

ECOLOGY AND EVOLUTIONARY BIOLOGY - DOCTOR OF PHILOSOPHY (PHD)

The EBIO department offers a Doctor of Philosophy (PhD) degree in a wide variety of biological disciplines, ranging from biogeochemistry to community ecology to evolutionary genetics and others.

The PhD is a research degree, involving the production of a major piece of original research (the dissertation). The program is intended to be a five-year course of study that produces graduates who subsequently teach and conduct research at colleges or universities or hold research or leadership positions at other private or government institutions

Students are expected to form a dissertation committee of five faculty members (including one from outside EBIO) after beginning their studies. This committee aids the student in designing a research program and choosing relevant coursework. In addition to the final examination upon completion of the dissertation, the dissertation committee administers an examination (typically in the third semester) on general knowledge in ecology and/or evolutionary biology and a comprehensive examination (typically in the fifth semester) on a written research proposal submitted by the student.

Modern laboratory facilities for graduate study are located in the Ramaley Biology building. In addition, the department has strong ties with the University Museum, the Institute of Arctic and Alpine Research (INSTAAR), the Institute of Behavioral Genetics (IBG), the Cooperative Institute for Research in Environmental Sciences (CIRES), the Environmental Studies Program (ENVS) and the departments of Integrative Physiology, Geology, Geography, Anthropology and Molecular, Cellular and Developmental Biology. INSTAAR operates the Mountain Research Station, an alpine field laboratory 25 miles from campus. Graduate student support is available in the form of fellowships, part-time instructorships, teaching assistantships, research assistantships and research grants.

Requirements

Admissions

International student applications are due by Dec. 1, and U.S. domestic applications are due by Dec. 31 for consideration for admission during the subsequent academic year. A completed domestic application includes a statement of intent, three letters of recommendation, official transcripts and scores on the GRE General Test.

Course Requirements

A total of 30 credit hours of coursework must be taken, although independent study credit may be included in this total. In addition, a total of 30 credit hours of dissertation must also be taken. PhD students are required to teach for at least one academic year, typically as a teaching assistant for one of the many laboratory courses offered by the department.

Learning Outcomes

By the completion of the program, students will be able to:

- Demonstrate expertise, critical thinking, and integration of foundational knowledge in ecology, evolution, quantitative reasoning and science writing.
- Develop and conduct independent, hypothesis-driven ethical science, including proposal-writing, study design, data collection, analyses, data and material deposition and archiving, writing and publishing.
- Effectively communicate and present research through oral presentations, posters, diverse media outlets, outreach opportunities and other venues to reach myriad audiences.
- Demonstrate pedagogical skills in teaching and mentoring undergraduate and graduate students.