

Biochemistry

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
- 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?

We have virtually a 100 percent placement for our graduates in graduate, medical or professional school or in a science-related job. Our students are some of the best prepared in the country, and we often receive phone calls from employers asking for our graduates.

College of Natural Sciences, Forestry, and Agriculture

Program Description

An important aspect of the undergraduate programs offered through the Department of Molecular and Biomedical Sciences is the opportunity to gain hands-on experience in the laboratory. Laboratory courses are offered in fundamental aspects of biochemistry and microbiology, as well as specialized topics such as recombinant DNA techniques, virology, cell culture, immunology, pathogenic microbiology, and microbial genetics and diversity. Laboratory courses in these topics are not generally available at smaller institutions without graduate and research programs or at many larger research universities, where student numbers are too large to accommodate numerous laboratory courses in such specialized areas.

Specialized Information

In their senior year research course, all of our undergraduate majors are required to engage in independent study and research with an individual faculty member. This direct link to active national- and international-level research activities is an important aspect of our undergraduate programs. Students become part of a research team of faculty, postdoctoral research associates, technicians, graduate and undergraduate students actively engaged in ongoing research projects that are both publicly and privately funded.

Associated Honor Societies and Student Organizations

Students have opportunities to attend such annual professional conferences as the American Society of Microbiology.

UMaine Graduate Programs

Master of Science in Biochemistry
Master of Professional Studies in Biochemistry
Master of Science in Microbiology
Master of Professional Studies in Microbiology
Doctor of Philosophy in Biochemistry and Molecular Biology
Doctor of Philosophy in Microbiology

Representative Courses

BMB 300 General Microbiology

BMB 305 Microbiology Laboratory

BMB 280 Cellular and Molecular Biology

BMB 400 Molecular Genetics

BMB 322 Biochemistry

BMB 323 Biochemistry Laboratory

BMB 460 Advanced Biochemistry

BMB 464 Analytical and Preparative Biochemical Laboratory Methods

BMB 467 Physical Biochemistry

BMB 491 Molecular and Biological Sciences Research

BMB 582 Biochemistry Seminar

Career and Graduate Opportunities

Our graduates have taken up positions in university research laboratories; in a variety of existing as well as emerging genetic engineering and biotechnology industries; in medical, dental and veterinary research laboratories; in public health laboratories; in pharmaceutical, food and chemical industries; and in environmental research and monitoring laboratories.

Majoring in biochemistry, microbiology or molecular and cellular biology also provides an excellent foundation for many careers in the health professions. Our majors are well-prepared for pursuing advanced degrees in: medicine, dentistry, veterinary medicine, pharmacy, optometry, biochemistry, microbiology, molecular genetics, biomedical science or pharmacology. Each of the majors includes the key science requirements for medical school. As medicine is increasingly understood at a molecular level, thinking and problem solving at the molecular level become key for physicians, veterinarians and pharmacists.

Majors in this department also find that they are highly competitive in getting into graduate programs at colleges and universities around the country, where they successfully further their education, leading to a master's or doctorate degree.

Graduates of our programs have been accepted to combined programs (M.D.–Ph.D.) at Case Western Reserve University, Dartmouth College and the University of Vermont; to M.D. programs at Dartmouth College, the University of Vermont, Stony Brook University, the Sackler School of Medicine in Tel Aviv, Boston University, the University of Rochester, Eastern Virginia School of Medicine and others; to D.O. programs at the University of New England College of Osteopathic Medicine; and to dentistry programs at Tufts and Dalhousie universities.

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.

