INTEGRATIVE BIOLOGY

Graduate Programs

Programs of Study

Programs of study leading to MS and PhD degrees are offered in Integrative Biology. The department emphasizes Ecology and Evolutionary Biology and Environmental Stress. Among faculty research interests are behavioral and evolutionary ecology, conservation biology, ecotoxicology, ecosystem services, ecological immunology, behavioral endocrinology and neuroendocrinology, neurobiology, theoretical ecology, invertebrate ecology, herpetology, ornithology, parasitology, physiology, macroevolution, phylogenetics, animal communication, bioacoustics, evolutionary medicine, disease ecology, nutritional exology, landscape ecology, population ecology, aquatic and wetland ecology, and science education. The department includes the Ecotoxicology and Water Quality Research Laboratory and the Oklahoma State University Collection of Vertebrates.

Prerequisites

Applicants must have completed a baccalaureate degree including 40 semester hours in biology and related areas.

The Master of Science Degree

Students must prepare a research proposal and complete either a thesis or a report. For the thesis option, 30 credit hours are required; for the report option, 32 credit hours.

The Doctor of Philosophy Degree

Students must prepare a research proposal, pass written and oral comprehensive examinations, and complete a dissertation based on original research worthy of publication. Most students enter the program already with an MS degree and their plan of study must include 60 credit hours. Exceptional students can enter the program directly following the BS.

Financial Aid

The department employs more than 35 graduate teaching assistants (TA). Faculty members also award research assistantships (RA) based on ongoing grants and contracts. Out-of-state students on RA or TA support are assessed in-state tuition only. However, in-state and out-of-state students on RA or TA support also receive full waivers of in-state tuition.

Research Facilities

The Department of Integrative Biology occupies a six-floor building with offices, classrooms, laboratories and animal rooms. A broad range of instrumentation is available for both teaching and research. Specialized equipment within the department includes atomic absorption spectrophotometers, ultraviolet and visible spectrophotometers, ion chromatographs, high pressure liquid chromatograph, liquid scintillation counter, ultracentrifuges, gas chromatograph, ion specific electrodes, bright field and epifluorescent microscopes and photomicrography systems, cryostat, laminar flow hoods, tissue culture equipment, PCR thermocyclers, ultracold freezers, horizontal starch, agarose, and polyacrylamide gel apparatus, automated DNA sequencer and computer labs. Available for use in field studies is the university-owned Lake Carl Blackwell area. The Department of Integrative Biology also houses the OSU Collection of Vertebrates which includes over 25,000 lots of fish, 14,000 reptiles and amphibians, 3,000 birds, and 13,000 mammals. For more information visit our website: integrativebiology.okstate.edu (http://integrativebiology.okstate.edu).