

Biomedical Engineering

▶ The University of Rochester's Department of Biomedical Engineering (BME) brings together the engineering expertise of the Edmund A. Hajim School of Engineering & Applied Sciences with the clinical experience of the University of Rochester Medical Center to offer outstanding training in this rapidly growing field. Located in the Robert B. Goergen Hall for Biomedical Engineering and Optics, the department offers bachelor's, master's, and doctoral degrees.

Research, innovation, and collaboration are central to the department's mission. The Center for Medical Technology and Innovation and the Center for Entrepreneurship give students numerous opportunities to watch their medical discoveries move from the laboratory bench to the patient's bedside.

The department's faculty members, graduate students, and alumni are also active participants in the growth of the medical and health care industry in western New York as well as around the world. Students



Biomedical engineering uses science and engineering to solve problems and advance human health. Research specialties include biomechanics, biomedical acoustics, biomedical nanotechnology, biomedical optics, cell and tissue engineering, medical imaging, and neuroengineering.

graduate with many career opportunities, from advanced research to engineering practice in industrial and clinical settings.

Points of Pride

Hands-On Learning

Seniors in BME's undergraduate program participate in a yearlong design course, which culminates in Senior Design Day each May. The course provides a complete handson medical device design experience. Students work with customers and faculty supervisors to solve real-life problems related to medical technology and health care.

Student Enrollment

With more than 300 students enrolled, the program represents the largest undergraduate engineering program at Rochester. Women make up 44 percent of undergraduates.

Cooperation for Progress

The BME program cooperates closely with departments across the University to establish and support collaborative research projects, including advanced imaging techniques for cancer detection and diagnosis, novel approaches for tissue engineering using ultrasound and bio-inspired materials, advanced biomaterials for drug delivery or kidney dialysis, and fundamental research into mechanisms of inflammation.

Job Opportunity

According to a 2011 survey from the National Association of Colleges and Employers, biomedical engineering is one of the top-paying majors, with an average starting salary of about \$45,000. U.S. News & World Report also rated biomedical engineering in the top 50 careers of 2011.

"In the BME program, we get hands-on time with medical equipment that helps address real health issues. The projects we work on and our collaborative approach make for a very rewarding experience here."

Alexander King '14 biomedical engineering major and premed student

How You Can Help

Your support can create academic and research opportunities for students and faculty and have a profound effect on human health and well-being. Consider any of the following giving opportunities:

Scholarships and Fellowships

Supporting students is one of the highest priorities at Rochester. Funding undergraduate scholarships, awards, or summer research programs is essential. On the graduate level, support is needed for fellowships, stipends, and research grants.

Professorships

Endowed positions are another priority. They help attract and retain faculty of exceptional talent and are among the most prestigious and visible honors at the University. Through faculty support, new programs and research can flourish. Endow a professorship or the directorship of one of the institutes or centers aligned with BME.

Center for Medical Technology and Innovation

Support this cocurricular initiative between the Hajim School and the School of Medicine and Dentistry. Within this new center, faculty and students interact with clinicians to identify areas of real need and develop new medical technologies used for diagnosis and treatment.



A Transformational Gift

An anonymous donor has just bequeathed \$1.5 million for a professorship and an additional \$1 million for a graduate student fellowship. The generous donor has spent her multidecade career improving patient lives through science, biology, and engineering and wants to create more opportunities that expand the biomedical engineering field, especially for women. Bequests provide significant funding for programs, facilities, and student aid.

Programs

Workshops, conferences, and experiential learning opportunities enrich the student experience. Funds are needed for the weekly BME colloquium, where internal and external speakers address the issues and ideas of the industry. Or support the Senior Design Day program and nurture the inquisitive minds of Rochester's students.

Learn, Discover, Heal, Create—And Make the World Ever Better www.bme.rochester.edu



For more information on giving opportunities, please contact **Eric Brandt** Executive Director for Advancement (585) 273-5901, ebrandt@alumni.rochester.edu