

# Ecology and Evolutionary Biology, Graduate Program

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Graduate training provides students with unparalleled opportunities for scientific research and career development. Historically, most students have enrolled in the Ph.D. program, but a thesis-based M.S. program is also available. Graduate students conduct research under the supervision of a faculty advisory committee. The Ph.D. curriculum includes five graduate courses, an advancement examination with written and oral components, and an original dissertation with an oral defense typically completed within five years of enrollment. The M.S. program requires 28 units of coursework along with a research proposal, original thesis, and oral defense typically completed within two or three years.

Applicants for this program should have a solid undergraduate program in biology and ecology, emphasizing both research and fieldwork. In addition, course work in statistics, mathematics, and physical and chemical sciences is expected. The deadline for application is December 1.

The graduate program offers both the Plan I M.S. and the Ph.D. in Biological Sciences.

## Requirements

Students are required to complete a minimum of five core courses during their first six academic quarters. Two of those courses are required graduate-level courses that all students must take:

ECO EVO 204	Writing Grant Proposals (typically in the second year)
ECO EVO 207	Quantitative Methods in Ecology and Evolutionary Biology (typically in the first 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). The list of acceptable courses is currently limited to:

ECO EVO 208	Ecological and Evolutionary Physiology (GP)
ECO EVO 227	Plant Physiological Ecology (GP)
PHYSIO 206A	Introduction to Medical Physiology (GP)
PHYSIO 206B	Introduction to Medical Physiology (GP)
ANATOMY 201	Human Gross Anatomy (GP)
BIO SCI E109	Human Physiology (UP)
BIO SCI E127	Physiological Plant Ecology (UP)
BIO SCI E138	Comparative Animal Physiology (UP)
BIO SCI E139	Animal Locomotion (UP)
BIO SCI E145	Animal Coloration and Vision (UP)
BIO SCI E183	Exercise Physiology (UP)
BIO SCI E188	Introduction to Insect Physiology (UP)
ECO EVO 205	Special Topics in Ecology (GEC)
ECO EVO 251	Evolutionary and Ecological Principles in Medicine (GEC)
BIO SCI E118	Ecosystem Ecology (UEC)
BIO SCI E151	Evolutionary and Ecological Principles in Medicine (UEC)
BIO SCI E166L	Field Biology (UEC)
BIO SCI E186	Population and Community Ecology (UEC)
ECO EVO 206	Special Topics in Evolution (GEV)
BIO SCI E153	Functional and Structural Evolutionary Genomics (UEV)
BIO SCI E154	Genetics and Human History (UEV)
BIO SCI E168	Evolution (UEV)

If a student wishes to request an exception (an exemption or a substitution), the student 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 Prescription Committee) will decide whether to grant the request.

Students who enter the program through the Gateway Program are required to take ECO EVO 204 and one additional course at either the undergraduate or graduate level in the dissertation topic area. The student and his/her thesis advisor should decide which particular course would be most appropriate.

Students are required to maintain a grade point average of B or greater in the five core courses required for that student. 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. Students failing to meet this requirement may be asked to leave the program. 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.

### **Teaching Requirement**

To ensure that all students gain teaching experience, all students are required to serve as Teaching Assistants for a minimum of one quarter for M.S. students and three quarters for Ph.D. students. These are minima, and students may teach additional quarters during their program.

### **Research**

Each entering graduate student chooses a faculty advisor and a three-person advisory committee for guidance, with whom the student meets at least twice each year. All students are encouraged to submit a research proposal to their advisory committee during their first year of residency. A comprehensive proposal is required before the end of the first year for M.S. students and before advancement to candidacy for Ph.D. students. The progress of each student is reviewed by the student's advisory committee, together with the Graduate Advisor, twice each academic year.

### **Advancement to Candidacy and Normative Time for Completion**

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

The normative time for completion of the Ph.D. is five years, and the maximum time permitted is seven years. All requirements for the M.S. degree should be completed within two years, with a maximum of three years allowed for completion of the program. Advancement to doctoral candidacy by an oral examination is expected during the third year for students entering with a B.A. or B.S. or during the second year for those entering with an M.A. or M.S.