

# DEPARTMENT OF ECOLOGY AND EVOLUTIONARY BIOLOGY

## PROGRAMS, POLICIES, AND GUIDELINES

### FOR GRADUATE STUDY

**2017-2018**

#### **A. Aims and Objectives**

The graduate program of the Department of Ecology and Evolutionary Biology grows out of strengths and interactions in ecology, evolution, and comparative physiology. We seek to promote these areas and their interactions through both research and instruction.

The Department has considerable strengths in areas such as molecular evolution, functional morphology, phylogenetics, physiological ecology, population genetics, evolutionary ecology, community ecology, microbial ecology and global change. The department seeks breadth, rather than concentration in a few isolated subdisciplines, to ensure that most graduate students interested in ecology and evolution can benefit by study in our department.

#### **B. Admission and Support**

##### **1. Application**

Application for graduate study is made directly through the Graduate Division <https://apps.grad.uci.edu/ogsa/>. Normally, each applicant for admission should have made contact with at least one Department faculty member whose research interests are related to those of the applicant. This is a natural recommendation for applicants to an educational program that will typically feature a period of close apprenticeship with a particular faculty member.

Three sections of the Graduate Record Examination (GRE), Verbal, Quantitative, and Analytical Writing (or Analytical) are normally required for admission. Completed application documents include the application form, officially certified GRE results, official transcripts of previous university study, three letters of recommendation, and either TOEFL, TOEFL iBT or IELTS exam scores (for foreign-language applicants). These must reach the Department Office by December 1 for consideration for admission and support for the following Fall Quarter.

##### **2. Evaluation and Admission of Applicants**

(a) **Admissions Committee.** The Admissions Committee typically consists of the Chair for Admissions, who is a faculty member, two additional faculty members, and one graduate student.

(b) **Evaluation procedures.** In December and January of each year, the Admissions Committee pre-screens applications to eliminate students who are clearly unqualified. The remaining applicants are evaluated by all interested faculty in the Department. Based on these evaluations, the Admissions Committee invites potential students to Irvine in late January or early February for interviews. The interviews serve to facilitate further evaluation of students by faculty, and vice versa. The Admissions Committee then makes a final recommendation about admissions. The Committee will endeavor to attract faculty sponsorship of particular students that it deems admissible.

(c) **Other roles of the Admissions Committee.** After the recruitment process, the Committee will summarize for the department the admissions for the coming year. The Committee is also expected to bring to the faculty matters of admission policy or procedure that the Committee concludes require reform or reevaluation. The Chair of the Admissions Committee shall inform the Department of all applicable changes in regulations, policies, and other directives emanating from the Graduate Division.

### **3. Admission**

Final notification of admission is normally made by the Department by March of each year. Students are admitted to begin the program in the Fall Quarter, except under unusual circumstances. Admission of UCI graduates is permissible on a case-by-case basis on the recommendation of the Admissions Committee if the Committee determines that it is in the student's and the Department's best interests for the student to undertake post-undergraduate education in the Department of Ecology and Evolutionary Biology.

### **4. Financial Support**

All applicants are considered for Departmental teaching assistantships (TAs), graduate student researcher appointments (GSRs), and graduate fellowships, so separate application for support is not necessary for University of California sources. Students are encouraged to obtain scholarships from other sources, for which separate application will be necessary.

International and U.S. Permanent Resident graduate students who wish to be considered for an appointment as a Teaching Assistant but who are not citizens of countries where English is either the primary or dominant language (as approved by the UCI Graduate Council), must pass one of the approved English proficiency exams (TSE, TOEFL iBT, IELTS or UCI Campus SPEAK exam).

For admitted students, the Department guarantees financial support for a nine-month period (the academic year) equivalent to that of the stipend of a 50% time Teaching Assistant (TA) for every student making satisfactory progress. The total duration of this support is limited to five years. This amount is not necessarily sufficient for 12 months of living expenses in the Irvine area. It is also not sufficient for the support of dependents. If such needs exist, students should explore other sources of income, including summer support from a faculty mentor, external fellowships, private awards and financial aid.

When students are fully supported as 50% TAs, they are expected to teach an average work load of 20 hours per week. Students with TA support less than 50% are required to teach the number of hours in proportion to their appointment. Students who are supported as Graduate Student Researchers or through fellowships are not required to be TAs, but all graduate students must fulfill a teaching requirement as part of their curriculum (three quarters for PhD students and one-quarter for MS students).

Foreign and out-of-state U.S. students will normally receive a non-resident tuition waiver in their first year. In second and subsequent years, such waivers are not normally given. U.S. students must take appropriate actions to establish California residency as soon as they move to California and should not need such waivers after the first year. Foreign students must continue to pay non-resident tuition after their first year. Major Professors are expected to assist foreign students in paying this fee. Students who successfully fulfill the requirements to Advance to Candidacy (usually in the third year) are eligible for a waiver of non-resident tuition for a maximum of three years, providing satisfactory progress is maintained toward the degree.

## **C. Outline of Course and Seminar Offerings**

(a) Core (graduate core) courses. Students shall complete a minimum of 5 core courses during their first six academic quarters. Two of those courses are required graduate level courses that all students must take: "Quantitative Methods in Ecology & Evolutionary Biology" (Eco Evo 207; typically in the first year) and "Writing Grant Proposals" (Eco Evo 204; typically in the second year). In addition students must

take one course each in the areas of Physiology {P}, Ecology {Ec}, and Evolution {Ev}. Although all three courses can be taken at the graduate level {G}, one of the three courses may be taken as an upper division undergraduate course {U} in a field in which students have not taken any previous undergraduate courses. The list of acceptable courses is currently limited to: E208{GP}, E227 {GP}, Physio206A-B{GP}, Anatomy201{GP}, E109{UP}, E127{UP}, E138{UP}, E139(UP), E145{UP}, E170{UP}, E183(UP), E188{UP}, E205{GEc}, E251{GEc}, E118{UEc}, E151{UEc}, E166L{UEc}, E186{UEc}, E206{GEv}, E135{UEv}, E137{UEv}, E153{UEv}, E154{UEv}, E168{UEv}. If a student wishes to request an exception (an exemption or a substitution), she/he must submit a written request justifying the reason to the graduate advisor. The graduate advisor and the student's Advisory Committee (or prior to the formation of the Advisory Committee, the First Year Graduate Student Committee) will decide whether to grant the request. Once approval has been given, the student must submit a General Petition found at <http://www.grad.uci.edu/forms/index.php> to Graduate Division.

(b) **Departmental seminar series.** The Department Seminar (EE 201) is a weekly seminar series, where seminars are presented by research scientists from UCI as well as other universities. Ample opportunity is given for informal meetings and interactions with visiting seminar speakers. The Departmental Seminar has traditionally included some guest speakers invited and hosted by the graduate students. All faculty and graduate students are strongly encouraged to attend these seminars.

(c) **Advanced graduate courses.** The Department offers advanced graduate seminar courses (e.g., EE 210, 221, 223, 235, 285) in evolution, ecology, statistics, and comparative physiology to help students develop a high level of scientific expertise in these areas.

(d) **Advanced undergraduate courses.** The Department offers courses at the advanced undergraduate level in ecology, evolution, and comparative physiology. These courses are designed to prepare undergraduates and entering graduate students for graduate level courses in these areas. Some of these courses may be taken for graduate credit. A graduate student may be recommended to take one of these courses by his/her First Year Committee or Dissertation Committee.

Students who enter the program through the Gateway Program are required to take E204 (Grant Writing) and one additional course at either the undergraduate or graduate level in the dissertation topic area. The student and her/his thesis advisor should decide which particular course would be most appropriate.

## D. Enrollment and the First Year

### 1. Enrollment

Newly enrolling students should arrive on-campus early in September. They must do so by the formal beginning of term, about one week before the beginning of classes. Early arrival will enable students to obtain housing, to familiarize themselves with the University and the Department. All entering graduate students are required to attend the department orientation. They will also be required to attend teaching orientation during the Fall before they begin teaching.

### 2. Academic Advising

Before or during the first week of Fall quarter, the First Year Committee will meet to assess each entering student's academic background and to prescribe a first-year course program to ensure that the student has a solid academic foundation. This committee also may recommend the composition of an Advisory Committee for any student entering without a Major Professor. It is also expected that students will discuss their plans for coursework with their Major Professor.

Each first-year student should meet with her/his Major Professor to decide on the composition of the student's Advisory Committee before the student's spring Advisory Committee meeting. The Advisory

Committee consists of at least two faculty members in the Department in addition to the Major Professor, and advises the student in research as well as in any course curriculum after the first year?.

Students will be required to complete an individual development plan (IDP) in Fall quarter of the 2nd year and update it annually in consultation with their thesis advisor using the MyIDP program developed by AAAS at <http://myidp.sciencecareers.org/>. This material should be provided to the pre-advancement/advancement/thesis committee along with a document summarizing progress in research during the annual meetings. The IDP plan should describe the student's career goals, desired training and specific milestones associated with professional development and academic training. The IDP should be revised to accommodate changes in career goals (such as anticipating applying for community college teaching posts, industry jobs, and government positions).

### **3. Other advising.**

The University provides a number of support services for graduate students. Throughout their graduate career, graduate students in the department should feel free to contact the Graduate Advisor of the department to discuss in a private setting any issues of concern and/or to help guide the student to other appropriate services. Other offices that offer support services include the Office of Equal Opportunity and Diversity (issues of discrimination and harassment, <http://www.eod.uci.edu/>, 949-824-5594), the UCI Counseling Center (personal issues, <http://www.counseling.uci.edu/>, 949-824-6457), and the Office of the Ombuds (dispute resolution services, <http://www.ombuds.uci.edu/>, 949-824-7256).

## **E. Degree Programs: General Guidelines**

### **1. Grade and Teaching Requirements**

Students are required to maintain a grade point average of B or greater in the five core courses required. The grade of B- is not considered a passing grade for a graduate student. Students must pass the five core courses by the end of their second academic year, unless there are extenuating circumstances that merit a time extension. Students failing to meet this requirement may be asked to leave the program.

Students are additionally required to maintain a satisfactory grade point average of B or greater in all additional coursework. The Satisfactory/Unsatisfactory option is used in some graduate courses. The Pass/No Pass option cannot be used for graduate courses because a Pass signifies C or above.

In the event a student receives an Incomplete in any of the core courses, the deficiency must be cleared by the deadline specified by the Graduate Advisor. Any extensions of this deadline require approval by the Graduate Advisor.

Graduate students are required to serve as a teaching assistant for a minimum of three quarters (for doctoral students) or one quarter (for Master's students) during their residence. Students are required to enroll in EE 399, University Teaching, during the quarter in which they serve as a teaching assistant. Instructors will evaluate them and submit the evaluation to the Graduate Advisor at the end of the quarter. Written evaluations of teaching performance may be attached to the student's permanent record.

### **2. The Major Professor and the Advisory Committee**

Each student must choose a Major Professor by the end of the first year. The Major Professor should be someone who can help the student realize his/her research goals. Normally, this would entail considerable interest on the part of the Major Professor in the research project(s) of the student as well as some provision of material assistance, such as laboratory space, materials, and so on. Students who cannot

find an appropriate Major Professor should consult with the Graduate Advisor for advice and assistance. On occasion, a student's interests change to such an extent that the Major Professor initially chosen is no longer appropriate. While changing Major Professors is obviously not a trivial matter, neither is it necessarily a sign of academic vagary, especially during the first year in residence. Any student who is contemplating a change to a different Major Professor should consult with the Graduate Advisor.

Each first-year student, in consultation with her/his Major Professor, should form an Advisory Committee and must meet with that committee during spring quarter of the first year. Each continuing student must convene his/her Advisory Committee (or Doctoral Dissertation Committee after advancement to candidacy) at least twice a year, normally once in fall and once in spring quarter. Failure of a student to convene his/her Advisory Committee within both the fall and spring quarter (spring quarter only for first year students) may result in termination of enrollment. Because the interests of a student may change, she/he is free to change the composition of the Advisory Committee with the concurrence of the Major Professor and the member to be added to the Committee. The member to be removed from the Committee need only be given the courtesy of notification.

Each graduate student is expected to work closely with her/his major professor and Advisory Committee in the development of a research proposal. Consultation with other members of the department is also encouraged. The research proposal should be submitted to the student's advisor and her/his advisory committee for their approval. Students should work closely with their Major Professor to explore possible internal and external funding opportunities for the proposed research.

### **3. Semi annual Review**

The Major Professor and committee members are responsible for submitting in a timely manner after each meeting a written summary of the meeting and the student's progress (see next section) to the student and the department (via the Staff Graduate Counselor) with a copy to the Graduate Advisor. This letter should outline the student's progress, accomplishments, and future plans. Any problems identified by the student or the Advisory Committee should be described, together with the student's plan for ameliorating them. This letter will be reviewed by the Graduate Advisor and placed in the student's file. The major professor should also provide the student and committee members with a copy of this letter.

In addition to the written evaluation completed by the Major Professor after each advisory committee meeting, the Graduate School requires a written evaluation of a student's progress once a year in the spring, signed by each committee member. Our department additionally requires that this form be completed after the fall meeting. The graduate student is responsible for obtaining these signatures and turning in the form. It is expected that the student will maintain "Satisfactory" progress in the program. Two "Unsatisfactory" reviews in a row will result in a review of the student by the Graduate Advisor and disciplinary action, including the possibility of dismissal.

A student who disagrees with this assessment or wishes to appeal any decisions made may:

- (i) discuss the matter with the Graduate Advisor;
- (ii) write a letter to the file; or
- (iii) come before the faculty to present an appeal in person.

The next year's annual review by the student's Advisory Committee should include a section that addresses the student's progress with respect to those concerns outlined the previous year. Open communication with the Major Professor and Advisory Committee should enable the student to receive the assistance required to correct any difficulties. If not, the advice of the Graduate Advisor should be sought.

## **F. Master's Degree Program**

### **1. Registration**

Students may be admitted for a Master's degree. Application procedures are identical to those for Ph.D. students.

### **2. Master's Degree Program**

A minimum of 28 quarter units in upper division and graduate classes approved by the Advisory Committee is also required, at least 20 of which must be earned in graduate (200-level) courses exclusive of credit given for thesis research and preparation. Students will complete the core courses, and expectations of achievement in these courses are the same as those for doctoral students (described in Part C heading (a) above). The student must also prepare a thesis on the basis of original research and give a public presentation of the research and defend this thesis before the Advisory Committee.

A written research proposal should be presented to and reviewed by the Advisory Committee and the student's major professor by the end of the Spring Quarter of the first year. Following approval by the Advisory Committee, this proposal will be incorporated in the student's file for the annual review of the second year. The Advisory Committee must consist of at least three faculty members of the Department.

The research thesis is normally completed by the end of the second year of residency. Copies of the thesis shall be submitted in accordance with procedures set down by the Thesis Advisor in the Graduate Division. The student shall supply one bound copy of the completed thesis to the Department and one bound copy to the Major Professor. It is a courtesy to provide copies to the other members of the Committee.

All requirements for the MS degree should be completed within two years, with a maximum of three years allowed for completion of the program.

### **3. Residence**

A Master's degree student must be in residence for at least three quarters. Waiver of residence requirements is at the discretion of the central administration, i.e., the Dean of the Graduate Division, following policies set down by the Graduate Council. It is anticipated that most students will require two years (six quarters) to complete the Master's degree.

### **4. Application for Advancement.**

Formal application for Advancement to Candidacy must be made to the Dean of the Graduate Division, preferably 30 days before but no later than the end of the quarter prior to the quarter in which it is anticipated that all requirements for the Masters degree will be completed

## **G. Doctoral Degree Program**

### **1. General Guidelines**

The Ph.D. degree requires original research and a dissertation. It is awarded on the basis of evidence that the recipient possesses knowledge of a broad field of learning and mastery of a particular sector of that field. It is not an award for diligence, but an indication of critical judgment, comprehension, and creativity. The dissertation is expected to provide adequate demonstration that these requirements have been met. However, the curriculum of courses that the student takes will play a critical role in supporting the student's research endeavors and broadening their knowledge.

## **2. Residence**

The minimum residence requirement for the Ph.D. degree is two years. Waiver of the residence requirement is at the discretion of the Dean of the Graduate Division. It is anticipated that students entering with a Bachelor's degree will require five years for the completion of the Ph.D.

## **3. Research and Advancement to Candidacy**

Before Advancement to Candidacy, students are expected to write a research proposal to be presented to and approved by her/his Advisory Committee. The Advisory Committee serves until the advancement to candidacy exam.

Formal application for Advancement to Candidacy must be made to the Dean of the Graduate Division when all requirements for advancement have been completed satisfactorily. This is expected to occur before the beginning of the 10th academic quarter (normally before the beginning of the fourth year); the normative time to advancement is during the third year of graduate school, including the summer of the third year. Advancement to Candidacy is contingent on passing an oral examination administered by the Advancement to Candidacy Committee.

## **4. Composition of Advancement to Candidacy Committee**

1. The Advancement Committee must have five members.
2. All members must be voting members of the University of California academic senate (members from other UC campuses do not require a request for exception)
3. If the student wishes to include a non-voting senate member or faculty from another university (non-UC), the student must submit a written request for exception to the Graduate Dean prior to scheduling the advancement. These individuals may not serve as Chair, a departmental committee member, or outside member. Approval is at the discretion of the Graduate Dean and may not be granted by the departmental Graduate Advisor, Dissertation Advisor, or Associate Dean of the School of Biological Science.
4. A majority of the members must be appointed in the student's department. The Office of Graduate Studies is receptive to some flexibility in the departmental affiliation of the committee members if there is an academic rationale. A request for exception and justification should be submitted prior to appointing a committee.
5. The Major Professor serves as Chair of the committee; the Chair must hold a primary or joint appointment in the student's department.
6. At least two members (in addition to the chair) must hold a primary or joint appointment in the student's department.
7. The "outside member" must be an academic senate member of the Irvine campus (must be regular rank faculty from UCI, may not hold a primary or joint appointment in the student's department, may be in the general area of Biological Sciences, but should not be in the student's research area).

The oral examination covers the student's major field of specialization, the proposed research to be developed, and other areas of biology. The student will be expected to demonstrate knowledge in these areas, as approved by the student's Advisory Committee. Each student should consult with members of her/his Advancement to Candidacy Committee about the member's expectations for the oral exam well before the exam.

Doctoral students who Advance to Candidacy meet the requirements for the MS degree, and can receive the MS degree by submitting the MS degree advancement to candidacy paperwork, and then submitting the MS degree completion paperwork in a subsequent quarter.

## 5. Doctoral Dissertation Committee

After Advancement to Candidacy, the three-person Doctoral Dissertation Committee supervises the remainder of the student's program, including completion of the research and preparation of the dissertation. The student will meet with the members of the Committee (at least twice a year as a committee) to discuss with them the research and the form of the dissertation.

This committee consists of the Major Professor and at least one other member from the Department. Representation on both the Advancement to Candidacy and Dissertation Committees by scholars from institutions other than UCI is encouraged.

## 6. Examination and Defense of Dissertation

**(a) Format.** At an appropriate time, the Doctoral Dissertation Committee will supervise the Final Examination. This consists of a preliminary conference between the candidate and the Doctoral Committee to consider the formal acceptance of the basic content of the dissertation. Following this acceptance, the candidate will give a public seminar. Immediately after this public seminar, there will be a final closed conference between the candidate, the Doctoral Dissertation Committee, and sometimes other faculty at the invitation of the Doctoral Dissertation Committee. The Committee will indicate that the Final Examination is satisfactory by signing the appropriate page of the dissertation and the Final Degree paperwork.

**(b) Timing.** Completion of the Doctoral degree should normally occur before the beginning of the 16th academic quarter (usually before the sixth year). After 15 quarters have elapsed (including leaves of absence), the student should give compelling written justification to the Graduate Advisor and Advisory Committee for further continuation. Each request is considered on a case-by-case basis. The maximum time to complete a doctoral degree is before the beginning of the 22nd academic quarter (before the beginning of the eighth year). The defense may be held before the dissertation is ready for the Archives, but not before the Doctoral Dissertation Committee has examined and approved a final draft. It will normally take place during a regular academic term, to ensure that as many faculty and students have the opportunity to attend as possible. Exceptions must be approved by the Advisory Committee.

**(c) Dissertation Copies.** Copies of the dissertation shall be submitted in accordance with procedures set down by the Dissertation Advisor in the Graduate Division. The student shall supply one bound copy of the completed dissertation to the Department and one bound copy to the Major Professor. It is a courtesy to provide copies to the other members of the Doctoral Dissertation Committee.

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