



COLLEGE OF ENGINEERING

Biomedical Engineering

UMaine's ADVANTAGE

- Hands-on experience in engineering projects mentored by UMaine faculty
- Summer internships in leading laboratories throughout New England
- Serves as an excellent foundation for admission to medical school
- Job growth is greater than in any other engineering field

Department of Chemical and
Biomedical Engineering
5737 Jenness Hall, Room 117
University of Maine
Orono, ME 04469-5737
207.581.2290

umaine.edu.chb
To apply: umaine.edu



WHY BIOMEDICAL ENGINEERING?

Biomedical engineering encompasses a broad range of topics that focus on the interface between biology and engineering. Biomedical engineers design devices and develop methods that benefit society. They work in exciting new areas that directly affect the lives of many people. The predicted job growth is currently greater than in any other engineering field.

WHAT DO BIOMEDICAL ENGINEERS DO?

Biomedical engineers work at the cutting-edge of research and industry, and frequently address clinical, diagnostic and therapeutic applications of engineering. For example, they may be involved in diagnostic imaging of tissues, in engineering surfaces to ensure compatibility of implants with the body, or in creating sensors for monitoring the repair of biological systems. They also work on the design of artificial organs, the development of new methods to detect and treat cancer, the production of devices to measure biological agents, and the creation of ways to obtain the controlled release of drugs.

HOW DO I BECOME A BIOMEDICAL ENGINEER?

UMaine's biomedical engineering B.S. curriculum provides thorough training in the fundamentals of engineering and biological sciences. Students learn instrumentation and techniques employed to analyze biological systems and processes. They are introduced to the challenges and methodologies associated with manipulating biological systems and are exposed to current and future applications of biomedical engineering. Utilizing this knowledge base, students develop the skills to engineer solutions to real-world problems. UMaine students are actively involved in engineering projects mentored by individual faculty. The size of UMaine's biomedical engineering program allows students to

receive individual attention, with many opportunities for direct interaction and discussion with faculty members. UMaine also offers a master's degree in biomedical engineering. Additionally, UMaine's College of Engineering offers a biomedical engineering minor, a five-year B.S.-M.B.A. degree with the Maine Business School, and a minor in engineering leadership and management.

WHAT CAN I DO WITH A DEGREE IN BIOMEDICAL ENGINEERING?

The B.S. degree is suitable for entry-level engineering careers and as preparation for graduate-level study in engineering or scientific disciplines. The degree also serves as an excellent foundation for admission to medical school.

RESEARCH OPPORTUNITIES

Professors in UMaine's biomedical engineering program are all highly active and accomplished researchers. Current research projects include the development of nanoprobe for detection and imaging of cancer; creation of model cellular membranes for the study of membrane-protein interactions; detection of pathogens and toxins using molecular biosensors; and improvement of tissue-implant compatibility. Undergraduates are encouraged to participate in projects such as these to gain hands-on experience in the field, either for course credit or as paid employees.

CO-OPS AND INTERNSHIPS

UMaine faculty members help place students in summer internships in leading research and diagnostics development laboratories throughout New England. Placement with these companies and research institutions typically takes place in the junior and senior years of the program.

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

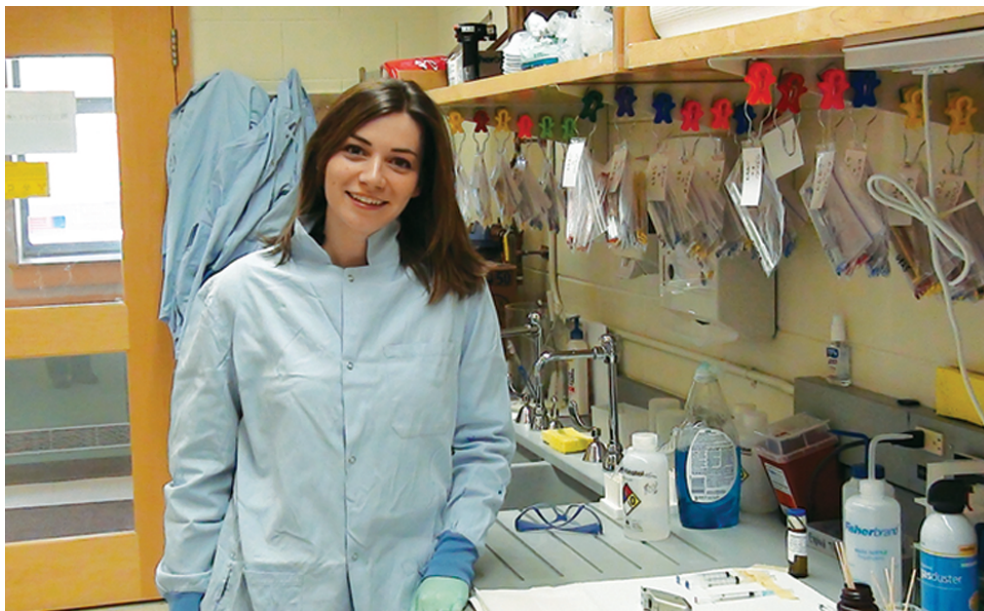
*Bachelor of Science in
Biomedical Engineering*

*Minor in
Biomedical Engineering*

*Engineering Leadership and
Management*

*Master of Science in
Biomedical Engineering*

*Ph.D. in
Biomedical Engineering
through Graduate School of Biomedical
Science and Engineering (GSBSE)*



Joan Malcolm, biomedical engineer at The Jackson Laboratory

ASSOCIATED HONOR SOCIETIES AND STUDENT ORGANIZATIONS

Majors are encouraged to join the Biomedical engineering Student Group. UMaine also has chapters of the Society of Women Engineers and Tau Beta Pi, the national engineering honor society.

NEBHE PROGRAM

Applicants to this program who reside in Connecticut, Massachusetts, New Hampshire, Rhode Island or Vermont 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).

HOW DO I APPLY?

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

“The ever-evolving field of bioengineering is diverse and fascinating. By exposing me to a variety of different fields within bioengineering, UMaine opened my eyes to what I was truly passionate about. The faculty and staff were devoted to my success and worked with me to tailor my education to meet my interests, helping me find a niche that has allowed me to excel in my career.”

— Joan Malcolm, Class of '07, Biomedical Engineering major



ABET.org

