Ecology and Evolutionary Biology, B.S.

In the 21st century, biologists in fields ranging from medicine to global change biology increasingly incorporate ecological and evolutionary ideas in their research. The major in Ecology and Evolutionary Biology encourages students to understand and appreciate important linkages between biological disciplines. The major is very broad, including components of evolutionary biology, ecology, and physiology. Faculty interests are also broad and include molecular evolution, population genetics, the evolution of aging, conservation biology, restoration ecology, biogeography, plant and animal population and community ecology, the evolution of infectious disease, experimental evolution, evolutionary ecology, population and community ecology, conservation and restoration ecology, global change, microbial ecology, behavioral ecology, ecophysiology, and evolutionary physiology. Following graduation, students will be especially well prepared to enter graduate programs in either ecology or evolution for advanced study. The major also provides the foundation to pursue careers in governmental and non-governmental environmental organizations, in industry, and in professional schools. The Department considers undergraduate experience in research an integral component of a scientific education, and majors are required to participate in BIO SCI 199 or BIO SCI 197, in which they will be mentored by an individual faculty member within the Department.

All students must meet the University Requirements (http://catalogue.uci.edu/informationforadmittedstudents/requirementsforabachelorsdegree/).

All students must meet the School Requirements (http://catalogue.uci.edu/schoolofbiologicalsciences/#schoolrequirementstext).

Major Requirements

A. Required Major Courses:

BIO SCI 2E  
Topics and Careers in Ecology and Evolution

BIO SCI 4B  
Introduction to Field Biology

BIO SCI E106  
Processes in Ecology and Evolution

BIO SCI E107  
Seminar in Ecology and Evolutionary Biology

ECO EVO 201  
Seminar in Ecology and Evolutionary Biology

STATS 8  
Introduction to Biological Statistics

B. Upper-Division Laboratories:

BIO SCI E115L  
Evolution Laboratory

BIO SCI E166L  
Field Biology

and select one of the following:

BIO SCI E106L  
Habitats and Organisms

BIO SCI E112L  
Physiology Laboratory

BIO SCI E131L  
Image Analysis in Biological Research

BIO SCI E140L  
Evolution and the Environment Laboratory

BIO SCI E160L  
Biology of Birds Lab

BIO SCI E179L  
Field Freshwater Ecology

BIO SCI E186L  
Population and Community Ecology Lab

One laboratory can be satisfied with completion of Excellence in Research in the Biological Sciences.

C. Upper-Division Biology Electives:

Select three four-unit courses from the following:

BIO SCI E118–E190. These electives fall into three areas (ecology, evolution, and physiology), but students may take any combination of three courses from BIO SCI E118 to BIO SCI E190 and are not required to distribute them among these three areas.

D. Independent Study

Minimum one quarter of independent study, usually BIO SCI 199. BIO SCI 197 can be substituted for BIO SCI 199.

Double majors within the School of Biological Sciences or with Public Health Sciences, Biomedical Engineering: Premedical, Nursing Science, or Pharmaceutical Sciences are not permitted.
# Ecology and Evolutionary Biology, B.S.

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<th>Year</th>
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<th>Winter</th>
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<td>Sophomore</td>
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<td><strong>BIO SCI 98</strong></td>
<td><strong>BIO SCI 99</strong></td>
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<td>Junior</td>
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1. Students have the option of taking HUMAN 1AS, HUMAN 1BS, HUMAN 1CS or WRITING 40, WRITING 50, WRITING 60 in order to fulfill the lower-division writing requirement.

2. BIO SCI E106 is offered in all three quarters, is a prerequisite for many upper-division courses and may be taken at any time after completion of BIO SCI 94.