

The Industrial Engineering Ph.D. Qualifying Exam is offered once per year, in Winter quarter. The Qualifying Exam must be taken no later than the second time it is offered while in residence.

Students planning on taking the Qualifying Exam must register with the IE Student Services Center in mid-November. The Qualifying Exam is administered as a take-home test over several days in Winter quarter, followed by an oral presentation. Specific details will be announced through the IE Student Service Center. The exam is open book and notes.

Course Requirements:

Students will be required to take a set of courses that represent acquiring a breadth of knowledge in industrial engineering. Students must complete at least one course from each of the three sections outlined below. In addition, students must complete at least two courses in one of the three areas (it is recommended that you take all the courses listed under the two sections you plan to complete in the Qualifying Exam).

Exam Requirements:

For the actual exam, students will be required to answer questions from two of the three sections below. Students will be allowed to take the exam with only one class in one area, if necessary. However, if you are not able to complete one of the recommended courses in your chosen section(s) it is advised that you contact the faculty members listed for that section for an appropriate substitute to prepare for the exam. The faculty member will be able to either recommend another course or to suggest appropriate texts to read in preparation for the exam.

Section A:

Courses that cover relevant topics include:
IND E 513, Linear Optimization Models
IND E 516, Applications of Optimization
Faculty responsible for this section: Zabinsky

Section B:

Courses that cover relevant topics include:
IND E 521, Quality Control in Manufacturing
IND E 524, Robust Design and Quality Engineering
IND E 599, Stochastic Processes for IE
Faculty responsible for this section: Kapur, Mastrangelo, Ghate

Section C:

Courses that cover relevant topics include:
IND E 535, Simulation
IND E 543, Virtual Interface Technology
IND E 570, Supply Chain Systems
Faculty responsible for this section: Beamon, Furness