Decreasing Order of Importance)** in the Assignment of Instructors for Undergraduate Courses

1. New faculty member (Oxford)

2. No alternative form of support available

3. Last three years prior to retirement

4. Regional campus faculty

5. Attempts to obtain other support

a. Committee on Faculty Research

b. External grant applications

6. Previous summer(s) teaching opportunities

7. Other considerations

Deviation for the criteria in Point C may occur in the case of graduate courses.

D. Certain activities which normally take place during the academic year, such as graduate examinations, may occasionally require faculty participation during the summer. Faculty members who can comply without serious inconvenience may be called upon to perform such duties without additional compensation.

## SUMMER CHM 700/790/850 TEACHING

### OBJECTIVES

To recognize faculty research involvements and direction of research with graduate students during summers.

To encourage continued research productivity.

To support research direction and research activities most likely to benefit the department and individual research directors--in that order.

### GUIDELINES

Graduate Faculty with one or more graduate students carrying out research during the summer are eligible.

Eligible faculty are prioritized with new faculty members in their first three years at Miami given preference. The other faculty are ranked by considering (first) their efforts to obtain external grants and (second) their departmental support over the previous three summers. Special consideration may be given for eligible faculty who also have major committee assignments or administrative tasks.

Four credits are normally assigned to the Department Chair for CHM 600/720/780 (and research direction) during Summer Term I.

## SABBATICAL LEAVES

The Department of Chemistry and Biochemistry encourages members to apply for sabbatical leaves. A member of the department must submit a written application for such a leave at least one year before the envisioned leave is to commence. The application, with comments from the pertinent division, should be submitted to the department Chair. The written application may be brief, but should adequately describe both the justification for the leave and plans as to how the leave will be spent.

The Chair will utilize the following criteria for evaluating the applications. These criteria are given in descending priority:

1. The leave is required for professional reasons. These include shifting of research interests, renewal of current research interests, pedagogical innovation, etc.

2. The faculty member has served the Department and the University well for a period of time.

It should be noted that if a faculty member is successful in obtaining total funding for a leave from outside sources an application for leave of absence without pay, rather than a sabbatical leave, should be filed through normal university channels.

This procedure is intended for the evaluation of sabbatical leaves only. It in no way affects established university procedures for the application and granting of sabbatical leaves.

If the Chair is asked to rank multiple applications for sabbatical leaves, the criteria listed above will be followed, but an additional factor will be whether funds recovered from the applicants' salary lines will be available to hire visiting teaching staff. This could result in requests for Academic Year leaves to have a higher priority than for single semester leave requests.

## ACADEMIC AND EXTRA-CURRICULAR ADVISING

The Chief Departmental Advisor coordinates all undergraduate advising within the Department. The CDA receives lists of upperclass, undergraduate, chemistry majors from the Dean's Office and assigns students to academic advisors. Individual advisers maintain an informational folder for each of their advisees. Primarily, the advisers aid students in course selection and scheduling to complete a plan of study leading to a B.S. or A.B. Degree in chemistry. Typical curricula, plans of study, requirement analyses, and synopses of requirements are in the Manual of Information for Undergraduate Majors, which is revised yearly. Advisors also consult on career opportunities, scholarships, fellowships, petitions, and admission to professional and graduate schools. In addition, the CDA continuously updates the lists of and folders for chemistry majors, checks the candidates' completion of the requirements for graduation, and ascertains Departmental and related requirements. The CDA prepares lists of graduates in chemistry, specifying those eligible for certification by the American Chemical Society.

Extra-curricular departmental organizations including the Miami Chemical Society (the Student Affiliate Chapter of the American Chemical Society) elect their respective advisors from the Faculty with the consent of the Chair of the Department.

## SPECIAL DEPARTMENTAL LECTURES AND SYMPOSIA

The Seminar Committee, comprising the faculty assigned to CHM 600 each year, shall be responsible for making the arrangements for the Howard L. Ritter Memorial Lectures and other special departmental lectures conducted in addition to the normal seminar schedule. The arrangements for special lectures, symposia, etc., sponsored by more than one department, and involving the Department of Chemistry and Biochemistry, should be coordinated with the Seminar Committee. At the start of each term, the Committee will prepare a list of the seminars and special speakers for the term. This listing will include the time and date of the seminar, name and affiliation of the speaker and the title of the seminar.

## SCHOLARSHIPS AND AWARDS

### Nomination Procedures

#### Undergraduates (continuing)

The faculty will submit standard nomination forms to the Honors and Awards Committee as soon as possible after the completion of the first and second semesters. (The nomination form is shown as Exhibit J). Faculty members may make as many nominations as they wish. The Honors and Awards Committee may make nominations after the deadline for faculty nominations has passed.

#### Undergraduates (entering)

The Undergraduate Recruiting Committee, in conjunction with the Office of Student Financial Aid, will nominate awardees. The Chair will approve the recommendations and the amount of the awards.

#### Graduate Teaching Assistant

The faculty may submit nominations to the Graduate Advising Committee after each semester. The nomination procedure is coupled to the Faculty Evaluation of Teaching Assistants (see Exhibit L). Faculty members may make as many nominations as they wish.

### Criteria

#### Undergraduate Scholarships and Awards

The faculty and the Honors and Awards Committee will be guided in the selection of recipients by the following criteria listed in order of importance:

1. Faculty comments (by the nominator(s) and others).
2. The curricula of the nominees; B.S. chemistry/biochemistry majors will be given preference over A.B. majors.
3. Chemistry GPA.
4. Overall GPA. Scholarships are to be awarded only to students with overall GPA greater than 3.0. (This is consistent with the general recommendation of the Office of Student Financial Aid).

Certain scholarships and awards may, at the request of the donor, impose certain restrictions on or favor certain groups of recipients. These restrictions will always be the first criterion used in selection in such cases. Criteria 1-4 above will then be applied in order where applicable.

**Undergraduate Citations**

Possible criteria include:

1. Demonstrated leadership
2. Interest in chemistry
3. Creativity and initiative
4. Service to the Department

**Graduate Teaching Assistant Award**

The criteria used will be:

1. Must have a very high rating by faculty on the "Supervisory Faculty Evaluation of Teaching Assistant".
2. Must be a graduate student in good standing (not necessarily a Chemistry major).
3. Must demonstrate consistently good teaching over a period of time.

**Selection of Recipients**

At the end of the second semester of each year, a voting meeting of the Faculty will be held for the purpose of identifying recipients of scholarships and awards. The Honors and Awards Committee will make recommendations to the Faculty for undergraduate awards. Final selection will be by Faculty vote.

The Honors and Awards Committee will, at the voting meeting, make available to the faculty additional information on criteria, background, and amounts of all awards and scholarships.

Nominees for the Graduate Teaching Assistant Award will be brought to the Faculty for a vote by the Graduate Advising Committee at the same meeting.

**EXHIBIT J**

To: Honors and Awards Committee

From: _____

Date: _____

**Nomination Form**
**Undergraduate Scholarships/Awards**

Nomination of: _____

Course(s) involved: _____

Comments:

**DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY**
**SCHOLARSHIPS AND AWARDS**

Due to the generosity of various donors, the Department of Chemistry and Biochemistry is fortunate to offer a number of scholarships and awards to Chemistry and Biochemistry majors in both the A.B. and B.S. degree programs. Candidates are nominated by the Chemistry/Biochemistry Faculty and/or the Department Honors and Awards Committee on the basis of performance in individual courses, chemistry/biochemistry GPA, and overall GPA. Scholarship/award recipients are determined by vote of the Chemistry and Biochemistry Faculty, subject to approval by the Office of Student Financial Aid. In excess of $42,000 and $14,000 were awarded to undergraduate and graduate students, respectively, by the Department of Chemistry and Biochemistry for the 2003-2004 academic year. These scholarships are independent of those awarded by Miami University. Descriptions of specific scholarships and awards are given below.

**Analytical Chemistry Award** - to a senior with an interest in analytical chemistry (the Award is a one-year subscription to the journal *Analytical Chemistry*, not awarded in 2004)

**Harvey Clayton Brill Scholarship** - to an upperclass chemistry major (one $1300, two $1000, and one $700 Scholarships were awarded in 2003)

**John H. Buckingham Scholarships** - to outstanding chemistry majors (three $2500 Scholarships were awarded in 2003)

**James A. Coulter Chemistry Scholarship** - to a junior chemistry major for use in senior year (one $400 and two $450 Scholarships were awarded in 2003)

**CRC Press Freshman Chemistry Achievement Award** - to an outstanding student in the CHM 151/153, CHM 158/161 series (the Award is a copy of the "CRC Handbook of Chemistry and Physics"; one Award was made in 2003)

**Joseph A. Culler Chemistry Scholarship** - to an upperclass chemistry major (one $450 and one $550 Scholarship was awarded in 2003)

**Raymond E. & Vonna D. McBride Scholarships** - awarded by Department Chair to promising entering freshman chemistry majors renewable up to four years (two continuing $2500 Scholarships)

**Gervaise O. Frost Award** - to an outstanding junior in the CHM 251/254, CHM 252/255 series (one Award of $100 was made in 2003)

**Elmer G. Gerwe Chemistry Scholarship** - to an upperclass chemistry major (one $750, one $450, and one $300 Scholarships were awarded in 2003)

**Procter and Gamble Award** - to an upperclass chemistry major (two Awards of $1000 were made in 2003)

**Richard E. Heckert Scholarship** - to an incoming freshman chemistry major who has participated in the American Chemical Society Project SEED program (no Scholarship was awarded in 2003)

**David Hershey Memorial Scholarship** - to upperclass chemistry majors (one $550, one $500, one $450, and two $250 Scholarships were awarded in 2003; this scholarship is awarded every other year)

**Anastas Karipides Memorial Scholarship** - to upperclass chemistry majors (one $500, one $400, and one $300 Scholarships were awarded in 2003)

**Lubrizol Chemistry Scholarship** - to a sophomore or junior chemistry major for use in junior or senior year (two $825 Scholarships were awarded in 2003)

**Merck Index Award** - to an upperclass chemistry major (the Award is a copy of the "Merck Index"; one Award was made in 2003)

**William Hartmann Schwarz Scholarship** - to a sophomore or junior chemistry major (one $1100, one $600, and one $200 Scholarships were awarded in 2003)

**Robert A. Stalzer Memorial Scholarship** - to an upperclass chemistry major (no award was given in 2003)

**Clyde E. and Alice W. Stiner Scholarship** - to an upperclass chemistry major (no Scholarships were awarded in 2004; this scholarship is awarded every other year)

**Malcolm E. Switzer, M.D., Award** - to a junior pre-med chemistry major (one $600 Scholarship was awarded in 2003)

**E. O. and B. V. Weidner Chemistry Scholarship** - (by Analytical Division) to a junior chemistry major carrying out undergraduate research in analytical chemistry; for use in senior year (one $2000 Scholarship and one $1000 Scholarship was awarded in 2003)

**E. O. and B. V. Weidner Chemistry Scholarship** - (by Analytical Division) to a graduate student with an interest in analytical chemistry; (one $1400 Scholarship was awarded in 2003)

**1809 Club Kreger Award** - to an outstanding student in the CHM 251/254, CHM 252/255 series (one $200 award was given in 2003)

**Certificate of Merit** - to an exceptional student worker (two certificates were awarded in 2003)

**TA Award** - to an outstanding graduate teaching assistant (one awarded in 2003)

**Dissertation Scholar** - to an outstanding graduate student in their last year (one awarded in 2003)

**R. Thomas Davidson Graduate Awards** - (by Department Chair) summer supplement to outstanding graduate students in their last year in the department (two awards in 2003)

## CONSULTING

The university policy on outside consulting is intended to encourage, within limits, outside professional consulting where this contributes to the faculty member's professional growth and development and thus allows the faculty member to be more effective in university service. Outside professional activity often tends to reflect credit and prestige on the faculty member as well as the Department and Miami University; thus the University provides a mechanism whereby the individual may accept outside work. The form "Request for Approval to Perform Outside Service" is included as **Exhibit M**. This request should be submitted after discussion with the department Chair regarding departmental responsibilities. For full-time faculty members, advanced authorization via this form must be received prior to the acceptance of outside work. Any work for which additional compensation is received during the academic year, must not exceed an average of one day per week. University guidelines on consulting are detailed in the **POLICY AND INFORMATION MANUAL**.

**EXHIBIT M**

MIAMI UNIVERSITY
OXFORD OHIO

# Request for Approval to Perform Outside Service / Consulting

Academic Year

Name: Last, First, Middle

Rank/Title: Department Chemistry & Biochemistry

Description of outside service: (A separate form must be completed for each entry for whom outside service is to be performed.)

1. Entity for whom service is to be performed:

   Name:

   Address:

2. Nature of service: (Explain in detail—use additional pages if necessary.)

3. Does the entity for whom you will be performing service conduct business either directly or indirectly with Miami University? (Yes ☐ No ☐) If yes, please explain:

4. Will any portion of this service be performed on campus or otherwise involve the use of University resources? (Yes ☐ No ☐ ) If yes, please explain:

5. Will the performance of outside service cause you to reschedule or otherwise provide substitute coverage of one or more scheduled classes or laboratories? (Yes ☐ No ☐ ). If yes, please describe:

6. Indicate additional commitments you have during the period covered by this request by checking all boxes that apply:

☐ Overload teaching

☐ One semester ☐ Both Semesters

☐ Release time for work on a grant or contract

_____ % time

☐ Other: if checked please describe:

7. Duration of outside service/consulting: From: _____ To: _____
*(Approval must be obtained each academic year.)*

8. Specific dates of service/consulting _____
*(Time may not exceed an average of one day per week in any semester. If dates are not set, give an estimate of time per week or days per month.)*

9. Is outside consulting to be performed for remuneration? (Yes ☐ No ☐ )

I hereby certify that: **(1)** the proposed outside service will not interfere with my duties as a full time member of the instructional staff; and **(2)** that it will contribute to my professional development or contribute an expertise not commonly available to the solution of a societal problem or has carryover value resulting in the improvement of instructional or research programs of the University; and **(3)** that the time engaged in outside service will not exceed an average of one day per week in any semester; and **(4)** the proposed outside service does not create a conflict of interest or commitment as described in Section 3.11 of the *Miami University Policy and Information Manual.*

_____ _____

Signature of Instructional Staff Member Date

Approved:

_____ _____

Department Chair Dean

_____ _____

Executive Director (If Applicable) Provost and Executive Vice President for Academic Affairs

## FACULTY RESEARCH FACILITIES

1. Allocation of research space shall be the responsibility of the Department Chair, in consultation with the Planning Committee. Space will be allocated to each faculty member who engages in research; the minimum allocation shall ordinarily be adequate for the faculty member and one researcher. Factors to be considered in allocating research space shall include: size and composition of the research group, nature of the research, and external support of the research.

2. Faculty requests for changes in space allocation, or appeals against decisions on space allocation, should be directed in writing to the Department Chair.

## DEPARTMENTAL SUPPORT OF GRADUATE RESEARCH

The Department recognizes that a portion of its operating expense budget must be used to support research and other scholarly activity. The primary purpose of these funds is to support research by the graduate students which is performed as part of their degree requirement, but even faculty without graduate students in a given year merit support in order to maintain continuity in their research program. Support of undergraduate research is justified likewise.

1. The source of principal support for graduate research is expected to be faculty research grants and contracts from agencies outside the University.

2. Whenever possible, the Department shall provide an equal allocation to all Research Active and Transitional faculty members.

3. In addition to point 2, each faculty member will receive an allocation determined by the Chair for costs of copying, supplies, etc. associated with teaching. This allocation will be announced at the beginning of each fiscal year.

**EXHIBIT M-C**

TO: Department of Chemistry and Biochemistry Faculty
FROM: Equipment and Supplies Committee

RE: DEPARTMENTAL EQUIPMENT NEEDS & PRIORITIES FOR THE ACADEMIC YEAR

A copy of the following form is to be completed for each piece of equipment requested and should be submitted to the Equipment and Supplies Committee. A list of all requested items will be drawn up by the committee and will be distributed to the Faculty. A copy of each individual item justification will be placed in the main office for faculty perusal prior to the noon meeting at which time each requested item will be discussed.

It should be noted that equipment not on our final list cannot be purchased until a subsequent fiscal year.

Requests should be consistent with the following:

Members of the Department of Chemistry and Biochemistry have an obligation to obtain external funding for research. Consistent with this view, Department funds shall not be requested for research equipment unless prior application for alternative funding has been made.

Most of the items regarding the attached form are self-explanatory, but the following specific comments are necessary.

1. Item a -- your relative priority for this item among those items you are specifically requesting.
2. Item b -- if your source is other than a standard catalog (e.g., a manufacturer's data sheet), it would be advantageous to furnish a copy of available information on the item.
3. Item h -- an example would be an additional accessory for an existing piece of equipment.

It should be pointed out that while the information requested in items a-j will be extremely useful to the Faculty, such information is, in fact, required by the Dean.

One should keep in mind the Administrations' definition of "equipment":

1. non-glassware
2. cost: above $1200
3. lifetime > 5 years
4. no office furniture

Additional forms are available from the Manager of Laboratories and Administrative Operations.

**EXHIBIT M-C-1**

**STOREROOM EQUIPMENT COMMITTEE**
**EQUIPMENT NEEDS**

Name _____ Date _____

I request that the following item be considered for the equipment priority list.

a. Your priority for this item. 1 2 3 4

b. Catalog, catalog date, page number, catalog number of item.

c. Description of item.

d. Is this a new or replacement item? New Replacement

e. Intended use (specify course number if applicable).

Research

Instructional

Both

f. Number of persons using this item.

Faculty (specify)

Graduate Students

Undergraduates

g. Is a similar item available on campus for our use? Yes No

h. Is this item part of a larger equipment package? Yes No

i. Expected life of item. ____ years

j. Cost of item; date of quoted price.

k. Has the item been requested in a research proposal to an external agency?

l. Include detailed justification (for external use) on back of this form.

## POLICY FOR FACULTY TRAVEL

The Department of Chemistry and Biochemistry has traditionally encouraged faculty members to participate in and/or attend professional meetings. In addition to the support of scholarly activity, the Department has also utilized travel funds for the purpose of recruiting, interviewing, and performing other necessary functions on behalf of the University. The above policies for disbursement of departmental travel funds can be summarized as follows:

1. The Department shall bear the normal expenses of travel by Department faculty members on official Departmental business.

2. The source of principal is expected to be faculty travel related to research and scholarship is expected to be faculty research grants and contracts from agencies outside the University.

3. The Department shall, consistent with the College plan, provide to Department faculty members support for one scientific meeting per year where the faculty member presents a paper or has official professional responsibilities. The Department may also provide support for other professional travel by Department faculty members in special cases.

## THE VOLWILER ENDOWMENT IN CHEMISTRY

The announcement by President Pearson of the generous gift by Dr. Ernest H. Volwiler (Class of 1914) provides a new level of recognition and involvement for members of the Department of Chemistry and Biochemistry at Miami University. It will provide the opportunity to honor Dr. Volwiler and to recognize his many accomplishments by providing funds to build and support the research programs of the Department of Chemistry and Biochemistry, in particular the Volwiler Distinguished Research Professor in chemistry.

## THE DONOR

Ernest Volwiler received the A.B. degree from Miami University in 1914 graduating *cum laude*. He was awarded the Ph.D. from the University of Illinois in 1918 after having worked as the first research student of the now famous organic chemist, Professor Roger Adams. In 1946 he was awarded an honorary ScD by Miami University (2 June 46) and received the Special Medal at the Miami Sesquicentennial in 1959. He was also one of the distinguished guests at the dedication of Hughes Laboratories in 1970.

Dr. Volwiler received honorary degrees from Northwestern (ScD 1949), Coe College (LLD 1953), Knox College (LLD 1954), Philadelphia College of Pharmacy (ScD 1954), Southwestern University at Memphis (D.Med.Sc. 1958), University of Illinois (ScD 1959), and Lake Forest College (DHL 1977). From his initial employment as plant chemist in 1918 at Abbott Laboratories, he progressed through various involvements including that of Research Chemist, Chief Chemist, Director of Research (1930--1933), Vice President for Research (1933-1946), Executive Vice President (1946-1950), President of Abbott Laboratories (1950-1958) and Chairman of the Board (1958-1959) when he retired. After retiring, he continued to be an active scientist interested in all facets of chemical research and was an ardent supporter of Miami University and the Chemistry Department. Dr. Volwiler died on 3 October 1992 at the age of 99.

The establishment of the Volwiler Professorship provides the Department and the University with an opportunity to recognize scholarly research and excellence within the Department of Chemistry and Biochemistry at Miami University. The endowment provides funds to support the scholarly research activities and travel of the Volwiler Professor and Chemistry and Biochemistry faculty. Emphasis will be placed on supporting the development of new research activities and avenues in the department. Clearly, the Volwiler Professorship provides an incentive for outstanding research activities and also represents a worthwhile goal for faculty members in the Department of Chemistry and Biochemistry in terms of their research activities.

## DETAILS OF THE ENDOWMENT

The procedures for selecting the Volwiler Distinguished Research Professor in Chemistry and Biochemistry and the distribution of other funds associated with the Volwiler Endowment are described below.

1. A Departmental Committee (referred to as the "Volwiler Committee") shall be established to nominate candidates for the Professorship. The Chair of the Department (or his/her designate) who will chair the Committee, two members elected from and by the Departmental faculty, and two members of cognate departments (one from physical sciences and one from biological sciences), also elected by the Departmental faculty, shall comprise the Committee.

2. The Volwiler Professor will be selected by the following procedure. The Volwiler Committee will solicit nominations from the Department faculty. Candidates will prepare dossiers, including a description of the research planned for the period covered by the Professorship. The Volwiler Committee will collect and forward the dossiers to the Volwiler Selection Committee which will be comprised of the Department Chair (or his/her designate), the Dean of the College of Arts and Science, and the Provost. Criteria used for the selection of the Volwiler Professor will include past research accomplishments, and the potential of the professor's future research plans to further elevate their research program. The Volwiler Selection Committee will choose the Volwiler Professor from the nominees submitted and will notify the Department and the Professor. The selection process will normally take place in Spring preceding the Fall appointment.

3. The Volwiler Professor will be appointed for a three-year, nonrenewable term. Persons awarded the Volwiler Professorship will be eligible for reappointment six years after the end of their initial appointment.

4. The primary use of the income from the Volwiler Endowment is to provide support to expand the research program of the Volwiler Professor. At the beginning of an appointment as Volwiler Professor, the amount of funds available to the Professor from the Volwiler Endowment will be determined for the three-year term. Specifically, the Volwiler Professor will have available an expense account of at least $40,000/yr. or 55% of the current income from the endowment, whichever is greater. Funds can be used for any professional expense, including, but not limited to, summer salary, staff salary, graduate student stipends, supplies, and travel. It cannot be used to supplement the base salary of the Professor. Income not expended during the preceding fiscal year will be carried over and added to any current income generated by the Fund. However, funds to support the Volwiler Professor's research must be used during their three year appointment.

5. The secondary objective of the Endowment is to provide funds to support the general scholarly activities of Departmental faculty. These funds will be available for distribution to departmental faculty by the Department Chair. The Chair is expected to give the highest priority to requests for foreign travel to participate in major conferences (especially for participation by invitation), or to present invited seminars at foreign universities. Other

priorities will be to enhance research programs by (1) providing opportunities for off-campus scholarly activities during research leaves granted through normal University procedures, (2) bringing to campus scientists from other universities, (3) providing funds to establish/develop new areas of research in the department. Funds can be used for supplies, personnel, and equipment. No additional approval, except the signature of the Department Chair, is required at the Departmental level for use of Endowment funds.

6. The Professor is subject to annual evaluation in accordance with the faculty review and evaluation procedures applicable to all faculty in the Department of Chemistry and Biochemistry.

7. The Chair will prepare an annual report for the Department summarizing how the departmental funds from the Endowment were utilized.

8. The Professor will prepare a report for the Volwiler Selection Committee at the end of his/her tenure as Volwiler Professor documenting their accomplishments during their time as Professor.

The holder of the Volwiler Professorship is expected to meet the following criteria.

The Volwiler Professor should be a nationally and internationally recognized researcher. They should also be a dedicated teacher, having demonstrated the ability to communicate concepts, theory, and practice to students at all levels. Research and teaching should be the Professor's primary responsibility within the Department. He or she should be an individual who professionally-inclined students could adopt as a role model. The Professor should:

a. Demonstrate a continuing high level of scholarly activity including publication and participation in scientific meetings and the receipt of extramural funding.

b. Have the ability and the willingness to teach undergraduate as well as graduate courses and to participate in professional activities.

c. Inspire other faculty members to have a keen interest in teaching and research.

d. Have a strong concern for the success of the students and be generous in committing time to their needs.

e. Be willing to serve on professional committees, task forces, and boards as a part of his/her responsibilities.

f. Encourage students and others to view chemistry as a rewarding and desirable career opportunity.

g. Regard the Professorship as an honor.

h. Be willing to participate, within reason, in Department, College and University activities.

9. Specific terms of the appointment include the following:

a. The Professor will be chosen from a pool of full-time faculty members at the rank of Associate Professor or Professor within the Department of Chemistry and Biochemistry, or from potential new additions to the Department at the tenured ranks noted above. Faculty holding administrative appointments, or another endowed position, are not eligible for appointment as Volwiler Professor. Should the Volwiler Professor accept an administrative position, their term as Volwiler Professor will automatically terminate at the end of the current academic year.

b. The appointment will call for nine month's service each Academic Year, unless the Professor is on an approved sabbatical leave.

c. The Professor must serve as a full-time member of the Department of Chemistry and Biochemistry and will continue to be eligible for all University rights and benefits (for example, sick leave, research leave, retirement benefits, and the like).

d. The specific teaching assignment of the Professor will be decided upon by the Chair of the Department in consultation with the Professor.

10. The Professor will be entitled, in addition to the support set forth herein to resources and privileges accorded other members of the Department of Chemistry and Biochemistry including, but not limited to, office space, chemicals, supplies, duplicating and typing services, travel allowances, postage, telephone, office furnishings, and equipment.

11. Finally, the Department of Chemistry and Biochemistry gratefully acknowledges the kind and generous gift of Dr. Volwiler in remembering Miami University and the Department of Chemistry and Biochemistry.

The first Volwiler Distinguished Research Professor in Chemistry was Dr. Gilbert Gordon. He was initially appointed on May 10, 1984. He was reappointed May 10, 1989, and June 28, 1994, and continued through August 14, 2003.

## WAIVER STATEMENTS FOR RECOMMENDATION DOCUMENTS FOR STUDENTS

The Family Education Rights and Privacy Act of 1974 guarantees students access to certain institutional records concerning them. Students are also permitted access to confidential letters of recommendation written after January 1, 1975. A student may choose to waive his or her right of access to these confidential recommendations. The faculty member, when writing a recommendation for a student, should obtain a waiver or non-waiver of right of access to the recommendation in the form of the following statements:

I waive the right to inspect the contents of the recommendation I have requested.

Signed _____ Date _____

I do not waive the right to inspect the contents of the recommendation I have requested.

Signed _____ Date _____

## FACULTY PROFESSIONAL LIABILITY

Miami University has an Educators Legal Liability Insurance Policy. This policy covers faculty for some wrongful acts arising from their employment at Miami University. Faculty should contact the Director of Business Affairs for details of Miami's current policy and to determine if additional individual coverage through a private policy is deemed necessary.

## GRIEVANCES

The faculty member has several avenues open for the resolution of professional or personal problems and concerns. Grievances may be discussed with the Chair of the Department, either for his personal consideration, or for inclusion on the Agenda for a Department Faculty Meeting. Problems or complaints limited to the physical plant, maintenance, services, and non-academic staff may be referred to the Manager for his/her attention. Grievances brought against Faculty members by students, and not resolved satisfactorily by the Chair and/or Departmental Faculty, may be carried by the student to the Dean of the College, who will assign the problem to the Academic Appeals Board for consideration and recommendation. Grievances forwarded to the Dean on behalf of a faculty member are usually referred to the Dean's Faculty Committee for review and recommendation. Two Committees of the University Senate stand ready to hear faculty grievances, after which they may report to the Provost, President, and/or the Senate.

1. The Committee on Faculty Rights and Responsibilities. Considers faculty grievances in matters pertaining to faculty rights and responsibilities.

2. The Faculty Welfare Committee. Considers non-academic matters such as salaries, insurance, retirement, leaves, and travel.

## INFORMATION MANUAL

Additionally, the Affirmative Action Policy of Miami University provides for grievance hearings which are outlined in the **Policy and Information Manual**. These procedures also cover the right to appeal. The sexual harrassment policy is likewise treated in the **Policy and Information Manual**.

**ADJUNCT AND AFFILIATE APPOINTMENTS IN**
**THE DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY**
(Appointments are Reviewed and Processed Annually)

**PURPOSE:** 1. To provide a professional involvement with the Department of Chemistry and Biochemistry for members of the Faculty/Staff of Miami University. These appointments require approval of the immediate supervisor of the potential appointee.

2. To provide a medium by which a scientist may continue to contribute professionally after retirement from an organization other than Miami University.

3. To provide an opportunity to scientists employed by an organization other than Miami University to participate in professional activities of the Department. Potential appointees in this category will be required to submit a letter from their employer acknowledging the potential appointment as an Adjunct member of the Department.

**THE REQUEST:** In general, it should be recognized that Adjunct and Affiliate Appointments in the Department are unusual--and are normally made only for compelling reasons. In requesting such an appointment in the Department of Chemistry and Biochemistry, the candidate should supply a current Curriculum Vita along with a proposal which takes into account as many of the following items that apply.

The proposal should address:

1. The objectives of the appointment including potential interactions or professional relationships with specific faculty members, research groups or the Department in general and a clear description of the benefits to be realized by the Department and the appointee.

2. A statement of availability of funds to cover any "costs" associated with the appointment such as office space, laboratory space, charges for the use of instrumentation, chemicals, office supplies and the like.

3. For reappointments, the candidate should prepare a brief annual report as a part of the proposal for reappointment.

**PROCEDURE:** 1. Potential Adjunct and Affiliate appointees in the Department of Chemistry and Biochemistry will have their proposal and Curriculum Vita reviewed by the Senior Staff Appointments Committee and presented to the Faculty at a regular voting meeting of the Department.

2. Approval by the Faculty will require a simple majority vote.

3. Approval by the Department Chair will be following by submission through the normal University channels for approval and appointment as an Adjunct or Affiliate Member of the Department of Chemistry and Biochemistry.

**From MUPIM:**

**7.12 Affiliate**

Faculty holding rank in one department may be considered for appointment to the additional title of Affiliate in another department or interdepartmental program. The Affiliate title is ordinarily used to recognize specific contributions on the part of the faculty member in teaching, and/or research, and/or service to a second department or interdepartmental program. The nomination for an Affiliate title can be initiated only by the appropriate department or interdepartmental program, and it will be granted only on the approval of the appropriate chairs, the program director(s), the dean(s), and the Provost.

The Affiliate title is intended to recognize the linkage of appropriate cognate faculty to academic departments and programs. Guidelines for administering this title are as follows:

A. Nomination for an Affiliate title must be initiated by an academic department or interdepartmental program.

B. An Affiliate title may be initiated at any time. The title continues until such time as a department or interdepartmental program or the person wishes it to be removed.

C. There is no limit to the number of Affiliate titles a faculty member may hold.

D. The Affiliate rank (i.e., assistant, associate, full) shall be at the same rank as that held in the home department.

E. The department chair or program director (when appropriate) initiating the Affiliate rank will prepare a letter outlining the expected contributions (e.g., teaching a course or courses in the program, serving as an adviser to students working on a collaborative research project, etc.) the person will make to the unit.

F. Since the expectation is that an Affiliate is making a significant contribution to the second unit, the chair or director of the home department or program will endorse the letter requesting Affiliate rank and will indicate how the Affiliate's responsibilities to the home unit have been adjusted to accommodate the person's new activities. These letters are then forwarded to the appropriate dean(s) and then to the Provost for approval.

## VISITS OF POTENTIAL GRADUATE STUDENTS TO MIAMI UNIVERSITY DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

Procedure for Hosts

At the time a prospective graduate student is offered a teaching assistantship, the Chair of the Graduate Admissions Committee will designate a member of the Departmental Faculty to act as the student's host. In general, the host will be chosen from the area of interest indicated by the student. In the cases where the area is unspecified, the Chair of the Graduate Admissions Committee will make a decision based on the best information available.

The host has two types of responsibilities: communication with the candidate regarding any questions or details about Miami University and the Department of Chemistry and Biochemistry and acting as host should the student decide to visit our department. Thus, it is the responsibility of the host to set up the schedule for the student's visit and ascertain that meals, lodging and transportation have been arranged. In general, these expenses are the responsibility of the visitor. The Dean of the Graduate School and the Department Chair do have limited funds to partially reimburse the student's travel expenses.

This visit should include the following points:

1. A tour of the Department of Chemistry and Biochemistry facilities.

2. A tour of the Oxford Campus (optional).

3. An opportunity to meet with the Chairs of the Department, the Graduate Admissions Committee, and the Graduate Advising Committee, if available.

4. An opportunity to meet several members of the faculty in order to discuss generalities associated with the visitor's research interests.

5. An opportunity to meet with graduate students and to discuss any areas of concern.

Although it is important that the host gives his colleagues as much advance warning as possible of an impending visit, it should be recognized that many students decide to visit our Department at the very last moment. It is also true that the potential graduate students may not have any particular ideas with respect to what they might like to see and with whom they might wish to meet. Thus, flexibility and "on the spot" decisions can be very important.

It is the intention of the Department to distribute host responsibilities equitably. Faculty help, cooperation and suggestions with respect to all dimensions of this program are greatly appreciated.

**Department of Chemistry and Biochemistry**
**Assessment Plan**

Whereas the University frequently is asked to document the quality of its programs, the Department must have formal means by which its performance on teaching, research, and service is evaluated. In order to document the quality of our programs, we must collect data in several categories. To document "value-addedness" we must monitor the quality of entering students and determine the outcome of the students' education in our Department. The attractiveness and quality of our curricula, the manner in which we are meeting the needs of the State, and the quality of our facilities also are part of assessment.

The Department of Chemistry and Biochemistry Assessment Plan is based on the use of the existing Committee and Special Assignment structure; overall coordination is the task of the Department Chair. In this manner, the tasks are spread to include most faculty thereby maximizing input to the program and minimizing the impact on an individual or subgroup of faculty.

The assessment tasks are distributed as follows:

**A. Program Assessment**

1. Assure that the B.S. curriculum meets the American Chemical Society's certification requirements; Chief Departmental Advisor (pentennial).

2. Monitor course sequences, (A.B., B.S. and graduate) to determine whether they are consistent with national trends; Educational Policy Committee (annual).

3. Determine whether our A.B. and B.S. curricula are attractive to applicants expressing an interest in a baccalaureate-level major in chemistry; Undergraduate Recruiting Committee (annual).

4. Monitor courses and sequences offered as part of the University's liberal education requirement for compliance with the approved agreements with the Liberal Education Council; General Chemistry Committee (annual).

5. Maintain records on GPAs of B.S. and B.A. Departmental graduates and keep data on their GPAs relative to those of other majors; Chief Departmental Advisor (annual).

6. Evaluate such teacher demographic functions as student-teacher ratio, distribution of assignments of faculty in various professorial ranks throughout the curriculum, and overall teaching loads in terms of the University's mission; Chair (annual).

7. Survey graduates' satisfaction with the curricula; Chair (pentennial).

8. Initiate external review of the Department; Chair (pentennial).

9. Collect data on underrepresented groups in Chemistry and Biochemistry on graduates (A.B., B.S., M.S. and Ph.D.) from the Department and from U.S. universities in general (provided that its available from the American Chemical Society, National Science Foundation, or a similar agency); Chief Departmental Advisor (annual).

**Student Quality**

1. Monitor such factors as GPA, class rank, national test scores and scholarships/honors for entering undergraduate students; Chief Departmental Advisor (annual).

2. Monitor entering graduate student GPAs, GRE scores, and diagnostic examination performances; Graduate Advisor (annual).

3. Monitor the progress of baccalaureate students (except as noted, annual).
a. Performance on national standardized examinations; Chair.
b. Scholarships (including national honors/awards upon graduation); Honors and Awards Committee.
c. Comparison of course GPAs vs. departmental averages; Procedures and Records Committee.
d. Publications and presentations, Chair.
e. University and/or Departmental Honors earned by graduates; Honors and Awards Committee.
f. Postgraduate employment; Chair (pentennial).

**Quality of Teaching (except as noted, annual)**

1. Peer evaluation records; Chair.

2. Student evaluation records; Chair.

3. Extramural funding for course improvement and curriculum development; Chair.

4. Teaching awards received; Chair.

5. Monitor outreach programs; Chair.

**Departmental Scholarship**

1. The Chair will maintain annual records on publications, patents, and extramural funding.

2. In conjunction with pentennial external review of the program, the Chair will obtain data on professional consulting and awards.

**Departmental Service**

1. Maintain records on service to the University, State and Nation; Chair (annual).

2. Maintain records on manuscript and proposal reviewing, editorship, and the like; Chair (annual).

**Resources and Facilities**

1. Monitor the condition of all storerooms and laboratories; Safety Committee (semi-annual).

2. Monitor physical conditions of the classrooms, including audio visual equipment; Chair (annual).

3. Monitor the quality of equipment; Equipment and Supplies Committee (annual).

4. Evaluate the needs of the operating budget; Chair (annual).

5. Monitor cost effectiveness of experiments; Equipment and Supplies Committee (annual).

6. Evaluate computer resources in the department; Computer Committee (annual).

7. Monitor journal subscriptions, book purchases, reference materials, data bases for literature; Library Committee (annual).

8. Evaluate adequacy of the support facilities available; Chair (biannual).

Department of Chemistry and Biochemistry

Miami University

# DEPARTMENTAL

# GOVERNANCE AND PROCEDURES

## C. Graduate Student

## Governance and Procedures

## OFFICIAL GRADUATE STUDENT RECORDS KEPT BY THE DEPARTMENT (GRADUATE ADVISING COMMITTEE)

A. Original letters of recommendation, transcripts and original application.

B. Letters of appointment.

C. Original Plan of Study.

D. Intradepartmental transcripts (MU).

E. Copies of all forms filed with the Graduate School (Forms D-1 to D-4, for example).

F. Copies of faculty evaluations of the graduate student as a teaching assistant.

G. A record of courses taken for the current year.

## ADMISSION POLICY

All applicants for graduate degree programs must be screened by the Graduate Admissions Committee. Those recommended for admission are forwarded to the Graduate School. All recommendations for an assistantship must be approved by the Chair of the Department.

Once a student formally accepts an offer of support and/or admission, his/her completed file is transferred from the Graduate Admissions Committee to the Graduate Advising Committee. At that point, the latter Committee becomes responsible for all communication with the student. This responsibility continues until the time that the student selects a research director.

### A. Grade Point Average

Minimum GPA's for admission to the MU Graduate School under all degree programs are in the Miami Bulletin.

### B. Undergraduate Training

The following requirements, in addition to completion of the bachelor's degree, are expected prior to commencing graduate study at Miami University.

1. Chemistry Courses

    a. 2 semesters of Organic Chemistry

    b. 2 semesters of Organic Chemistry Laboratory

    c. 2 semesters of Physical Chemistry

    d. 1 semester of Physical Chemistry Laboratory

    e. Two of the following three courses

i. 1 semester of Inorganic Chemistry with a Physical Chemistry prerequisite
ii. 1 semester of Instrumental Analysis with a Physical Chemistry prerequisite
iii. 1 semester of Biochemistry with a 2 semester Organic Chemistry prerequisite

2. Related Courses

   a. 2 semesters of Physics
   b. Mathematics through Calculus

3. Promising students who do not meet these requirements will be considered on a case-by-case basis.

## C. Non-degree Students

A non-degree student who wishes to enter a graduate degree program must apply to the Graduate School and receive approval from the Departmental Graduate Admissions Committee.

## D. Master's Students

A student wishing to enter the Ph.D. program directly upon completion of a Master's Degree from Miami University must receive approval from the Graduate Advising Committee and the Departmental faculty.

A student who has received a master's degree from Miami University and is no longer in residence must reapply to the Graduate School and receive approval from the Departmental Graduate Admissions Committee in order to enter the doctoral program.

## E. Students with Miami University Undergraduate Degrees

Students with a baccalaureate degree from Miami University are discouraged from entering our graduate program. Any who are admitted will be required to terminate at the Master's Degree.

**Guidelines for Admission to the Combined Bachelor's-Master's Program**
**Department of Chemistry and Biochemistry**

This document represents the departmental protocol for handling applications for the combined program. For University-wide guidelines, see the Graduate Bulletin. None of the policies below can supersede those of the Graduate School.

1. Applications for the combined bachelor's-master's program should be made to the graduate admissions committee. In addition to the credit hour requirement set by the Graduate School, the applicant should have completed at least one semester of physical chemistry and be enrolled in a second semester. At the time of application, the applicant should be made aware of departmental policy concerning Miami undergraduates and the doctoral degree.

2. The application should include a current transcript, a plan of study showing how the requirements of the degree (including the thesis) can be fulfilled in a timely fashion and a statement from the proposed research advisor further discussing the research progress of the applicant. Applicants whose thesis work is projected to extend into the sixth year after matriculation at Miami University do not meet the intent of the combined bachelor's-master's program.

3. Since the advanced undergraduate courses are the same as those used in the proficiency requirement, students admitted to the combined program need not take entrance exams. [**NOTE**: the calculated graduate GPA, which is required to be $\geq 3.0$ is calculated based on earned graduate hours]. In addition, the research advisor interview process need not be carried out. Upon admission, the graduate committee should be named and the first year exam conducted within the first semester in the program, at which time the committee will provide input and approval of the plan of study.

4. The above guidelines do not preclude students with majors outside the department from being considered for the combined program with the master's in chemistry, but such applicants are subject to the same policies as undergraduate chemistry and biochemistry majors.

5. In general, participants in this program will not be considered for departmental support.

## OUTLINE OF THE M.S. AND PH.D PROGRAM TRACKS

Upon entering the Chemistry and Biochemistry Graduate Program the student will be asked for his/her intent to pursue the M.S. or Ph.D. degree. This information will be used for initial course planning only, since during the first year, the two tracks do not differ significantly. First, all students must complete the Area Requirements by examination or coursework.

After two semesters of residence in the program, each student completes an oral conference on his/her progress. Based on the student's progress as discussed in the conference, the student's Graduate Committee will recommend that the student pursue the M.S. degree, the Ph.D. degree, or be dropped from the Chemistry and Biochemistry Graduate Program.

To earn an M.S. degree, the student will complete coursework, carry out a research project, write a thesis and defend the thesis. With normal progress, this work should be completed by the end of the second year (except in unusual cases, two years is the maximum period for which an M.S. student can receive an assistantship). To earn a Ph.D. degree, the student will complete coursework, take comprehensive or cumulative written exams, conduct one or more research projects, present an original research proposition (Ph.D. preliminary oral exam) and write and defend a dissertation.

A student initially approved only for the M.S. program may request a change to the Ph.D. program. The procedures and requirements for such a change are given under the section titled "Procedures for Changing from the M.S. to the Ph.D. program".

# DIAGNOSTIC EXAMINATIONS AND BACKGROUND COURSES

Students entering the graduate program in Chemistry and Biochemistry must demonstrate a strong background in at least three areas of chemistry. The specific procedures and options for meeting these requirements are given below. Failure to complete these requirements within the prescribed time limit will result in dismissal from the Chemistry and Biochemistry graduate program and ineligibility for future support as a graduate assistant.

## I. Area Requirements

Students must demonstrate a strong background in at least three areas of chemistry, including his/her major area, choosing from physical, organic, inorganic, analytical, and biochemistry. A strong background can be demonstrated either by examination or by satisfactory completion of coursework. Area examinations will be offered at the beginning of each semester (as scheduled by the Graduate Advisor). All entering students are required to take each of the five area exams unless they have not taken the requisite undergraduate course. A student may attempt to pass this requirement by examination only at his/her first opportunity upon entering the program.

Each area examination will be a national, standardized exam, chosen by the corresponding division of the Department. Each division will recommend a passing level which must be approved by faculty vote each time a new version of the exam is given or if the division wishes to deviate by more than 5% of the predetermined number of correct responses for passing. Divisions will report the results of each exam (passes/fails) and turn over the records of exam performance to the Chair of the Graduate Advising Committee. Results (pass/fail) will be provided to the student by the Graduate Advising Committee. Upon request, the Committee will also identify areas of weakness for the student.

Students who do not score above the 25th percentile on four of the area exams will be deemed poorly prepared for graduate studies in chemistry and biochemistry. Since poorly prepared students always have a general chemistry deficiency, these students are required to enroll in a remedial course in general chemistry principles. This course will be a one-credit credit/no credit graduate course taught during fall semester. The week before commencing their second semester of graduate work, these students will be required to pass the current version of the ACS General Chemistry exam at or above the 75th percentile.

Students enrolled in the review course are also required to enroll in two graded graduate courses in each semester; the specific courses will be chosen in consultation with the Chair of the Graduate Advising Committee.

Any student who fails the General Chemistry exam will not be recommended for reappointment as a teaching assistant for the 2$^{nd}$ year of graduate study.

For those students who are required to take the exam, the First Year Conference must include discussion of performance on the exam. Those students who fail the General Chemistry exam but are allowed to continue in the program will likely be recommended for a Terminal M.S. degree.

*Revised May 2009*

If a student does not pass three area examinations (including the area of the student's major) coursework must be used to complete the area requirement. This requirement is fulfilled by obtaining a grade of B or above in the appropriate course(s):

| | |
|---|---|
| Physical | CHM 571 or 572 |
| Organic | CHM 526 or 641 or 642 |
| Inorganic | CHM 517 |
| Analytical | CHM 554 or CHM 760.U |
| Biochemistry | CHM 532 or 533 or 534 |

Courses should be chosen from this list to bring the total number of areas passed by exam or coursework up to three. (If a student changes his/her major area at a later date and did not pass the new area either by exam or by coursework, they will be required to pass the corresponding course at its next offering.) The Department recognizes that because of the diversity of topics within each field, the material covered in these courses may not closely match the material covered in the standardized examinations.

A student planning to conduct an interdisciplinary research project must satisfy area requirements in both divisions involved. A student working in the area of Chemical Education must satisfy requirements in the areas determined by his/her graduate committee and approved by the Graduate Advising Committee.

NOTE: The area requirement must be completed by the end of the third semester of residence in the Chemistry graduate program (not counting summer terms) for students entering with a baccalaureate degree, and by the end of the second semester of residence in the Chemistry graduate program for students entering with a Master's degree in Chemistry or Biochemistry from a university in the U.S.A. or Canada.

## II. Student Status Following Diagnostic Exams and Area Coursework

A. Students who enter the program with a baccalaureate degree.

1. If the Area Requirements have been met, the student is judged to be proficient for the Ph.D. program.
2. If the two areas have been passed, with a grade of at least "C" in the coursework for the third area, the student is judged to be proficient for the Master's program. After completing the M.S. program, the student may petition the faculty for admission to the Ph.D. program. The faculty will vote on admission, and if granted, the student's committee will decide on how the remaining area requirement may be fulfilled.

3. If two areas have not been passed (plus a grade of "C" in the third area), the student will be dropped from the chemistry graduate program at the end of the academic year.

B. Students who enter with a Master's Degree in Chemistry or Biochemistry from a university in the U.S.A. or Canada.

1. If three areas have been passed, the student may continue in the Ph.D. program.

2. If fewer than three area requirements have been met within two semesters, the student will be dropped from the Chemistry and Biochemistry graduate program at the end of the academic year.

## DEPARTMENTAL GRADUATE COURSE REQUIREMENTS

1. A student must fulfill the Area Requirements either through diagnostic examinations or taking the appropriate courses.

2. The minimum graded coursework requirement for the Ph.D. degree is: six (6) graduate courses comprising at least 16 credit hours; at least two (2) of these hours must be in courses numbered 600 or above.

3. The minimum graded coursework requirement for the M.S. degree is: five (5) graduate courses comprising at least 13 credit hours; at least two (2) of these hours must be in courses numbered 600 or above.

4. Students who pass area examinations will have one three-credit course waived from the above requirements for each exam passed, up to a maximum of two courses. Each waived course will be the course designated above that can be used to satisfy the area requirement in that area. If a student elects to take this course, they decline the advantage gained by passing that area examination.

5. The responsibility of establishing a balanced program of study rests with the student, in consultation with the student's Graduate Committee. All plans of study will be reviewed by the Graduate Advising Committee. Unusual cases will be forwarded to the Department Chair, who has the final responsibility to accept or reject a proposed plan of study based on discussions with the student and the student's Graduate Committee.

6. Students who choose to take the molecular biology core courses (Adv. Molecular Biology ZOO 605 and Adv. Cell Biology ZOO 606) and the CHM 650 seminar will obtain a transcript notation in Molecular Biology when they complete their Ph.D. degrees.

7. All graduate students are required to take CHM 655, Theory and Practice of Chemistry Laboratory Instruction, during their first year in the Chemistry and Biochemistry Graduate Program.

8. A student will <u>not</u> be permitted to take a 500-level course for credit if he/she has taken the corresponding undergraduate course (400-level) at Miami University.

9. A student may not receive credit for a graduate course at Miami University if he/she has already received credit for a nearly identical graduate course at another Ohio state-supported University.

10. A student who has received a M.S. degree in Chemistry or Biochemistry from a university in the U.S.A. or Canada may receive a waiver up to a maximum of two non-proficiency courses if they are equivalent to those offered at Miami. Two courses can be combined for consideration as equivalent to one Miami course. The Miami proficiency entrance exam must be passed in the Division represented by the equivalent course. Evidence in the form of a syllabus, exams, reports, and final grade must be provided to the appropriate Division. The final decision is made by the Division.

## Chemistry Education Program Requirements for M.S. & Ph.D. Students

**Admission**
same as all chemistry graduate students, see http://www.cas.muohio.edu/chm/gradprog.htm

**Coursework**
*Chemistry Courses*
*Students choose one discipline (analytical, organic, biophysical, etc.) as cognate area
*3 courses in cognate area for Ph.D. students (2 cognate courses for M.S. students)
*proficiency in 2 additional disciplines by passing either ACS placement exam or graduate course
*cognate area seminar (CHM 650, 720, 725, or 780) once per year
*chemistry education seminar (CHM 730) once per year

*Chemistry Education Courses*
at least 2 courses from the following, chosen in consultation with research advisor:
CHM 623, College Chemistry Teaching
CHM 710, Special Topics in Chemistry Education
-Chemical Misconceptions and Conceptual Change
-Learning Theories in Chemistry Education

*Research Methodology Courses*
at least 2 courses for Ph.D. students (at least 1 course for M.S. students),
chosen from the following, in consultation with research advisor:
CHM 621, Methods in CER: Elements of Effective Teacher Enhancement Efforts
CHM 622, Methods in CER: Materials & Curriculum Development
quantitative methodology courses (e.g., Ed Psych 667, Statistics 671, Psych 593)
qualitative methodology courses (e.g., Anthro 525, Gerontology 609, Psych 697)

**Cognate Area Research (Ph.D. students only)**
Student must carry out a research project in their cognate area, e.g., improving one laboratory experiment used in a cognate area undergraduate laboratory course at Miami. A short (e.g., one semester or summer) traditional research project in the cognate discipline may fulfill this requirement with permission of the research advisor. The expectations for the cognate area research project must by specified during the first year conference and so noted in the memo written by the committee chair after completion of the first-year conference. (This requirement can be waived for students who have earned an M.S. in chemistry or the equivalent.)

**Qualifying Exams (Ph.D. students only)**
Student must pass the written cumulative exams (2 out of 5 attempts) or comprehensive exam given by their cognate discipline, as well as a comprehensive written exam in chemistry education.

**Original Research Proposal (Ph.D. students only)**
Student must conceive, prepare, and defend an original research proposal in chemistry education.

**Thesis/Dissertation Research**
Student must carry out a research project designed in consultation with research advisor, write and defend a thesis (M.S. students) or dissertation (Ph.D. students).



*approved May 2008*

## SEMINAR GUIDELINES

CHM 600

1. Seminars will generally be presented by speakers from other universities or from departments outside Chemistry and Biochemistry at Miami.

2. Seminars will begin at 4:15 p.m. on Thursdays. Refreshments will be available at 4:00 p.m.

3. Graduate students have traditionally been responsible for setting out refreshments and cleaning up at the end of the seminar. Two graduate students will be assigned, by lot, to each seminar. They will be responsible for projecting slides and handling the refreshments.

4. Credit/No Credit grading will be based on attendance which is mandatory for all graduate students.

CHM 650, 720, 780

1. The format for these seminars will be determined by the faculty member in charge.

2. Graduate students will be expected to present, at most, three seminars per student during the first two years of residence, and are expected to actively participate in the discussion following all seminars. Ph.D. candidates will be expected to continue in the seminar program by giving a minimum of one seminar per academic year.

3. Attendance is mandatory for all graduate students whenever the appropriate seminar is offered. Biochemistry graduate students may fulfill their seminar requirement by taking either Organic/-Biochemistry Seminar, CHM 720, or Molecular Biology Seminar, CHM 650.

4. Students presenting seminars may receive letter grades for a maximum of two seminars by following the procedures outlined by the faculty member in charge. All other students will be graded on a Credit/No Credit basis.

## CREDIT HOUR REQUIREMENTS
## (Summarized from the Miami Bulletin, Graduate Edition)

Minimum and Maximum Registration (M.S. and Ph.D.)

The maximum number of hours which can be earned by a graduate student in a regular semester is 16; in a summer term of 6 weeks the maximum is 8 hours. The Dissertation Scholar must register for 16 hours per semester. Graduate Assistants and Teaching Associates with duties of 18-20 hours per week must register for a minimum of 10 hours per semester but no more than 14 hours per semester.

Summer Registration

Graduate students will normally register for 12 credit hours total in the summer, normally including two hours of seminar and 10 credits of research (normally divided between 1 seminar hour and 5 research hours during each of our summer I and III terms). Students taking CHM 655 for two hours would normally reduce their research hours to a total of eight (including four each of our usual summer terms).

M.S. Requirements

For a Master's degree, a student must pass at least 30 semester hours. At least 12 semester hours must be earned in courses numbered 600 or above, and a minimum of 6 hours must be in CHM 700.

Ph.D. Requirements

A doctoral program generally includes three stages. The first stage ends when the student receives a Master's degree or earns the equivalent credit (30 semester hours) with a minimum grade point average of 3.00. The second stage comprises fulfillment of departmental requirements and successful completion of the preliminary written and oral examinations. The third stage comprises research and seminars, preparation of the dissertation, and the final examination.

A minimum of 60 semester hours beyond the Master's degree (or its equivalent) is required; 48 hours must be earned at Miami University. A minimum of 16 credit hours and a maximum of 60 hours may be given for dissertation research at the discretion of the department. Admission to the third stage requires a minimum of 30 hours post-master's credit.

Credit/No credit (Ph.D. and M.S.)

No more than one-fourth of the total hours (exclusive of thesis or dissertation credit hours) may count for a graduate degree under the credit/no credit arrangement. In the Department of Chemistry and Biochemistry, only seminars are offered credit/no credit (CHM 600, 720 and 780).

## ACADEMIC PERFORMANCE

1. The minimum grade point average required by the Graduate School for an advanced degree is 3.00.

2. If a chemistry or biochemistry graduate student's graduate GPA is not at least 3.0 at the end of the first semester, the student will be warned in a letter from the Chair of the Graduate Advising Committee.

3. If a chemistry or biochemistry graduate student's overall graduate GPA is still below 3.0 after an additional semester, the student will usually not be permitted to continue in a degree program within the Department.

4. The Graduate Advising Committee reviews the overall performance of each graduate student at the end of the academic year. Those students having received grades of less than "C" in any course will undergo particular scrutiny. Students who are not making satisfactory progress to finish their degree in a timely fashion will be identified. As a result of these reviews, the Graduate Advising Committee makes recommendations to the chemistry and biochemistry faculty regarding continuing graduate appointments.

5. For first year students, normal progress is defined as successfully completing four graded courses in the first two semesters of residence. The progress of students who complete fewer than four graded courses will be reviewed by the Department; those who complete fewer than three graded courses will lose their assistantship unless there are extenuating circumstances.

6. Students with a graduate assistantship are required to be registered for at least 10 credits throughout the entire semester with 10 + 2 seminar credits in the summer.

NOTE: An overall GPA of 3.0 is required to remain in "good standing" in the Graduate School; this determines eligibility for the summer stipend and for continuing appointment as a GA/TA. To receive an advanced degree in Chemistry and Biochemistry, a GPA of 3.0 in graduate chemistry and biochemistry courses as well as an overall GPA of 3.0 is required.

## SELECTION OF A RESEARCH DIRECTOR

### I. Students Entering in August

All graduate students entering in August are required to attend a special seminar course for first-year students. This course, which begins during the second week of classes, consists of two weekly sessions of three 20-minute research overviews presented by faculty. Following these sessions, which last for approximately four weeks, the student initiate*s* the interview process by obtaining copies of the Research Director Selection Form and the Biographical Data Form (they are part of the Governance material given to the student when they commence graduate study). The Biographical Data Form is to be posted in the Department of Chemistry and Biochemistry office. Each student interviews faculty with similar research interests. In addition, they must comply with requests by other faculty members for an interview; these will be noted on the posted Biographical Data Form. The Research Director Selection Form is to be carried to the interviews. After each interview, the faculty member initials the form. Students may wish to have more than one meeting with faculty members whose research they find closest to their interests.

By the first week of November the student will submit to the Chair a ranked order list of their three choices for a research advisor. The results of the student's advisor requests will be provided to the faculty. Faculty will then submit to the Chair a ranked order list of three students they are willing to mentor in their lab. The Chair, in consultation with the Graduate Advising Committee, will use these preferences to assign students a research director. Every effort will be made to place students in the lab of their first choice. However, the equitable distribution of students into active research groups will also be considered in accord with departmental governance. If the student and faculty member agree to the assignment, both sign the form and return it to the Chair of the Department. The student should inform all faculty they interviewed of their selection.

### II. Students Entering in January

Graduate students entering in January may begin their formal interviews for a research director at the start of their first semester in residence. The student initiate*s* the interview process by obtaining copies of the Research Director Selection Form and the Biographical Data Form (they are part of the Governance material given to the student when they commence graduate study). The Biographical Data Form is to be posted in the Department of Chemistry and Biochemistry office.

The student must interview all faculty members in the division they select and all faculty cross-listed in that division. In addition, they must comply with requests by other faculty members for an interview; these will be noted on the posted Biographical Data Form. After each interview, the faculty member initials the form. Students may wish to have more than one meeting with faculty members whose research they find closest to their interests.

For students entering in January, an alternative to the interview process is for an individual faculty member to arrange a seminar on his/her research interests at which attendance by uncommitted students in the division is required.

By Spring Break, the student selects a research director by submitting to the Chair a ranked order list of their three choices for a research advisor. The results of the student's advisor requests will be provided to the faculty. Faculty will then submit to the Chair a ranked order list of students they are willing to mentor in their lab. The Chair, in consultation with the Graduate Advising Committee, will use these preferences to assign students a research director. Every effort will be made to place students in the lab of their first choice. However, the equitable distribution of students into active research groups will also be considered. If the student and faculty member agree to the assignment, both sign the form and return it to the Chair of the Department. The student should inform all faculty they interviewed of their selection.

**BIOGRAPHICAL DATA FORM**
(for graduate students entering in January)

1. Name

2. Candidate for M.S. Ph.D.

3. Previous Education (year, degree, and school)

4. Previous Research Background

5. Division(s) of Interest (all faculty therein will be interviewed)

Signature

Date

---

Other faculty members interested in discussing various aspects of their research projects with the candidate should sign below.

## RESEARCH DIRECTOR SELECTION FORM

For graduate students entering in January, all faculty, including those who are cross-listed, in the circled division(s) will be interviewed.

| Analytical | Inorganic | Organic | Physical | Biochemistry |
|---|---|---|---|---|
| J. Cox | M Crowder* | R. Taylor | S. M. Cybulski | C. Dabney-Smith |
| N. Danielson | D. Tierney*▪ | B. Gung | A. Isaacson | A. Hagerman |
| G. Pacey | | C. S. Hartley | G. Lorigan* | C. Makaroff |
| T. Riechel | | J. Hershberger | M. Kennedy | B. Tolbert▪ |
| A. Sommer | | M. Novak | | |
| S. Zou▪ | | H. Wang | | |

Chemical Education

S. Lowery Bretz
J. Sarquis
M. Sarquis
J. Williams

* cross-list: Biochemistry
▪ cross-list: Physical

Research Director selected (Name): _____

_____
Signature & date

Graduate Student (Name) _____

_____
Signature & date

Please return this form to the Chair of the Department and notify all faculty whom you interviewed of your final choice.



Revised July 2009

## ADMINISTRATIVE RESPONSIBILITIES OF RESEARCH DIRECTORS

### I. Records to be kept by the research directors:

A. Records of all courses taken and grades, courses currently enrolled in, and courses to be taken by the graduate student advisee.
B. A copy of the student's Plan of Study.
C. Records of names of all examining committee members and committee actions.

### II. Advising

A. At the time of each preregistration or registration, the graduate student and his/her research director should consult the Plan of Study for discussion of course selection.
B. The director should be aware of the courses currently taken by the graduate student, the number of credits involved and the GPA of the student.
C. The director should meet with the graduate student periodically for the purpose of discussing all phases of the student's progress. Changes in the Plan of Study should be reviewed through the student's Graduate Committee and the Graduate Advising Committee.
D. While the director can make the graduate student aware of the required forms and pertinent rules and guidelines of the Graduate School and the Department, it is the graduate student's responsibility to obtain, learn, and comply with all of the departmental and Graduate School rules and regulations governing requirements and financial support.
E. The research director is responsible for overseeing the transmission of the appropriate completed Graduate School forms to the Chair of the Graduate Advising Committee, to the Graduate School and a copy to the Chair of the Department.
F. Graduate assistantships awarded to a student admitted to a master's program at Miami University may be appointed for one additional year for a maximum of two years of support.

Regardless of the source of support, a student enrolled in a doctoral program may receive:

❖ Financial support from graduate assistantships, teaching associateships, doctoral associateships and dissertation scholarships for a total of four years beyond receipt of a master's degree, or
❖ Six years of support beyond the bachelor's degree if admitted directly into a doctoral program at Miami University

For more detail see http://www.units.muohio.edu/gradschool/handbook/awards.html

**NOTE**: an appointment will not be made for a student whose enrollment is not eligible for state subsidy, i.e., the student has in excess of 173 semester hours. Students whose funding will come from non-university sources are exempt from this regulation.

## THE RESEARCH DIRECTOR, THE GRADUATE COMMITTEE AND THE PLAN OF STUDY

1. Following the choice of a research director, the director and the student propose a Graduate Committee to the Department Chair for approval. This should occur no later than the first week of the second semester of residence, and preferably before the end of the first semester of residence. This Committee will consist of the research director, at least one additional member from the student's division (or research area for a student pursuing an interdisciplinary program), and as many members from other divisions as necessary to reach a total of four. The research director acts as the Committee Chair until the First Year Conference is completed. At that time another member of the student's division becomes Chair. Generally this committee serves as the student's M.S. committee. For a student who enters the Ph.D. program, a Graduate School Representative will be added at the appropriate time, as outlined elsewhere.

2. Within two weeks of approval of the Graduate Committee, the student's Plan of Study should be developed, following these steps:

a. A Plan will be drafted by the student and the research director.

b. The student's Graduate Committee will review the Plan and recommend it or a revised Plan to the Graduate Advising Committee.

c. The Graduate Advising Committee will review the Plan for compliance with governance guidelines.

d. If all parties reach agreement, the approved Plan will become part of the student's file with copies returned to the student and Committee.

e. Disagreements and/or exceptions will be brought to the Department Chair for final action.

3. Any changes to the Plan of Study must be reviewed in advance by the student's Graduate Committee and approved by the mechanism described above.

4. In addition to reviewing the student's Plan of Study, it is the responsibility of the student's Graduate Committee to monitor his/her performance in the graduate program. All problematic cases for continuation or reappointment will rely on recommendations from the student's Graduate Committee, although such matters will continue to be processed by the Chair via the Graduate Advising Committee and the Department.

**GRADUATE STUDENT'S PLAN OF STUDY**
**Department of Chemistry and Biochemistry - Miami University**

Each member of the graduate committee should review this plan and initial to indicate agreement

Name of Student Degree Program
Last, First Middle

Date of Entrance to Miami University

Division Research Director

Cognate area (for Chem Ed students)

Graduate Committee , , ,
Chair* Graduate School Representative

*The member of the student's division, other than the research director, who will become Chair when the First Year Conference is completed. The Committee for the MS is research director plus 3 others from CHM, for the PhD add one from outside the department.

Proficiencies Achieved by Examination: , , , ,

Proficiency Courses: , ,

Other Required Courses: , ,

Courses planned by semester (give course #'s and credit hours)[1,2].

| **Semester 1 (Fall)** | **Semester 2 (Spring)** | **Semester 3 (Summer)** |
|---|---|---|
| CHM 600 (1) | CHM 600 (1) | CHM 600 (1) |
| Divisional seminar (1) | Divisional seminar (1) | Divisional seminar (1) |
| | | |
| | | |
| | | |

| **Semester 4 (Fall)** | **Semester 5 (Sprint)** | **Semester 6 (Summer)** |
|---|---|---|
| CHM 600 (1) | CHM 600 (1) | CHM 600 (1) |
| Divisional seminar (1) | Divisional seminar (1) | Divisional seminar (1) |
| | | |
| | | |
| | | |

_____ _____; _____ _____
Graduate Student Date Research Director Date

_____ _____
Graduate Advising Committee Date

[1] "For first year students, normal progress is defined as sucessfully completing four graded courses in the first two semesters of residence". Governance C-12
[2] "Full time graduate students will enroll in CHM 600 every semester that they are enrolled for courses on the Oxford campus". Governance C-10

**FIRST-YEAR CONFERENCE**

(Completed by all graduate students)

I. Timing of the Conference

The conference is expected to take place between May and July after the end of the second semester of residence in the program (November to December for students entering the previous January).

II. Purpose of the Conference

The conference is designed to review the student's progress up to that point, including his/her progress in fulfilling the plan of study and area requirements and initiating research.

III. Who may attend the Conference?

a. Any member of the graduate faculty may attend.

b. An announcement of the conference date, time and room number will be sent to each member of the Chemistry and Biochemistry faculty one week prior to the conference.

IV. Conduct of the Conference

a. The student should write an outline of their proposed research and compile a list of graduate chemistry courses and pertinent allied courses taken and the grade in each course. A copy of the outline and course grade list should be given to each member of the student's division and to each Graduate Committee member at least one week prior to the conference. The outline in general should not exceed two pages in length and should include a statement of the proposed research problem, its significance, a proposed solution, and references.

b. It is suggested that the Graduate Committee members meet immediately before the conference to discuss among themselves ground rules for the questions, number of questioning periods, and areas to be covered.

c. The student will begin the conference with a short oral description of the research problem. The student will then be asked questions on the research problem and closely allied areas.

d. The conference should be limited to 90 minutes. At the end of an hour the Research Director, as Chair of the Committee, will ask if there are any additional questions; if not, the student is asked to leave and a vote is taken.



V. What decisions should be made?

a. For a student entering with a baccalaureate degree, it is the responsibility of the Committee to recommend (by majority vote) continuation in the M.S. program, direct admission to the Ph.D.

program, or leaving without a degree. The possibility of admission to the Ph.D. program before completion of the M.S. degree is discussed on p. C-23. For students recommended for direct admission to the Ph.D. program, the Committee will establish whether the student should start the Cumulative Exams immediately or after one additional semester of course work (August or January of the second year for a student admitted in August; January or August of the 2nd year for a student admitted in January).

b. For a student entering with a Master's degree in Chemistry or Biochemistry from a university in the U.S.A. or Canada, it is the responsibility of the Committee to recommend (by majority vote) direct admission to the Ph.D. program or leaving without a degree. Direct admission to the Ph.D. program implies that the student is ready to start the Cumulative Exams immediately in August or January, whichever comes first.

VI. How are the student, faculty, and Chair of the Graduate Advising Committee informed of the results?

The Committee Chair orally informs the student of the Committee's recommendation following the conference. The Committee Chair then gives written confirmation to the student, and sends a copy of the letter to the Chair of the Graduate Advising Committee who subsequently notifies the Chemistry faculty.

VII. How does the composition of the student's Graduate Committee change following this conference?

a. If the student is proceeding in the M.S. program the composition of the Committee stays the same, but the chairmanship passes from the Research Director to another member of the student's division.

b. If the student is approved for the Ph.D. program the chairmanship changes as given above and a faculty member from another department is added. This member is known as the Graduate School Representative.

## GRADUATE STUDENT RESEARCH

### Department of Chemistry and Biochemistry, Miami University

1. The completed research project must lend itself to publication in refereed journals. Submitting a manuscript for publication in a refereed journal is a minimum requirement for the Ph.D. degree.

2. The decision with respect to the acceptability of a particular research problem as partial fulfillment of the requirements of the Ph.D. degree is a basic responsibility of the candidate's committee for the Doctoral Prospectus and Final Oral Exam.

3. Direction of the research problem is the responsibility of the research director.

## FINAL DEFENSE OF THE MASTER'S THESIS

The final oral is intended to measure the scope and quality of the student's completed research and to determine how well the student understands the completed work.

The candidate is required to write a thesis on the research he/she has carried out under the direction of his/her Research Director. The candidate will defend his/her thesis at the final oral examination. A printed or electronic copy of the thesis in approximately final form shall be placed in the hands of each committee member at least ten days before the date of the final examination. Signature pages and submission must comply with the Graduate School requirements. It is the student's and faculty director's responsibility to see that a corrected thesis is submitted. The time and place of the examination shall be made known to the other members of the department who may attend and ask questions.

The committee which conducted the First Year Conference will normally serve as the Final Oral Examining Committee but with the chairmanship having changed to a faculty member in the student's division, other than the Research Director. A vote of at least 3 to 1 is required to pass, in addition to approval by the thesis director.

The student should take somewhere between 15 and 30 minutes to summarize the significant research findings. Committee members and other faculty will then have an opportunity to ask questions. In general, the examination will last no more than 90 minutes. The Committee Chair will orally inform the candidate of the results of the examination. The Committee Chair shall inform, in writing, the Chair of the Graduate Advising Committee and the Department Chair of the examination results. The faculty director will file the appropriate forms with the Graduate School and provide copies to the Chair of the Graduate Advising Committee.

An electronic copy of the thesis must be submitted to the Miami University Libraries.

## PROCEDURES FOR CHANGING FROM THE M.S. TO THE Ph.D. PROGRAM

A student who is initially approved only for the M.S. program may request a change to the Ph.D. program by the following procedure.

1. The student should consult his/her research director and discuss a plan for fulfilling the Ph.D. Area Requirements if they have not already been met.

2. The following letters should be sent to the Chair of the Graduate Advising Committee (preceding the Final M.S. Oral Examination):

a. A letter from the student requesting the change.

b. A letter from the student's Graduate Committee.

These letters should address the plan and timing for fulfilling all Area Requirements and whether or not the M.S. degree will be completed.

The Graduate Committee will evaluate the overall student performance and may well request a research progress report. The Committee may recommend termination at the M.S. degree, admission to the Ph.D. program upon completion of the M.S. degree, direct admission to the Ph.D. program, or to delay the decision until the Final M.S. Oral examination.

The Graduate Advising Committee will process this request through the Department Chair and forward it to the faculty. The final decision will be made by a vote of the faculty at a regular faculty meeting.

In order to have reasonable assurance of continued financial support, second year graduate students planning to switch to the Ph.D. program should complete the procedures for changing programs no later than February 15. Those students who wish to switch after this date should send a written request for financial support to the Graduate Admissions Committee.

NOTE: These pages (C-24, C-25, C-25a-c) govern the policy on written exams and progress reports for students entering August 2009. They supercede C-24 and C-25 of the 2008 document that govern students who matriculate before that date. See Appendix A for previous document.

## DOCTORAL WRITTEN EXAMINATIONS

### I. Timing of the Examinations

Students entering with a B.S. degree should complete this requirement within 30 months of matriculation. Those entering with an M.S. degree should complete this requirement within 24 months of matriculation. Students who complete an M.S. degree in the Department of Chemistry and Biochemistry before entering the Ph.D. program should complete this requirement within 12 months of obtaining the M.S. degree.

### II. Guidelines for the Cumulative Examinations

(Analytical, Biochemistry, Chem Ed, Inorganic, Organic, Physical)

a. The examinations will be given at a common time each month starting in August and ending in May for a total of ten per academic year. An exam from each of the six divisions will be available at each exam session. Divisions will provide GAC with a schedule of examiners in August of each academic year, and GAC will provide that schedule to the students who are taking the Cumulative exams.

b. Students entering in August with a B.S. degree will begin taking the examinations in August or January of their second year in the program, as recommended by their committee at the First Year Conference (page C-19). (Students admitted in January will begin in January or August of their 2nd year). Students entering with an M.S. degree will start taking the examinations in August of their second year in the program (January if admitted in January).

c. Once started, the examinations will be written consecutively. If a student misses an examination, except for reasons beyond the student's control such as documented illness or a presentation at a professional meeting, the examination will be counted as a failure.

d. The student is required to pass 4 of 10 examinations. The four exams may be passed in any of the six divisions.

e. A student who fails five examinations consecutively has failed the doctoral written examination.

f. The exam period will be three hours, including a 5 minute period at the beginning of the period when students may select the exam they wish to write out of those available. The exam selected during the 5 minute period is the exam that the student will complete.

g. Individual examiners will provide GAC with a topic each month. The amount and type of information is left to the discretion of the examiner. GAC will announce the topic on Friday afternoon at 3:00 pm, and the exams will be administered on Monday evening from 6:00-9:00 pm.

h. The identity of students taking the exams will be via a numerical code to ensure unbiased grading. Each exam will be graded by the faculty member who wrote the exam. After exams are graded, decisions to pass or fail will be based on discussion within the division. The results (P/F) will be reported to GAC, which will maintain records for the exams and inform students of their progress. The results should be provided to GAC within one week of the exam, so the students get timely feedback on their progress.

i. After the exam, students should contact the division coordinator to obtain their exam materials, and should discuss performance with the individual examiner.

**III. What decisions should be made for the written doctoral examinations?**

a. The student either passes without any qualification or the student fails.

b. If the student does not pass the written doctoral examination, the student will write a M.S. thesis and leave the Department of Chemistry & Biochemistry. If the student already has a M.S. degree, the Graduate School determines whether another MS degree can be pursued.

# ANNUAL REPORTS

## I. Timing of the Annual Report

Each student is expected to submit an annual written report due no later than May 20 of the student's 2nd year in the program, and continuing for the duration of the student's graduate program.

## II. Purpose of the Annual Report

The Annual Report provides the student an opportunity to summarize progress towards their degree, and to reflect on their accomplishments and goals. The Report provides the Graduate Committee with an opportunity to evaluate those accomplishments. The Annual Report (1-2 pages) will comprise a summary of the work the student has accomplished during the past year, and the goals that the student has set for the upcoming year. The report should include a summary of required and elective classes that were completed, and of exams and other requirements that were fulfilled during the year. The student's advisor is encouraged to provide feedback as the student prepares the report.

## III. Who will receive the Annual Report?

The Report will go to the student's Graduate Committee.

## IV. What will be the follow-up to the Annual Report?

a. The committee members will read each report to determine if a student is making normal progress towards the degree. After reading a Report, any member of a Graduate Committee can request a committee meeting to discuss the student's progress. Within a week of distributing the report, the student will circulate a form (p. C-25d) to the Graduate Committee. By signing the form, each committee member verifies that they have read the report, and indicates whether they are requesting a meeting or not. The student will submit the completed form to GAC no later than May 30.

b. If a committee meeting is necessary, then the format would be similar to the First Year Conference. The committee meeting must be held before July 1 following the receipt of the Annual Report. The Graduate Committee members should meet immediately before the meeting to briefly discuss the scope of the meeting. The student will present a short oral description of accomplishments and plans. The student will then be asked questions related to their research and research goals. The meeting should be a collegial discussion rather than an exam. At the conclusion of the meeting, the student should leave and the Graduate Committee members should evaluate the direction, the pace, and the success of the student's work to date.



*Revised 2009*

## V. What decisions should be made?

The Graduate Committee should vote to determine whether the student is making acceptable progress towards the degree. If a majority (three out of four for a MS committee, four out of five for a PhD committee) agree that the student is making acceptable progress, there are no consequences to

the student. If it is determined that the student is not making acceptable progress, the Graduate Committee should agree on specific goals for the student to accomplish within the next 6 months.

VI. How are the student and GAC informed of the results?

The Graduate Committee should provide the student with oral feedback at the conclusion of the meeting. The Chair of the Graduate Committee should provide a written summary of the committee's evaluation to the student, to GAC, and to the Chair of the Department. For a student who is making acceptable progress, the written summary should be a brief record of the meeting and the Committee consensus on progress. For a student who is not making acceptable progress, the specific goals established by the Committee should be included in the written summary.

VII. What are the consequences of a determination of unacceptable progress?

A student whose progress is unacceptable will initially be reappointed, but should understand that their continuation in the program is contingent on making acceptable progress within the next 6 months. The student will submit another written report within 6 months of the committee meeting. The report will document progress towards the goals established at the committee meeting. As with the annual reports, the student will circulate a form that establishes each committee members opinion of the new report. There is no long term consequence for a student who improves their performance in accord with the Committee expectations. A student who does not document improved performance during the 6 months following the unsuccessful Annual Report will again meet with their Committee. At the second meeting the Committee may make a determination of unsatisfactory performance in the Graduate program. This determination will be sent to GAC and to the Department Chair, who will bring the report before the faculty at a faculty meeting. Determination of unsatisfactory performance may be used as the basis for a decision not to continue or reappoint the student (Governance C-17).

**GRADUATE STUDENT'S ANNUAL REPORT**
**Department of Chemistry and Biochemistry - Miami University**

Each member of the graduate committee should review the annual report and initial the form.

Name of Student _____
Last First Middle

Degree Program _____

Date of Entrance to Miami University _____

Division _____ Research Director _____

Cognate area (for Chem Ed students) _____

Date of Annual Report _____

| Committee Member | Annual Report Read | Committee Meeting Required Yes/No |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

## GUIDELINES--PRELIMINARY Ph.D. ORAL EXAMINATION

The Preliminary Ph.D. Oral Examination follows completion of the Doctoral written examinations. (See Section IV.A for exact timing). Students will be given a summary of the expectations of the exam and must meet with GAC to clarify the expectations. This meeting will be scheduled near the beginning of each semester for students who anticipate taking the oral examination that semester.

I. Purpose of the oral examination.

A. To assess the student's ability to identify an original, important problem in the scientific literature and design a series of experiments to solve the problem. While not an absolute requirement, the best proposals are typically hypothesis driven.

1. Successful completion of the examination will require the student to:

a. Explain the significance of the problem and why the proposed studies are justified.

b. Explain the rationale for the proposed experiments and how the experimental results will address the questions/hypothesis proposed. Design specific experiments to test the hypothesis.

c. Explain what results are anticipated if the hypothesis is correct or not correct.

d. Understand the concepts behind the experiments being used and the limitations of the techniques.

e. Explain control experiments to ensure that the results obtained will be valid.

Identify potential pitfalls; explain alternative approaches and/or possibilities if difficulties are encountered.

2. Other aspects considered in assessing the student might include:

a. Are reasonable and meaningful questions answered thoughtfully?
b. Enthusiasm and interest in chemistry and biochemistry.
c. Measure of promise.

B. To fulfill the Graduate School's requirement.

Comments: It is the Department belief that many of the aspects listed above are best determined in an oral examination with spontaneity being perhaps the most important feature of such examinations.

II. Formation of the Oral Examination Committee.

The Committee shall consist of five members of the graduate faculty. Since this committee is also expected to be the committee for the student's Ph.D. disssertation defense, the Graduate School rules regarding composition of the doctoral final examination committee will apply; however, in general, the student's Graduate Committee named at the time the Plan of Study was formulated will serve as the nucleus of this committee. The composition of the committee will be:

1. The research director. The director will be a member of the Committee but not its Chair.

2. The chair of the committee should be chosen from the student's research area (the chair cannot be the student's research director). The definition of the area of research is the responsibility of the research director and the student. Usually, area is defined as that division (physical, organic, etc.) in which the candidate takes the written part of the preliminary Ph.D. examination. Many research interests, however, are not restricted to just one of the classical divisions of chemistry and biochemistry and hence the examining committee should be of such a composition as to permit a meaningful, but not unreasonable, range of questions related to the area.

3. The Graduate School Representative (not a member of the Department of Chemistry and Biochemistry).

4. Two additional members of the Chemistry and Biochemistry faculty.

B. Selection of Committee Members.

1. The student and research director together will recommend a committee to the Department Chair.

2. Form D-1 must be filed by the research director via the Department Chair at least 10 days prior to the exam.

III. Who may attend the preliminary oral examination?

A. Any member of the graduate faculty may attend.

IV. Conduct of the preliminary oral examination.

A. The student should write an original research proposal not directly related to the student's or advisor's past or current research program. A one page abstract of the proposal should be submitted to the student's committee within three (3) months of passing the doctoral written examination. The student's committee should accept or reject the proposal topic within two weeks. If the topic is approved, no other feedback, written or oral, should be given by the committee. The oral exam should then be scheduled to take place within one month of the committee's approval. The student's committee, if it does not approve the topic for independence from the advisor's research, as described above in this section, can provide limited written feedback to the student in the form of a one page memo. The student should then submit an abstract for a new proposal within one month of the committee's decision.

B. The original research proposal will be no more than ten typewritten pages (not including diagrams or references) and will be submitted to the student's oral examination committee at least one week prior to the date of the oral examination. The proposal should include: (a) a description of the nature, objectives, and significance of the proposed research; (b) a research plan; (c) a one page budget which includes equipment (not available to chemistry and biochemistry graduate students at Miami University), chemicals and supplies; and (d) references.

C. The student is strongly encouraged to practice the exam with other graduate students and postdoctoral researchers.

D. It is suggested that the committee members meet immediately before the examination to discuss, among themselves, examination ground rules, number of questioning periods, and areas to be covered in the examination.

E. Before questions start, the student should give a 10 minute oral presentation to elaborate and defend the idea more fully (not repeat what is in the proposal).

F. Areas of knowledge to be covered in the defense of the original research proposal. The student will be responsible for the chemistry (physical, organic, inorganic, etc.) associated specifically with the original research proposal. Questions of a general nature (not closely related to the research proposal) should not be asked as they should have been covered in previous coursework and examinations.

G. The advisor is not permitted to participate in the exam process until near the end, after all other committee members have completed their questioning. At that time, the advisor's participation is limited to asking questions. The time limit is 90 minutes. The chair will ask the committee if there are any additional questions. If not, the student is asked to leave and a vote is taken.

V. What decisions should be made?

A. The student either passes without any qualification or the student fails.

B. If four of the five members of the examining committee approve, the examination is passed and the student becomes a candidate for the Ph.D. degree. This corresponds to successful completion of the "second stage" as defined by the Graduate School.

If the student fails, the committee will select one of several options:

1. Take another oral examination within the time specified by the committee but no longer than three months after the first oral examination. A retake of the exam is recommended if the student presents a poor proposal and/or fails to meet the

expectations of the exam. Before the exam is retaken, a memo describing the reasons for retaking the exam is submitted to the student. Students can meet with the committee to discuss general weaknesses of the performance. After the exam is retaken, the decision can only be pass or fail.

2. Write a M.S. thesis and then take another oral examination.

3. Write a M.S. thesis and leave the University.

4. Be denied further attempts to gain candidacy for the Ph.D. degree in Chemistry and Biochemistry at Miami University.

If the committee recommends that the student be denied candidacy for the Ph.D. degree, this decision must be reviewed by the entire Departmental faculty.

VI. How are the student, faculty, Chair of the Graduate Advising Committee and the Graduate School informed of the results?

A. The committee chair orally informs the student of the results of the examination.

B. If the student has passed the examination:

The committee chair promptly gives written confirmation to the student and sends a copy of the letter to the Chair of the Graduate Advising Committee who subsequently notifies the faculty.

C. If the student has failed the examination:

Except for the case where the committee recommendation is to deny the student further attempts to gain candidacy for the Ph.D. degree in Chemistry and Biochemistry, the committee chair gives to the student written confirmation of the selected option and sends a copy of the letter to the Chair of the Graduate Advising Committee who subsequently notifies the Departmental faculty.

When the committee recommends that the student be denied further attempts to gain candidacy for the Ph.D. degree in Chemistry and Biochemistry, the committee chair informs the student that the final decision will be reviewed by the entire Departmental faculty at the next regularly scheduled faculty meeting.

D. Form D-2 should be filed with the Graduate School at the time the final decision is reached (see Section V.B.).

## DISSERTATION PROSPECTUS
## (Research Conference)

At approximately six months prior to the Final Oral Examination, the Doctoral Committee will meet with the candidate for the purpose of reviewing the research completed and the intended research to be completed before the final defense of the dissertation. Copies of a memo confirming this date and format of the research conference will be sent by the committee chair to the candidate, Doctoral Committee members, Chair of the Graduate Advising Committee, and Department Chair at least one week prior to the conference. A copy of the memo should be posted at the same time in the Department of Chemistry and Biochemistry office for the purpose of informing the faculty of the forthcoming conference. A typical memo is shown below:

"This memo will confirm the date of your six month Doctoral Research Conference, a departmental requirement for the Ph.D. degree. The Research Conference will take place on _____ in Room 153 Hughes. You will be expected to review your research to date and to discuss with your committee your intended research and publication plans prior to completion of the thesis research problem. While there is no formal requirement regarding the length of the discussion, 30 minutes should be sufficient after which the committee might ask questions directly related to your thesis research. It is important to emphasize that this Research Conference is intended to be a cooperative session in which the student's research progress will be reviewed. It is not an examination".

The candidate is expected to organize and prepare a reasonable presentation of the completed and intended research. Audio-Visual and other materials may be employed to facilitate the discussion. Following successful completion of the meeting, the Chair of the Doctoral Committee will advise the Graduate Advising Committee by memo that the Dissertation Prospectus has been completed.

## FINAL DEFENSE OF THE Ph.D. DISSERTATION

The final oral is intended to measure the scope and quality of the student's completed research and to determine how well the candidate understands the completed work.

The candidate is required to write a dissertation on the research he/she has carried out under the direction of his/her research supervisor. The candidate will defend this dissertation at the final oral examination. A printed or electronic copy of the dissertation in approximately final form shall be placed in the hands of each committee member at least 10 days before the date of the final examination. Signature pages and submission must comply with Graduate School requirements. It is the student's and faculty director's responsibility to see that a corrected dissertation is submitted. The examination is open to the public. As a minimum, it should be announced in the manner of a departmental seminar.

Note: The final Ph.D. oral examination may not be scheduled until at least one manuscript based on the student's doctoral research is submitted for publication.

The committee which administered the preliminary oral examination will serve as the Final Oral Examining Committee. Form D-3 should be filed with the Graduate School via the Department Chair at least 10 days prior to the examination.

The student should begin by presenting a formal departmental seminar on the research. Committee members and other faculty will then have the opportunity to ask questions at the end of the seminar. Subsequently, the Committee will go into executive session with the candidate where they will continue the examination. The executive session will last no more than 60 minutes. A vote of at least 4 to 1 is required to pass. The Committee Chair will orally inform the candidate of the results of the examination. The Committee Chair shall inform, in writing, the Chair of the Graduate Advising Committee and the Department Chair of the examination results. The research director will file the appropriate form (D-4) with the Graduate School and provide copies to the Chair of the Graduate Advising Committee.

Form D-5 should be signed by the members of the committee for inclusion in the dissertation. Please note: University Microfilms International will no longer accept abstracts of dissertations which exceed 350 words.

An electronic copy of the dissertation must be submitted to the Miami University Libraries.

## CRITERIA FOR THE SELECTION OF TEACHING ASSOCIATES FROM THE GROUP OF ELIGIBLE GRADUATE ASSISTANTS

The criteria, without regard to priority, are as follows:

1. Length of time in the Ph.D. program.
2. Graduate grade point average (at Miami University).
3. Demonstrated research ability.
4. Performance as a Graduate Assistant.
5. Overall graduate performance (seminars, oral presentations, etc.).

## SELECTION OF A DISSERTATION SCHOLAR

The primary criteria, without regard to priority, are as follows:

1. The Ph.D. degree is expected within one year of appointment.
2. Satisfactory completion of the preliminary Ph.D. oral examination.
3. Demonstrated research productivity.
4. Grade point average.

A secondary criterion is:

Overall graduate performance.

## GRIEVANCE PROCEDURE CONCERNING THE SERVICE ASSIGNMENT OF GRADUATE AWARD HOLDERS*

It is the policy of Miami University that graduate assistants will work an average of eighteen to twenty hours a week and that modified graduate assistants will work an average of eight hours a week. Students who hold residence hall assistantships and must determine their own time schedules will, at times, work more than twenty hours a week. However, the Office of Residence Life recognizes that its award holders will place their highest priority on their academic performance. The work assignments will have a clear educational benefit and will be consistent with the awardee's professional aspirations. Any student who feels that he or she is being asked to work more than the expected hours or whose work assignment consists of a disproportionate amount of clerical and administrative tasks and has discussed his or her concerns with the appropriate director of graduate studies or supervisor and has availed himself or herself of the appropriate departmental grievance procedures without satisfaction should approach the appropriate divisional dean to request a review of the work assignment. If the award holder is not satisfied by the response of the divisional dean, the award holder should meet with the Associate Provost and Graduate Dean, who will first discuss the problem with the divisional dean and the supervisor of the graduate student. If the Associate Provost and Graduate Dean is unable to resolve the problem, he or she will appoint an ad hoc subcommittee of Graduate Council to adjudicate the problem. The decision of the ad hoc subcommittee will be binding on the student and the department or program involved, and there will be no further appeal.

* Official Miami University policy approved March 8, 1993.

Department of Chemistry and Biochemistry

Miami University

# DEPARTMENTAL

# GOVERNANCE AND PROCEDURES

## D. Undergraduate Student

## Governance and Procedures

## DEPARTMENTAL UNDERGRADUATE STUDENT RECORDS

Advising information is available on bannerweb.muohio.edu for each student and can be accessed by the student and his/her advisor.

Chemistry and Biochemistry faculty may, upon request and by their signature, inspect the advising folder of any chemistry/biochemistry major. See the student's advisor.

## DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY LABORATORY FEE

A $25 non-refundable fee (subject to change) is charged to the account of each undergraduate student enrolled in each chemistry/biochemistry laboratory course on the Oxford Campus. In addition, each incidence of breakage or loss of $20 or more will be charged to the student separately.

## TUTORS FOR UNDERGRADUATE STUDENTS IN CHEMISTRY AND BIOCHEMISTRY

Tutors for students enrolled in undergraduate chemistry and biochemistry courses are assigned by the Office of Learning Assistance. That office will handle all contacts between tutors and tutees. No instructor referral is required. A potential tutor must be recommended by a faculty member and such recommendations must be forwarded to the Office of Learning Assistance. To register online, go to www.units.muohio.edu/saf/lrn/tap.shtml. See Page D-3 for personal reference form.

## STUDENT ACADEMIC GRIEVANCE PROCEDURES

An undergraduate student with an academic grievance who fails to resolve the difficulty with the instructor(s) involved should schedule a conference with the Chair of the Department, who may resolve the issue or may recommend an application to the Department of Chemistry and Biochemistry Academic Grievance Committee. This committee consists of the Chief Departmental Advisor (CDA) or his designee and two advisors appointed by the CDA or his designee who are not directly involved in the grievance. Once the student has submitted a written statement to the CDA, the Committee will solicit a written response from the instructor(s) involved and will make its decision within two weeks of the submission of the student grievance.

**MIAMI UNIVERSITY**

**BERNARD B. RINELLA, JR.**
**LEARNING ASSISTANCE CENTER**
**14 CAMPUS AVENUE BUILDING**

**APPLICANT'S NAME:** _____

**SUBJECT AREA TO TUTOR:** _____

Please indicate your preference for access to this recommendation and sign below.
I _____ wish _____ do not wish to waive the right to inspect the contents of this reference.

Student Signature: _____ Date: _____

## PERSONAL/PAST EMPLOYER RECOMMENDATION

This reference should be completed by a past employer or another adult who can address the applicant's work habits, interpersonal skills, etc. A reference from a fellow undergraduate student will not be accepted.

The following student, _____, has applied for a tutoring position with our office. Statements concerning the capacity in which you have known the student, the length of time you have known him/her, the individual's work ability, personal qualities and your general evaluation of the student and his/her potential are of most value. Please return to the address below. (Use back of paper if needed.)

Name: _____ Date: _____

Position/Place of Business: _____

Address: _____

Please mail to: Bernard B. Rinella, Jr.
Learning Assistance Center
Tutorial Assistance Program
14 Campus Avenue Building
Miami University
Oxford, OH 45056

## STUDENT ACADEMIC GRIEVANCE PROCEDURES

A student has the right to question a grade he or she received and/or to charge an instructor with a violation of the Statement of Good Teaching Practices as outlined in the Student Handbook. These are serious matters and deserve careful consideration. Complaints may be handled via an informal process or through a formal grievances review.

### Informal Resolution

A student is encouraged to first confer with the instructor and seek a resolution. If the student is unwilling to confer with the instructor or after conferring, is unable to resolve a difficulty to the student's satisfaction, the student may file a written complaint with the Chair. The student must submit to the Chair a written, dated, and signed complaint stating the name of the instructor, the course, a precise description of the nature of the complaint including, as appropriate, the provision(s) of the Good Teaching Practices alleged to have been violated, and a brief description of the incident(s) giving rise to the complaint, any supporting documents and the remedy requested.

If the Chair is the instructor, the complaint should be filed with the Chief Departmental Advisor. Anonymous of unsigned complaints will be disregarded and destroyed. Written complaints will be filed in the departmental student complaint file.

Upon receipt of a complaint, the Chair will share the complaint with the instructor and give the instructor an opportunity to submit a written response to the complaint or explain the circumstances as viewed by the instructor. If submitted, the instructor's written response is also to be placed in the departmental student complaint file.

The Chair may then proceed to attempt to resolve the complaint. The student who files a complaint is entitled to a copy of the instructor's response and to know what actions were taken by the Chair in response to his or her complaint.

### Formal Grievance

In the event the student elects to pursue an informal resolution, is not satisfied with the Chair's informal resolution or the Chair determines that he or she is unable to resolve the matter informally, the student may challenge a grade and/or charge an instructor with a violation of Good Teaching Practices through this formal grievance procedure.

The written complaint and any written response from the instructor submitted as part of the information resolution process form the basis for the grievance. If the informal resolution process has not been engaged, the student must submit to the Chair a written, dated, and signed complaint stating the name of the instructor, the course, a precise description of the nature of the complaint including, as appropriate, the provision(s) of the Good Teaching Practices alleged to have been violated, and a brief description of the incident(s) giving rise to the grievance, any supporting documents and the remedy requested. The instructor may elect to submit a written response.



The Chair shall appoint a Committee of faculty members including the Chief Departmental Advisor (CDA) or his designee and two advisors appointed by the CDA (or his designee) who are not directly involved in the grievance, to hear the grievance and name one of its members as

Chair. The Chair will provide the grievance committee with copies of the student's complaint and the instructor's response.

Each party shall have the right to call a reasonable number of witnesses to support his or her position. Witnesses shall be present only when their testimony is being given. Each party may bring an advisor to the proceedings. However, representation by legal counsel is not permitted. Both the student and the instructor shall have the right to question each other and inquire into any testimony given at the hearing. The Committee may receive any information it believes will be helpful.

Within seven (7) calendar days after the close of the hearing in the matter, the Hearing Committee shall present its recommendations in writing to the Chair, the student, and the instructor.

If the student asks only for a grade review, the review of the grade will be handled within the department and the final decision will be made according to the departmental procedures. A student may appeal a departmental decision on a charge of a violation of Good Teaching Practices.

**Appeal**

If the student wishes to appeal the decision beyond the departmental level, the student must follow the procedures outlined in the Academic Grievance Policy found in the Student Handbook. A divisional grievance committee will not adjudicate a violation of Good Teaching Practices unless the written complaint is lodged before 5 p.m. Friday of the eleventh week of the fall or spring semester that follows the term in which the alleged violation occurred.

An undergraduate student with an academic grievance who fails to resolve the difficulty with the instructor(s) involved should schedule a conference with the Chair of the Department, who may resolve the issue or may recommend an application to the Department of Chemistry and Biochemistry Academic Grievance Committee. This committee consists of the Chief Departmental Advisor (CDA) or his designee and two advisors appointed by the CDA or his designee who are not directly involved in the grievance. Once the student has submitted a written statement to the CDA, the Committee will solicit a written response from the instructor(s) involved and will make its decision within two weeks of the submission of the student grievance.

## DEPARTMENTAL HONORS IN CHEMISTRY AND BIOCHEMISTRY

I. Admission to the Program

A. Chemistry/Biochemistry majors with at least 25 hours of Chemistry/Biochemistry courses and at least a 3.50 Departmental GPA may apply for admission to the Departmental Honors program.

B. Application for admission to the Departmental Honors program **should be made in the term preceding the applicant's final year**.

C. Admission to the program is granted jointly by the Honors and Awards Committee and the applicant's faculty mentor (the faculty member directing the applicant's CHM 480 project).

II. Requirements of the Program

A. Candidates must register for a minimum of two terms of research, including at least one term of CHM 480. Enrollment in research courses requires independent study approval by the **faculty mentor** and the **Chair of the Department**. Grading of this course is the responsibility of the faculty mentor. An S grade may be assigned for satisfactory completion of the first semester, and final letter grades for CHM 480 will be assigned on completion of the program.

B. Candidates must maintain at least a 3.50 Chemistry/Biochemistry GPA to be eligible for Departmental Honors.

C. Candidates must submit to the Honors and Awards Committee a written report summarizing the work accomplished in CHM 480. This report is to be submitted three weeks before graduation.

III. Coordination of the Program

A. The Chair of the Honors and Awards Committee will also be the Chemistry/ Biochemistry Honors Program Coordinator.

B. The Coordinator will assume responsibility for publicity, recruitment, general administration and faculty awareness of students involved in the program.



*Revised February 1999*

## COLLEGE OF ARTS AND SCIENCE CATALOG DESCRIPTION
## (quoted from the current University Catalog)

### Departmental Honors

The College 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 3.5 in the major in which departmental honors work is desired. You also 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.

Students who qualify, register for CHM 480: departmental honors (1-6, maximum of 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. Approvals of the department chair or program director and the faculty mentor of your honors work are required for registration.

Expectations are rigorous and demanding, but the nature of projects vary. 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 Senior Directed Study 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.

## DEPARTMENTAL RELATIONSHIP WITH THE GENERAL HONORS PROGRAM

The Department of Chemistry and Biochemistry offers only infrequently specific courses for the University Honors Program. The University's Honors Program requires completion of a Departmental Honors Program (or equivalent). While Departmental Honors in Chemistry/Biochemistry may be (and has been) used for the University's Honors Program, it is likely that only B.S. Chemistry/Biochemistry majors will be successful in achieving Departmental Honors. A.B. Chemistry majors have used CHM 490 in partial fulfillment of University Honors Program Requirements.

## INDEPENDENT READING (CHM 177, 277, 377 AND 477) AND UNDERGRADUATE RESEARCH (CHM 490)

These courses are open to all students with a 2.3 or better Chemistry/Biochemistry GPA. A student who wishes to take one of these courses makes arrangements with the individual instructor. The instructor oversees an individual project, the form and size of which is mutually agreeable to instructor and student. Initially students register for these courses on a credit/no credit basis. However, undergraduate students may register for a maximum of four hours of undergraduate research for a letter grade. Enrollment in the graded research requires prior undergraduate research for at least one semester on a credit/no credit basis with the research supervisor assigning the grade. Approval of the entry into the graded research course requires documentation of an agreement between the research mentor and the student on the grading criteria/research expectations.

## Program Modifications for Students with Unusual Backgrounds

As Miami University continues to attract students with diverse backgrounds, students with an unusual level of prior experience may choose to attend Miami University as undergraduates. Our regular list of requirements and plans of study may not represent the optimum sequence of courses for such students. Upon petition, the Department, through the CDA, can implement alternatives:

1. For general chemistry background, the AP exams and the CLEP exams will serve as the mechanism for gaining credit for such experience. No other mechanisms are deemed necessary.

2. Transfer articulation policies are in place for coursework taken elsewhere. No other mechanisms are deemed necessary.

3. The departmental CDA is able to make DARS notations and to allow course substitutions for regular requirements.

4. Advising for graduate students is already flexible enough to allow an individualized plan of study, so this policy applies to undergraduate coursework.

When a student presents documentation that leads the CDA to believe the student may have already mastered the material in what will be a required course, the CDA will refer the matter to the division administering that required course. The division will, at its discretion, administer an examination allowing the student to demonstrate current mastery of the material in the course. Normally, such an examination will be equivalent to a course final exam or a graduate entrance exam. Provided that the student performs at a satisfactory level (as determined by the division), the division will recommend a higher level course (normally one with the original course as a prerequisite) that can serve as a substitute for the required course. Upon completion of the higher level course, the CDA will execute a DARS notation allowing the upper level course to fulfill the requirement.

The departmental CDA has DARS control over the requirements for the majors in the department. If the student under consideration wishes to use the upper level course for another major or for Miami Plan requirements, the CDA can inform the advisors in the other unit of our internal policy, but the decision to allow a DARS substitution rests with the department of major (or the Office of Liberal Education).

Department of Chemistry and Biochemistry

Miami University

# DEPARTMENTAL

# GOVERNANCE AND PROCEDURES

## E. Safety Guidelines

## and

## Storeroom Procedures



February 1999

# SAFETY GUIDELINES
# DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY
# MIAMI UNIVERSITY

The Miami University Department of Chemistry and Biochemistry accepts the safety guidelines included in the booklet, "Safety in Academic Chemistry Laboratories", published by the American Chemical Society, C. 1990.

Some common safety problems are covered by the following guidelines:

1. Experiments in instructional and research laboratories must be designed with safety considerations in mind.

2. Eye protection is required in all laboratories and where chemicals are stored and handled. This is consistent with Ohio Law, Section 3313.643 of the Ohio Revised Code. Splash resistant chemical goggles are the only protective devices adequate for general eye protection. The use of contact lenses in the laboratory or where chemicals are stored and handled is strongly discouraged.

3. Eating, drinking or smoking is not permitted in laboratories, service areas or the storeroom.

4. Bare feet, sandals, or open-toed shoes are not permitted in the chemistry laboratories.

5. Persons with long hair, baggy clothing, etc., must exercise extreme caution in laboratories.

6. Glassware must not be used as ice-scoops in the ice machines.

7. Solid chemicals, glass and paper must be disposed of in appropriately labeled containers.

8. Potentially dangerous liquids must be treated before discharge into the sewer system.

**Emergency Numbers**:

| | |
|---|---|
| Emergency (Medical, Fire, Police) | 911 |
| University Police | 9-2222 |
| Campus Health Service | 9-3000 |
| Manager of Laboratories & Administrative Operations | 9-2816 |
| Oxford Fire Department (non-emergency #) | 88-523-4321 |
| Oxford Police Department (non-emergency #) | 88-523-4321 |

February 1999

E-2

# SAFETY INSPECTION REPORT

Room _____ Occupant

Professor _____ Date

CLASSIFICATION: RESEARCH, TEACHING, CLASSROOM, OFFICE, STOCKROOM, SHOP

For a safer working area, the following deficiencies should be corrected:

**GENERAL**

**COMMENTS**

_____ Housekeeping: good fair poor
_____ no fire extinguisher
_____ no first aid kit (at least one per research group)
_____ egress blocked
_____ door windows covered
_____ vents blocked
_____ protective equipment not in use
_____ hoods cannot be shut
_____ tripping hazards; open drawers or doors, hoses and wires, equipment, other
_____ defrost refrigerator
_____ clutter around sinks

**EQUIPMENT**

_____ no vacuum pump belt guards
_____ vacuum desiccators not taped
_____ hoses not clamped
_____ frayed wires
_____ overloaded sockets
_____ equipment not grounded
_____ excess flammable material

**REAGENTS**

_____ crowded shelves; wall, above bench, refrigerator
_____ excessive amounts of volatile solvents
_____ corrosives not within inert trays
_____ co-storage of incompatible reagents
_____ liquids stored above eye level
_____ corroded or defective containers
_____ Hg exposed to air
_____ gas cylinders improperly secured

**OTHER COMMENTS**

A. _____

B. _____

C. _____

Lab condition compared to last inspection: improved same worse

**SAFETY**
**Department of Chemistry and Biochemistry**
**Miami University**

## EYE PROTECTION

Eye protection is required in all laboratories and where chemicals are stored and handled. This is consistent with Ohio Law, Section 3313.643 of the Ohio Revised Code. Splash resistant chemical goggles are the only protective devices adequate for general eye protection. Safety glasses with side shields may be used if the threat is other than liquid splash.

## CONTACT LENSES

The use of contact lenses in the laboratory or where chemicals are stored and/or handled is strongly discouraged.

It has been argued that contact lenses offer protection from damage by particles and chemicals. Nothing could be more erroneous. An eye that has received a chemical splash should be irrigated with water until the material has been completely washed out. This usually takes about 15 minutes. If a contact lens is in the affected eye, the chemical may be drawn under the lens by capillary attraction where it cannot be reached by water washing. The lens must be removed to permit effective washing. Under the traumatic conditions with pain and fear as impediments, it may be impossible for the victim or anyone else to remove the lens.

I do/do not (circle one) plan to wear contact lenses in the laboratory.

I have read and understand the information provided above.

_____

Student's Signature Date

## MEDICAL INFORMATION

The Department of Chemistry and Biochemistry faculty/staff should be aware of the following information concerning my medical/health status:

_____

_____

_____

# EMERGENCY PROCEDURES

All incidents resulting in an injury, in property damage, or in a fire must be reported promptly to the instructor in charge, to the appropriate supervisor, to the Manager of Laboratories and Administrative Operations, and the Environmental Health & Safety Office (injuries only).

## IN CASE OF INJURY

1. In case of injury, promptly render first aid, doing only the minimum necessary to prevent more serious injury to the patient.

2. If the incident occurs in an instructional laboratory, help may be summoned from the service area.

3. If the injury appears serious, telephone University Police (9-2222) and give the following details:

    a. Identify yourself.
    b. What has happened and where the patient is located.
        i. building
        ii. room number
    c. Is a stretcher necessary?
    d. Is stretcher help available?

e. If a hazardous chemical is involved, give the name of substance in writing to the University Police Officer for delivery to emergency room supervisor.

4. For minor injuries, encourage the injured to go to Student Health Service.

5. Report the incident promptly to your supervisor and also give a completed Incident Report Form to the Manager of Laboratories, who will keep it on file.

## IN CASE OF FIRE:

1. If small and easily extinguished, use the appropriate fire extinguisher.

2. Upon learning of a fire (big or difficult to extinguish) immediately pull the fire alarm--if it is not already sounding. Fire alarms are located at every stairwell and exit.

a. When the fire alarm sounds, the University Police should **immediately** be called by
    Departmental Office staff, and/or
    Person sounding alarm, and/or
    Library Personnel

Then proceed with an orderly evacuation.  If possible, meet the University Police and/or the Fire Department outside to explain the nature and location of the fire.

b. When the fire alarm sounds in Hughes Laboratories, the building should be evacuated **immediately**. Storeroom personnel should close the doors to their labs and check the hallways adjacent to their labs for major fires (by looking up and down the halls only)--or other emergencies--as they exit. Faculty and teaching assistants should close the doors to their labs and/or offices as they leave the building. As everyone leaves he/she should advise any persons seen lagging to also leave the building.

c. If the alarm does not work when it is pulled, the person knowing about the fire should call the Departmental Office (9-2813) at once (if during school hours) or call a faculty member and they should proceed at once to notify other people in the building by knocking on and opening all office and lab doors. As soon as each person is notified, they also help to notify others in the building, taking the next floor (if possible) and/or the other hallway. No one should stay in the building more than 5 minutes after learning about a major fire or emergency. Be sure that the Instrumentation Lab (9-7216), Environmental Health and Safety (9-2829), and departments other than Chemistry and Biochemistry housed in the basement are notified. University Police should be notified as soon as possible.

d. Everyone should assemble on the south side of the oval park (across Bishop Circle drive) and ascertain if all people known to be in the building have evacuated. If not, the fire department and University Police should be notified of the problem.

e. Once the incident has been reported, University Police should be contacted as soon as possible with additional details, background, etc.

f. No one should re-enter the building until a representative of the University Police indicates that it is safe to do so.

g. Finally, prepare a report of the fire on the Incident Report Form and give it to the Manager of Laboratories. All fires must be reported to University Police regardless of size.

**IN CASE OF OTHER INCIDENTS (gas leaks, floods, etc.)**

1. If the incident occurs in a research laboratory, notify the faculty member whose name and phone number are on the door of the laboratory.

2. Notify University Police.

3. Notify the Director of Environment Health & Safety (9-2829).

4. Meet University Police and the Director of Environmental Health & Safety to inform them of the circumstances of the incident.

5. Prepare a written report on the Incident Report Form and give it to the Manager of Laboratories.

## INCIDENT REPORT

Name of Injured Person _____

Lab Course & Section (if applicable) _____

Supervising Faculty _____

Date & Time of Incident _____

Room number and location within room where incident occurred:

_____

Activity of injured person at time of incident: _____

_____

Nature/cause of incident: _____

_____

Nature of resulting injury: _____

Condition of injured person (coherent, faint, etc.):

Name(s) of other person(s) injured in same incident (file a separate Incident Report Form for each individual listed):

### Person Filing Report

Name _____ Title _____

Office Number _____ Phone _____

How did you learn of this incident? _____

What did you do in response to this incident?

Other important information regarding this incident?

Signature of person filing: _____ Date/Time _____

## THE CHEMISTRY AND BIOCHEMISTRY STOREROOM

| | |
|---|---|
| Dee Dee Bear | Manager of Laboratories and Administrative Operations (Rm. 162) |
| Kathleen Brown | Storeroom Manager (Rm. 82) |
| TBA | First Floor Service Area (Rm. 170) |
| Bryan McLean | Second Floor Service Area (Rm. 270) |

I. The Storeroom (Room 82)

A. General Policies

1. Equipment and supplies for research purposes in chemistry (and other departments) can be obtained only through the storeroom (Room 82). In addition, equipment and supplies for the service areas can be obtained only through the storeroom.

2. Normal hours of operation for the storeroom are posted on the door of Room 82. Occasionally, the storeroom may be closed during these hours. In that case, the Storeroom Manager or the Manager of Laboratories and Administrative Operations may be contacted for emergency service. If necessary, one of the other storekeepers may be contacted.

B. Check-out Procedure

1. Any item taken from the storeroom must be signed out using the requisition form.

2. A copy of the requisition form is included as Exhibit Y. The following information is required:

a. Name of research advisor or instructor.
b. Student's name, if applicable.
c. Course number, if applicable.
d. Account to be charged, if other than research advisor's allocation or a course.
e. Date.
f. Laboratory room number where item will be taken (if for research; this helps the storeroom locate items at a later date).
g. Quantity taken.
h. Vendor or manufacturer and catalog number, if possible; (chemicals usually have the catalog number on the label).
i. Detailed description of item.

***Revised August 2009***

3. Chemicals--In many cases the storeroom stocks chemicals in large containers. If you need less, the storeroom personnel will assist in providing the desired amount of chemicals.

4. Locked items--Syringes and needles, chemicals listed as carcinogens, drug precursors, ethyl alcohol, explosives, and certain high-cost items can be obtained only with the written approval of the research advisor.

5. Solvents--Many solvents are purchased in large containers and dispensed in 1-gallon bottles. When empty, these bottles are to be returned to the storeroom for refilling.

6. Ethyl alcohol, tax free--Ethyl alcohol is dispensed in numbered bottles. To get a refill, the empty numbered bottle must be returned to the storeroom for credit. Written approval of the research advisor and the Storeroom Manager are required to obtain this reagent.

7. Gases--

a. Common gases such as nitrogen, oxygen, and helium are available from the storeroom. See the storeroom manager for the ordering schedule for these and other specialty gases.

b. If one of the above gases is needed for a long period of time, it may be necessary for the Department to lease a cylinder. This lease must be approved by the Manager of Laboratories.

c. An empty cylinder must be returned to the storeroom in order to get a replacement.

d. Other gases not in stock can be purchased. The monthly demurrage charge on the cylinders necessitates a prompt return of empty cylinders.

e. Gas cylinder carts, wrenches, etc., should be returned immediately after use to the storeroom.

f. All gas cylinders must be clamped. Clamps are available in the storeroom.

g. The purchase of regulators is the responsibility of the research advisor.

C. Management of Equipment Stored in the Service Area

Faculty may store small unused equipment temporarily in the basement service area. When an item is placed in storage, the date and the owner will be recorded by the service area. The item may be retrieved by its owner at any time. Other faculty members may retrieve an item for use with permission of the owner. After an item has been in storage for 3 years, it must be removed from the service area.

On an annual basis, the storeroom manager will provide the entire faculty with a list of all equipment that is in storage. Any item that has been in storage for 3 years must be removed. The owner of any item will have first priority for retrieving it. If the owner of a piece of equipment chooses not to retrieve it, other faculty may claim it. Any unclaimed equipment will be sent to auction.

D. Management of Chemical Inventory in the Storeroom

The computerized storeroom inventory will include two categories of chemicals, "must stock" and "free use". Each container of chemical will be inventoried by name, amount, date of purchase, and date of last use.

1. Must-stock Chemicals: The Supplies and Equipment Committee will work with the Department Manager to maintain a list of chemicals that must always be in stock. These chemicals are required for instruction or are regularly used in large quantities in research laboratories. When the storeroom inventory of these chemicals falls below a critical level, more will be ordered. These chemicals will be stored in unopened containers. The user must check out the entire container and will be charged for the entire container.

2. Free-use Chemicals: When a research laboratory or instructional lab returns any chemical to the storeroom because it is no longer needed, the chemical is re-inventoried but is classified as a "free use" chemical. The date of return is recorded in the inventory. Researchers may check out entire containers or smaller quantities of these "free use" chemicals at no charge. Changes in quantity and date of use are indicated on the inventory.

Any "free use" chemical that has remained in the storeroom **unused** for 5 years is a candidate for disposal. On an annual basis, the storeroom manager will provide the entire faculty with a list of "free use" chemicals that have not been used for 5 years. Any faculty member may identify specific chemicals from this list that should be retained for at least 5 more years, subject to review by the Safety and Waste Disposal Committee. These compounds must be chemically stable and pose no special hazards. All items on the 5-year list that are not

identified for retention by individual faculty will be removed from inventory for disposal.

II. The Service Areas (Rooms 170, 270, 370)

A. General Policies

1. The purpose of the service areas is to service the instructional laboratories.

2. Equipment and supplies for the service areas will be obtained through the storeroom by normal procedures.

3. The first and second floor service areas are on an alarm system. Faculty and staff should know how to disarm and rearm the system if they must enter during closed hours.

4. As a general policy there should be no more than a one-semester supply of necessary chemicals in the service areas.

5. Certain pieces of equipment ordinarily used in the instructional laboratories may be borrowed from the storeroom by the usual procedure when said equipment is not required for instruction. The borrowing of these items is subject to the following constraints:

a. The loan must be approved by the Manager of Laboratories and Administrative Operations, and the Storeroom Manager will be the point-of-contact.

b. Such items are subject to recall by the storeroom at any date.

c. Such items must be returned by a specific date prior to the start of the next term for which they are to be used in the instructional laboratory.

d. The equipment is to be maintained in proper working condition. Should the equipment malfunction it must be returned to the storeroom immediately.

e. These items should be returned promptly to the storeroom when not in use.

III. Instructional Laboratories

A. General Policies

1. Faculty members are responsible for providing service area personnel with written instructions regarding experiments to be performed, including a list of all chemicals, materials, and commonly shared equipment needed. These instructions must be provided well in advance.

2. Faculty members are responsible for informing the Manager of Laboratories in a timely fashion of all equipment, chemicals, and supplies to be used in their instructional laboratories.

3. Faculty members are responsible for cost accounting of individual experiments.

4. Neither service area nor custodial personnel are responsible for maintaining clean bench tops, hoods, and sinks in the instructional laboratories.

B. Check-in and Check-out Procedure

Faculty members will instruct Graduate Assistants regarding check-in and check-out procedures. Since Graduate Assistants have ultimate responsibility in check-out procedures, it is important that they realize the significance of the check-out list. An instructional locker with a full complement of equipment makes the check-in procedure trivial for the next term and prevents running out of on-hand stock. In addition, return of special equipment not on the check-in list ensures availability for others.

**Req. #_____CHEMISTRY AND BIOCHEMISTRY STOREROOM REQUISITION**

**Account to be charged _____ Date _____**
**Professor/Student/Course**

**Received or Requested by _____ Research Lab**
**Professor/Student/Course**

| | | | Storeroom Use Only | | | |
|---|---|---|---|---|---|---|
| Quantity | Catalogue # | Full Item Description | LB | OB | OO | |
| | | | | | | |

# GUIDELINES FOR THE DISPOSAL OF HAZARDOUS WASTE IN HUGHES LABORATORIES

1. Separate hazardous waste containers for organic solvents and for halogenated solvents are provided by the Environmental Health & Safety Office (EHSO). When a container is full, the researcher or research advisor calls EHSO (9-2829), who will pick up the full container and leave an empty container.

2. A daily log containing the volume (in milliliters) and identity of each waste placed in the container must be kept and presented to EHSO when the filled container is picked up.

3. Any substance which is highly reactive should be rendered essentially unreactive by the researcher or research advisor before the material is transferred to the waste container.

4. Organic solvents may be presented as mixtures but halogenated solvents must be kept separate from flammable solvents.

5. Heavy metal waste must be presented to EHSO personnel as a solid, <u>not as a solution.</u> Faculty in charge of instructional laboratories are responsible for the evaporation of solutions of heavy metals.

6. Heavy metal waste should be packaged in a plastic-bag-lined box for pick-up by EHSO. Whenever possible, the composition of the waste (mass in grams of each metal ion) should be listed. A separate container should be used for waste that contains mercury. Glassware and other solid materials permanently contaminated with heavy metals should also be placed in plastic bags for pick-up by EHSO.

7. Faculty are requested to evaluate the cost/benefit ratio of experiments which require the use of heavy metals.

8. Radioactive wastes are handled exclusively by the EHSO personnel, and they should be contacted directly.

## HUGHES LABORATORIES SECURITY

All holders of keys to Hughes Laboratories are charged with the responsibility for the security of the building, particularly when outside doors are locked and the building is closed to unauthorized traffic. The University Police should be informed of any irregularities or open doors during the closed hours, particularly unlocked entry doors and doorways connecting the Science Library with Hughes Laboratories. The following signs are placed on the entry doors to the Laboratory from the Science Library and from the open basement areas.

ATTENTION!!!

Entry Into Hughes Beyond This Point

Requires a Late Night Pass

Hughes is Closed After

10:00 p.m. Monday - Thursday

6:00 p.m. Friday

All Day Saturday & Sunday

Persons without Passes

Will Be Escorted From the Building

**Department of Chemistry and Biochemistry - Miami University**
**Graduate Student Check-Out Sheet**

Name

Forwarding
Address

Degree Program

Research Advisor

Employment Status

Title of Next Position

Employers Name & Address

Date of Final Oral
Examination

---

**Chemistry Department Check-out/Departure Approval**

Equipment/Supplies
Returned to Storeroom _____ ____
Storeroom Manager Date

Keys Returned _____ ____
Manager of Laboratories & Administrative Date
Operations/Senior Administrative Secretary

Thesis Approved
Research Notebooks Filed
Final Papers Delivered to
Graduate School
Final Lab Check-out _____ ____
Research Advisor Date

"Farewell" _____ ____
Department Chair Date
(to be filed in Candidate's folder)