

ECOLOGY, EVOLUTION, AND ORGANISMAL BIOLOGY

Overview

Within the Biological Sciences, studies of ecology, evolution, and organismal biology are essential in understanding the complex relationships of life on Planet Earth. Ecology focuses on the interactions among organisms as well as the interactions between organisms and their physical environments. Evolutionary theory addresses the origins and interrelationships of species. Organismal biology studies both the diversity of biological organisms and the structure and function of individual organisms.

Undergraduate Study

The Department of Ecology, Evolution, and Organismal Biology (<https://www.eeob.iastate.edu/>) (EEOB) offers several undergraduate majors with other departments. Students interested in the areas of ecology, evolution, and organismal biology should major in Biology, Environmental Science, or Genetics. The Biology Major (<http://catalog.iastate.edu/previouscatalogs/2023-2024/collegeofliberalartsandsciences/biology/>) is administered and offered jointly by the EEOB (<https://www.eeob.iastate.edu/>) and GDCB (<https://www.gdcb.iastate.edu/>) departments. The faculty of EEOB, together with those in GDCB and BBMB (<https://www.bbmb.iastate.edu/>), administer and offer the Genetics Major (<http://catalog.iastate.edu/previouscatalogs/2023-2024/collegeofliberalartsandsciences/genetics/>). Faculty in EEOB, in cooperation with faculty from other departments on campus, administer and offer the Environmental Science Major (<http://catalog.iastate.edu/previouscatalogs/2023-2024/collegeofliberalartsandsciences/environmentalscience/>). Each of these majors are available through the College of Liberal Arts and Sciences or through the College of Agriculture and Life Sciences. Faculty in the EEOB Department also teach undergraduate courses at Iowa Lakeside Laboratory (see the Iowa Lakeside Laboratory listing).

Graduate Study

The department offers graduate work leading to both Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees. EEOB graduate students major in one of several interdepartmental majors including Bioinformatics and Computational Biology, Ecology and Evolutionary Biology, Environmental Science, Genetics, Interdisciplinary Graduate Studies, Neuroscience, and Toxicology. The EEOB faculty members are active in the interdepartmental graduate majors and teach a wide range of graduate courses. Faculty research programs cover a wide range of specializations including physiology and physiological ecology; microbiology; animal behavior; evolutionary genetics of plants and animals; modeling of evolutionary and ecological processes;

plant and animal systematics; neurobiology; developmental biology; aquatic and wetland ecology; functional, population, community, landscape, and ecosystem ecology; and conservation biology. For further information on faculty research interests check the EEOB web site (www.eeob.iastate.edu (<http://www.eeob.iastate.edu>)). Some EEOB faculty teach graduate courses at Iowa Lakeside Laboratory. Field Station courses are also available through the Gulf Coast Marine Laboratory and the Organization for Tropical Studies (see the Biology listing).

Students who are enrolled in the interdepartmental graduate majors with EEOB affiliation are required to participate in departmental seminars, to participate in research activities, and to show adequate progress and professional development while pursuing their degree. For both the M.S. and Ph.D. degrees, it is expected that research conducted by the student will culminate in the writing and presentation of a thesis or dissertation. Requirements and guidelines for study are provided by the Graduate College, the EEOB faculty, and the individual student's major professor and Program of Study Committee. General information about graduate study requirements can be found at the web site for the Graduate College and requirements for the interdepartmental majors can be found by following the links from the EEOB web site above. Although not a formal requirement, the EEOB faculty recommends that students pursuing the Ph.D. include teaching experience in their graduate training.