

# **UMaine's** ADVANTAGE

- Many opportunities for research and fieldwork
- Excellent placement rates in top medical, dental and optometry schools
- Excellent admission rates to master's and doctoral programs
- Flexible curriculum allows many choices
- Active learning in lectures and labs
- Opportunity to combine undergraduate and graduate degrees with the 4+ program

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To apply: umaine.edu





# COLLEGE OF NATURAL SCIENCES, FORESTRY, AND AGRICULTURE

# **Biology**

## WHY STUDY BIOLOGY AT UMAINE?

The University of Maine is the ideal place to study biology. We have well-equipped teaching laboratories and easy access to nearby forests, fields, streams, ponds and wetlands — the ultimate outdoor classroom. We also offer many opportunities for undergraduate research in faculty laboratories and in the field. Our program provides excellent preparation for graduate study in the health professions, including medicine, dentistry and optometry. As a result of rigorous coursework and excellent preprofessional advising, UMaine has high placement rates in top medical, dental, optometry and professional schools. Our program also provides strong preparation for further specialization in graduate school.

Our advanced courses vary in size, but most have 40 or fewer students and, in contrast to many other universities, many have labs and field trips. Although UMaine's introductory courses have large lectures, these courses use active learning techniques and have computer-based support. They also have small, inquiry based labs, where students design and carry out their own experiments.

# WHAT CAN I DO WITH A BIOLOGY DEGREE?

You can find cures for diseases, prepare to become a doctor, save endangered species, understand the changes that are likely to occur in Maine and elsewhere as a result of climate change, or find ways to produce more food and plants to use in the creation of biofuels. Biology is a broad field that seeks to understand living creatures including animals, plants, fungi and microbes. Although these organisms are quite diverse, they share many biological processes, including cell function, genetics and evolution. UMaine's bachelor's degree in biology provides students with many options for employment or more specialized study. Majors can go on to become research technicians assisting with laboratory and field research; product developers and

quality controllers in biotechnology and pharmaceutical companies, university and government laboratories, and public health facilities; officers in government agencies related to agriculture, the environment and public health; science teachers; environmental consultants; sales representatives for laboratory equipment, science books, biotechnology and pharmaceutical companies; and writers and editors of science publications, magazines and newspapers. The degree also prepares students for professional study in medicine, dentistry, optometry, podiatry, pharmacy, and veterinary medicine, as well as master's and doctoral programs in botany, ecology, genetics, plant pathology and zoology.

# **OUR UNDERGRADUATE PROGRAM**

Upper-level courses form the core of our program. These courses build on a foundation of chemistry, math and physics, providing the basis for understanding current advances in biology. The flexible curriculum allows students to tailor their studies to their interests. For example, one student can prepare for medical school while another prepares to do research in ecology. Students can choose from 35 upper-level biology courses and an additional 22 courses in related disciplines, including microbiology, molecular biology, plant science, marine science and wildlife ecology. Students can choose the basic program in biology or add a concentration in pre-medical studies or ecology. Both concentrations provide academic guidance to ensure that students select the best courses to prepare them for their area of interest. Students can also choose a minor in neuroscience, which provides excellent preparation for graduate study in neuroscience. Strong students can complete a combined bachelors and master's program (4+ program) that allows them to start taking graduate classes in their senior year which saves time and reduces overall tuition.

#### **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 more than 11,000 total undergraduate and graduate students. UMaine students directly participate in groundbreaking research working with world-class scholars. The University of Maine offers doctoral degrees in 30 fields, representing the humanities, sciences, engineering and education; master's degrees in 85 disciplines; 90 undergraduate majors and academic 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, visit umaine.edu.

# explore

Bachelor of Science in Biology
Concentrations in Pre-Medical Studies
Ecology

Bachelor of Arts in Biology Concentration in Ecology

Minors in Biology Neuroscience

Master of Science in Botany and Plant Pathology Entomology Zoology

Ph.D. in Biological Sciences Zoology



#### **OUR GRADUATE PROGRAM**

UMaine's School of Biology and Ecology offers several master's and doctoral degrees. Our faculty lead cutting-edge, internationally recognized research programs, maintain well-equipped laboratories and win grants to support their research and that of their students. The School of Biology and Ecology provides financial support for graduate students via faculty research grants or teaching assistantships.

#### **OUR FACULTY**

Biology faculty care deeply about undergraduates, use a variety of teaching techniques, keep up with the rapidly changing field of biology and welcome students into their research labs. Members of our faculty have won UMaine teaching and research awards. Biology faculty regularly

present their research results at regional, national and international conferences.

## **OPPORTUNITIES TO EXCEL**

Outstanding students are recognized through annual book awards. We offer scholarships for top students in animal, insect and plant science and in medical laboratory science. Our students compete successfully for on-campus scholarships and prizes, as well as national research internships. Students can work with faculty on research projects and are often published in the scientific literature together with their faculty mentor.

# **HOW DO I APPLY?**

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

