

Interdisciplinary Doctoral Degree Option in Mechanical Engineering

The field of mechanical engineering incorporates a wide array of technical disciplines. Academic and industrial demand for doctoral level mechanical engineers with interdisciplinary skills is significant. The technical diversity of the Department of Mechanical Engineering at the University of Texas at Austin offers an unusual opportunity to prepare doctoral level mechanical engineers for future challenges in interdisciplinary research and education. Recognizing this opportunity, the Mechanical Engineering Graduate Studies Committee has approved a new Interdisciplinary Doctoral Degree Option in Mechanical Engineering. At the direction of their faculty advisor, doctoral students interested in interdisciplinary research will pursue this degree option.

In order to apply for PhD candidacy, under this option the students will be required to meet the following requirements:

(1) Pass a PhD qualifying exam consisting of written and oral parts. The first part will be a three hour written exam, consisting of three one-hour sections, one section on each of three topical areas selected by the student (under the direction of their faculty advisor). Each area in the department will identify topical areas in which they will offer one-hour written exams. The written exams will be administered by the areas and will be given on the last regular workday before the start of classes for each long semester. Within one week after the written exam, the areas will report the exam results (pass or fail) to the graduate office. The second part of the qualifying exam will be a one-hour oral exam, administered by a committee of five faculty formed by the student's advisor (nominally, the prospective dissertation committee). For the oral exam, the student must defend a research hypothesis formulated by the committee and provided to the student two weeks in advance of the oral exam (there will be no written submission associated with this exam). Within one week after the oral exam, the student's advisor will report the oral exam results (pass or fail) to the graduate office. The student must pass all three written exams and the oral exam in order to qualify for the interdisciplinary degree program. Students who fail the written part may repeat the written exam one time. Students who pass the written part may then take the oral part. Students who fail the oral part may repeat the oral exam one time, without retaking the written exam.

(2) Present a dissertation proposal to a prospective dissertation committee; the committee members must approve the proposal and agree to serve on the dissertation committee.

(3) Submit a Program of Work consisting of 18 hours (for students with the MS degree) or 36 hours (for students with the BS degree) of graduate coursework, with all courses taken for letter grade, including six hours taken outside the student's primary technical area (within the department) or outside the Department of Mechanical Engineering.