Ph.D. in Ecology and Evolutionary Biology

The EEB doctoral program provides a training environment in ecological and evolutionary science for future scientists and societal leaders that focuses on research that challenges and/or improves current theory and knowledge and has the capacity to be relevant to society. Faculty in the EEB program work on scales ranging from molecules to global change, in terrestrial and aquatic systems both regionally and around the world. In particular, our research focuses in two key areas: Biodiversity and Global Change Ecology.

Admission Requirements

1. Bachelor's degree from an accredited institution in the United States or proof of equivalent education in a foreign institution
2. Three letters of recommendation indicating endorsement of the applicant for doctoral study
3. Statement of purpose
4. Applicants from countries where English is not the first language are required to demonstrate English proficiency. Please consult the graduate school (http://catalog.utep.edu/admissions/graduate/graduate-student/) website for required scores.

Degree Requirements

With departmental approval, students entering the program with a master's degree can count up to 24 semester hours of graduate coursework towards advanced standing in the PhD degree. Students with deficiencies in Cell Biology, Genetics, Ecology, or Evolutionary Theory will be required to take additional coursework to remove the deficiencies.

Admission to Candidacy

The student must pass a qualifying oral examination to advance to candidacy for the doctorate. This exam is designed to assess the candidate's knowledge and understanding of the material covered in the core courses as well as the candidate's ability to rationally discuss the design, implementation, and analysis of a research problem of the student's and the committee's choosing. The Preliminary Examination Committee will determine whether the student displays sufficient breadth of knowledge and understanding of basic principles to undertake original research.

Dissertation

A dissertation demonstrating both the ability to do original independent research and competence in scholarly exposition will be required of all students. The dissertation must present original research and should provide the basis for one or more publishable contributions to the research literature. The dissertation will be supervised by the Dissertation Advisor, in consultation with a Dissertation Committee consisting of at least three additional members, at least one of whom must be a graduate faculty member from outside the Department of Biological Sciences. The candidate will present a dissertation proposal for approval by the Dissertation Committee.

Final Oral Examination

Upon completion of the dissertation, the student must defend, in public, his or her work. The Dissertation Committee will be responsible for administering the final public oral defense and will have the responsibility of determining whether the written dissertation and its oral presentation and defense are acceptable.

Degree Plan

Required Credits: 60

<table>
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<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOL 6129</td>
<td>Seminar in Ecology Evolution (Complete three semesters)</td>
<td>3</td>
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<tr>
<td>BIOL 6208</td>
<td>Prof Skills Devel Eco Evo</td>
<td>2</td>
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<tr>
<td>BIOL 6209</td>
<td>Rsrch Proposals in Eco Evo</td>
<td>2</td>
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<td>BIOL 6328</td>
<td>Biostatistics</td>
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<td>BIOL 6331</td>
<td>Advances in Eco/Evo Theory</td>
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Free Electives:

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<tr>
<td>BIOL 6301</td>
<td>Basic Principles of Toxicology</td>
</tr>
<tr>
<td>BIOL 6304</td>
<td>Physiological Regulatory Mech</td>
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<tr>
<td>BIOL 6305</td>
<td>Cell Physiology</td>
</tr>
<tr>
<td>BIOL 6310</td>
<td>Adv Research Techniques</td>
</tr>
<tr>
<td>BIOL 6312</td>
<td>Biodiversity</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
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<td>BIOL 6313</td>
<td>Biogeography</td>
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<td>BIOL 6316</td>
<td>Biosystematics</td>
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<tr>
<td>BIOL 6329</td>
<td>Physiology of Bacterial Cell</td>
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<tr>
<td>BIOL 6340</td>
<td>Structure/Funct Macromolecules</td>
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<tr>
<td>BIOL 6344</td>
<td>Molecular Pathogenesis</td>
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<td>BIOL 6351</td>
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<td>BIOL 6352</td>
<td>Intro Bio II: Gene Find/Compar</td>
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<td>BIOL 6360</td>
<td>Limnology</td>
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<td>ESE 6301</td>
<td>Environmental Law and Policy</td>
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<td>ESE 6307</td>
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<td>ESE 6402</td>
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<tr>
<td>GEOP 6336</td>
<td>Digital Image Processing</td>
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<tr>
<td>GEOP 6361</td>
<td>Plate Tectonics</td>
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<tr>
<td>MATH 6388</td>
<td>Multivariate Data Analysis</td>
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<tr>
<td>MATH 6391</td>
<td>Time Series Analysis</td>
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Select twenty-seven hours from the following: 27

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<td>BIOL 6290</td>
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<tr>
<td>BIOL 6390</td>
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<tr>
<td>BIOL 6490</td>
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<tr>
<td>BIOL 6690</td>
<td>Independent Research</td>
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**Thesis:**

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<th>Course Title</th>
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<tbody>
<tr>
<td>BIOL 6398</td>
<td>Dissertation</td>
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<tr>
<td>&amp; BIOL 6399</td>
<td>and Dissertation</td>
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**Total Hours** 60