

# ***GRADUATE STUDENT HANDBOOK***

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

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## 1. GENERAL INFORMATION

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

### **Overall Program description:**

The Department of Developmental and Cell Biology offers a program of study that leads to the degree of **Doctor of Philosophy (PhD)** in the Graduate School of UC Irvine. Research in the department is multi-disciplinary and highly interactive, with particular strengths in the areas of developmental genetics, stem cell biology, cell and cancer biology, systems biology and neurobiology. Investigators use state of the art techniques including confocal, live and super-resolution microscopy, molecular biology, biochemistry, biophysics and genetics to address a diverse set of molecular questions. Model systems for these studies include mouse, *Drosophila*, Zebrafish, *C.elegans* and tissue culture cells. Understanding the normal processes of cell, tissue and developmental biology will provide mechanistic insights into human diseases, such as birth defects, diabetes, obesity and cancer.

Students are admitted into the department after their first year, which they spend in umbrella PhD programs, such as Cellular and Molecular Biology (CMB), Interdepartmental Neuroscience Program (INP) and Mathematical, Computational and Systems Biology (MCSB). In addition to being fully immersed in cutting edge research, students have the opportunity to serve as Teaching Assistants to develop their teaching skills. Progress in the program is monitored through regular committee meetings and research in progress presentations.

The department also offers a **Masters in Sciences (MS)** program, in which students perform research in similar areas, but within a smaller scope.

### **1.1 DEPARTMENTAL OFFICE AND ADMINISTRATION**

Key faculty and administrative personnel relevant to graduate students:

- **Prof. Kavita Arora**, Chair, 4215 McGaugh Hall, x1087, [karora@uci.edu](mailto:karora@uci.edu)
- **Prof. Lee Bardwell**, Vice Chair, 2208 Natural Sciences I, x6902. [bardwell@uci.edu](mailto:bardwell@uci.edu)
- **Prof. Christine Suetterlin**, Graduate Advisor, 4242 McGaugh Hall, x7140, [suetterc@uci.edu](mailto:suetterc@uci.edu)
- **Andrea Wiley**, Department Manager 2104 Bio Sci 3, x4706 [wileya@uci.edu](mailto:wileya@uci.edu)
- **TBD, Graduate Coordinator**, 2011 BS3 x1969

### **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 THE GRADUATE ADVISOR**

The role of the Graduate Advisor Dr. Suetterlin is to help you maneuver graduate school successfully. She works closely with the Associate Dean of Graduate Studies in the School to answer all your questions about process (ie when to do what). She will make sure that you meet all requirements in a timely fashion. She will also provide you with advice and mentorship should there be issues with your PI or committee. Furthermore, she is often asked to select students from the department for awards. Thus, please keep her informed about your progress and successes (eg fellowships that you receive, papers that you publish, talks that you give etc).

Office hours: Tuesdays 2-3 pm (no appointment needed)

#### 1.4 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](http://www.ucidevcell.org)
- Graduate Division: [www.grad.uci.edu](http://www.grad.uci.edu)
- Office of Research: [www.research.uci.edu](http://www.research.uci.edu)
- Mike Mulligan, Associate Dean of Graduate Studies, 5217 McGaugh Hall, x8433, [rmmullig@uci.edu](mailto:rmmullig@uci.edu)

#### 1.5 OTHER RESOURCES ON CAMPUS

Bio Sci Sexual Harassment Advisor: Kathleen Treseder, (949)-824-7634, [treseder@uci.edu](mailto:treseder@uci.edu)

Bio Sci Equity Advisor: Aimee Edinger, (949) 824-1921, [aedinger@uci.edu](mailto:aedinger@uci.edu)

UCI Office of Equal Opportunity and Diversity (OEOD): (949) 824-5594, [oeod@uci.edu](mailto:oeod@uci.edu)

Associate Dean for Graduate Studies: R. Michael Mulligan, (949)-824-8433, [rmmullig@uci.edu](mailto:rmmullig@uci.edu)

UCI Graduate Division: (949)-824-4611, <https://www.grad.uci.edu>

UCI Office of the Ombudsman: (949)-824-7256, <https://ombuds.uci.edu>

International Center, (949) 824-7249, <https://ic.uci.edu>

LGBT Resource Center, (949) 824-3277, <https://lgbtrc.uci.edu>

Dream Center, (949) 824-6390, <https://dream.uci.edu>

UC Learning Center: <http://www.uclc.uci.edu>; for Responsible Conduct of Research training navigate to: <https://uc.sumtotal.host/Core/search>

Graduate Counselors (Graduate Divisions): Phong Luong: [pbluong@uci.edu](mailto:pbluong@uci.edu), (949)- 824-0246

Elizabeth Dunn: [dunnes@uci.edu](mailto:dunnes@uci.edu), (949)-824-9031. ☐

## 2. ENROLLMENT

### **2.1 ENROLLMENT BASICS**

You must enroll each quarter through Web Soc <https://www.reg.uci.edu/perl/WebSoc> (see details below). 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 Registrar's 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**

The Dean for Graduate Studies will not permit students to enroll past their programs' maximum time to degree (7 years). **This means that 7<sup>th</sup>-year students must graduate in that year.**

To help you meet this goal, 7<sup>th</sup> year students **MUST** have a committee meeting in the fall quarter of their 7<sup>th</sup> year. At this meeting, they must present a timeline to degree completion that includes a thesis defense date 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, signed by all 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** (please also see “Cheat Sheet” in the appendix)

**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**

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

**Year of the defense (see sections 14 and 15)**

- Pre-Defense Meeting (6 months or less before planned defense, see Section 14.3)
- Thesis Defense (see Section 15)

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.

**Table 1: Summary of committees that will monitor your progress**

<b>Meeting</b>	<b>Chair</b>	<b>Number of committee members</b>	<b>Composition</b>	<b>Outside member</b>	<b>Notes</b>
2 <sup>nd</sup> year meeting	Advisor	3	all DCB, or majority DCB	Not required	
Pre-advancement	Advisor	5	majority DCB	Yes, all least one	Can be same as second year, but not necessary, <b>Committee has to be approved by the graduate advisor</b>
Advancement	Advisor	5	majority DCB	Yes, all least one	Can but does not have to be the same as pre-advancement committee <b>Changes have to be approved by the Graduate Advisor</b>
Thesis	Advisor	At least 3, but 5 is recommended		Not required	<b>Memo necessary if there is a change from Advancement committee</b>

**4.2 Unsatisfactory progress and dismissal**

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

### **5.1 GENERAL COURSE REQUIREMENTS FOR STUDENTS COMING THROUGH CMB OR INP GRADUATE PROGRAMS**

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 (generally administered by CMB or INP programs)**

- 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.ttc.uci.edu/taTraining](http://www.ttc.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 a Journal Club (JC) – see below.
- Every quarter you must enroll in a suitable number of units in the 200 and 203 series (see detailed sample below). Which section you enroll in depends on who is your thesis advisor.

Directions for how to enroll:

1. Visit Web Soc <https://www.reg.uci.edu/perl/WebSoc>
  2. Select the quarter you wish to register for
  3. Select the Department- “DEV BIO”
  4. Click “Display Web Results”
  5. All Dev Bio courses taught that quarter will be populated
  6. Search for your advisor’s research courses (Dev Bio 200 or Dev Bio 203)
  7. Journal Club and Seminar will also be listed (Dev Bio 206 and Dev Bio 290)
  8. Use the course codes for these courses to enroll in your courses
  9. Reach out to the departmental Graduate Coordinator with any further questions
- 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 (JC)**

- Every quarter, you must enroll in a Journal Club. Journal club attendance is NOT optional.
- Fall and winter quarter:
  - Departmental journal club: Dev Bio 206 (ADV TOP IN CELL BIO, 2 units)  
OR
  - Suitable alternative journal club that meets 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
    - **Please request permission from the Graduate Advisor if you would like to attend a JC other than the departmental JC.**
    - If this alternative JC is not administered by the department, you may need to contact the instructor for an enrollment code
- Spring quarter:  
You must 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.

**Approval from the Graduate Advisor is required for the following situations:**

1. You would like to replace Journal Club with an undergraduate or graduate level course that may help you with your research, such as statistics, writing, or a 1<sup>st</sup> year CMB, INP or MCSB class etc. This option is only offered in fall or winter quarter and is limited to one course/year.
2. You would like to 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.
3. Your TA assignment is in conflict with JC or seminar.

**Fall**

*Dev Bio 200A	Research	4
Dev Bio 203A	Graduate Tutorial	4
Dev Bio 206	JC (or alternative)	2
Dev Bio 290	Seminar	2
<hr/>		
Total units		12

**Winter**

*Dev Bio 200B	Research	4
Dev Bio 203B	Graduate Tutorial	4
Dev Bio 206	JC (or alternative)	2
Dev Bio 290	Seminar	2
<hr/>		
Total units		12

**Spring**

*Dev Bio 200C	Research	4
Dev Bio 203C	Graduate Tutorial	4
Dev Bio 206	JC	2
Dev Bio 290	Seminar	2
<hr/>		
Total units		12

**sample quarter if you are TAing**

*Dev Bio 200C	Research	4
Dev Bio 203C	Graduate Tutorial	4
Dev Bio 206	JC	2
Dev Bio 290	Seminar	2
Dev Bio 399	University Teaching	4
<hr/>		
Total units		16

**Table 2: Sample schedule for each quarter**

\*Note: Independent research, 2-12 units, please adjust number of units, if your enrollment in other courses changes. Total number of credit should be between 12 and 16.

## 5.2 DIRECT ADMITS INTO THE DEPARTMENT

You have been selected by a PI in the department for direct admission into his/her laboratory. This means that you will be working with the faculty that sponsored your admission as their thesis advisor (and not do any rotations). As a result, your timetable is slightly shifted compared to students entering the department through an umbrella program. While TA requirements are the same for all students in the department, there are some adjustments to your coursework, which follows the requirements for students in the other CMB, INP and MSCB PhD programs. A plan for your year 1 courses should be discussed with your faculty sponsor and meet your training goals and departmental requirements. The Year 1 coursework has to be approved by the Graduate Advisor. You can find information about courses commonly taken by doctoral students in the gateway programs on the following websites: <https://cmb.uci.edu>, <https://cbs.uci.edu/education/mcsb/>, <https://inp.uci.edu>

### Year 1

- Each quarter, enroll in a didactic graduate level course. Please discuss with your PI which courses would be most beneficial and suitable for your training and thesis project. As an exception, an undergraduate course can possibly be approved if such a course would help with getting you ready for your research project. You do not have to take a didactic course in the quarter in which you TA.
- You must participate in the TA Professional Development Program ([www.tltc.uci.edu/taTraining](http://www.tltc.uci.edu/taTraining)) in preparation for your TAship.
- You are also required to take MMG250 “Conduct of Research” for 2 units in Spring quarter. Courses like Ph.D. Fundamentals (MBB 291, 2 units in Fall quarter) or Biomedical Research Methods (MBB 295, 2 units in Winter quarter) are optional. Participation in JC or Departmental Seminar is also optional in year 1.
- **At the end of year 1, you will have to take a preliminary examination, which will follow the same format as the prelims in the CBM program, with the exception that it is administered by the Graduate Advisor** [https://cmb.uci.edu/files/2014/03/Prelim\\_Exam\\_Instructions\\_2014.pdf](https://cmb.uci.edu/files/2014/03/Prelim_Exam_Instructions_2014.pdf)

#### Quarter without TAship (eg fall)

Graduate course of your choice (eg D231)	4
Dev Bio 200A Research	4
Dev Bio 203A Graduate Tutorial	4
<b>Total units</b>	<b>12</b>

#### Quarter with TAship (eg winter)

Dev Bio 200B Research	4
Dev Bio 203B Graduate Tutorial	4
Dev Bio 399 University Teaching	4
<b>Total units</b>	<b>12</b>

#### Spring quarter without TAship

Graduate or undergraduate class of your choice	4
Dev Bio 200C Research	4
Dev Bio 203C Graduate Tutorial	4
MMG250 Conduct of Research	2
<b>Total</b>	<b>14</b>

#### Spring quarter with TAship

Dev Bio 200C Research	4
Dev Bio 203C Graduate Tutorial	4
Dev Bio 399 University Teaching	4
MMG250 Conduct of Research	2
<b>Total</b>	<b>14</b>

**Table 3: Sample schedules for a direct admit student in year 1**

### Year 2 (each quarter until graduation)

- JC or alternative (eg Dev Bio 206)
- weekly departmental seminar (Dev Bio 290)
- of course, you can always enroll in additional courses, if those would help your research ...

### TAships

Just like the other students, there is a requirement for 2 50% TA ships. We recommend that you complete these TAships before advancing to candidacy.

## 6. YOUR SECOND YEAR

### **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, you should:
  - 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 WHEN TO FORM YOUR SECOND YEAR COMMITTEE**

As you know that you will have to have a second year meeting towards the end of your second year, it is a good idea to start thinking (and to discuss with your PI) about who in the department would be suitable for your committee – you should consider a faculty members scientific expertise, accessibility, interest and ease in providing input. In the best case, you would keep this faculty members on your committee throughout graduate school and thereby build up a strong relationship with them.

### **6.3 SECOND YEAR COMMITTEE MEETING**

You will present your research problem as a formal “Research in Progress” (RIP) 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 year 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, 10 min for general questions. The presentation should have all elements of a research talk: 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 (the overall majority on this committee should be Dev and Cell faculty) – 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 and have all committee members sign the form.
  - **After the meeting:** It is your responsibility to discuss these comments and suggestions with your

advisor and to summarize them on the third page of the committee meeting form (see Notes on the next page). This summary and “road map” has to be signed by your advisor.

Please make sure to submit the committee meeting form promptly to the Department office Graduate Coordinator ) because this form is the record that this meeting has taken place!

- Discussion of the Individual Development Plan (IDP): At this committee meeting, you should present a completed IDP form (see appendix) and discuss specific plans with the committee. The completed IDP form will be submitted, along with the signed committee meeting form, to the Graduate Coordinator.

### **Important: Post-committee meeting documents:**

After a committee meeting, the student (not the PI) is required to:

1. Summarize the committee's comments and identify the key points of discussion and criticism.
2. Discuss these points with his/her faculty advisor so that student and Advisor are on the same page. If a specific point made by a committee member was unclear, the student should clarify this point with the committee member either by email or in a one-on-one meeting.
3. After this discussion and agreement on the essential points, the student will write down these relevant points (short but concise) on page 3 of the committee meeting form (in appendix) and send them to the committee members for their approval.
4. The faculty advisor will then sign this document, and the student will turn it in to the departmental office, where it will be placed in the student's file. A copy will also be sent to the graduate advisor.
5. As a result of this activity, the student has generated a roadmap for his/her work, which details the expectation of the committee for the work going forward.

### **7. TEACHING ASSISTANTSHIPS** - Please direct questions to Graduate Advisor Suetterlin or Vice Chair Bardwell

- TAing is a critical part of Graduate School training: it gives you insight into teaching as a possible future career, and helps you improve your organizational skills as well as your ability to give oral presentations.
- 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). This corresponds to 2 classes, which can be the same if two sections are offered. A 25% TAship corresponds to one class and allows 10 hours of your effort towards a class/week.
- 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 2nd year and another 25% TAship in their 3rd year. The remainder (either 2 x 25% or 1x 50%) can be completed in year 4.
- There are no exceptions to these TA responsibilities, but requirements for specific grants (NIH, GAANN) will be accommodated.
- TAships in year 6 are discouraged as you should focus on completing your project, writing your thesis and graduating (see timeline to degree count-down in Appendix). Please consult with your PI and the Graduate Advisor if you are considering a TAship in this year.
- TA ships in Year 7 are not allowed, unless specifically approved by the Associate Dean.

## **8. PRE-ADVANCEMENT & ADVANCEMENT COMMITTEES**

### **8.1 OVERVIEW**

In your 3<sup>rd</sup> year, you will need to form a committee of 5 faculty members that will serve as your Pre-Advancement Committee (and possibly also as your 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

<https://senate.uci.edu/uci-academic-senate-manual/>

Graduate students will be particularly interested in the following section:

PART II. REGULATIONS OF THE IRVINE DIVISION,

Chapter IV: Doctor of Philosophy 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.

<https://senate.uci.edu/uci-academic-senate-manual/part-ii-regulations/#regulation915>

<https://senate.uci.edu/uci-academic-senate-manual/part-ii-regulations/#regulation918>

Pre-Advancement and Advancement to Candidacy Committee: Key facts

- 5 faculty members (majority must hold a primary or joint appointment in Dev and Cell).
  - 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.
- Choose your committee members in consultation with your thesis advisor. However, this is YOUR committee (and not your PI’s), and it should be your goal to have a close working relationship with each of your committee members - (they may be writing ref letters for you afterwards....).
- **The committee has to be approved by the Graduate Advisor.**
- It is possible to have a Researcher, Project Scientist, Post-doc, etc. serve as a non-voting, non-signing, 6<sup>th</sup> 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 PRE-ADVANCEMENT COMMITTEE**

You should form your Pre-Advancement/Advancement to Candidacy Committee in the summer between your 2<sup>nd</sup> and 3<sup>rd</sup> years, in the fall quarter of your 3<sup>rd</sup> year, or (at the latest) by the winter quarter of your 3<sup>rd</sup> 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. This meeting is mandatory for every student!!!*
- *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 at least 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 and have the committee members sign the form.
  - **After the meeting**: It is your responsibility to discuss these comments and suggestions with your advisor, to summarize them on the third page of the committee meeting form, which has to be signed by your advisor. (see note on page 12). After that, please submit the entire committee meeting form promptly to the Department office (Graduate Coordinator).  
Please note that this form 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

The Advancement to Candidacy Exam is a University requirement.

### **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 before 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 you anticipate any problems with advancing on time.**

**Reward for on time advancement:** 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.

### **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 the 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 no longer than 15 pages (single-spaced with 1 inch margin, Arial font 12 including 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.

Note: To see how such a document should look, it is a good idea to obtain an advancement document from previous students in your lab or in the department as an example. It is also a good idea to talk to students who have already gone through this exam for advice and suggestions.

### **10.5 ADVANCEMENT FORMAT: ORAL PRESENTATION** (please schedule a 2 hour period)

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.

**\*\*At the end of this meeting, the student should present a completed IDP to the committee. The completed form will be submitted, together with the advancement paperwork, to the Graduate Coordinator.**

### **10.6 PAPERWORK**

**All graduate student forms are now online. The Dev and Cell Graduate Coordinator will initiate the forms for you and the system will automatically route for signature.**

If you have successfully Advanced to Candidacy (AtC) and your committee is ready to sign off, please follow these steps:

1. Email the Graduate Coordinator and request they initiate the Ph.D. 1 form
2. State whether you wish to receive a Master's degree along with your AtC
3. Provide the following in your email:
  - a. Date of advancement
  - b. The name of your Committee Chair
  - c. The Advancement Committee Members
  - d. The Doctoral Committee Members that will guide your dissertation (we need a minimum of 3 faculty including your PI)
  - e. Phone number you can be reached
4. Pay the advancement processing fee at this link [Ph.D. Advancement to Candidacy Fee](#)

### **10.7 EXAM 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.*

**EXPECTATIONS FOR ADVANCEMENT TO CANDIDACY EXAM** (this document is also in the appendix)

Points the Committee will consider in evaluating your performance:

1. Are the experimental Aims proposed supported by a strong rationale? Is it clear you have selected problems that you should address and not just problems that you could address?
2. Will testing the hypotheses underlying your Aims lead to significant and impactful research worthy of publication in a peer-reviewed journal?
3. Have you or the lab acquired the necessary preliminary data to support the feasibility of your experimental plan?
4. Will you have access to the reagents, tools, and equipment necessary to complete the experiments you propose?
5. Will you have the skills necessary to complete the work you have planned? If not, how will you acquire these skills?
6. Can the project be completed or at least lead to a publication within the normal time to degree?
7. Are the Aims proposed connected, cross-informative, or synergistic in any way? This is desirable, but not essential in every case.
8. Can you fluently discuss the answers to questions 1-7 without significant assistance from your thesis advisor?
9. Are you familiar with the relevant background literature for your project? Mastery is not expected at this stage, but students who successfully advance will have demonstrated the ability to identify, read, understand, and summarize primary literature relevant to their thesis work.
10. Does you understand the appropriate controls for the experiments proposed and the caveats of the techniques you will utilize? Can you explain at a basic level how the assays that will be utilized work?
11. Are you able to prepare a cogent oral presentation describing your research plans? Again, training is ongoing, but it is expected that a student who successfully advances will be able to prepare a clear and organized slide set to support their proposed research.
12. Is the written AtC document carefully prepared and does it use appropriate scientific language? Are figures clear, accurate, and readily understood? Are appropriate references cited throughout the document?

**REMEMBER TO PRINT OUT THE FORMS THE COMMITTEE NEEDS TO SIGN AND BRING THEM TO THE ATC EXAM! : )**

*Students who do not successfully AtC on the first attempt will be allowed a second attempt without any punitive action as long as standard deadlines for adequate progress to degree are met.*

## **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/senatweb/default2.asp?active\\_page\\_id=727](http://www.senate.uci.edu/senatweb/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.
- The chair of the committee 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 can 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.

This request has to be reviewed and signed by the Graduate Advisor and the Associate Dean prior to submission to Graduate Division. The Graduate Coordinator can help you with the preparation of the document.

## **12. RESEARCH IN PROGRESS TALKS**

- You will be asked 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 suggestion, 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.

### 13. ANNUAL THESIS COMMITTEE (TUNE-UP) MEETINGS

#### **13.1 Tune-up meeting**

Tune-up meetings must be held AT LEAST once a year, every year between advancement and graduation. They are a Campus, School and Department requirement, and it is your responsibility to schedule these meetings. 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. If your project has reached a point where you would like to get more input from your committee, please do not hesitate to call in a committee meeting.

##### Format:

The tune-up meeting should be designed to remind the committee of your research area, the major questions addressed by your work, and review the experimental studies you have done and hope to do in the next 12 months. You will give an oral presentation of 30 to 45 min (with slides), which should include background, research progress and future plans (those experiments you plan to complete as part of your Ph.D. work). All these should be outlined in the written document, see below).

##### Committee:

Your thesis committee with all members listed on the Advancement to Candidacy form, or your approved modified committee (see section 11.4). 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.

##### Description of Progress and accomplishments:

For the annual committee meeting, 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. It should reflect what you have accomplished, what has been difficult and what you plan to do.

##### Documents to bring to meeting:

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.

##### Paperwork:

- **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 and have the committee members sign the form.
- **After the meeting**: It is your responsibility to discuss these comments and suggestions with your advisor, to summarize them on the third page of the committee meeting form, which has to be signed by your advisor (see also page 12). After that, please submit the entire committee meeting form promptly to the Department office (Graduate Coordinator).

Please note that this form is the record that this meeting has taken place!

##### Discussion of the IDP:

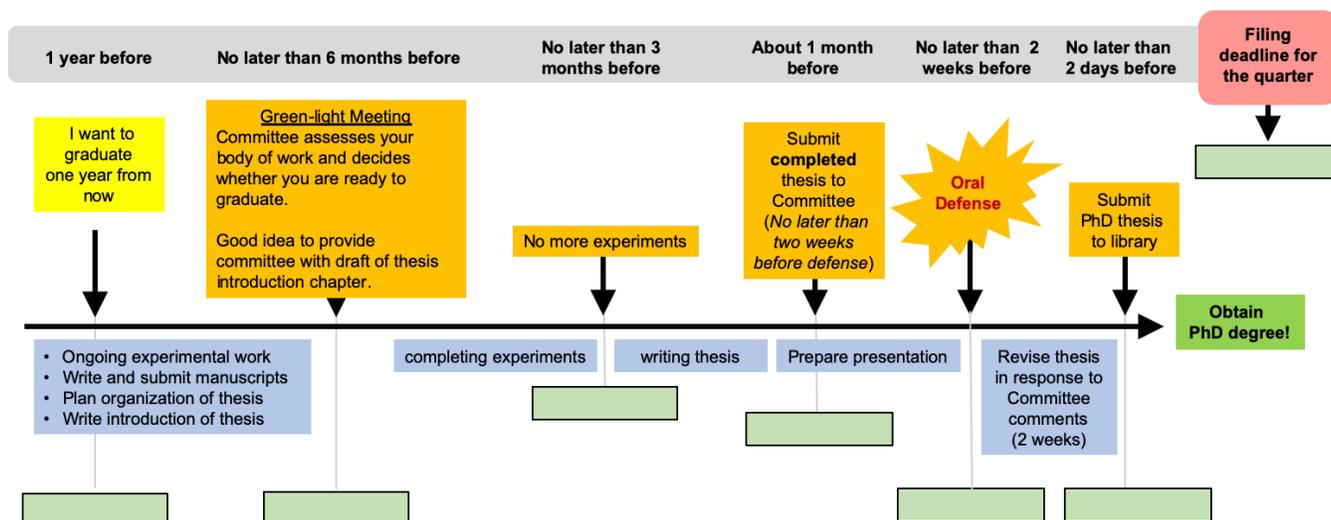
Please present a completed IDP document at each annual committee meeting and discuss your plans with your committee. The completed IDP should be submitted to the Graduate Coordinator for inclusion in your file.

#### **13.2 NEW!!!! Report on professional accomplishments**

After having advanced to candidacy, you are well on your way towards graduation. This is the time when you will publish papers, give poster presentations and talks at meetings and possibly receive fellowships and awards. To inform the department about your progress, complete page 4 of the tune-up form "Second year meeting, pre-advancement and tune-up form". This form should be completed after every committee meeting, but you can send an update on your accomplishments to the Graduate Advisor at any time. Sharing this information will help the department with possible nominations for awards.

## 14. PLANNING OF THESIS WRITING AND GRADUATION

### 14.1 TIMELINE FOR PREPARING YOUR GRADUATION



**Fig. 1: Timeline for the 1-year countdown to degree (this document is also in the appendix). Please enter dates to generate your personal timeline, then discuss with your advisor and committee members**

### 14.2 THESIS WRITING WORKSHOP

The department recommends that you start to plan out your thesis document and organize your reading early so that you will be able to provide a global perspective on how your research questions and findings fit into the published knowledge of the field. About 1 year before your planned graduation, start working on a 5-7 page DRAFT of the introduction of your thesis, and share this document with your committee at your green-light meeting. In order to facilitate this process, to get going and to hold yourself accountable, we highly recommend that you form a writing group with other students in the department who are approaching the same checkpoint. This group should meet once/week and give you protected time to work on reading, outlining and writing. It will also provide you with a network of other scientists to discuss the challenges you are encountering and learn from each other – please contact the Grad Advisor for more information and suggestions.

Note: Just like for the Advancement Document, it is a good idea to obtain one or several PhD theses from previous students in the lab as samples so that you can clearly see what is expected.

### 14.3 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 (Graduate Coordinator).*
- **After the meeting:** *It is your responsibility to discuss these comments and suggestions with your advisor, to summarize them on the third page of the committee meeting form, which has to be signed by your advisor. After that, please submit the entire committee meeting form promptly to the Department office (Graduate Coordinator).*

*Please note that this form is the record that this meeting has taken place!*

*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.*

**15. THESIS DEFENSE** (see note below for how to plan your graduation)

**15.1 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.*

**15.2 MAXIMUM TIME TO DEGREE**

*In general, students in the Department defend their thesis in their 5<sup>th</sup> or 6<sup>th</sup> year.*

**7<sup>th</sup> year students:** *You must defend your thesis before the end of your 7<sup>th</sup> year - the Graduate Dean will NOT permit students to enroll past their programs' maximum time to degree (7 years). In the fall quarter of your 7<sup>th</sup> year, you must hold a committee meeting during which you must present a timeline to degree plan that includes a thesis defense before the end of spring quarter.*

**A copy of this proposed timeline to defense document, 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.** *(A pre-defense meeting must be held no more than 6 months prior to your defense).*

**15.3 THESIS DEFENSE**

*You must submit a final draft of your written Thesis to your Committee **at least two weeks** before the Defense to your committee. 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. It will verify 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.*

**15.4 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!*

### **15.5 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.*

### **16. FORMS**

*All graduate student forms are now online. The Graduate Coordinator for the unit will initiate the forms for you and the system will automatically route for signature.*

*Please contact the Graduate Coordinator or the MSO Andrea Wiley for help with of the following actions:*

- *Filing Fee Petition*
- *Readmission Petition*
- *General Petition*
- *Ph.D. Dissertation filing*
- *Leave of Absence*
- *Change of Degree*
- *PHD Advancement to Candidace (AtC) form*

## **17. 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*

### **17.1 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.*

### **17.2. 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.*

**18. APPENDX**

These documents can be found on the Dev and Cell Website: <https://devcell.bio.uci.edu/information-for-current-phd-students/>

- *Summary of the timeline for Graduate Students*
- *Expectations for Advancement to Candidacy*
- *Individual Development Plan (IDP)*
- *Committee meeting report form*
- *“Timeline to degree” countdown*
- *School of BioSci Professional Conduct*

**SUMMARY OF DCB GRADUATE STUDENT EXPECTATIONS BY YEAR** - good idea to post this over your desk ☺  
Details can be found in the Graduate Handbook on the DCB website - CSuetterlin, Graduate Advisor 08/04/21

**YEAR 2**

- TA one quarter at 50%
- Enroll in the DCB journal club (JC) in all quarters (or request permission to attend other JC in fall or winter quarter)
- Attend DCB Thursday seminars and student Research-in-progress (RIP) talks
- Present a 2<sup>nd</sup> year RIP talk in DCB journal club in spring quarter
- Have a 2<sup>nd</sup> year committee meeting (after RIP or at other time).

**YEAR 3**

- TA one quarter at 50%
- Enroll in the DCB JC in all quarters (or request permission to attend other JC in fall or winter)
- Attend DCB Thursday seminars and RIP talks
- Present a 20 min RIP talk in Thursday seminar slot
- Pre-advancement committee meeting in fall or winter quarter
- Advance to candidacy meeting: by the end of the summer of your 3<sup>rd</sup> year (MEETING THIS GOAL BY THE END OF SPRING QUARTER WILL EARN YOU \$1,000 FOR YOUR POCKET!!).

**YEAR 4**

- Enroll in the DCB JC in all quarters (or request permission to attend other JC in fall or winter)
- Attend DCB Thursday seminars and RIP talks
- Present a RIP talk in Thursday seminar slot
- If you have not already advanced, please advance by the end of fall quarter.  
*Failure to do so will lead to academic probation in winter.*  
Please discuss delays with your advancement with the Graduate Advisor!!
- Have at least one thesis committee meeting this year.

**YEAR 5**

- Enroll in the DCB JC in all quarters (or request permission to attend other JC in fall or winter)
- Attend DCB Thursday seminars and RIP talks
- Have at least one thesis committee meeting (present timeline to degree completion)
- Possibly defend thesis. Note: “*Green light*” meeting has to take place 6 months or less before your defense

**YEAR 6 (if you have not graduated)**

- Enroll in the DCB JC in all quarters (or request permission to attend other JC in fall or winter)
- Attend DCB Thursday seminars and RIP talks
- Have a thesis committee meeting in fall quarter (present timeline to defense, discuss IDP)
- Defend thesis by end of the 6<sup>th</sup> year  
Note: “*Green light*” meeting has to take place 6 months or less before your defense

**YEAR 7 (YOU NEED TO GRADUATE ASAP)**

- Enroll in the DCB JC in all quarters (or request permission to attend other JC in fall or winter)
- Attend DCB Thursday seminars and RIP talks
- Have a thesis committee meeting in fall quarter and present timeline to defense.  
*Failure to do so will lead to academic probation in winter!!*
- Defend thesis by end of the spring quarter. Note: “*Green light*” meeting has to take place 6 months or less before your defense. **STUDENTS WILL NOT BE RE-APPOINTED FOR AN 8<sup>TH</sup> YEAR**

**REQUIREMENTS FOR EACH COMMITTEE MEETING** (2<sup>nd</sup> year to graduation)

- Discuss your progress
- Spend 10 min or so on the discussion of your IDP with your committee
- Summarize the committee’s comments and suggestions, discuss them with your Advisor
- Forms to be submitted: 1) Committee signature page, 2) Summary of comments, 3) IDP

## EXPECTATIONS FOR ADVANCEMENT TO CANDIDACY EXAM

Developmental and Cell Biology, revised August 4, 2021

From the Grad Handbook:

### 10.3 GOAL OF EXAM

#### Purpose of the AtC exam:

to determine if the student is capable of Ph.D. quality research. This encompasses two related aspects:

- 1) defining a tractable research problem
- 2) demonstrating requisite knowledge, skills and experimental sophistication to convince the committee that there is a high probability for the project to succeed.

#### Advancement committee:

You need five members on the AtC Committee, the majority of which have to be DCB faculty members. Your advisor is the Chair of the Committee. This committee can, but does not have to, be the same as the one for the pre-advancement meeting. The committee has to be approved by the Graduate Advisor.

#### Here are points the Committee will consider in evaluating your performance:

1. Are the experimental Aims proposed supported by a strong rationale? Is it clear you have selected problems that you *should* address and not just problems that you *could* address?
2. Will testing the hypotheses underlying your Aims lead to significant and impactful research worthy of publication in a peer-reviewed journal?
3. Have you or the lab acquired the necessary preliminary data to support the feasibility of your experimental plan?
4. Will you have access to the reagents, tools, and equipment necessary to complete the experiments you propose?
5. Will you have the skills necessary to complete the work you have planned? If not, how will you acquire these skills?
6. Can the project be completed or at least lead to a publication within the normal time to degree?
7. Are the Aims proposed connected, cross-informative, or synergistic in any way? This is desirable, but not essential in every case.
8. Can you fluently discuss the answers to questions 1-7 without significant assistance from your thesis advisor?
9. Are you familiar with the relevant background literature for your project? Mastery is not expected at this stage, but students who successfully advance will have demonstrated the ability to identify, read, understand, and summarize primary literature relevant to their thesis work.
10. Does you understand the appropriate controls for the experiments proposed and the caveats of the techniques you will utilize? Can you explain at a basic level how the assays that will be utilized work?
11. Are you able to prepare a cogent oral presentation describing your research plans? Again, training is on-going, but it is expected that a student who successfully advances will be able to prepare a clear and organized slide set to support their proposed research.
12. Is the written AtC document carefully prepared and does it use appropriate scientific language? Are figures clear, accurate, and readily understood? Are appropriate references cited throughout the document?

REMEMBER TO PRINT OUT THE FORMS THE COMMITTEE NEEDS TO SIGN AND BRING THEM TO THE ATC EXAM! - they can be found on the departmental website-

Students who do not successfully pass the AtC examination on the first attempt will be allowed a second attempt without any punitive action, as long as standard deadlines for adequate progress to degree completion are met.



<b>Name</b>		
<b>Program</b>		
<b>NTTA</b> (Normative Time to Advancement)		
<b>NTTD</b> (Normative Time to Degree)		
<b>Advisor</b>		
<b>Mentor</b>		
<b>Academic Year</b>	<b>Year in Program</b>	<b>Date</b>

**Instructions:** The student should complete the IDP in preparation for a scheduled meeting with his/her mentor and advisor. The IDP is designed to foster communication in a variety of areas to ensure the student is receiving comprehensive feedback about both his/her progress to date and future expectations. Accomplishments, challenges and goals should be addressed as well as any performance/progress issues so that both the student and the mentor/advisor have a clear understanding of the student's progress toward the degree.

<b>Academic Course Planning</b>
In order to fulfill my academic goals and maintain NTTD progress, I plan to enroll in these courses.
<b>Annual Goals:</b>
<b>Long Term Plans:</b>
-----
<b>Mentor/Advisor Comments:</b>

<b>Research Planning</b>
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I will make progress on my research agenda through the following: (include collaborations, research theories that you've developed, and studies/projects that you've been involved with.)

**Annual Goals:**

**Long Term Plans:**

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**Mentor/Advisor Comments:**

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**Conference/Publications Planning**

I plan to attend the following conferences. The professional papers I plan to submit (include publications and submittal deadlines).

**Annual Goals:**

**Long Term Plans:**

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**Mentor/Advisor Comments:**

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**Career Planning**

My long and short-term career goals. Skills and competencies I expect to develop and workshops



I plan to attend.

**Annual Goals:**

**Long Term Plans:**

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**Mentor/Advisor Comments:**

**Funding Planning**

My plans for securing funding each year of my graduate program. (Include Dept. Funding, External Grants/Fellowships and Summer Internships)

**Annual Goals:**

**Long Term Plans (including funding for dissertations and research projects):**

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**Mentor/Advisor Comments:**

**Health and Wellness Planning**

This section highlights the importance of maintaining work-life balance to increase



wellness and decrease risk for work burnout. Examples of health and wellness activities include participating in moderate to vigorous exercise 3 times a week, meditation, time management, eating balanced meals, getting appropriate hours of sleep, and having supportive social relationships.

I will prioritize my health and wellness by regularly engaging in the following personal and/or professional activities:

Weekly:

Monthly:

-----  
**Mentor/Advisor Comments:**

**Leadership Development Planning**

My leadership skills and competencies are being developed through the following (include positions held, activities and projects, civic engagement activities etc.) My professional leadership aspirations include the following activities:

**Annual Goals:**

**Long Term Plans:**

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**Mentor/Advisor Comments:**

**Dissertation Progress Planning**

I am aware of and am following the Department degree progress expectations through the



following steps: (Include plans for committee membership, advancement deadlines and writing schedules).

**Annual Goals:**

**Long Term Plans:**

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**Mentor/Advisor Comments:**

\_\_\_\_\_  
Graduate Student Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Mentor Signature

\_\_\_\_\_  
Date

Department of Developmental & Cell Biology, University of California, Irvine

**Committee meeting report**

(For SECOND YEAR MEETING, PRE-ADVANCEMENT & ANNUAL THESIS COMMITTEE MEETING REPORT)

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

Quarter and Year student entered graduate school \_\_\_\_\_

Type of meeting (circle one):    Second Year Meeting    Pre-Advancement    Tune-Up    Pre-Defense

Date of previous committee meeting \_\_\_\_\_ Type: Pre-Advancement    Advancement    Tune-up

Date of Advancement to candidacy \_\_\_\_\_ (if not advanced yet write "not advanced")

Expected quarter and year of thesis defense F W Sp Su \_\_\_\_\_ (if uncertain write "uncertain"; if this is a Pre-Defense meeting then a date must be specified).

**SUMMARY OF SCIENTIFIC PROGRESS (1 paragraph completed by student, please type before meeting)**

**COMMITTEE MEMBER SIGNATURES**

Name:

Signature:

Satisfactory Progress?\*

\_\_\_\_\_

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\_\_\_\_\_

Date received by Dept. \_\_\_\_\_

\*For a Pre-Advancement or Pre-Defense meeting, "yes" implies that the candidate okay to advance or defend next quarter or the quarter after that.

## **SUMMARY OF COMMITTEE COMMENTS AND SUGGESTIONS**

*Please note that this section is to be completed by the student, after discussion with the Advisor, and then signed by the Advisor.*

**1.**

**2.**

**3.**

**4.**

---

Signature of Thesis Advisor, Date

(REV 08/2021)

**PROFESSIONAL ACCOMPLISHMENTS** (please send this page by email to the Graduate Advisor)

Manuscripts published or submitted (Authors, Title, Journal)

Scientific presentations (Author, Title, Location, Date)

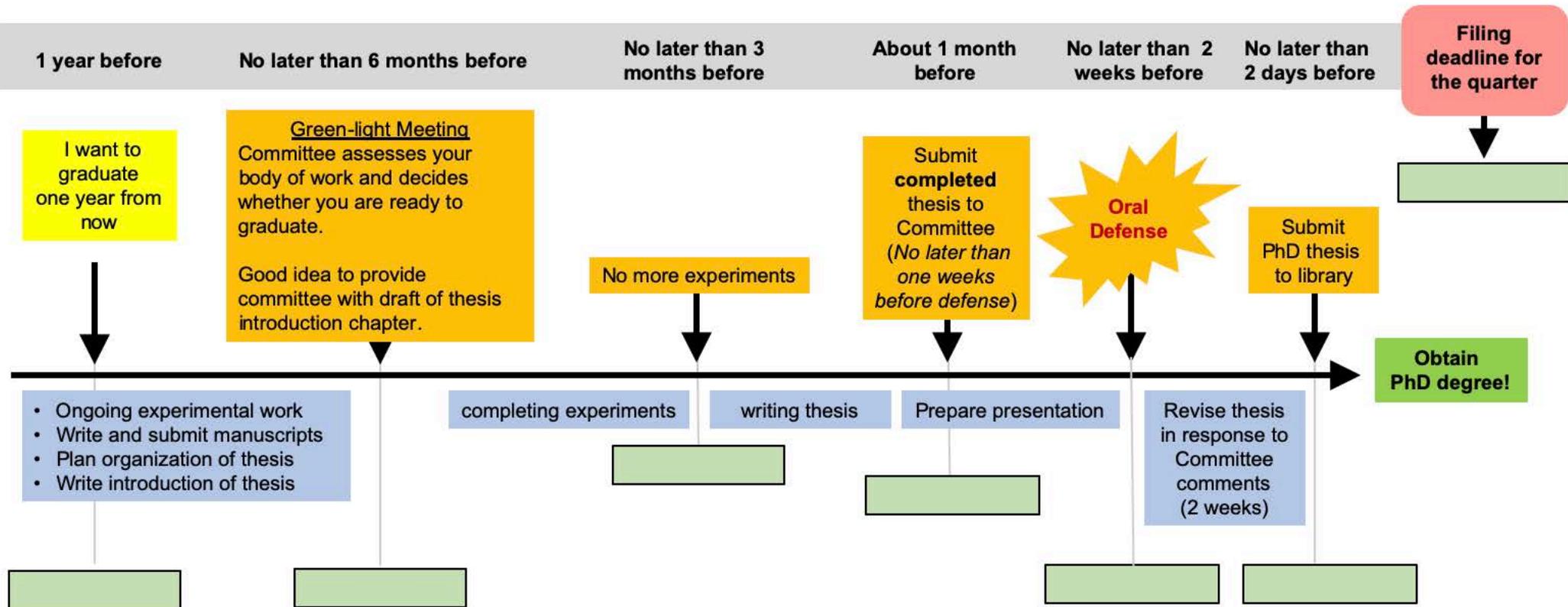
Talk

Poster

Meetings attended (Location, Date)

Awards nominated/received (Name, Date)

# DCB Graduate Program - 1-year countdown to degree timeline



Enter dates above to make your personal timeline then distribute to your advisor and committee members

**Ayala School of Biological Sciences Statement of Professional Conduct**  
**May 23, 2018**

This document is intended to outline the standards of professional conduct expected of all students, staff, and faculty in the Ayala School of Biological Sciences at UC Irvine.

***Adherence to these principles of conduct -- together with good academic standing -- maintains a student's "good standing" status in the School.***

As a community, we respect the dignity, individuality, and freedom of each member. At the same time, we strive to be a place where individuals and groups learn with and from each other. Although we acknowledge the difficulties inherent in creating a community of individuals who are different from each other, we remain unwavering in our commitment to both diversity and community in a context of academic excellence. We seek to enable all members of our community to pursue their educational, scholarly, and career interests in an environment that recognizes both the distinctiveness of each person's experience and the common humanity that unites us all, in order to take full educational advantage of the variety of talents, backgrounds, and perspectives of those who live and work here.

In all activities, members of the Ayala School are expected to be respectful of the rights and interests of the community and of the others in the community and to be personally honest. We are expected to conduct ourselves in a manner compatible with the University's function as an educational institution, and with the rights of all members of the University community to attend, make use of, and enjoy the facilities and benefits of the University without undue interruption or disruption. With their professional conduct, all members of the School are expected to contribute to a School climate in which all community members feel personally safe, listened to, valued, and treated fairly and with respect.

**The key principles of professional conduct include:**

**1. Professional Competence and Responsibility:** As scholars, we strive to maintain the highest level of competence in our work. Members of the UCI academic community are committed to engage in teaching, learning, research, and community service. This includes communicating in a manner that is respectful and that does not discriminate against or harass others, and treats the ideas, scholarship, and interests of others with respect.

**2. Integrity:** UCI is an institution of learning, research, and scholarship. As members of the academic community, we are responsible for maintaining academic integrity and must accept individual responsibility for their work and actions. Violations of academic integrity will not be tolerated because they devalue the teaching and learning experience for the entire community. Observing basic honesty in one's work, words, ideas, and actions is a principle to which all members of the community are required to subscribe.

**3. Respect for People's Rights and Dignity:** Respect for the rights, privileges, and sensibilities of each member are essential to our academic community. Actions that make the atmosphere intimidating, threatening or hostile to individuals are regarded as serious offenses. Free speech and peaceful assembly are basic requirements of the University as a center of free inquiry and the search of knowledge and insight. These rights involve a concurrent obligation on the part of all members of the University, guests, and visitors to maintain on the campus an atmosphere conducive to scholarly pursuits and to respect the rights of all individuals.

**4. Respect for Diversity:** UCI seeks to promote full inclusion of all members and groups in every aspect of University life. Diversity -- on the basis of race, creed, color, sex, gender identity or expression, age, national origin, ancestry, religion, physical or mental disability, veteran status, marital or domestic partnership status, affective or sexual orientation, socio-economic background, and other protected characteristics -- is a source of strength for UCI. All participants, visitors, staff, students, faculty, and vendors are to be treated with respect and consideration, valuing a diversity of views and opinions. We do not tolerate any discriminatory and/or harassing behavior based on protected characteristics, and will take immediate action to end and remedy the effects of any hostile environment on affected members of campus community. Unacceptable behavior includes verbal comments related to gender, sexual orientation, disability, physical appearance, body size, race, religion, or national origin.

**5. Appropriate Sexual Conduct:** UCI does not tolerate sex or gender discrimination, including sexual misconduct such as sexual harassment and sexual assault, stalking, and intimate partner violence. All UCI graduate students, staff, and faculty must undergo mandatory sexual harassment compliance training. Sexual harassment training is mandatory for graduate students, and must be completed within six weeks of enrollment with annual ongoing education and training.

**6. Appropriate Use of Electronic Media:** When acting as representatives of the School or interacting on official UCI platforms, students must be responsible in their use of social media and should not violate our professional and academic standards in their social media activities.

### **Accountability**

The School will maintain and publicize a clear structure to address complaints involving professional conduct of graduate students, staff or faculty. Allegations of improper behavior will be treated seriously and promptly. All members of the community are entitled to know what is expected of them, and to a timely, fair, and meaningful evaluation of their contributions. Proper training and orientation will be available to all members of the community.

### **Observance of University Policies**

No set of rules can possibly address all situations that may arise. The School reserves the right to find that other conduct not specified in this Code or UCI policies constitutes a

violation of good academic or professional standing. If situations arise that seem ambiguous, please consult with departmental graduate advisors, chairs, the Graduate Office, or the Associate Dean.

The UCI Student Code of Conduct defines behavior expected of all UCI students. It is each student's responsibility to know and comply with the university's Student Code of Conduct. In addition, the violation of the laws of any jurisdiction, whether local, state, federal, or foreign, may subject an individual to disciplinary action.

### **Responsible Conduct of Research.**

The Ayala School of Biological Sciences requires that all doctoral and Master's students complete training in the Responsible Conduct of Research. Students in gateway programs (CMB, INP, MCB) are required to take MMG 250 Conduct of Research, which prepares scientists for biomedical research and is compliant with the NIH requirements. In addition, any student that is directly admitted Developmental and Cell Biology, Molecular Biology and Biochemistry or Neurobiology and Behavior must complete MMG 250.

The Office of Research Administration offers a Responsible Conduct of Research training module through the UC Learning Center web site (<http://www.uclc.uci.edu>). The IRC-RA-RCR-2011 module is NSF compliant and is required for NSF GRFP pre-doctoral fellows and graduate students and post-docs conducting research on NSF grants. This training is suitable for graduate students that are not funded by the NIH.

In order to insure compliance with federal and campus training requirement for the Responsible Conduct of Research, the School will adopt the following policies for graduate student training.

1. All doctoral students entering gateway graduate programs (CMB, INP, MCB) or departments (DCB, MBB, and NBB) will take MMG 250 during the first year of graduate study. In addition, MMG 250 will be required of any EEB student funded by a NIH research grant (RO1) or appointed to an NIH Training Grant (T-32).
2. All doctoral students in EEB will complete the NSF on line RCR training, or take MMG 250 as needed.
3. All MS students in the MS Biotechnology and MS Biotechnology Management will take the UC Learning Center module in the Responsible Conduct of Research during the first year of graduate study.
4. All other MS students enrolled in departmental programs must complete the UC Learning Center training module, or MMG 250 (contingent on instructor's approval).

### **Certification:**

I, \_\_\_\_\_, have read and understand the Statement of Professional

(name)

Conduct, which outlines the standards of professional conduct expected of graduate students in the Ayala School of Biological Sciences at UCI.

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[signature]

[date]

**Useful Contacts:**

Bio Sci Sexual Harassment Advisor: Kathleen Treseder, 949-824-7634, treseder@uci.edu

Bio Sci Equity Advisor: Aimee Edinger, (949) 824-1921, aedinger@uci.edu

UCI Office of Equal Opportunity and Diversity: (949) 824-5594, [oeod@uci.edu](mailto:oeod@uci.edu)

Associate Dean for Graduate Studies: R. Michael Mulligan, 949-824-8433,  
[rmmullig@uci.edu](mailto:rmmullig@uci.edu)

UCI Graduate Division: 949-824-4611

UCI Office of the Ombudsman: 949-824-7256

UC Learning Center: <http://www.uclc.uci.edu>; for Responsible Conduct of Research training navigate to: <https://uc.sumtotal.host/Core/search>