

Zoology

Bachelor of Arts Degree

Bachelor of Science Degree

Contact

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Admission Requirements

(In years as established by the college)

A high school diploma with the following specific courses:

- 4 English
- 2 Algebra I & II
- 1 Geometry
- 1 Senior math (recommended)
- 2 Lab Science (biology and chemistry or physics)
- 2 History/Social Studies
- Academic electives (to equal at least 17 credits)

To ensure current mathematical skills, students should take a mathematics course during their senior year of high school.

Did You Know?

UMaine's Zoology Program offers a wide choice of courses and undergraduate research opportunities, excellent preparation for health professions (including medicine and dentistry), great opportunities for ecological fieldwork and a neuroscience minor.

College of Natural Sciences, Forestry, and Agriculture

Program Description

The Bachelor of Arts and Bachelor of Science degrees in zoology provide students with a broad background in the biology of animals. Courses are selected from several departments within the college: Biology and Ecology; Molecular and Biomedical Sciences; Wildlife Ecology; and Marine Sciences.

The program is solidly grounded in the basic sciences (general biology, chemistry, math and physics) and allows a wide range of choice in upper-level biology courses, permitting students to tailor their degrees to their interests in zoology with the help of faculty advisors. A wide range of upper-level courses is available, including courses taught by biology faculty and faculty in related disciplines such as biochemistry, microbiology, molecular biology, animal science, marine science and wildlife ecology.

Students can choose a Bachelor of Science degree that includes an in-depth background in chemistry, math and physics or a Bachelor of Arts degree with a more limited background in chemistry, math and physics but more courses in the humanities and a special emphasis on an international perspective. Students can choose to complete the basic program in zoology or choose to add a concentration in pre-medical studies. This concentration provides guidance as to the best courses to select to prepare for further study in medical or dental school or to prepare for one of the other health professions such as optometry or physician assistant.

Specialized Information

UMaine offers students in zoology many opportunities to participate in faculty laboratory and field research. Students can do independent research for course credit, research for a capstone (senior project) or an honors thesis, and paid work. Undergraduate students have participated in research in such areas as the ecology of birds, mechanisms of color vision, development of muscle in embryos, cell biology of kidney disease, fire ant ecology, heartbeat in fruit flies, fungi that infect frogs, evolution of guppies in Trinidad and fish in the Penobscot River. These are great opportunities for class field trips and student research close to campus. The University Forest and other natural areas within easy driving distance offer a wide variety of interesting ecosystems with abundant wildlife and a wide range of plants, including forests, fields, bogs, alpine communities, seashores, rivers and lakes.

Special opportunities in the health professions include affiliations with graduate programs that allow students to complete three years at UMaine and then complete the professional program in four years. Students earn a Bachelor of Science in zoology from UMaine and a doctorate from the partner college. Students can choose to complete a neuroscience minor, which provides excellent preparation for graduate study in neuroscience.

Associated Honor Societies and Student Organizations

Students are encouraged to join the Biology Club. They also can participate in such travel-study courses as Field Studies in Ecology, which has gone to South Africa, Panama and Peru. The Schoodic Experience takes first-year students to Acadia National Park.

Special recognition for students includes membership in the local chapter of the national biology honor society, Beta Beta Beta; book awards for top academic performance in each class; and awards to the top students in animal, insect and plant sciences.

Representative Courses

BIO 200	Biology of Organisms	BIO 441	Electron Microscopes – Theory and Use
BIO 205	Field Natural History of Maine	BIO 447	Experimental Aquatic Ecology
BIO 307	Introduction to Neuroscience	BIO 448	Insect Pest Ecology and Management
BIO 319	General Ecology	BIO 450	Histology
BIO 326	Introductory Entomology	BIO 454	Invertebrate Functional Morphology
BIO 329	Vertebrate Biology	BIO 455	Biological Invasions
BIO 335	Comparative Anatomy	BIO 461	Insect Biology, Taxonomy and Systematics
BIO 336	Developmental Biology	BIO 462	Principles of Genetics
BIO 350	Concepts and Applications of Genetics	BIO 463	River Ecology
BIO 353	Invertebrate Zoology	BIO 465	Evolution
BIO 354	Biology of Behavior	BIO 468	Limnology
BIO 377	Medical Physiology	BIO 474	Neurobiology
BIO 430	Ecology and Systematics of Aquatic Insects	BIO 476	Paleoecology
BIO 433	Mammalogy	BIO 479	Endocrinology
BIO 434	Avian Biology and Ecology	BIO 480	Cell Biology
BIO 438	Morphogenesis and Differentiation	WLE 200	Wildlife Ecology

NEBHE Program

Applicants to this program who reside in Connecticut and Massachusetts are eligible for reduced tuition (in-state plus 50 percent) under the New England Regional Student Program, administered through the New England Board of Higher Education (nebhe.org).

Career and Graduate Opportunities

Research technician assisting with laboratory and field research; product developer or quality controller in biotechnology and pharmaceutical companies, university and government laboratories, or public health facilities; officer in government agencies related to agriculture, the environment or public health; science teacher or professor; environmental consultant; sales representative for laboratory equipment, science books, biotechnology or pharmaceutical companies; writer or editor for science publications, magazines, newspapers.

Graduate programs in the health professions, including medicine, dentistry, optometry, podiatry, physician assistant, pharmacy and veterinary medicine. Graduate programs in zoology are offered at all levels, including molecules, cells, genetics, physiology, whole organisms and ecology.

UMaine Graduate Programs

Master of Science in Ecology and Environmental Science
Master of Science in Entomology
Master of Science in Zoology
Doctor of Philosophy in Biological Sciences
Doctor of Philosophy in Ecology and Environmental Science
Doctor of Philosophy in Zoology

About UMaine

The University of Maine, founded in Orono in 1865, is the state's premier public university. It is among the most comprehensive higher education institutions in the Northeast and attracts students from across the U.S. and more than 60 countries. It currently enrolls 12,000 total undergraduate and graduate students who can directly participate in groundbreaking research working with world-class scholars. Students are offered 88 bachelor's degree programs, 64 master's degree programs, 25 doctoral programs and one of the oldest and most prestigious honors programs in the U.S. The university promotes environmental stewardship on its campus, with substantial efforts aimed at conserving energy, recycling and adhering to green building standards in new construction. For more information about UMaine, go online (umaine.edu). Equal opportunity information also is available online (umaine.edu/eo).

How do I apply?

Visit go.umaine.edu for an application, as well as information about academics and life at UMaine.



Academic Programs 2011–12

The latest versions of the UMaine fact sheets are online (factsheets.umaine.edu). This fact sheet is intended for informational purposes only and is subject to change.



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