

## **Graduate Program in Ecology and Evolution Ph.D. Degree learning Goals and Assessment**

The Graduate Program in Ecology and Evolution strives to have students complete degrees that allow them to become leaders in their areas of expertise in research institutions, governmental agencies, NGO's and other areas where this advanced knowledge and skill is needed.

### **Learning Goal 1 for Students: Distinguished research, scholarship, teaching, and leadership skills in the fields of ecology and evolution**

Assessment of student achievement of Goal 1:

- Grades in graduate courses
- Successful completion of the qualifying exam by the end of the first semester of the student's third year with clear knowledge in all subject areas within the fields.
- Advising by student's committee members and the Scholastic Review Committee.
- Successful teaching reviews for those students engaged in teaching and pedagogy.
- Attainment of employment in positions requiring the expertise obtained with the degree.

Role of the program in helping the students to achieve Goal 1:

- Admittance to the program only if an E&E faculty advisor is in place at time of acceptance to program.
- Formation of an advisory committee in the first semester that consists of the advisor, two additional E&E faculty members and an ABD graduate student preferably from another lab in the program.
- First semester registration in the required course that introduces students to the many areas in ecology and evolution and provides them with classic papers to be read in discussed in each of those areas.
- Creation and maintenance of a Core Knowledge Resource List, a compendium of classic articles, books and other media, that the E&E faculty has deemed each student must be conversant in to attain their degree.
- Program by-laws that require a Scholastic Review Committee as a standing committee within the program.
- Completion of the Annual Progress Report by every student with copies going to their advisor, their committee members and the program office with review by the Scholastic Review Committee if requested by the student and/or the advisor. This report, which includes the student's independent research, publications, presentations, outreach and general scholarship, serves to keep the students focused on the goals of their education.

- A Yearly Scholastic Review completed by the program administrator and examined and signed by the Scholastic Review Chairperson that alerts the student and their advisor to any administrative deficiencies and upcoming deadlines (quals, prelims etc).
- Departmental/program newsletter that highlights the publications, presentations, grants, awards and achievements of both faculty and students in the E&E program. This serves to illustrate the importance of communicating research and scholarship to the scientific community and the general public.
- Advising students to teach as a portion of their graduate career to become familiar with the classroom setting and learn teaching skills.
- Use of the Teaching Assistance Program and its workshops for teacher training.
- Review of the curriculum by the Curriculum Committee to insure that course offerings are sufficient and current in content.

### **Learning Goal 2 for Students: Engage in and conduct original research**

Assessment of student achievement of Goal 2:

- Preliminary Proposal completed and defended by the end of year four.
- Dissertation prepared and defended successfully.
- Attendance and presentations (posters or talks) at local and national venues during the graduate career.
- Publication of scholarly articles in peer-reviewed journals on the research in the dissertation project.
- Attainment of internal and external grants/fellowships for research.
- Attainment of awards for research.

Role of graduate program in helping students achieve Goal 2:

- Advisor and advisory committee introduce students to research possibilities in the first semester.
- Advise students to meet with their advisor and committee frequently to act as mentors throughout the student's graduate career.
- Opportunities to write and submit grants for external funding.
- Graduate Program Seminar Series to showcase local and visiting scientists, and to present the most current research in ecology and evolution on a weekly basis.
- Provide public opportunities for the students to present their research and gather feedback from peers and colleagues.
- Provide courses that require a research and writing component with critical feedback.
- Track publications and presentations, and nominate eligible student candidates for awards.

### **Learning Goal 3 for Students: Professional career preparation.**

Assessment of graduate student achievement of Goal 3:

- Graduate student teaching evaluations.
- Track number of publications, presentations, and outreach activities.
- Placement of students upon completion of degree.

Role of graduate program in helping students to achieve Goal 3:

- Provide students access to teaching skills classes both within the program and through the Teaching Assistant Project.
- Provide students with an academic atmosphere that fosters professionalism by treating students as junior colleagues and expecting them to act in that manner.
- Provide networking opportunities by providing access to seminar speakers and visiting scholars through one-on-one meetings, funding to local and national meetings and professional organizations.
- Keep students informed of professional development opportunities as they become available through the university.
- Keep students informed of the job opportunities both academic and non-academic available to them.

UPDATE 2012:

We have continued to refine our course offerings and other means of assessing graduate student progress towards our learning goals. Our major effort over this past year is the development of a 1-credit course that provides two critical tools for academic development: (1) ethics and academic integrity and (2) job search skills such as CV preparation, seminar preparation, and mock interviewing. This course is currently under consideration for approval by the Graduate School. Until this course is approved, we will continue to offer one-off faculty led sessions on these topics as we have in past years. We also continue to collectively build the resources available online to our students related to our designated Core Topics. This is intended to provide each student with a set of critical readings that will familiarize them with the historical development of each field, and with a sufficient breadth of knowledge across all associated fields.

## **Graduate Program in Ecology and Evolution M.S.. Degree learning Goals and Assessment**

The Graduate Program in Ecology and Evolution strives to have students complete degrees that allow them to become leaders in their areas of expertise in governmental agencies, NGO's, environmental and ecological consulting firms and other areas where this advanced knowledge and skill is needed.

### **Learning Goal 1 for Students: Mastery of research, scholarship, and leadership skills in the fields of ecology and evolution**

Assessment of student achievement of Goal 1:

- Grades in graduate courses
- Advising by student's committee members and the Scholastic Review Committee.
- Attainment of employment in positions requiring the expertise obtained with the degree.

Role of the program in helping the students to achieve Goal 1:

- Admittance to the program only if an E&E faculty advisor is in place at time of acceptance to program.
- First semester registration in the required course that introduces students to the many areas in ecology and evolution and provides them with classic papers to be read in discussed in each of those areas.
- Creation and maintenance of a Core Knowledge Resource List, a compendium of classic articles, books and other media, that the E&E faculty has deemed each student must be conversant in to attain their degree.
- Program by-laws that require a Scholastic Review Committee as a standing committee within the program.
- Completion of the Annual Progress Report by every student with copies going to their advisor, their committee members and the program office with review by the Scholastic Review Committee if requested by the student and/or the advisor. This report, which includes the student's independent research, publications, presentations, outreach and general scholarship, serves to keep the students focused on the goals of their education.
- A Yearly Scholastic Review completed by the program administrator and examined and signed by the Scholastic Review Chairperson that alerts the student and their advisor to any administrative deficiencies and upcoming deadlines (quals, prelims etc).
- Departmental/program newsletter that highlights the publications, presentations, grants, awards and achievements of both faculty and students in the E&E program. This serves to illustrate the importance of communicating research and scholarship to the scientific community and the general public.

- Review of the curriculum by the Curriculum Committee to insure that course offerings are sufficient and current in content.

**Learning Goal 2 for Students: Engage in and conduct original research (for those students obtaining a Master's degree with thesis).**

Assessment of student achievement of Goal 2:

- Thesis prepared and defended successfully.
- Attendance and presentations (posters or talks) at local and national venues during the graduate career.
- Publication of scholarly articles in peer-reviewed journals on the research in the dissertation project.
- Attainment of internal and external grants/fellowships for research.
- Attainment of awards for research.

Role of graduate program in helping students achieve Goal 2:

- Advisor introduces students to research possibilities in the first semester.
- Advise students to meet with their advisor and committee frequently to act as mentors throughout the student's graduate career.
- Opportunities to write and submit grants for external funding.
- Graduate Program Seminar Series to showcase local and visiting scientists, and to present the most current research in ecology and evolution on a weekly basis.
- Provide public opportunities for the students to present their research and gather feedback from peers and colleagues.
- Provide courses that require a research and writing component with critical feedback.
- Track publications and presentations, and nominate eligible student candidates for awards.

**Learning Goal 3 for Students: Professional career preparation.**

Assessment of graduate student achievement of Goal 3:

- Track number of publications, presentations, and outreach activities.
- Placement of students upon completion of degree.

Role of graduate program in helping students to achieve Goal 3:

- Provide students with an academic atmosphere that fosters professionalism by treating students as junior colleagues and expecting them to act in that manner.

- Provide networking opportunities by providing access to seminar speakers and visiting scholars through one-on-one meetings, funding to local and national meetings and professional organizations.
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