



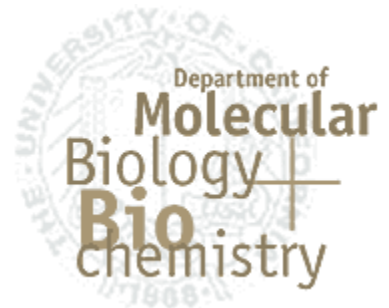
Student Handbook

**Molecular Biology &
Biochemistry**

Graduate Student Handbook

Ph.D. Program

September, 2006





FOREWORD

This brief handbook is designed for graduate students who enter the Department of Molecular Biology and Biochemistry (MB&B) for their dissertation work after their first year in the Combined Program in Molecular Biology, Genetics, and Biochemistry.

We warmly welcome those who are just joining the Department, and hope you will find the handbook a source of practical information that will help you in your academic and research endeavors.

Chris Hughes

Graduate Advisor, MB&B

Introduction

By the time you become part of our Department in your second year, you will have spent some time here on one or more rotations under the *aegis* of the Combined Program in Molecular Biology, Genetics, and Biochemistry. You will also have passed your first-year preliminary examination. From the second year on, you are officially affiliated with our Department of Molecular Biology and Biochemistry, and will meet your teaching obligation and continued course program as a member of it. Therefore, we as a faculty and staff can help you with most of the questions and problems that you might encounter. This handbook tells you about the Department, the requirements of the academic program, and who to go to for specific matters. We are a coherent faculty that, by virtue of diverse research interests and long association, can give you a well-rounded background if you use the opportunities we provide.

IN THE LABORATORY: Your research advisor's laboratory is under his or her direction. Common to all laboratories is the need to familiarize yourself with handling hazardous and toxic materials, and to receive formal training and certification in the use and disposal of toxic and radioactive waste if you have not yet done so.

REPRESENTATIVE: The graduate students elect a Graduate Student representative each year for organizing meetings and formulating activities and representations to the Department. In addition, students will be assigned, on a rotating basis, responsibility for showing slides at and bringing the refreshments to seminars, inviting speakers of their choice if funds are available, and hosting certain speakers at lunch or meetings with students during their visits.

FACILITIES: The Bio Sci Computing lab at Natural Science I, Room 2144 is available to you if or when you need it. Many other common facilities and pieces of equipment are available to your laboratory, and you should familiarize yourself with them as you need them, beginning with training in their use. Please be sure to get permission or sign up for equipment; leave it clean; report any problems; and respect the needs of others.

General Information

DEPARTMENTAL OFFICE AND ADMINISTRATION

3205 McGaugh Hall

Fax (949) 824-8551

Tim Osborne, Chair
Rm. 3244 x4-2979
tfosborn@uci.edu

Tony James, Vice-Chair
Rm. 2242 x4-5930
aajames@uci.edu

Chris Hughes, Graduate Advisor
Rm. 3219 x4-8771
cchughes@uci.edu

Cathy Temple, Student Affairs Officer

Rm. 3205 x4-6034 catemple@uci.edu

Bessy Varela, Department Administrator/Manager

Rm. 3205 x4-4739 bvarela@uci.edu

Emily Jen, Operations Manager

Rm. 3205 x4-3510 emilyjen@uci.edu

Judy Lundberg, Payroll/Personnel Coordinator

Rm. 3205 x4-4740 jllundbe@uci.edu

Cam Tran, Financial Manager

Rm. 3149 x4-4926 camt@uci.edu

Theresa Collica, Department Assistant (A/V Equip., rooms, keys)

Rm. 3205 x4-4915 tcollica@uci.edu

Departmental Bookkeepers:

Tracy Culbertson, Rm. 3216, x4-2209, culbertt@uci.edu

TBH

Please introduce yourself to any of these people when you join the Department if you have not already met them in other ways. In particular, Professor Chris Hughes and Cathy Temple will be able to help you with a variety of matters concerning enrollment, progress, deadlines, and so forth during your graduate career.

The Department Office, Room 3205, has a Fax machine and a typewriter that you may use for legitimate business; however, the fax may not be used for personal faxes. Please ask staff to instruct you in their use.

The photocopier in the office is for faculty only. However, you will be provided with a personal number by your faculty sponsor or laboratory to use at the copy machines on the 2nd, 4th and 5th floors. For copying in the libraries, a copy card will be provided, see your department bookkeeper.

TRAVEL

You may be traveling to meetings as a graduate student. You will need to apply for a UCI Corporate Visa Card to assist you with meeting registration costs and the payment of travel costs. Your reimbursement can be directed to your UCI visa (see your bookkeeper upon your return, with original receipts).

BUSINESS CARDS

Business cards will be ordered for you upon your transition into MB&B. See Cathy Temple.

STIPENDS AND ENROLLMENT

You can enroll each quarter through TELE. You are expected to enroll full time (minimum 12 hours) each quarter according to the academic plan set out in the next section. Please enroll as early as possible. The Department will submit information for fee payment. This is your responsibility each quarter. A late fee of \$25, increasing to \$50, is assessed if you have not enrolled by the SECOND week of the quarter. The consequences of late registration are:

- (i) You must pay the late fee, the Department is not responsible;
- (ii) Owing to the non-student status, you will have federal deductions from your paycheck; and it affects your eligibility for housing.
- (iii) You must use an add card to enroll in the courses.

Cathy in the Department office will help you with enrollment problems and records.

For US citizens who are non-residents of California, you should act to become legal residents of the state by the beginning of the second year. This reduces the tuition fees considerably, to everyone's benefit. The change of residency must be recorded in the Registrar's Office BEFORE the fee payment deadline in the Fall quarter of your second year. Documentation will be required, and you may call the Registrar's Office at 4-6124 for details. At the same time, our office should be informed of the change. Again, Cathy will help you with this matter.

For foreign students, tuition is reduced to the California resident rate after they advance to candidacy (see below). This reduction in rate is a very important saving for the grant that is paying the stipend, and therefore, advancement to candidacy is a goal to be achieved at the normal time (at the end of the third year) or earlier. The reduction in rate continues for three years thereafter; the original rate is then restored.

Every student receives a stipend from the Department on the same schedule, unless they are on a training grant. The stipends are set by the Department each year and carry with them the expectation that you will spend 100% of your time at your studies and research.

FINANCIAL AID

TRAINEESHIPS: Beyond stipends from Departmental sources, including Teaching Assistantships and research funds that support the student's laboratory, several Traineeships on a variety of NIH or other Training Grants are available. Most or all professors are listed as members of one or more training grants, on which their students are eligible for support. The Directors of the various Training Grants announce notice of openings to the faculty members, and students' sponsors make nominations of students. Appointment to a Traineeship is an honor, and such appointments may come with special obligations such as particular or additional coursework, or attendance at training grant meetings at which trainees present work in progress.

CAMPUS DISSERTATION FELLOWSHIPS: These are designed for students in the last quarter of their degree work. They are meant to free the student from other obligations, such as teaching that may interfere with timely completion of his or her dissertation. These fellowships are competitive and are announced once or twice each year by the Graduate Advisor.

TRAVEL ASSISTANCE: The School, Training Grants, and the Graduate Division all have modest funds for support of travel to meetings, particularly those at which students present their research. In addition, dissertation directors often have funds in their research grants to provide for travel to meetings or to other institutions for experimental work. To apply for travel funds from the School, email Associate Dean Mike Mulligan at rmmullig@uci.edu and provide him with the name of the meeting and describe how you will be involved, as a presenter, submitting a poster, or attendee.

OTHER FELLOWSHIPS: A number of UC and national fellowship programs provide support for graduate study. The student may take initiative in obtaining these awards, and the Graduate Advisor will attempt to provide information about them as it appears.

ACADEMIC PROGRESS

The Department's academic requirements incorporate those of the Combined Program in Molecular Biology, Genetics and Biochemistry, your primary academic home during the first year.

Courses:

NOTE: All courses must be passed by a grade of B or better, or by an S (satisfactory).

FIRST YEAR: Students must enroll in the following courses for a minimum of 12 units each quarter:

Fall: Mol Bio 204, "Structure/Biosynthesis of Proteins"

Winter: Mol Bio 203, "Structure/Biosynthesis of Nucleic Acid";
and either Dev. Cell 231B, "Cell Biology" **OR** Dev. Cell 231D, "Molecular, Cellular and Developmental Neurobiology".

Spring: Mol Bio 206, "Regulation of Gene Expression"; **OR**
Mol Bio/Biol Chem 207, "Advanced Molecular Genetics"; **OR**
Dev. Cell. 210, "Advanced Developmental Genetics".

In addition, you will enroll each quarter in the Mol Bio 200 (research), 202 (laboratory discussion), 201 (Departmental Seminar), and 399 (Teaching) if applicable and 229 (Research-in-Progress). Research-in-Progress gives students an opportunity to develop the skills necessary for effective scientific presentations. Students rotate weekly and all students are expected to present once a year.

SECOND YEAR: You will enroll in at least one more elective course in the second year. The choice is dictated in many cases by your academic track, by your research sponsor, or by the requirements of a Training Grant if you have support from one. A non-inclusive list of suitable electives is listed in the website for the Combined Program in Molecular Biology, Genetics, and Biochemistry. Again, each quarter, you must enroll in a suitable number of hours in each of the 200, 201, 202 and 229 series, and, when serving as a Teaching Assistant, in Mol. Biol. 399 (University Teaching).

THIRD, FOURTH, FIFTH YEARS: In addition to the 200, 201, 202 and 229 series each quarter, you are required to enroll in one didactic course (not a journal

club, lab discussion group, research tutorial or departmental seminar) during your third and fourth years. Beyond the courses listed on the Combined Program website, many others— even in other Schools - may serve your interests, and you may enroll in them with the approval of your dissertation director and the Graduate Advisor of the Department. Requirements for the fifth year are the same as for the third and fourth, with the exception that a didactic course is NOT required.

Ph. D. DEGREE

TIME TO DEGREE POLICY: The policy of the Department of Molecular Biology and Biochemistry has been and continues to be:

- Advancement to Candidacy should be by the end of the third year. This is, you must pass your advancement before the Fall quarter that begins your fourth year (10th academic quarter).
- Completion of the Doctoral degree should occur before the end of your fifth year. That is, before the Fall quarter that begins your sixth year (16th academic quarter).
- Maximal time to degree is before the beginning of your eighth year (22nd academic quarter). After this time students are no longer eligible for non-instructional University resources.

FIRST YEAR EXAMINATION. A preliminary examination with written and oral portions is given during the summer after the first year. The examination is designed to cover your research rotations, and to determine how well you can integrate this material in a way that reveals your research potential. If you do not pass the examination, a second examination must be completed before the end of the summer. This is a condition of becoming affiliated with, and supported financially by, the Department or its faculty. A conditional pass may carry an obligation to do remedial work during the second year.

ADVANCEMENT TO CANDIDACY. During your second and third years, you will work to define a research problem suitable for your dissertation. Toward the end of the third year, you will write and defend a proposal for the thesis work that summarizes the preliminary work and gives a solid plan for the remainder of the dissertation. The form of the proposal is ideally that of an NIH proposal, in which the aims, background and significance, preliminary data, and proposed experiments are presented in that order.

The advancement examination is based on this proposal, and is carried out by a five-member committee approved by the Graduate Advisor. The committee includes your dissertation director and must have a majority of its members from the Department of Molecular Biology and Biochemistry (these may include those with joint appointments, but it does not include all members of the Combined Program in Molecular Biology, Genetics and Biochemistry). One member must be an “outside” member; that is, from another department of the Irvine campus and not holding a joint appointment with MB&B, and not working in the student’s research area. The outside member can be chosen from any School on campus, or from any other department of the School of Biological Sciences or College of Medicine.

Advancement to candidacy represents the fulfillment of all requirements except continuing courses and a thesis. It is therefore contingent on having passed all courses with a B or better. If courses have not been passed satisfactorily, the first-year examination or remedial work must be cited in evidence of having gained additional competence in the area. In addition, your teaching commitment (3 courses; 2 lab, 1 lecture) must have been met.

Following is a guide to the process for advancing to candidacy.

Procedures for Advancing to Candidacy:

- (i) Download the form (Ph.D. Form I) from the OGS website and complete it.
- (ii) Consult with the Graduate Advisor to verify the fulfillment of requirements and selection of committee members;
- (iii) Arrange the examination time and place (scheduling five faculty members is often a problem, particularly near quarter breaks and in the summer);
- (iv) the examination is held;
- (v) the form is signed by the student, the student’s dissertation director, the Departmental Graduate Advisor (currently Professor Hughes) and the Associate Dean for Biological Sciences, Mike Mulligan; and
- (vi) give the form to Cathy Temple for processing. The department pays the Advancement Fee electronically and attaches a copy to this form prior to forwarding to the Office of Graduate Studies. This form may contain or be accompanied by a memo from the Departmental Graduate Advisor that failure to pass courses with a B or better have been mitigated.

The advancement examination is a discussion of the feasibility, rationales, coherence, and importance of the work proposed, and is highly beneficial in continuing with the work. For that reason, the candidacy examination should not, despite a common temptation to do so, be delayed beyond the third year.

Dissertation Committee:

The members of the dissertation committee who will oversee further research progress are usually, but not always, chosen from among the members of the advancement committee. A minimum of three members are named and, again, a majority must hold appointments in the Department of Molecular Biology and Biochemistry. In many cases, all are Department members; in some cases, a fourth member from elsewhere on campus may be added to provide expertise in a particular area.

IMPORTANT: You are required to meet with your Dissertation Committee at least once a year until your defense, so that good progress can be confirmed. After each meeting return the form “Graduate Student Annual Report (SGAR1) to Cathy Temple.

DISSERTATION. The dissertation is the fruit of three or four years’ work. It may be prepared in a variety of formats, the most common being in the form of separate chapters that will be or have been submitted for publication as research papers. In some cases, printed papers are photocopied and bound with the other materials. In the case of papers with joint authorship, contributions of the Ph.D. candidate must be spelled out briefly.

The deadline for “filing” for the degree is during the quarter **PRIOR** to the one in which you expect to receive the degree. The office has the appropriate form (Application For a Degree.) Deadlines are published each year, and you must prepare to meet them in good time. These dates are posted in the Department Office and are available online.

The deadline for submission of the thesis is also published each year, and can be found in the Departmental Office as well as online. The submission process requires preparation of a penultimate draft for approval by the dissertation committee; corrections of the draft to accommodate the committee’s comments; arrangement of a dissertation oral examination; and approval of format by the University Librarian, and (after the examination) submission of the unbound final draft to the Office of Graduate Studies. Bound copies are ultimately given to the Departmental office, your research director, and others who may wish to have them. Binding can be arranged through the office. Three copies are paid for by the Department. Additional copies must be prepaid.

DISSERTATION EXAMINATION. The dissertation examination includes a public, Departmental seminar, arranged by the student at a time when all members of his or her committee can attend. Discussion of questions asked at the seminar,

and others the committee may pose thereafter, complete the examination.

IMPORTANT: BEFORE you set a date for your defense you must confirm with Cathy that all the requirements have been met for graduation, including completion of ALL necessary classes with a B grade or better. Early completion of these checks will avoid the possibility of an embarrassing cancellation of your defense. These requirements for graduation are now being STRICTLY enforced.

M.S. DEGREE

Generally, students are not admitted to the Department for a terminal M. S. degree in Molecular Biology and Biochemistry *per se*, although MB&B does offer an independent M. S. program in Biotechnology (see Departmental website). However, under certain circumstances this has been allowed, and some students find it necessary or prudent to obtain an M. S. degree after entering the Ph.D. program in MB&B. The requirements for the first two years are the same with several exceptions. First, the second-year elective is not required. Second, while a thesis is required (this is the “Plan I” M. S. degree), it represents research of a smaller scope than that of the Ph.D. thesis. Third, the Department does not support Master’s students financially, and the student must obtain support independently or from the sponsor of his or her research work. The Department will, however, consider support in the form of a Teaching Assistantship.

Approval of the thesis by three Department members (including the sponsor) is required. An application for the degree must be filed the quarter **BEFORE** the degree is granted. Forms are available in the Department Office.

For updated information please access our website at: www.rgs.uci.edu.