Degree Requirements, Biomedical Engineering

Graduate handbook information is updated and maintained by each program. Graduate handbooks are available within each program's office and online at https://utexas.box.com/v/UTAustinGraduateHandbooks. Please contact the program with concerns or questions.

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.

This program has been designated as a STEM-eligible degree program, as defined by the Department of Homeland Security.

Master of Science in Engineering

The master's degree requires at least 30 semester hours of coursework, including six hours in the thesis course and 18 hours of biomedical engineering coursework. The remaining six semester hours can be selected from courses outside the field of biomedical engineering. These additional courses must be logically related to the student's program and must be approved by the graduate advisor.

A thesis is normally expected; however, with the consent of the graduate advisor, the student may follow a degree plan that includes a report or one with neither thesis nor report. The report option requires 30 semester hours of coursework, consisting of six courses in the major, three courses in supporting work, and three hours in the report course. The plan without thesis or report requires 30 semester hours of coursework, consisting of at least six courses in the major and up to four courses in supporting work.

Integrated Bachelor of Science in Biomedical Engineering/Master of Science in Engineering Program. The integrated degree program results in simultaneously awarding a Bachelor of Science in Biomedical Engineering (BSBiomedE) and a Master of Science in Engineering (MSE) degree offered by the graduate program in biomedical engineering. The objective of the Integrated BSBiomedE/MSE Program is to enable prepared undergraduates in Biomedical Engineering to earn two degrees in a shortened time period. By applying AP and Credit by Exam courses, having students take recommended summer courses, and allowing seniors to enroll in graduate-level engineering courses reserved for graduate credit, the program enables graduates to complete both degree requirements in five years.

Graduates of the integrated program will receive the BSBiomedE and MSE degrees simultaneously after successfully completing the 126 SCH for the BSBiomedE and 30 SCH for the MSE, a total of 156 SCH. It is expected that students in this program will graduate with both degrees in a total of five years to completion.

Information regarding the integrated program requirements and policies may be obtained from the Biomedical Engineering Academic Advising Office in BME 3.308.

Doctor of Philosophy

Doctoral degree students complete at least 26 semester hours of coursework beyond the baccalaureate degree, in addition to conducting research necessary to write a dissertation under the direction of a faculty supervisor. The 26 hours of coursework must be composed of one course from each of the three specializations mentioned above, two seminar courses, one biological/clinical sciences course, one mathematics or statistics course, and three other supporting graduate-level courses. One technical course may be substituted with one approved graduate-level professional development course. All coursework must be approved by the graduate advisor in advance.

After the first year of study, the student must pass both written and oral components of the qualifying examination. The student must present a written and oral dissertation proposal to the dissertation committee within two years of enrollment in the program. The written proposal must be formatted according to the guidelines of the National Science Foundation or the National Institutes of Health. Before taking the oral examination, the student is expected to formulate a hypothesis and propose an approach to a selected research problem with a selected supervisor. The student is examined specifically on the proposed research. After the oral examination, the dissertation committee determines if the student should complete additional coursework. At least one faculty member outside the biomedical engineering Graduate Studies Committee must participate in examining and supervising the student.

Dual Degree Program

The Department of Biomedical Engineering offers the following dual degree programs in cooperation with other divisions of the University. More information is available from the graduate advisor in each program.

Major(s)	Degree(s)
Medicine	Doctor of Medicine

Doctor of Medicine/Master of Science in Engineering

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. 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.