

Biomedical Engineering (MD/MSE)

The biomedical engineering program is interdisciplinary, with a faculty that includes members of the Dell Medical School, College of Natural Sciences, the Departments of Kinesiology and Health Education, Chemistry and Biochemistry, Psychology, Biomedical Engineering, and several other departments in the Cockrell School of Engineering. In addition, several faculty members from the University of Texas Health Science Center at San Antonio, the University of Texas Health Science Center at Houston, and the University of Texas MD Anderson Cancer Center serve on the Graduate Studies Committee and supervise biomedical engineering students.

The current research of this faculty is focused in the following areas: biomedical imaging and instrumentation; cellular and biomolecular engineering; computational biomedical engineering; and molecular, cellular, and tissue biomechanics. Research activities embrace such topics as bioinstrumentation, modeling and control of biological systems, nerve fiber regeneration, biomedical computer and information technology, biomechanics, cell and tissue mechanics, thermal processes, musculoskeletal modeling, acquisition and analysis of in vivo and ex vivo spatial human biomechanics data, acquisition of physiological data by noninvasive means, cell and tissue engineering, design and testing of novel fluid and drug delivery systems, effects of laser radiation on biological material, laser applications in medicine, coherence imaging of biological materials, pulsed photothermal tomography, biorheology, visual system instrumentation, computer vision, production and purification of genetically engineered proteins, DNA and drug delivery, cell-electronic interfaces, acquisition and processing of neurological signals, neuroprostheses, applications of finite element modeling in medicine, acoustics and ultrasound, image processing, thermography, hyperthermia, genomic signal processing, biological and medical informatics, and nanotechnology.

The Master of Science in Engineering and the Doctor of Philosophy degree programs include a core curriculum and courses from one or more areas of specialization selected with the approval of the graduate advisor. Specializations are offered in the following four areas: biomedical imaging and instrumentation; cellular and biomolecular engineering; computational biomedical engineering and bioinformatics; and molecular, cellular, and tissue biomechanics. The graduate advisor and the Executive Committee of the Graduate Studies Committee must approve deviation from the prescribed curriculum.

Graduate Handbook

Graduate handbook information is updated and maintained by each program. Graduate handbooks are available within each program's office and [online](#). Please contact the program with concerns or questions.

Admission

Admission into the Doctor of Medicine/Master of Science in Engineering dual degree program is only open to current Dell Medical Students.

Admission into the integrated Bachelor of Science in Biomedical Engineering/Master of Science in Engineering degree is only open to current biomedical engineering undergraduate students at The University of Texas at Austin.

All applicants whose native language is not English must submit a score on the Test of English as a Foreign Language (TOEFL), unless exempt. More information is given [online](#).

Total Hours Required: 190

MD: 172

MSE: 30

Requirements

The Department of Biomedical Engineering offers an MD/MSE program that is designed for medical school students who choose to complete requirements for an MSE degree while completing their MD degree program at the Dell Medical School. Please note through waivers of coursework that is common to both degrees, the total number of hours required to earn both degrees through the dual-degree arrangement is decreased by 12 credit hours. The requirements and policies associated with the dual-degree program are published in the [Medical School Catalog](#). More information is available from the graduate advisor in biomedical engineering.

Code	Title	Hours
All students must also follow the requirements and policies below:		
Graduate Engineering Requirements		
Graduate University Requirements		