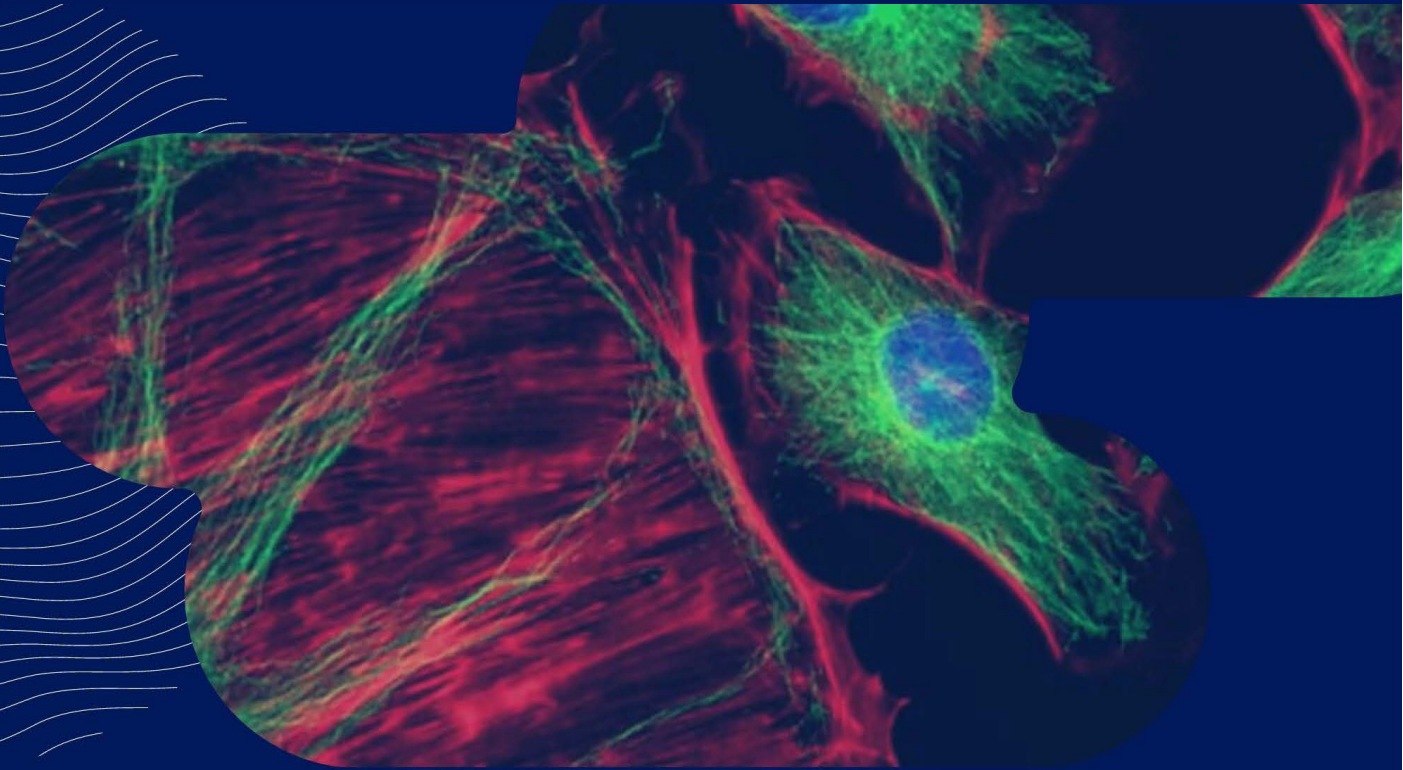




UCI BioSci | Department of Developmental
and Cell Biology

GRADUATE STUDENT HANDBOOK



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This handbook contains everything you need to know about the DCB graduate program, its requirements and how to successfully complete them. Please read this document carefully and have it handy should any questions come up...



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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 (DCB) offers a program of study that leads to the degree of Doctor of Philosophy (PhD) in UC Irvine's Graduate Division. 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, flies, fish, worms 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.

Most students are admitted into the department after their first year, which they have spent in umbrella PhD programs, such as Cellular and Molecular Biology (CMB), Interdepartmental Neuroscience Program (INP) and Mathematical, Computational and Systems Biology (MCSB). More recently, students have also been admitted into the department directly. 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, x4-1087, karora@uci.edu
- **Prof. Lee Bardwell**, Vice Chair, 2208 Natural Sciences I, x4-6902, bardwell@uci.edu
- **Prof. Christine Suetterlin**, Graduate Advisor, 4242 McGaugh Hall, x4-7140, suetterc@uci.edu
- **Andrea Wiley**, Department Manager 2104 Bio Sci 3, x4-4706 wileya@uci.edu
- **Mayra Rubio**, Graduate Coordinator, 2108 Bio Sci 3, x4-1969, mrubio3@uci.edu

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 to maneuver graduate school successfully. She works closely with the Associate Dean of Graduate Studies in the School, Dr. Craig Walsh, to answer all your questions about the process, such as when to do what. Together with the Graduate Coordinator, Ms. Mayra Rubio, Dr. Suetterlin will make sure that you will meet all departmental requirements in a timely fashion. She

will also provide you with advice and mentorship if you have questions about the process, your progress in graduate school, if you would like an additional opinion or if there are issues with your PI or committee. Please do not hesitate to contact Grad Advisor or the Graduate Coordinator with questions (big or small). They are happy to help!!! The Graduate Coordinator's door is always open to you.....

Please keep Grad Advisor and Graduate Coordinator informed about your progress and successes (e.g. fellowships that you have received, papers that you have published, talks that you have given etc.). This information will help them when they are asked to select students for department and school-wide awards.

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). Please note that a 911 call will go to the Irvine PD, not the campus police.

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:

<https://ehs.uci.edu/forms/report-injury/index.php>

1.5 OTHER CONTACT INFORMATION

- Department website: <https://devcell.bio.uci.edu/>
- Graduate Division: www.grad.uci.edu
- Office of Research: www.research.uci.edu
- Craig Walsh, Associate Dean of Graduate Studies, 3215 McGaugh Hall, (949)824-8487, cwalsh@uci.edu

1.6 OTHER RESOURCES ON CAMPUS

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

Bio Sci Equity Advisor: TBD

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

Associate Dean for Graduate Studies: Craig Walsh, (949) 824-8487, cwalsh@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/> <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, (949) 824-0246

Amelle Beauvil: abeauvil@uci.edu (949) 824-9169

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) Non-student status will lead to federal deductions from your paycheck and affect your eligibility for housing.

2.2 CITIZENSHIP ISSUES AND ENROLLMENT

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.

International students: tuition in year 2 and in subsequent years is the same as for California residents, with the differential being covered by Graduate Division. Thus, advancement to candidacy will not change the tuition rate for foreign students.

Direct admits pay non-resident supplemental tuition (NRST) in their first year, and this even applies to students who have received an MS from UCI.

2.3 MAXIMUM TIME 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 students in their 7th year 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 completion that includes a thesis defense date before the end of spring quarter (note that a pre-defense meeting (section 15.2) 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.

A timeline with milestones that have to be completed in order to be able to graduate can be found in the appendix.

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. Please let the Grad Coordinator know if there are any issues with stipend payments.

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 training grants are available. The directors of various training grants announce openings to 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 \$300/year for a student to present their thesis research at a professional meeting. Funding requests should be submitted to the School's Associate Dean for Graduate Studies, Dr. Craig Walsh.

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)
- Discuss with your PI the quarterly syllabus so that you know what is expected of you
- Discuss the Individual Development Plan (IDP) at least once/year

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).
We strongly recommend that you complete your TA responsibilities before you advance to candidacy.
- Pre-Advancement** (Fall or Winter, see Sections 8 & 9)
- Advancement to Candidacy Exam (AtC)** (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)

Committee meetings

year 2: 2nd year meeting

year 3: Pre-advancement and advancement meeting

Subsequent years: at least on meeting/year

Year before defense: Pre-defense (green-light meeting) and Thesis Defense

It is your responsibility (not your PI's!!!) to schedule these meetings. The Graduate Coordinator will send you a gentle reminder 11 months after your last meeting to help you not to fall behind. If you have not scheduled this meeting 12 months after your last meeting, you will be given a 4-week firm deadline.

Meeting these deadlines in this time frame is critical to maintain satisfactory progress in the doctoral program.

Please inform Grad Coordinator and Grad Advisor if you anticipate not being able to meet these deadlines.

Meeting	Chair	Total number of committee members	Composition	Outside member	Notes
2 nd year meeting	Advisor	3	all DCB,	Not required, possible as exception	
Pre-advancement	Advisor	5	majority DCB, if outside member(s) are included	No required, but highly recommended	Can be same as second year committee, but not necessary. Committee has to be approved by Graduate Advisor
Advancement	Advisor	5	majority DCB, if outside member(s) are included	No required, but highly recommended	Can be the same as pre-advancement committee, but not necessary. Changes have to be approved by Graduate Advisor
Thesis	Advisor	At least 3, but 5 is recommended		Not required	Memo necessary if there is a change from Advancement committee

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

4.1 UNSATISFACTORY PROGRESS AND DISMISSAL

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

5. COURSE REQUIREMENTS

5.1 GENERAL COURSE REQUIREMENTS FOR STUDENTS COMING THROUGH CMB OR INP 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.

Year 1 (generally administered by the umbrella programs)

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

Year 2

- Students must participate in the TA Professional Development Program.
<https://dtei.uci.edu/opportunities/grads-postdocs/ta-professional-development-program/> This course is typically offered at the beginning of year 2.

Year 2 and beyond

Every quarter, you must

- enroll in a minimum of 12 units (see Section 2) – *note: you need 12 units to be a fulltime student!*
- attend the weekly Department Seminar (Thursdays at 11 AM) and enroll in the corresponding graduate course Dev Bio 290 (DEVEL & CELL BIOL, 2 units)
- enroll in and attend a Journal Club (JC) – see below.
- enroll in a suitable number of research units
note: in fall 2023: Dev Bio 200 and Dev Bio 203A, in winter 2024 and onwards: only Dev Bio 200 A/B/C (see detailed sample below). Please enroll in your thesis advisor's section.

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 shown
 6. Search for your advisor’s research courses - please note that Dev Bio 200 and Dev Bio 203, will become a combined course starting in winter 2024 (Dev Bio 200)
 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
- It is your responsibility to enroll as directed above. Repeated failure to enroll in the appropriate courses may result in academic probation the following quarter.

Every student is expected to present a poster/talk on his/her research at the Departmental retreat. Please inform the Grad Advisor if TA responsibilities prevent you from attending the retreat.

5.2 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
 - 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
 - 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 in Spring quarter, emphasis is on “Research in Progress” (RIP) talks. These presentations are a great opportunity for you to meet the other students in the department, hear about ongoing research projects in the department, learn to ask precise questions and give constructive feedback to your peers.

Fall 2023			Winter 2024		
*Dev Bio 200A	Independent Research	4	*Dev Bio 200B	Independent Research	8
Dev Bio 203A	Graduate Tutorial	4	Dev Bio 206	JC (or alternative)	2
Dev Bio 206	JC (or alternative)	2	Dev Bio 290	Seminar	<u>2</u>
Dev Bio 290	Seminar	<u>2</u>	Total units		12
Total units		12			
Spring 2024					
*Dev Bio 200	Independent Research	8			
Dev Bio 206	JC	2			
Dev Bio 290	Seminar	<u>2</u>			
Total units		12			

Table 2: Sample schedule for each quarter

**Note: Independent research: typically, 8 units, but if your TA responsibilities prevent you from enrolling in seminar or JC, enroll in more research units to meet the 12 unit minimum. You can of course enroll in more than 12 units, and the total number of credits should be between 12 and 16.*

5.3 REPLACING JC WITH A COURSE

During fall or winter quarter, you are allowed to replace JC with a didactic course that would be beneficial for your research. For example, if you are struggling with statistical analyses, you may want to take a course in statistics. If your project involves mouse genetics, it may be helpful to take a course in Developmental Genetics etc. Such a course can be at the graduate or undergraduate level and can be taught by other departments on campus. Please send a petition to the Grad Advisor, with a clear description of the course and its benefits for your research.

5.4 APPROVAL FROM THE GRAD ADVISOR

Approval from the Grad Advisor is required for the following situations:

1. You would like to attend a JC other than the departmental JC (see above).
2. You would like to replace JC with an undergraduate or graduate level course that may help you with your research. This option is only offered in fall or winter quarter and is limited to one course/year.

3. 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.
4. Your TA assignment is in conflict with JC or seminar.

6. DIRECT ADMITS INTO THE DEPARTMENT

6.1 GENERAL INFORMATION

As a direct admit, you have been selected by a faculty member in the department for admission into his/her laboratory. This means that you will be performing your PhD studies under the supervision and mentorship of the faculty member who sponsored your admission to UCI. Therefore, in contrast to students coming into the department through umbrella programs (CMB, INP and MCSB PhD programs), you will not be doing any rotations. While your coursework will be slightly different (although overall, it follows the same requirements other students have to meet), the TA requirements are the same for all students in the department,

6.2 REQUIREMENTS

Year 1 (This is the year that is different from other students in the department)

- 1.) **Didactic courses:** Each quarter, you must enroll in one didactic graduate level course. Please discuss with your PI which courses would be most beneficial and suitable for your training and thesis project. Year 1 coursework has to be approved by the Graduate Advisor, and we recommend that you and your PI come up with a plan of coursework for the entire year before the beginning of fall quarter. You can find information about courses commonly taken by doctoral students in the gateway programs on the following websites: <https://cmb.uci.edu>, <https://ccbs.uci.edu/education/mcsb/>, <https://inp.uci.edu>. 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.
- 2.) **Additional courses:** You are required to take mandatory course MMG250 “Responsible Conduct of Research” for 2 units in Spring quarter. Other 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.

Quarter without TAship (fall or winter)		Spring quarter without TAship	
Graduate course of your choice (e.g. D231)	4	Graduate course of your choice	4
<u>Dev Bio 200/203 Independent Research</u>	8	Dev Bio 200C/203C Research	8
Total units	12	<u>MMG250 Conduct of Research</u>	2
		Total units	14
Quarter with TAship (fall or winter)		Spring quarter with TAship	
Dev Bio 200A	12	Dev Bio 200/203 Research	12
Independent Research	12	<u>MMG250 Conduct of Research</u>	2
Total units	12	<u>Total units</u>	14

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

Please note: in Fall 2023, DevBio200A and 203 are each 4-unit courses. Starting in winter 24, they will be combined to course DevBio200A-C with 8-12 units.

Preliminary Exam 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. This exam will be given around the same time as the CMB exams (late June). Some more senior students may help you with the preparation. Please contact the Grad Advisor to identify these students who are willing to share their experience.

https://cmb.uci.edu/files/2014/03/Prelim_Exam_Instructions_2014.pdf **TAing:**

- Just like the other students, there is a requirement for 2 50% TAs. We strongly recommend that you complete these TAs before advancing to candidacy. Please contact Vice Chair Lee Bardwell with all TA-related questions. TAs will normally take place in years 2 and 3, but may possibly also be offered in years 1 and 2 – this depends on departmental need.
- In preparation for the TAs, you must participate in the TA Professional Development Program (<https://dtei.uci.edu/opportunities/grads-postdocs/ta-professional-development-program/>)

Courses in year 2 and all subsequent years, until graduation

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

7. YOUR SECOND YEAR

7.1 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, together with your advisor, an interesting, tractable research problem, which will result in an exciting thesis project to be completed over the following 3-5-year period.
 - Develop the knowledge and technical skills/know-how necessary to 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). There can be one outside member on this committee, but this is not a requirement.

7.2 WHEN TO FORM YOUR SECOND YEAR COMMITTEE

You will have to have a second-year meeting towards the end of your second year. This meeting requires a committee of 3 faculty members (majority from DCB), and it is therefore a good idea to start thinking (and to discuss with your PI) about who in the department would be suitable for your committee. Consider a faculty member's scientific expertise, accessibility, interest and ease in providing input (don't just choose faculty members who are nice and easy...). In a best-case scenario, you would keep these faculty members on your committee throughout your PhD work, which would allow you build up a strong relationship (they may write ref letters for you later on....).

7.3 SECOND YEAR COMMITTEE MEETING

Research presentation:

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: 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 google form “Second year meeting, pre-advancement and tune-up form”, available on the departmental website <https://devcell.bio.uci.edu/information-for-current-grad-students/>
 - **Before the meeting**, please write up a 1 paragraph summary of your scientific progress on the form. Fill out the details, select “Second year meeting” on the form, and bring the form to the meeting.
 - **At the meeting**: Record the comments and recommendations of the committee on this form
 - **After the meeting**:
 1. Discuss comments and suggestions with your advisor, prioritize them and list them on the third page of the committee meeting form. This prioritized summary of comments can serve as a “road map” for your experiments. It has to be signed by your advisor.
 2. Contact the grad coordinator Mayra Rubio to help collect signatures via DocuSign
- 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!

Notes about the Post-committee meeting document to be submitted to the Graduate Advisor and Graduate Coordinator: 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 your faculty advisor so that student and Advisor are on the same page. If a specific point made by a committee member was unclear, you should clarify this point with the committee member either by email or in a one-on-one meeting.
3. Prioritize the committee’s comments and don’t provide a laundry list of everything said at the meeting.
4. After this discussion and agreement on the essential points, you will write down these relevant points (be as concise as possible) on page 3 of the committee meeting form.
5. Send completed report to the Graduate Advisor and Graduate Coordinator, who will collect signatures via DocuSign. A final copy of signed report will be sent back to the student
6. **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.**

7.4 DISCUSSION OF THE INDIVIDUAL DEVELOPMENT PLAN (IDP)

At any point in his/her career, a scientist should think about activities that help him/her reach his/her professional goals and that will complement the training. This requires a critical assessment of own activities and engagement. The IDP should help with this challenging activity, and it is therefore important to complete the IDP form (see appendix) **at least once/year**. The annual committee meeting offers a good frame for this discussion, which should take place between you and your PI, but can involve the committee, if you would like more input. The completed IDP form must be signed by your mentor/PI and submitted to the Graduate Coordinator for inclusion in the department file. Please also keep a copy for yourself as it provides a guideline for your career development.

8. TEACHING ASSISTANTSHIPS (Please direct questions to Graduate Advisor or the Vice Chair)

- 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 will 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 because 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.

9. PRE-ADVANCEMENT & ADVANCEMENT: OVERVIEW AND COMMITTEES

9.1 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

9.2 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://docs.google.com/document/d/16w0EicH2R7TAHT-](https://docs.google.com/document/d/16w0EicH2R7TAHT-Na66HhsPwMsh0XwNX5sdxalyYlrQ/edit#heading=h.cav7yvz7t18o)

[Na66HhsPwMsh0XwNX5sdxalyYlrQ/edit#heading=h.cav7yvz7t18o](https://docs.google.com/document/d/16w0EicH2R7TAHT-Na66HhsPwMsh0XwNX5sdxalyYlrQ/edit#heading=h.cav7yvz7t18o)

[https://docs.google.com/document/d/16w0EicH2R7TAHT-](https://docs.google.com/document/d/16w0EicH2R7TAHT-Na66HhsPwMsh0XwNX5sdxalyYlrQ/edit#heading=h.x8n12l8qnjj1)

[Na66HhsPwMsh0XwNX5sdxalyYlrQ/edit#heading=h.x8n12l8qnjj1](https://docs.google.com/document/d/16w0EicH2R7TAHT-Na66HhsPwMsh0XwNX5sdxalyYlrQ/edit#heading=h.x8n12l8qnjj1)

9.3 THE DIFFERENCE BETWEEN PRE-ADVANCEMENT AND ADVANCEMENT**

	PRE-ADVANCEMENT	ADVANCEMENT
What is the purpose of this meeting?	Present your research ideas and get guidance that will lead to a successful advancement to candidacy examination a few months later. During this meeting, the committee may redirect your research (e.g. Expand Aim 2b, but remove Aim 3....)	Present a thoughtful plan for your PhD research. Demonstrate knowledge of the background, your research questions and approaches, with clearly described alternative approaches.
When should you hold this meeting?	Fall or winter of third year	Spring of third year
How long is the write-up	2-3 pages, submit to committee 3 days before the meeting	15 pages, submit to the committee 1 week before the meeting
How long does this meeting last?	2 hours	2 hours
Can I fail this exam?	no	Yes, you can only retake it once
How does the committee look? (see in section 9.4))	5, majority DCB if outside member is included committee has to be approved by Grad Advisor. We highly recommend to include an outside member in your committee	5, majority DCB if outside member is included, but committee members don't have to be the same as for the pre-advancement, changes have to be approved by Grad Advisor. We highly recommend to include an outside member in your committee
	Departmental requirement	Campus-wide requirement

Table 4: Comparison of pre-advancement and advancement – please don't hesitate to contact the Graduate Advisor if you have any questions about these meetings.

****Note:** If your committee approves the direction of your proposed research and liked your presentation during the pre-advancement meeting, they may invite you to submit a written Advancement proposal (15 pages max, including references), and they may agree that you do not have to meet with them again for an Advancement meeting. Once your written advancement proposal has been approved, you will have advanced to candidacy, and will only have to meet again with your committee a year later for the tune-up meeting.

9.4 PRE-ADVANCEMENT AND ADVANCEMENT COMMITTEES

- 5 faculty members (outside member is recommended, but not required)
 - 1 Chair (your thesis advisor). The Chair must hold primary or joint faculty appointment in Dev & Cell
 - Up to 4 additional Dev & Cell faculty members with primary or joint faculty appointments in Dev & Cell.
 - Optional outside member: 1 or 2 “Outside” faculty member are possible: such 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.
 - Please note: A spouse who is also a UCI faculty member can be on the committee, but will be a non-voting 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 strong working relationship with each of your committee members - (they may be writing ref letters for you later on....).
- Your pre-advancement committee has to be approved by the Graduate Advisor.
- You can have a Researcher, Project Scientist, Post-doc, or additional faculty member (e.g. faculty spouse) 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.
- Please note that after the pre-advancement meeting has taken place, you can make changes to your pre-advancement committee. Such a change should be based on the direction of your project, the required expertise as well as on practical issues, such as scheduling and response rate by the faculty member. Changes in the committee should be discussed with the advisor. Should you replace someone on your committee, it is courteous to inform the “removed” faculty member and thank him/her for their efforts/time.

9.4 WHEN TO FORM YOUR PRE-ADVANCEMENT COMMITTEE

You should form your Pre-Advancement/Advancement to Candidacy Committee in the summer between your 2nd and 3rd year, in the fall quarter of your 3rd year, or (at the very 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. Thus, please initiate discussion with potential committee members early on!

10. PRE-ADVANCEMENT MEETING (a departmental requirement)

10.1 OVERVIEW

- The pre-advancement meeting is required by the department and 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.**

10.2 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 “Committee Report form”, that you download from the departmental website:
<https://devcell.bio.uci.edu/information-for-current-grad-students/>
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**: Discuss comments and suggestions with your advisor, 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 Graduate Coordinator, she will collect your committee members signatures via DocuSign, and send you a final copy.
Please note that this form is the record that this meeting has taken place!

10.3 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. Please inform the Grad Advisor in this situation.

11. ADVANCEMENT TO CANDIDACY (AtC) EXAM (campus-wide requirement)

11.1 AtC COMMITTEE

See Section 9.4, Pre-Advancement/Advancement to Candidacy Committee.

Pre-Advancement and Advancement Committees are generally the same. However, you can replace one or several member(s) of your Pre-Advancement Committee. Such a change has to be approved by the Graduate Advisor.

11.2 TIMING OF THE ADVANCEMENT MEETING

Advancement **MUST** occur in the winter, spring or summer quarters of your 3rd year (i.e. before the start of the fall quarter, which is when you enter into 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 if not corrected, could result in a recommendation 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 summer quarter of your third year, you will receive a **\$1,000 bonus** in addition to your stipend.

11.3 GOAL OF the Advancement to Candidacy (AtC) 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
- 2) demonstrating requisite knowledge, skills and experimental sophistication to convince the committee that there is a high probability for the project to succeed.

11.4 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 and tip: 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.

Good job, you have read 17 pages of this handbook☺. Keep reading and you may find a surprise!

11.5 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 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 AtC meeting provides a great opportunity to discuss your career plans. Therefore, please prepare your IDP for this meeting and discuss it with your PI. It may be a good idea to present your career plans also to your entire committee as they may have valuable suggestions and connections that may help you reach your goals. After this discussion, please submit the completed IDP (signed by your PI) to the Graduate Coordinator.

11.6 PAPERWORK

All graduate student forms are now online. The Graduate Coordinator will initiate the forms for you and the system will automatically route them for signature. However, it is your responsibility to inform her about your AtC, if you fail to do so, the department does not know that your exam has taken place.

Upon successful Advancement to Candidacy (AtC), please follow these steps:

1. Email the Graduate Coordinator and request initiation of the Ph.D. 1 form
2. Attach the completed [Committee Meeting Report](#) and the Graduate Program Coordinator, will collect committee members signatures via DocuSign, if not collected at the time of your AtC.)
3. Provide phone number you can be reached
4. Pay the advancement processing fee at this link [Ph.D. Advancement to Candidacy Fee](#)

Note: After the AtC meeting, you are asked to identify your thesis committee – i.e. remove committee members from your AtC committee as needed (if doing do, please send them a friendly note, informing them that you have removed them from the committee and thanking them for their efforts!)

11.7 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.

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

Important points that your AtC 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. Do you/the lab have the necessary preliminary data to support the feasibility of your experimental plan?
4. Do you have the reagents, tools, and equipment necessary to complete the experiments you propose?
5. Do you have the skills necessary to complete the planned work? 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 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. Do 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?

Students who fail to successfully complete the 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.

12. THESIS COMMITTEE

12.1 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.

12.2 THESIS COMMITTEE

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

<https://docs.google.com/document/d/16w0EicH2R7TAHT-Na66HhsPwMsh0XwNX5sdxalyYlrQ/edit#heading=h.wavqlbxwd0nn>

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.

12.3 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.

12.4 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.

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 difficulties 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.

Paperwork:

- **Before the meeting**, complete the form “Committee Meeting Report”, that you download from the departmental website <https://devcell.bio.uci.edu/information-for-current-grad-students/>. Type a 1 paragraph summary of your scientific progress on the form. Fill out the details, select “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 or you may email the graduate coordinator to collect signatures via DocuSign.
- **After the meeting**: 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 submission of this form is the record that this meeting has taken place!

Discussion of the IDP: As discussed in section 7.4, completing the IDP is an important activity to help design your personal career path. This activity should be done at least once/year, in discussion with your mentor/PI. It may be a good idea to present your career plans also to your committee to get their input and guidance. After each tune-up meeting, an updated and signed IDP should be submitted to the Graduate Coordinator for inclusion in your file.

Note for the first tune-up meeting after AtC on career development:

At this point, you are well into your PhD work and only about 1-2 years away from graduating. This is a great time to think about the direction in which you want to go (e.g. Academic research, industry, teaching, etc.) Discuss these plans with your PI and committee because they may have recommendations about activities that may support your career path, such as, for example, stronger involvement in GPS-BioMed, or opportunities to serve as instructor on record. They may also have useful connections.....

13.2 REPORT ON PROFESSIONAL ACCOMPLISHMENTS

The time after AtC is the time when you will make huge progress in your research, publishing papers, giving poster presentations and talks at meetings and possibly receiving fellowships and awards. To inform the department about your progress, complete the [Professional Accomplishments 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. [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.

15. PLANNING OF THESIS WRITING AND GRADUATION

19.1 TIMELINE FOR PREPARING YOUR GRADUATION

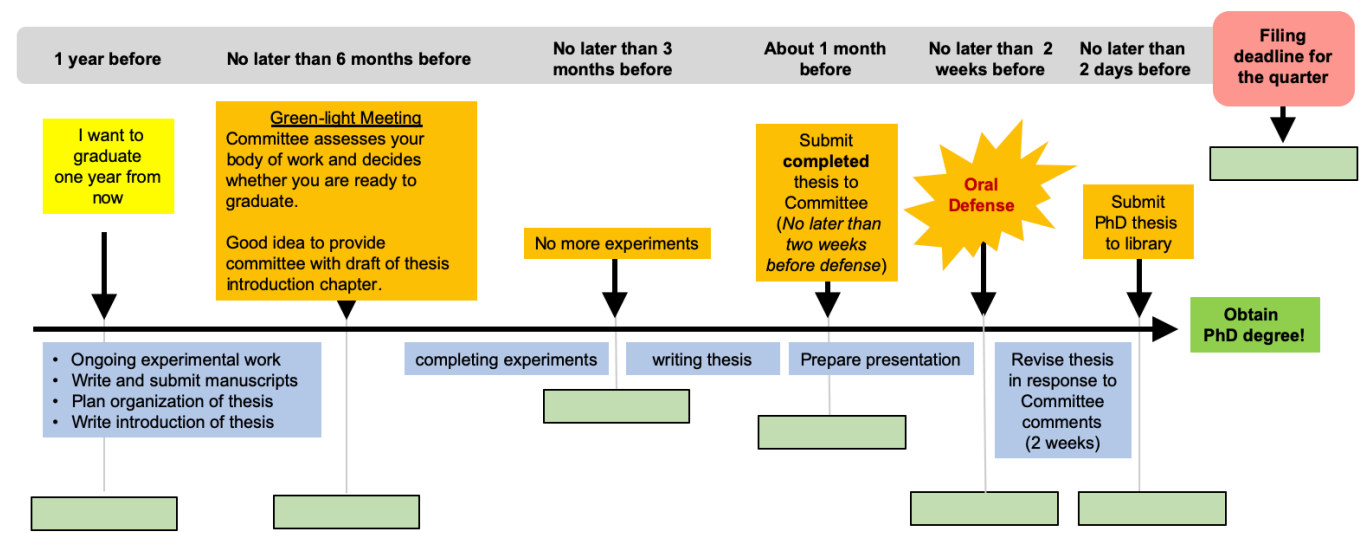


Fig. 1: 1-year countdown to degree (this document is also in the appendix). Please enter dates to generate your personal timeline, then discuss with your advisor and committee members

15.1 THESIS WRITING

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.

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 scientist 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 know what is expected.

15.2 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 “Committee Meeting Report”, that you download from the departmental website <https://devcell.bio.uci.edu/information-for-current-grad-students/>. Type a 1 paragraph summary of your scientific progress on the form. Fill out the details, select “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 or you may email the graduate coordinator to collect signatures via DocuSign.

- **After the meeting:** As done before, discuss comments and suggestions with your advisor, summarize them on the third page of the committee meeting form, and have it 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 only record that this meeting has taken place, so please do not forget to turn it in!

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

If you read this, please contact Grad Coordinator Mayra Rubio for a small surprise 😊.

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

16.1 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.

16.2 MAXIMUM TIME TO DEGREE

In general, students in the Department defend their thesis 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). In the fall quarter of your 7th 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).

16.3 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.

16.4 PAPERWORK

Upon defending your thesis please email the Graduate Coordinator and request initiation of the Ph.D. Form II. You will need "Ph.D. Form II - Signature Page / Report on Final Examination for the Ph.D. Degree" which can be obtained from <https://grad.uci.edu/current-students/student-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!

16.5 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.

17. 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 Mayra Rubio or the MSO Andrea Wiley for help with of the following actions:

1. [Academic Leave of Absence](#)
2. [Change of degree level](#)
3. [Filing Fee Petition](#)
4. [General Petition](#)
5. [In-Absentia Registration](#)
6. [Summer Filing Fee](#)
7. [Readmission Petition](#)
8. [Master's Advancement to Candidacy Comprehensive Exam Option](#) (*optional file at the time of Ph.D. AtC.)
9. [Final Degree Paperwork for the Master's Degree/Comprehensive Exam](#) (*optional file a quarter after Ph.D. AtC)
10. [Ph.D. Advancement to Candidacy \(AtC\) Form I](#)
11. [Ph.D. Dissertation Checklist/final degree paperwork](#)

**only if you would like to earn a Master's Degree along the way.*

18. 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

18.1 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.

18.2. 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-grad-students/>

- [Summary of the timeline for Graduate Students](#)
- [Expectations for Advancement to Candidacy](#)
- [Individual Development Plan \(IDP\)](#)
- [Committee meeting report form](#)
- [Professional accomplishments form](#)
- ["Timeline to degree" countdown](#)
- [School of BioSci Professional Conduct](#)

