

POLICIES FOR THE MOLECULAR BIOLOGY Ph.D. PROGRAM UNIVERSITY OF WYOMING

Effective for graduate students entering in Fall 2009 or later
This Document is 8 pages long.

Text updated: August 20, 2009 by David Liberles.
Text updated Feb 15, 2012 by Pam Langer add MOLB 5010 Advanced
Laboratory Research in Molecular Biology as the research lab course in which
students should enroll starting Fall 2012 (policies were not changed)

INTRODUCTION

The purpose of the Graduate Program in the Department of Molecular Biology is to provide the student with a quality education and to aid the development of the student's ability to perform independent, original research. Individual Graduate Faculty of the Department of Molecular Biology, consisting of all tenure-track, joint, and adjunct faculty, have the responsibility of recruiting and obtaining financial support for graduate students. The Graduate Program Committee, hereafter "program committee", has the responsibility of overseeing the admissions process initiated by the host PI and overseeing student progress.

The purpose of the Policies for the Graduate Programs, hereafter referred to as the "Policies," is to list the Requirements and Responsibilities of the Graduate Students and the Faculty involved in graduate education in the Department of Molecular Biology. We feel it is in the best interest of the students and the faculty associated with the Graduate Program that their responsibilities are defined so that they are aware of the requirements and deadlines to be met throughout their course of study. At the same time this set of rules is not inordinately rigid; therefore there is also a defined means by which special situations may be accommodated (addressed below under "Exceptions to Policies.") These rules should be used in conjunction with the current Graduate Bulletin, since some of the Graduate School requirements may not be included in this document. Graduate Student Regulations and policies at the University of Wyoming are posted on the Office of the Registrar website: http://www.uwyo.edu/registrar/university_catalog/grad_students.html

1. Applications and Admissions

Individual faculty members will recruit and prescreen candidates to join their laboratories through the MOLB Ph.D. program. The program committee will make final admissions decisions. Completed application packets consist of a CV, a statement of research interests, transcripts for all undergraduate and graduate schools attended, GRE scores (for students without an M.S. degree), and three letters of recommendation. The faculty adviser with whom the student wishes to work should also write a letter of support indicating additional screening procedures that occurred (phone interview, seminar in the group, etc.) and describing the intended source of funds for graduate support.

2. Exceptions to Policies

Any request for exceptions to these Policies should be submitted in writing, allowing two to four weeks for action, to the program committee.

3. Amendments/Revised Guidelines

Proposed changes in the Graduate Program should be submitted in writing to the program committee for consideration. The proposal will be considered at a meeting of the program committee. Students entering the Graduate Program will follow the Policies that are in effect when they enter. If revisions are made during or after that year, the student has the option of changing to the revised Policies in succeeding academic years or remaining under the original plan of study. A decision to change to the new Policies must be made in writing and submitted to the program committee.

Specific dates corresponding to the program activities described in this document will be distributed to all graduate students and faculty at the beginning of the fall semester in the form of a Graduate Program Calendar assembled by the Graduate Program Chairperson.

Significant changes to this document must be approved by the MOLB faculty.

4. Degrees Offered by the Department of Molecular Biology

- This document concerns the Doctor of Philosophy in Molecular Biology.

5. Policies Applying to Graduate Students in All Degree Programs

5.1 Introduction to Graduate Program

Lab rotations are not part of the molecular biology program. The student joins the lab that they applied to, and that PI is also responsible for financial support of the student.

If a student elects to try to pass out of the Biochemistry requirement (see individual program requirements), he or she should notify the program committee at least 2 weeks before entering the graduate program so that a decision on this request can be made. The student may be requested to pass an exam as part of the decision-making process.

Students must take the Graduate Student orientation course offered through the Graduate School including the Teaching Seminar, which is offered in August. All new international graduate students are required to successfully complete ENGLISH 5910, also given during the month of August, before assuming their teaching duties.

5.2 E-mail Accounts

All students should establish an e-mail account as soon as they register for the first semester. The majority of written communication between the Department Chairperson or the program committee and the students is done via e-mail. Students should check their e-mail daily for announcements and other messages. Many "official" communications (e.g. notifying the Graduate Program Chairperson of the composition of the student's committee) can be done via e-mail.

5.3 Seminars

Seminars represent an important aspect of graduate and continuing education. All graduate students, throughout their tenure, are required to attend the Departmental Seminars and to enroll each semester in MOLB 5051 or MOLB 5052 in the summer (S/U only). The only exceptions will be semesters in which a student registers for another class scheduled at the same time as the departmental seminar or if he or she is off campus for the semester.

5.4 Participation in International, National and Regional Scientific Meetings

Participation in scientific meetings is highly encouraged. Presentation of research data to a larger scientific community, exposure to recent research results and interaction with other scientists is a valuable part of graduate education. The cost of traveling to and participating in a scientific meeting may be supported by the research adviser.

5.5 Workman's Compensation

While at work, graduate students who are paid by the University are covered by the Workman's Compensation program. Such students are also covered under the Program while traveling for work-related business.

Students who are not paid by the University are not covered under the Workman's Compensation program. However, such students may be covered while traveling for work-related business. Check with the University Workman's Compensation representative for the current regulations. No later than 2 weeks before such travel begins, a student should fill out a travel information form that can be obtained on the university website.

International students are required to obtain health insurance while other students are encouraged to do so.

5.6 Notification of Thesis or Dissertation Committees

Official notification of the initial composition of the dissertation committee or any subsequent changes in the committee must be done by the Graduate Program Chairperson to the Graduate School. For simplicity, an e-mail message sent by the adviser to the Graduate Program Chairperson can be forwarded to the Graduate School by the Graduate Program Chairperson. The committee should be established within the first semester of enrollment as a Ph.D. student.

5.7 Official transactions

Every graduate student has a permanent file in the main departmental office and the Graduate Program Chairperson maintains a spreadsheet summarizing each graduate student's progress in the program. In order to maintain adequate and up-to-date records, it is essential that a student: (1) notify the program committee of completed steps in their program (e.g. when a student passes the oral portion of prelims, please notify the Graduate Program Chairperson by e-mail, etc.) and (2) submit a copy of all official forms to an administrative assistant in the departmental office so that a copy will be placed in the permanent file. This procedure protects the student against the possibility of lost forms in other offices on campus.

DOCTOR of PHILOSOPHY (Ph.D.)

Students pursuing the Ph.D. degree in Molecular Biology are expected to complete their program in 4 to 5 years, on average. Ph.D. candidates have four calendar years after the successful completion of their preliminary examination to complete their degree according to University regulations (see Graduate Bulletin). A student that is accepted into the Ph.D. program may elect to change his or her program of study to the master's programs after obtaining the approval of the student's Dissertation committee.

1. Formation of a Dissertation Committee

Upon entering the Ph.D. program, the student should consult with their adviser in order to develop a first year program.

Before the end of the first semester, a dissertation committee should be assembled consisting of the adviser, 3 additional Molecular Biology Graduate Program faculty, and an external committee member. The Graduate Program Chairperson should be notified of this committee in writing or by e-mail.

To obtain summer funding, the student must pass the first qualifying exams (exams 1a and 1b in Section 6.1) by the end of the spring semester, even if the student enrolled that semester.

If, during the course of a Ph.D. program, there will be a change of adviser with whom the student will be working, the student and professor must so notify the Graduate Program Chairperson in writing before the actual change takes place.

2. Program of Study

The student should convene a dissertation committee meeting by the end of their first semester in enrollment. They should discuss relevant coursework, a program of study, and the research plan.

All students are recommended to take the MCLS Cornerstone class the first fall semester they are on campus.

Requirements for fulfilling the 14 specified hours of the 42-hour requirement:

- 6 hours total of General Biochemistry MOLB 5600 and MOLB 5610 with grades of B or better. (If a student has already taken the MOLB 4600/4610 sequence as an undergraduate or MOLB 5600/5610 as a graduate student and received grades of B or better in each course, the General Biochemistry requirement will have been fulfilled and thus only 8 of the 42 hour-requirement of formal course work will be specified. Also, if a student can transfer credits for a corresponding course at another university or passes out of the Biochemistry requirement by taking an exam at the beginning of the first semester, only 8 hours of the 42 hour-requirement of formal course work will be specified. The exam will be given by the dissertation committee or an ad hoc committee established by the PI if the dissertation committee has not yet been assembled.)
- 2 hours of seminar presentation courses MOLB 5050 (1 cr of MOLB 5050 must be taken the first semester a student enrolls)

- 6 hours of lab research credits (2 x 3 hours of MOLB 5520-03). Students entering in Fall 2012 or later should enroll in MOLB 5010 for lab research credits, not MOLB 5520.

Recommendations for fulfilling the 28 elective hours of the 42-hour requirement:

- MOLB 5000-level lab pod courses (pods are offered each semester)
- 5000-level advanced molecular biology core courses
- Advanced MOLB courses such as Immunology, Molecular Genetics, Special Topics, etc.
- MOLB 5051 and MOLB 5052 credits (Students are required to register and attend the departmental seminar each semester (MOLB 5051 - academic year or MOLB 5052 - summer))
- Courses in other departments, as recommended by a student's committee
- Please note that credits earned in ENGL 5910 **cannot** be included in the Program of Study even if a student is required to take this course.

Recommendations for fulfilling the 30 additional hours of the 72-hour requirement:

- Other formal course credits
- MOLB 5980: dissertation research credits.
- MOLB 5051, MOLB 5052 or MOLB 5900 credits

3. Transfer Credit

Doctoral candidates may transfer up to 48 hours of appropriate course work from previous graduate work with a letter grade of B or better. Only 4 of these 48 hours may be comparable to dissertation research.

4. Dissertation committee

The student's major dissertation adviser will serve as chairperson of the student's committee unless the student's adviser is not a member of the Graduate Faculty. In this event, a chairperson shall be chosen from among the Graduate Faculty by the adviser and student, and the adviser may serve as a co-chairperson of the committee. By the end of the first semester, the remaining committee members (at least 4) will be recommended jointly by the student and his or her adviser. At least one of these committee members must be a member of the Graduate Faculty at U.W. who is not a faculty member, tenure track, joint, or adjunct in the Molecular Biology Program. An additional member (making a total of 6) may be added to the committee (see Graduate School Bulletin). This additional member does not necessarily have to be a faculty member from this university.

5. Evaluation of Satisfactory Degree Progress

Each student should arrange an annual research progress meeting with their dissertation committee until completion of the degree. The purpose of this meeting is to provide discussion and guidance in the execution of the proposed research and to allow the student to benefit from the experience and insight of his or her committee members. Unsatisfactory performance in the second and subsequent years as judged by the thesis committee may lead to removal from the Graduate Program.

6. Preliminary Examinations

For each exam, pass/fail is determined by a majority vote of the committee, including the adviser.

6.1 Research topic exam (exams 1a and 1b)

This exam is to be completed by the end of the spring semester of the first year for both students admitted in the fall and the spring semesters. The exam consists of two parts. The student should write a 10-15 page research proposal including figures, but excluding references (12 point font, 1 inch margins, letter-size paper) in the style of an NSF or NIH proposal based upon the research they expect to carry out over the course of their Ph.D. studies (exam 1a). This proposal will be defended within 3 weeks of submission to the dissertation committee in a closed oral exam (exam 1b). The student will be expected to understand not only the proposal itself, but also the scientific background around the proposal. The student will be notified immediately after the oral exam of passing/failing. A student who fails may be given the opportunity to schedule a new oral exam not less than 2 weeks later, but not more than 6 months later. A student who fails to pass the oral exam (1b) in one or two opportunities as determined by the evaluation committee will be removed from the graduate program.

6.2 Novel topic exam (exams 2a and 2b)

This exam is expected to be completed by the end of the second year, the end of the spring semester of year 2 for students enrolling first in the fall semester and the end of the fall semester of calendar year 2 for students first enrolling in the spring semester. The student should write a 10-15 page research proposal including figures, but excluding references (12 point font, 1 inch margins, letter-size paper) in the style of an NSF or NIH proposal based upon a novel original topic of their choosing that is in a field of biology or chemistry that is non-overlapping with the research field of the candidate (exam 2a). The topic must be approved by the Major Dissertation Advisor as well as by the Graduate Program Chairperson. This proposal will be defended within 3 weeks of submission to the thesis committee in a closed oral exam (exam 2b). The student will be expected to understand not only the proposal itself, but also the scientific background around the proposal. The student will be notified immediately after the oral exam of passing/failing. A student who fails may be given the opportunity to schedule a new oral exam not less than 2 weeks later, but not more than 6 months later. A student who fails to pass the oral exam (2b) in one or two opportunities as determined by the evaluation committee will be removed from the graduate program.

7. Teaching Duties

All new U.S. graduate students receiving graduate assistantships in our department are required to successfully complete the Teaching Seminar, given in August before classes start, before assuming their duties. All new international graduate students are required to successfully complete ENGLISH 5910, also given during the month of August, before assuming their teaching duties. Since ENGL 5910 presents all the information covered in the Teaching Seminar, international graduate assistants will not need to attend the Teaching Seminar.

Students in this program will be expected to assist a faculty member in teaching one course (3 credits) or two lab pods (2 credits) during their Ph.D. studies. The TA assignment is made in a joint decision between the Department Chair and PI.

Students must enroll in MOLB5900 for 1 credit for the semester in which they will be a TA.

8. Termination of Support

The following conditions may result in termination of financial support: cumulative GPA below 3.0, unsatisfactory progress as determined by the committee, termination of candidacy for the Ph.D. degree, or completion of five years of support unless the adviser approves a written request by the student for an extension of the grant-supported position. The PI may also withdraw financial support and PI supervisory status.

9. Continuing enrollment

Once a student has completed 90% of their course work and has passed the preliminary exam, the student may register for only 2 credit hours per semester instead of being a full-time student. Since registration in MOLB 5051 (or MOLB 5052 in the summer) Departmental Seminar is required for each graduate student every semester, the student must register for this course (the other 1 credit should be in MOLB 5980). During the summer, a student is only required to register for 1 credit of MOLB 5052. A student may also wish to enroll in 1 credit of MOLB 5980 to have a record of enrolling in research credits, but this is a personal preference and not a requirement. In the case of part-time student status, the student should arrange to receive the optional fee package by filing a "Petition for the optional student fee package," a form which can be obtained from grad school or from the main department office. (To complete this form, a student will need the dates on which the Program of Study was filed and the Preliminary Exam (exam parts 1a and 1b) was completed). This package will enable the student to have the same benefits as a full-time student (access to student health, etc.) If the optional fee package is to be purchased, it must be done by the last day to add a course each semester (see the Graduate Catalog and the Class schedule.) Registration for only 2 credit hours plus the optional fee package (or 1 credit hour in the summer) will allow a substantial savings in tuition and fees' cost for the adviser.

A student who elects to enroll as a part-time graduate student is still eligible for the full graduate stipend and for the Ph.D. augmentation offered by the graduate school. If a student has a loan such as a Stafford federal loan, they may be required to enroll for at least 4.5 credit hours in order to retain eligibility for the loan. A student should discuss the option of enrolling as a part-time student with his or her adviser before registering each semester.

10. Ph.D. Dissertation and Final Oral Exam

As a final requirement for graduation, students must submit a dissertation and defend that dissertation in a closed oral examination before his/her Committee. In addition to the Committee, MOLB departmental faculty may also attend the oral examination as non-voting attendees. The Committee determines the acceptability of the dissertation and awards a "pass" or "fail" for the oral examination. At least two weeks

following a successful defense, the student must present a public seminar on his/her dissertation research.

A student nearing completion of his or her Graduate Program is required to review the proposed content of the dissertation with all members of his or her thesis committee. A student should schedule a meeting with the dissertation committee prior to commencing the writing of the dissertation and at least 3 months prior to the anticipated date of the defense. This meeting with the committee provides the student with the advantage of an early review. The dissertation should then be presented in typed draft form to the student's committee at least five weeks prior to the scheduled defense. Committee members will have ten days from the date of receipt of the manuscript to suggest major changes in content and register any other significant objections. The student must present the completed dissertation to the committee no later than two weeks prior to the scheduled date for the closed oral exam.

Prior to the final oral examination, Ph.D. candidates are required to have at least one first author paper of material in the Ph.D. thesis published or accepted for publication in a refereed journal that is acceptable to the committee. However, acceptance of a paper for publication does not necessarily indicate that acceptable dissertation work has been completed. The student must also submit the Graduation>Title form to the graduate school by the due date in the final semester (check schedule) and do a program check with the graduate school.