

Coursework

Personalized Learning Plan

The concept of a Personal Learning Plan (PLP) is to tailor educational experiences to meet individual needs. Courses are selected in consultation with the student's supervisor, dissertation committee, and the graduate advisor to ensure adequate breadth and depth. The PhD Program of Work includes **26 credit hours** of required coursework. Except for the 1-hour seminar courses and when otherwise noted, all technical courses must be taken at the graduate level for a letter grade.

Previously approved courses for each requirement can be found on the [Graduate Level Courses by Requirement](#) list. This list is not exhaustive and other courses are available to meet program of work requirements. If you find another course that you wish to count toward a requirement, please send the course name, number, and the requirement you want to fill to the Graduate Advisor for approval. A syllabus may be requested in some cases. You must receive approval prior to enrollment in the course.

Requirement	Credit Hours	Details
Biological or Clinical Sciences	3	May be upper-division undergraduate level if a graduate cross-listing of the same course is not offered in the same semester. Must get written approval first from the Graduate Advisor unless the course is already on the approved coursework listing .
Basic or Applied Mathematics	3	A statistics course is encouraged, but another mathematics topic may be approved in some circumstances.
Technical Area 1: Biomedical Imaging and Instrumentation	3	Choose one course from each of three of the four technical areas.
Technical Area 2: Cellular and Biomolecular Engineering	3	
Technical Area 3: Computational Biomedical Engineering	3	
Technical Area 4: Molecular, Cellular, and Tissue Biomechanics	3	
Technical Electives	9	One technical elective may be substituted with one approved graduate-level professional development course. All coursework must be approved by the Graduate Advisor in advance of registration.
BME 197S Seminar	2	Two semesters

BME 197S Seminar Series

You are required to register for at least 2 semesters of BME 197S before graduation, presumably during your first two semesters. You are encouraged to attend the seminar series every semester, whether you are officially enrolled or not. All first through third year students should sign-in on the sheet located at the back of the seminar room before each seminar.

Program of Work

The Program of Work is a form students complete to report their coursework status as they complete milestones such as the Qualifying Exam, Dissertation Proposal, and Final Oral Exam. The Program of Work is most commonly documented via the BME Advising Form completed twice per year before summer /fall and spring registration.

All versions of the Program of Work for the MSE and PhD programs can be found on UT Box at <https://utexas.box.com/v/BMEGradForms>.

Students are to complete the Program of Work that corresponds with their respective degree program and year of entry into the graduate program.

Imaging Science and Informatics Portfolio Program

The overarching theme of this program is to train "comprehensive imaging scientists" in the skills necessary to identify clinically relevant problems. Topics include developing instrumentation, sensors, and contrast agents to form images appropriate for the problem; and analyzing the resulting imaging data using signal processing, mathematical modeling, visualizations, and informatics techniques to improve the prevention, detection, diagnosis, and treatment of human diseases.

The basic requirement to complete this portfolio program is 12 hours of coursework (4 courses), which provide the requisite core knowledge for an imaging scientist.

- BME 381J.3 *Biomedical Imaging Modalities / Biomedical Imaging: Signals & Systems* (3 credit hours)
- Elective in Image Processing (3 credit hours)
- Elective in Modeling and Visualization (3 credit hours)
- Elective in Data Mining and Informatics (3 credit hours)

Some, but not necessarily all, of these courses **may count toward your degree requirements** as well. Additionally, optional coursework, seminars, and externship opportunities are available to portfolio students. If you are interested in completing the Imaging Science and Informatics Portfolio Program, please contact the Graduate Program Coordinator.

Students who complete the portfolio program must submit a [Portfolio Completion Form](#) to the Graduate School to have the portfolio added to their transcript.