

BIOLOGY PH.D.

All students must meet the Requirements for the Doctor of Philosophy Degree

OVERVIEW

The research of Biology faculty is grouped into two clusters: Cell and Molecular Biology and Ecology-Evolution-Animal Behavior. Students will have the opportunity to mention from the outset of the application process whose research they are interested in. While faculty research interests fall into these two broad groupings, students are encouraged to consider research projects that cross disciplines.

Learning goals for the PhD degree students are:

- Be able to design and execute an independent research project, and analyze and communicate experimental results orally and in writing.
- Be proficient in analysis and visualization of experimental results.
- Be able to articulate and defend rationale and importance of research questions, study design, and analysis of results.
- Be able to communicate general and specific knowledge and importance of findings to broad audience as well as experts within sub-disciplines.
- Have a broad factual and conceptual knowledge and understanding of biology.

SPECIFIC REQUIREMENTS

Requirements for Admission to Graduate Studies for the Degree of Doctor of Philosophy

Satisfactory completion of a B.A. or B.S. degree, typically in the natural sciences. Taking the Graduate Record Examination is not required.

Minimum Degree Requirements

There are 75 required credits, of which at least 30 must be graded credits and at least 9 of which must be at the 6000- or 7000-level.

This includes a minimum of 4 content-based credits of Graduate Colloquia, Scientific Survival Skills, Proposal Writing, 5 credits of Graduate Seminar, 4 credits of Biology Seminar, and Computational Biology. Students may take two 3-credit 3000- or 4000-level courses for graduate credit with approval of the course instructor, the Director of Graduate Studies, and the Graduate College. The selection of courses will be designated for each student by the advisor and graduate studies committee. At least 20, but not more than 45, credits must be earned in dissertation research. Each candidate must participate in the teaching of at least 1 undergraduate course.

Comprehensive Examination

Students take Proposal Writing the spring semester of their second semester during which they prepare a written research proposal. The

comprehensive exam evaluates the written proposal and has two oral parts. The first oral part is a defense of the written proposal. The second oral part evaluates the student's understanding of the broad range of concepts in the student's discipline. The comprehensive examination takes place before the end of May of their second semester.

Requirements for Advancement to Candidacy for the Degree of Doctor of Philosophy

Successful completion of the comprehensive examination is required for advancement to candidacy.