

GRADUATE STUDENT HANDBOOK

*Department of Developmental and Cell Biology
University of California, Irvine*

last updated on 09/29/17 by Christine Suetterlin, Graduate Advisor

CONTENTS

- 1. GENERAL INFORMATION**
- 2. ENROLLMENT**
- 3. STIPENDS AND FINANCIAL AID**
- 4. OUTLINE OF REQUIREMENTS AND TIMELINE**
- 5. COURSE REQUIREMENTS**
- 6. YEAR 2**
- 7. TEACHING ASSISTANTSHIPS**
- 8. PRE-ADVANCEMENT & ADVANCEMENT COMMITTEES**
- 9. PRE-ADVANCEMENT MEETING**
- 10. ADVANCEMENT TO CANDIDACY EXAM**
- 11. THESIS COMMITTEE**
- 12. ANNUAL THESIS COMMITTEE (TUNE-UP) AND PRE-DEFENSE MEETINGS**
- 13. RESEARCH IN PROGRESS TALKS**
- 14. THESIS DEFENSE**
- 15. MASTER PROGRAM**

1. GENERAL INFORMATION

The Department of Developmental and Cell Biology is in the School of Biological Sciences at the University of California, Irvine

1.1 DEPARTMENTAL OFFICE AND ADMINISTRATION

- Key faculty and administrative personnel relevant to graduate students:
Prof. Thomas Schilling, Chair, 2212 Bio Sci 3, x2479, tschilli@uci.edu
Prof. Kavita Arora, Vice Chair, 4215 McGaugh Hall, x1087, karora@uci.edu
Prof. Christine Suetterlin, Graduate Advisor, 4242 McGaugh Hall, x7140, suetterc@uci.edu - office hours: Tuesdays 2-3 pm (no appointment needed)
Andrea Wiley, Department Manager 2104 Bio Sci 3, x4706 wileya@uci.edu
Grace Kuei, Payroll and Personnel 2102 Bio Sci 3 x4707, ykuei@uci.edu
Lindsay Malter, Graduate Administrator 2011 BS3 x1969, lmalter@uci.edu
- Other office administrative personnel:
<http://www.ucidevcell.org/administration> for a full listing

1.2 DEPARTMENTAL RESOURCES

- The department office (Rm 2011, Bio Sciences III) has a Fax machine available.
- For photocopying, you will be provided with a personal number by your faculty sponsor.
- For copying services in the libraries, you will need a copy card.
- Parking/Escort services are available 24/7, 365 days a year on campus, University Apartments and University Center. Call 824-SAFE (7233).

1.3 OTHER GENERAL INFORMATION

EMERGENCIES: You have access to fire, rescue and police at the 911 emergency number. The non-emergency number for campus police is 824-5223 (4-5223 from campus phones).

LABORATORY USE: Your research advisor's laboratory is under his/her direction. You need to receive formal training and certification in the use and disposal of toxic and radioactive waste. Other safety courses may be required as well, e.g., blood-borne pathogens. If a laboratory accident occurs, it must be immediately reported to EH&S (4-6200). See web information at:

<http://www.ehs.uci.edu/programs/safety/HowtoReportSeriousInjuries.pdf>

1.4 OTHER CONTACT INFORMATION

- Department website: www.ucidevcell.org
- Graduate Division: www.grad.uci.edu
- Office of Research: www.research.uci.edu
- Mike Mulligan, Associate Dean of Graduate Studies, 5217 McGaugh Hall, x8433, rmmullig@uci.edu

2. ENROLLMENT

2.1 ENROLLMENT BASICS

You must enroll each quarter through TELE. You are expected to enroll full time (minimum 12 units) each quarter. **It is your responsibility to make sure that your fees are paid every quarter.** Normally the deadline is four weeks before the start of the fall quarter. For the documentation required, call the Registrars office at extension x46124.

The consequences of late registration are:

- a) There will be late fees.
- b) On non-student status, you will have federal deductions from your paycheck, which will affect your eligibility for housing.

2.2 CITIZENSHIP ISSUES AND ENROLLMENT

For US citizens who are non-residents of California, you should become a legal resident of the state by the beginning of the second year. This will reduce the tuition fees considerably. A change of residency must be recorded in the Registrar's Office BEFORE the fee deadline.

For foreign students, tuition is reduced to the California resident rate after advancement to candidacy. This reduction in rate is a very important savings for the grant that is paying the stipend.

2.3 MAXIMUM TERM TO DEGREE

Beginning with students entering in Fall 2010, the Dean for Graduate Studies will not permit students to enroll past their programs' maximum time to degree (7 years).

This means that 7th-year students must graduate in that year.

To help you meet this goal, 7th year students MUST have a committee meeting in the fall quarter of their 7th year. At this meeting, they must present a timeline to degree plan that includes a thesis defense before the end of spring quarter (note that a pre-defense meeting is required no more than 6 months prior to your defense).

A copy of this proposed timeline to defense document that has been signed by all your committee members must be provided to the Departmental Graduate Advisor before the end of fall quarter to remain in good academic standing.

3. STIPENDS AND FINANCIAL AID

3.1 STIPENDS

Students typically receive a stipend either from the Department or from Graduate Division, if they are on a training grant or receive a fellowship. The first stipend payment through the department (check or direct deposit) is on August 1, stipend payments through Graduate Division are on a slightly different schedule.

3.2 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. The directors of various Training Grants announce notice of openings to the faculty members and student sponsors who make nominations of students.

Campus/ School Dissertation Fellowships: Designed for students in the last quarter of their degree work. These fellowships (e.g., Faculty Mentor Program, President's Dissertation Year Fellowship) are competitive and are announced once or twice/year by the Graduate Advisor. Please note that when applying for fellowships offered by the UCI Graduate Division, completed fellowship paperwork is generally required to be submitted to the Associate Dean at least a week in advance of the Graduate Division deadline.

Travel: The school, Training Grants, and some programs have modest funds to support graduate student travel to meetings. These funds are used for students to present their research. Dissertation Directors commonly have funds in their research grants to provide for travel to meetings or other institutions for experimental work. The School of Biological Sciences offers travel awards of approximately \$200 for a student to present their thesis research at a professional meeting. Funding requests should be submitted to the Associate Dean for Graduate Studies.

Other fellowships: A number of UC and national fellowship programs provide support for graduate study. Students should take the initiative in obtaining these awards.

Special Accommodations related to health care: Questions on health care issues, including pregnancy and mental health problems, should be directed to the Graduate Advisor.

4. OUTLINE OF REQUIREMENTS AND TIMELINE

Years 2, 3, 4... until graduation

- Enroll in Journal Club & Seminar every quarter (See Section 5)
- Enroll in 200 and 203 series every quarter (See Section 5)

Year 2

- Second year committee meeting (in spring quarter, see Section 6.2)
- One quarter of 50% Teaching Assistant (TA) ship (see Section 7)

Year 3

- One quarter of 50% Teaching Assistantship (see Section 7). It is highly recommended that you complete your TA responsibilities before you advance to candidacy.
- Pre-Advancement (Fall or Winter, see Sections 8 & 9)
- Advancement to Candidacy Exam (Spring or Summer, see Sections 8 & 10)

Years 3, 4, 5, 6... until graduation

- Annual Tune-Up Meeting with your Thesis Committee (see Section 12)
- RIP talks (see Section 13)

Year of the defense

- Pre-Defense Meeting (6 months or less before planned defense, see Section 12)
- Thesis Defense (see Section 14)

It is your responsibility to follow these requirements and stick to this timeline. In order to maintain satisfactory progress in the doctoral program, a student must meet all program requirements in the outlined time frame.

A student who is not making satisfactory progress will be placed on academic probation, and may not receive employment or fellowship. The Associate Dean for Graduate Studies will request dismissal from the doctoral program if a student is not making satisfactory progress for more than one quarter.

5. COURSE REQUIREMENTS

NOTE: All courses must be passed with a grade of “B” or better, or by an S (satisfactory). Students receiving a failing or unsatisfactory grade of B- or lower or “U” (= unsatisfactory) must repeat the course. **Students must maintain a GPA of at least 3.0.**

First Year

- Students must enroll in a minimum of 12 units each quarter and take appropriate courses. The required coursework varies in different gateway programs.

Second Year

- Students must participate in the TA Professional Development Program (www.tluc.uci.edu/taTraining). This course is typically offered at the beginning of year 2.

Second Year and beyond

- You must enroll in a minimum of 12 units (see Section 2).
- Every quarter you must attend the weekly Department Seminar (Thursdays at 11 AM) and enroll in the corresponding graduate course Dev Bio 290 (DEVEL & CELL BIOL, 2 units).
- Every quarter you must enroll in and attend the departmental journal club, Dev Bio 206 (ADV TOP IN CELL BIO, 2 units), or another suitable journal club (see “Journal Club”, below). However, during fall or winter quarter, you can petition to the Graduate Advisor to replace JC with a graduate level course of your choice, such as biostatistics, writing, 1st year CMB, INP or MCSB class etc.
- Every quarter you must enroll in a suitable number of units in the 200 and 203 series. Which section you enroll in depends on who is your thesis advisor.
- Every quarter in which you are a Teaching Assistant, you must enroll in Dev Bio 399, University Teaching (4 units).
- It is your responsibility to enroll as directed above. Repeated failure to enroll in the appropriate courses may result in being placed on academic probation the following quarter.
- Every student is expected to present a poster or talk on his/her research at the Departmental retreat. If there are conflicts, such as TA responsibilities that prevent you from attending the retreat, please contact the Graduate Advisor.

Journal Club

- Every fall and winter quarter, you must enroll in and attend a journal club. Journal club attendance is NOT optional, it is required.
 - Departmental journal club: Dev Bio 206 ADV TOP IN CELL BIO (2 units)
OR
 - Suitable alternative journal clubs that meet the following requirements
 - has an associated graduate course in which you must enroll
 - has a requirement for student presentation and participation
 - Examples: Dev Bio 212 TOPICS SYST BIO JRL CLUB
Mol Bio 293 CANCER BIO JNL CLUB
- In spring quarter, it is mandatory to enroll in Dev Bio 206 because “Research in

Progress” (RIP) talks are emphasized in this quarter. These presentations are a great opportunity for you to meet the other students in the department, to hear about ongoing research projects in the department, to learn to ask precise questions and to give constructive feedback. Accommodations will be made for students on Training grants.

- With permission of the Graduate Student Advisor, you may replace JC in either fall or winter with a graduate level class of your choice that would help you with your research.
- With permission of the Graduate Student Advisor, you may opt out of Journal Club in the quarter in which you plan to defend your thesis. However, if you fail to defend that quarter as planned, you will not receive further opportunities to opt out.

6. YEAR 2

6.1 PROJECT SELECTION AND DEVELOPMENT

- Selection of a thesis advisor with a primary appointment in the Dept. of Developmental & Cell Biology makes you a member of the graduate program in Developmental and Cell Biology. Students typically join the department at the start of their second year in graduate school, after having been under the auspices of a gateway program such as CMB or MCSB during their first year.
- During your second year:
 - Identify, in conjunction with your advisor, an interesting, tractable research problem, which will result in a thesis over the following 3-5 year period.
 - Develop the knowledge and technical skills necessary to successfully complete the proposed project.
 - Select two Dev and Cell faculty members (in addition to your advisor) to serve on your second year committee (Section 6.2).

6.2 SECOND YEAR COMMITTEE MEETING

You will present your research problem as a formal “Research in Progress” talk in front of the other students and a faculty committee in the departmental journal club (Dev Bio 206) during the spring quarter. If you can arrange your second meeting to coincide with your RIP, that is an efficient way to meet this requirement. If you are unable to schedule your second year committee meeting within the journal club of the spring quarter (i.e. if your advisor or committee members are not available), you can arrange the second year committee meeting with a 20 to 30 min presentation, followed by a 15 to 30 min discussion, outside of the journal club during the spring quarter.

- Presentation: 20 min and 10 min for general questions. This presentation should contain all elements of a regular research talk, with slides on background, results/progress and future plans.
- Faculty committee (3 members): your thesis advisor and two Dev and Cell faculty members of your choice (who will likely serve as members of your pre-advancement and advancement committee). Please organize a meeting with your thesis advisor and two additional committee members – it is your responsibility to find a time and date when everyone on the committee can attend, so start organizing early.
- Follow-up meeting for feedback: After your presentation, you will meet with the faculty committee for specific questions and a discussion of your presentation (15 to 30 min). The committee will provide you with feedback and will sign the form “Second year meeting, pre-advancement and tune-up form”, which you download from the departmental website <http://devcell.bio.uci.edu/graduate-programs/grad-forms/>
 - **Before the meeting**, please type a 1 paragraph summary of your scientific progress on the form. Fill out the details, circle “Second year meeting” on the form, and take it to the meeting.
 - **At the meeting**: Record the comments and recommendations of the committee on this form. Have the committee members sign the form and

submit it promptly to the Department office (Lindsay Malter).

- **After the meeting:** Please make sure to submit your form to the Department office (Lindsay Malter). This form is the record that this meeting has taken place!

7. TEACHING ASSISTANTSHIPS

- The School of Biological Sciences requirement is 2 quarters of a 50% TAship. A 50% TA appointment corresponds to 20 hours per week over the course of the quarter (total of 220 hours).
- Typically, students are advised to fulfill their teaching obligations with a 50% TAship during their second year and a 50% TAship during their third year.
- The Department will determine the quarters and courses you must TA, based on departmental needs. **Please DO NOT accept a teaching assistant position with another department unless you have received permission from the graduate advisor and/or Vice Chair.** It is recommended that you complete your TA responsibilities before you advance to candidacy.
- Students on training grants or fellowships are expected to complete a 25% TAship in their second year and another 25% TAship in their third year. The remainder (either 2 times 25% or one 50%) can be completed in year 4.
- There are no exceptions to these TA responsibilities, although requirements for specific grants (NIH, GAANN) will be accommodated.

8. PRE-ADVANCEMENT & ADVANCEMENT COMMITTEES

8.1 OVERVIEW

In your 3rd year, you will need to form a committee of 5 faculty that will serve as your Pre-Advancement Committee and Advancement to Candidacy Committee. The faculty member(s) from your second year committee can be on your Pre-advancement/Advancement committee, but do not have to be.

8.2 ACADEMIC SENATE MANUAL

The online version of the THE MANUAL OF THE IRVINE DIVISION OF THE ACADEMIC SENATE can be found at

<http://www.senate.uci.edu/manual>

Graduate students will be particularly interested in the following section:

PART II. REGULATIONS OF THE IRVINE DIVISION,
Chapter IV: Doctor of Philosophy Degree Requirements

8.3 PRE-ADVANCEMENT/ADVANCEMENT TO CANDIDACY COMMITTEE

The relevant regulations can be found in the online manual of the Academic Senate, PART II, Chapter IV, Regulation 918. Candidacy Committee.

http://www.senate.uci.edu/senateweb/default2.asp?active_page_id=726

Pre-Advancement and Advancement to Candidacy Committee: Key facts

- 5 faculty members. Choose them in consultation with your thesis advisor.
 - 1 Chair (your thesis advisor). The Chair must hold primary or joint faculty appointment in Dev & Cell
 - 2 additional Dev & Cell faculty members with primary or joint faculty appointments in Dev & Cell.
 - 1 “Outside” faculty member: this faculty member may not hold either a primary or joint faculty appointment in Dev & Cell and is typically from another department in the School of Biological Sciences, or from the College of Medicine, but may be from any department at UCI, including math, chemistry, physics, computer science, engineering, etc.
 - 1 “flexible” faculty member who can either be faculty in Dev & Cell, or may be an additional outside faculty member.
- All members need to be full UCI “senate faculty” members (not Researchers, Project Scientists, Post-docs, etc.; not non-UCI faculty), unless an exception is granted by the Graduate Division.
- It is possible to have a Researcher, Project Scientist, Post-doc, etc. serve as a non-voting, non-signing, 6th member of your committee, if that person has unique expertise relevant to your thesis project. If you are considering this option, contact the Graduate Advisor to discuss.

8.4 WHEN TO FORM YOUR COMMITTEE

You should form your Pre-Advancement/Advancement to Candidacy Committee in the summer between your 2nd and 3rd years, in the fall quarter of your 3rd year, or (at the latest) by the winter quarter of your 3rd year. You will need to have your committee formed in order to take the pre-advancement exam.

9. PRE-ADVANCEMENT MEETING

9.1 Overview

- The pre-advancement meeting is required by the department.
- Goal: to obtain input and feedback on your ideas for your thesis proposal from a faculty committee at an early date. This may influence the direction and focus of your Advancement to Candidacy proposal.
- It is your responsibility to schedule this meeting.
- **This meeting must be held in the fall or winter quarter of your third year.**

9.2 Committee and Written Pre-Advancement Document

- Committee: See section on selection of the Pre-Advancement/Advancement Committee (Section 8.3).
- Document: You must submit a 1-2 page outline of your thesis proposal (brief Introduction and Specific Aims) to each member of the committee. This document is due **no later than 72 hours** prior to the scheduled meeting time.
- Meeting (schedule two hours for this meeting):
 - You will make an oral presentation (with slides) of your research progress and future plans (as outlined in your written document). Include all the necessary elements (“need to know” background information, hypothesis, rationale, aims, approaches, interpretation and conclusion).
 - **Before the meeting**, complete the form “Second year meeting, pre-advancement and tune-up form”, that you download from the departmental website:
<http://devcell.bio.uci.edu/graduate-programs/grad-forms/>
Type a 1 paragraph summary of your scientific progress on the form. Fill out the details, circle “Pre-Advancement” on the form, and take it to the meeting.
 - **At the meeting**: Record the comments and recommendations of the committee on this form. Have the committee members sign the form and submit it promptly to the Department office (Lindsay Malter).
 - **After the meeting**: Please make sure to submit your signed form to the Department office (as it is the record that this meeting has taken place).

Scheduling Issues. Every effort should be made to hold the pre-advancement exam with all 5 Advancement Committee members. However, for pre-advancement only (i.e. NOT for advancement), it is permissible to hold this exam if only 4 of 5 committee members are able to be present.

10. ADVANCEMENT TO CANDIDACY EXAM

10.1 CANDIDACY COMMITTEE

See Section 8.3, Pre-Advancement/Advancement to Candidacy Committee.

Pre-Advancement and Advancement Committees are generally the same. However, if you would like to replace one or several member(s) of your Pre-Advancement Committee, you will not need approval by the Graduate Advisor.

10.2 ADVANCEMENT TIMING

Advancement MUST occur in the winter, spring or summer quarters of your 3rd year (ie by the start of the fall quarter of your 4th year).

Students who have not advanced by the end of the fall quarter of their 4th year are in violation of University, School and Department policy.

This may result in the student being placed on academic probation and recommended for dismissal from the doctoral program.

It is your responsibility to advance on time. Please contact the Graduate Advisor if there are problems with advancing on time.

***New for 2015:** If you successfully advance before the end of spring quarter of your third year, you will receive a \$1,000 bonus in addition to your stipend.*

10.3 GOAL OF EXAM

The purpose of the exam is to determine if the student is capable of Ph.D. quality research. This encompasses two related aspects: 1) defining a tractable research problem; and 2) demonstrating requisite knowledge, skills and experimental sophistication to convince the committee that there is a high probability for the project to succeed.

The Advancement to Candidacy Exam is a University-level requirement.

10.4 ADVANCEMENT FORMAT: WRITTEN PROPOSAL

Written Proposal. A written proposal in NIH format should be prepared by the candidate and distributed to the committee **at least 1 week prior** to advancement.

Written Proposal Format. The proposal should follow conventional format for a federal grant. The manuscript should be prepared with proper scientific nomenclature, as would be acceptable to a granting agency. The document should be approximately 10-15 pages (single-spaced with 1 inch margin, Arial font 12) excluding references. The document should include the following sections.

Specific Aims (1 page). It is the single most important section in the proposal. It is the master plan for the rest of the proposal and the most difficult section to write. The logic of

each aim must be compelling and the answers must be important to the field. Whenever possible, test a hypothesis in the specific aim title. The Specific Aims should not be a list of experiments. Avoid writing aims that can be viewed as “a fishing expedition”.

Introduction (2-3 pages). Problems and objectives of your research should be clearly stated and placed in the context of a broader field. However, limit your introduction to the information needed to know to understand your project. An extensive bibliography should be included. This section should lead the reader to each question or hypothesis that you are testing in each aim. Significance of the project should be also included here.

Preliminary results (3-5 pages). This section should include your research efforts. Appropriate discussion and methods are important; you should show how you could perform all of the necessary techniques and methods. Please embed figures into the text and include a brief legend. Figures and Tables must be absolutely clear and visible.

Proposed research (3-6 pages). The proposal should address the feasibility of various experiments and point out caveats that might be encountered and how these could be circumvented. Be sure to include positive and negative controls, analysis and interpretation, pitfalls and alternative approaches, and somewhat detailed methods. Outline your priority.

10.5 ADVANCEMENT FORMAT: ORAL PRESENTATION

The oral portion of the exam will involve the presentation of background material, preliminary results and a summary of proposed experiments. The presentation should be ~40-45 minutes (30-40 PowerPoint slides), although committee discussion will usually interrupt the flow. During this time the committee will evaluate whether or not you have the ability to formulate questions on important biological issues. You may be asked to discuss experimental design, required controls for an experiment, and possible artifacts or caveats. You will be expected to place the significance of the research project in a broad context, and demonstrate in-depth knowledge of the discipline in which you are working.

The exam should be scheduled for a two hour time period.

10.6 PAPERWORK

You will need Ph.D. FORM I: ADVANCEMENT TO CANDIDACY–PH.D. DEGREE. This form can be downloaded from Graduate Division <http://www.grad.uci.edu/forms/>

Upon successful completion of your Advancement, the form must be signed first by your committee (at the advancement meeting), then by the Graduate Advisor. You should put asterisks next to those members of your Advancement Committee who will serve on your Thesis Committee. Students and faculty must also complete the conflict of interest statement on page 3, and check the “has /has not” box. You must then turn in this paperwork to the department office. It will then be forwarded to Assoc. Dean Mulligan for his signature, and then to Graduate Division.

10.7 POSSIBLE OUTCOMES AND CONSEQUENCES

There are two possible outcomes of the exam:

1) You pass the exam and can expect to spend another one to three more years of lab work to complete the Ph.D. thesis

2) You do not pass the exam. Depending on the feedback from your committee, you may have to prepare a new advancement document, provide additional experimental results or additional tutorial or course work to remedy any deficiencies. You will be allowed to retake the Advancement exam, but failure to pass a second attempt will result in the student not making satisfactory progress. A student who is not making satisfactory progress at this stage may be recommended to withdraw from the doctoral program with a possibility of the completion of a Master's degree.

11. THESIS COMMITTEE

11.1 OVERVIEW

Once you have advanced, your Thesis Committee will provide guidance on your research project and will ultimately judge whether or not you have satisfied the requirements for a Ph.D. degree at your Thesis defense. Your thesis committee will generally be your Advancement to Candidacy Committee, or a subset of this committee.

11.2 THESIS COMMITTEE

The relevant regulations can be found in the online manual of the Academic Senate, PART II, Chapter IV, Regulation 920. Doctoral Committee.

http://www.senate.uci.edu/senateweb/default2.asp?active_page_id=727

Thesis Committee:

typically the same as, or a subset of, the Advancement to Candidacy Committee.

Requirements:

- At least 3 members, but having 4 or 5 members is advised. Choose them in consultation with your thesis advisor.
- Chair is your thesis advisor. S/he counts as one of the members. Chair must hold a primary or joint faculty appointment in Dev & Cell.
- A majority of the members (2 out of 3, 3 out of 4, 3 out of 5, etc.) must hold primary or joint faculty appointments in Dev & Cell.
- There is no requirement for an outside member. In principle every single member could hold a primary appointment in Dev & Cell.

11.3 WHEN TO FORM YOUR COMMITTEE

You will form your Thesis Committee at the end of your Advancement. On the ADVANCEMENT TO CANDIDACY–PH.D. DEGREE form, you will indicate those members of your Advancement Committee who will remain on your Thesis committee by putting an asterisk (*) next to their names.

11.4 CHANGES TO YOUR COMMITTEE

Once the Thesis Committee is formed, the members remain in place until you graduate. Any changes (dropping, adding, or replacing members) require approval by the Graduate Advisor. A request should be submitted stating the existing thesis committee, the reason for the change in committee composition, and the new thesis committee members.

The request has to be reviewed and signed by the Graduate Advisor and the Associate Dean prior to submission to Graduate Division.

12. ANNUAL THESIS COMMITTEE (TUNE-UP) MEETINGS

12.1 TUNE-UPS: KEY FACTS

- Annual tune-up meetings are a Campus, School and Department requirement.
- They must be held AT LEAST once a year, every year between advancement and graduation.
- Committee: Your thesis committee with all members listed on the Advancement to Candidacy form, or your approved modified committee (see 11.4). However, if you are encountering severe difficulties with scheduling a committee meeting, you can petition to the Graduate Advisor to hold the meeting with only a subset of your committee.
- The goal of these meetings is to provide input and feedback on your thesis progress, and to approve of proposed changes in the direction of your thesis work.
- It is your responsibility to schedule these meetings.
- Tune-up meetings are held with your Thesis Committee.
- You must submit a 2-3 page Progress Report to each committee member. This document is due **no later than 72 hours** prior to the scheduled meeting time.
- At the meeting, you will give an oral presentation (with slides) on your research progress and future plans (as outlined in your written document). **Before the meeting**, complete the form “Second year meeting, pre-advancement and tune-up form”, that you download from the departmental website:

<http://devcell.bio.uci.edu/graduate-programs/grad-forms/>

Type a 1 paragraph summary of your scientific progress on the form. Fill out the details, circle “Tune-up” on the form, and take it to the meeting.

- **At the meeting:** Record the comments and recommendations of the committee on this form. Have the committee members sign the form and submit it promptly to the Department office (Lindsay Malter).
- Your Tune-up meeting only counts once this form has been submitted.
 - Failure to submit this completed form by the end of each academic year (June 30) may result in the student being placed on academic probation.

12.2 TUNE-UP FORMAT

The tune-up meeting should be designed to remind the committee of your research area and the major questions your work addresses, and review the experimental studies you have done and hope to do in the next 12 months. A suggested outline for the presentation is 30-45 min. with background, results, and plans. A series of experiments to be accomplished for the Ph.D. and a tentative end date will be discussed.

The student's file containing the advancement proposal, previous research summaries (if applicable), and previous comments of the committee (if applicable) will be brought to the meeting.

12.3 PRE-DEFENSE MEETING

Your final tune-up meeting is your Pre-Defense (“Green light”) Meeting. This must be held no more than 6 months prior to your Defense*. At this meeting your Thesis Committee will assess if you are ready to defend within the next 6 months.

- **Before the meeting**, complete the form “Second year meeting, pre-advancement and tune-up form”, that you download from the departmental website: <http://devcell.bio.uci.edu/graduate-programs/grad-forms/>. Type a 1 paragraph summary of your scientific progress on the form. Fill out the details, circle “Pre-Defense” on the form, and take it to the meeting.
- **At the meeting**: Record the comments and recommendations of the committee on this form. Have the committee members sign the form and submit it promptly to the Department office (Lindsay Malter).

The Pre-Defense meeting is a Department-level requirement, but you will not be allowed to schedule your defense unless this form is on file and current.

*unless an exception from the Graduate Advisor is obtained.

13. RESEARCH IN PROGRESS TALKS

- You will be called upon to give a Research in Progress (RIP) talk approximately once a year, either
 - in journal club (in year 2, in front of other students and a small faculty committee (journal club instructor, your thesis advisor and two additional faculty member of your choice)
 - as part of the weekly Dept seminar (in front of whole department).
- The format of the talk is 20 minutes for presentation plus 10 minutes of Q & A.
- Practice your talk so that it does not go over 20 minutes.
- When the journal club instructor or the Departmental RIP Organizer assigns you to a RIP slot, it is not a request, it is an assignment. The only valid reasons for asking for an alternative time slot are (a) if you are attending an out-of-town scientific meeting or (b) if you have a teaching assistant duty that meets at the same time as your scheduled RIP.

14. THESIS DEFENSE

14.1 PH.D. REQUIREMENTS– THESIS RESEARCH

It is expected that a student receiving a Ph.D. in the department of Developmental & Cell Biology will be able to identify a significant body of work that they have been primarily responsible for, with regard to the formulation of the experiments, the acquisition and interpretation of the data, and the writing of a manuscript(s). It is also expected that this work will constitute a novel contribution to the body of scientific knowledge, suitable for publication as a research article in one or more peer-reviewed journals. Obviously, the clearest way to demonstrate that this goal has been achieved is to have one or more first-author or co-first author papers published or in press at the time of defense. However, the thesis committee may in some cases approve the defense if the work is clearly of publication quality, even if it has not yet been published. The thesis committee may also decide that substantial contributions to two or more non-first author manuscripts/projects meet the requirements towards a Ph.D. degree.

14.2 MAXIMUM TIME TO DEGREE

In general, students in the Department defend in their 5th or 6th year.

7th year students:

You must defend your thesis before the end of your 7th year - the Graduate Dean will not permit students to enroll past their programs' maximum time to degree (7 years).

7th year students **MUST** have a committee meeting in the fall quarter of their 7th year. During this meeting, they must present a timeline to degree plan that includes a thesis defense before the end of spring quarter (note that a pre-defense meeting is required no more than 6 months prior to your defense).

A copy of this proposed timeline to defense document that has been signed by all your committee members must be provided to the Departmental Graduate Advisor before the end of fall quarter to remain in good academic standing

14.3 THESIS DEFENSE

You must submit a final draft of your written Thesis to your Committee at least a week before the Defense. Failure to meet this requirement will result in your defense being cancelled or postponed, and you will be responsible for any fees that result.

All Thesis Defenses must be scheduled through the Dept. office. The office will check to make sure that the Pre-Defense Meeting requirement has been met.

You must defend your thesis by providing a formal 1-hour seminar that is open to the public, which will be followed by a closed committee meeting to evaluate your performance. All committee members should be present during the thesis defense. If any committee member cannot attend, pre-approval from the Graduate Advisor is required. At the minimum, 3 committee members must be present for the Defense to be official.

14.4 PAPERWORK

You will need “Ph.D. Form II - Signature Page / Report on Final Examination for the Ph.D. Degree” which can be obtained from <http://www.grad.uci.edu/forms/>. Contact Graduate Division regarding other requirements, thesis formatting issues, etc. When your thesis and paperwork has been signed and turned in, you are officially a Doctor of Philosophy!

14.5 EMBARGO PAPERWORK

If you include unpublished data in your PhD thesis that should not yet be publically available, you can embargo your thesis at the library. Please discuss this issue with your PI.

The required forms can be found at <http://special.lib.uci.edu/dissertations/paper/td5.html>

15. MASTER'S PROGRAM

(Please see document on Master's in Biological Sciences Program for more details)

The department offers two different Plans for obtaining a Master's in Science degree

15.1 M.S. BY PLAN I (Thesis option)

1. Course work

A minimum of 28 quarter units in approved courses is required, at least 20 of which must be earned in 200 series graduate-level courses exclusive of credit given for thesis research and preparation. A general examination is also required. Students in the MS program may be employed as teaching assistants, but units earned in University Teaching (399) may not be included to satisfy degree.

- Required Courses (minimum of 16 units): Graduate level didactic courses offered by the School of Biological Sciences (16 units, lecture or lab). A list of departmental or school graduate courses that will be available to the student will be identified by the graduate advisor at the time of admission.
- Research Courses. (Units as needed to complete thesis research). Independent Laboratory Research (e.g. Dev Bio 200).
- Elective Coursework (at least 8 units):
 - Departmental seminars and journal clubs. Students are expected to enroll in graduate seminars and journal clubs that are typically required of doctoral students in that department.
 - Additional graduate coursework or upper division undergraduate courses offered by the School of Biological Sciences. Upper division undergraduate coursework may not exceed 4 units, and the Associate Dean and departmental graduate advisor will approve any undergraduate coursework.

2. Advancement to Candidacy:

Advancement to candidacy for the MS degree is based on completion of required coursework. The advancement to candidacy paperwork is generally submitted one quarter prior to the thesis defense.

3. Committee meetings: Annual committee meetings with your thesis committee (see below) are highly recommended!

4. Dissertation:

The Master's thesis committee will consist of at least three faculty as detailed in the Graduate Student Handbook. The student will submit the M.S. thesis and give an oral defense to the committee. The thesis committee will approve the thesis with signatures on the signature page of the dissertation and the M.S. degree completion paperwork. The thesis will be filed according to UCI policy.

15.2. M.S. BY PLAN II (Comprehensive Examination)

1. Coursework

The curriculum includes a minimum of 36 units of coursework. Sixteen units of coursework

in didactic graduate courses are required; these courses are generally core courses taken by doctoral students in the school. In addition, up to twelve units in research coursework may be earned. The remaining courses are selected from the elective course list. No more than 4 units of upper division undergraduate courses may be included. Students in the MS program may be employed as teaching assistants, but units earned in University Teaching (399) may not be included to satisfy degree requirements.

- Required Coursework (minimum of 16 units): Graduate level didactic courses offered by the School of Biological Sciences (16 units, lecture or lab). A list of departmental graduate courses that will be available to the student will be identified by the supervising PI and the graduate advisor at the time of acceptance.
- Research Coursework. Units (up to 12 units): Independent Laboratory Research (up to 12 units, e.g. Dev Bio 200).
- Elective Coursework (at least 8 units):
 - Departmental seminars and journal clubs.
 - Additional graduate coursework or upper division undergraduate courses offered by the School of Biological Sciences. Upper division undergraduate coursework may not exceed 4 units. Approval of the Associate Dean for Graduate Studies and departmental graduate advisor is required.

2. Advancement to Candidacy:

Advancement to candidacy for the plan II MS degree is based on completion of required coursework. The advancement to candidacy paperwork is generally submitted at the end of the second quarter of study, and the student should be on track to complete all requirements in the following quarter.

3. Committee meetings: Annual committee meetings with your thesis committee (see below) are highly recommended!

4. Comprehensive Exam:

The department will administer a comprehensive exam.

The exam will be administered by a committee of at least three departmental faculty, and may include written and oral sections. The recommended comprehensive exam format will include a research presentation and may include additional portions such as a research proposal, presentation of a project, or other components.