Degree: Bachelor of Arts (BA)
Major: Evolutionary Biology

Program Overview

The Evolutionary Biology Program is designed to provide students with knowledge of macro- and micro-evolutionary processes underlying the evolution and diversification of life on Earth and an understanding of the meta-scientific issues involved in this unique field of study.

The program includes grounding in the history and philosophy of evolutionary thought and alternative conceptualizations of the mechanisms, patterns, and processes of evolution. It emphasizes evolutionary theory, foundations of ecology and genetics, focused study of particular organisms or groups of organisms, and the dynamics of evolutionary principles in scientific inquiry.

Undergraduate Policies

For undergraduate policies and procedures, please review the Undergraduate Academics section of the General Bulletin.

Accelerated Master's Programs

Undergraduate students may participate in accelerated programs toward graduate or professional degrees. For more information and details of the policies and procedures related to accelerated studies, please visit the Undergraduate Academics section of the General Bulletin.

Program Faculty

Michael Benard, PhD
Associate Professor and Chair, Department of Biology

Radhika Atit, PhD
Professor, Department of Biology

Darin Croft, PhD
Professor, Department of Anatomy, School of Medicine

Emmitt Jolly, PhD
Professor, Department of Biology

Scott Simpson, PhD
Professor, Department of Anatomy, School of Medicine

Mark Willis, PhD
Professor, Department of Biology

Peter A. Zimmerman, PhD
Professor, Center for Global Health and Diseases, School of Medicine

Program Requirements

This program is available only as a second major for a BA degree; as a secondary major for a student completing a BS degree; or as the sole major for a BA degree if a student is also completing a BS degree. All students must meet the general requirements for bachelor’s degrees and the Unified General Education Requirements.

Evolutionary biology is a second major, to be pursued in conjunction with a conventional disciplinary major. Up to 12 credit hours in required and elective courses taken by students for their first major may be applied to their evolutionary biology major.

The 30 credit hour interdisciplinary major in evolutionary biology consists of:

a. Three foundation courses
b. One course in ecology
c. One course in the philosophy/history of science
d. 15 credit hours of approved electives

The approved electives may include additional philosophy/history of science courses from the list below. In consultation with a major advisor, students will tailor intensive study to suit particular interests within the major.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>BIOL 214</td>
<td>Genes, Evolution and Ecology</td>
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<tr>
<td>EEPS 210</td>
<td>Earth History: Time, Tectonics, Climate, and Life</td>
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<td>PHIL/ANTH/BIOL/EEPS/HSTY 225</td>
<td>Evolution</td>
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Ecology Courses: 3

Choose one of the following:

- BIOL 216 Development and Physiology
- BIOL 336 Aquatic Biology
- BIOL 351 Principles of Ecology

Philosophy/History of Science Courses: 3

Choose one of the following:

- HSTY 201 Science in Western Thought I
- HSTY 202 Science in Western Thought II
- PHIL 203 Revolutions in Science

Elective Courses: 15

- ANTH 103 Introduction to Human Evolution
- ANTH 302 Darwinian Medicine
- BIOL 214L Genes, Evolution and Ecology Lab
- BIOL 216L Development and Physiology Lab
- BIOL 223 Vertebrate Biology
- BIOL 305 Herpetology
- BIOL 318 Introductory Entomology
- BIOL 326 Genetics
- BIOL 328 Plant Genomics and Proteomics
- BIOL 339 Aquatic Biology Laboratory
- BIOL 343 Microbiology
- BIOL 345 Mammal Diversity and Evolution
- BIOL 351L Principles of Ecology Laboratory
- BIOL 358 Animal Behavior
- BIOL 362 Principles of Developmental Biology
- BIOL 364 Research Methods in Evolutionary Biology
- BIOL 365 Evo-Devo: Evolution of Body Plans and Pathologies
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<tr>
<td>EEPS 301</td>
<td>Stratigraphy and Sedimentation</td>
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<td>PSCL 350</td>
<td>Behavior Genetics</td>
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<td>STAT 201</td>
<td>Basic Statistics for Social and Life Sciences</td>
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<td>Statistics for Experimenters</td>
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<td>Topics in Evolutionary Biology</td>
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**Total Hours** 30