Comprehensive Exam Guidelines

School of Engineering Graduate Committee

The comprehensive exam ensures that a PhD student has acquired the requisite depth of knowledge in his/her area of concentration, and should be completed before the student embarks on dissertation research.

The following sections summarize the recommended clarifications to the guidelines of the current implementation of the exam across the departments within the School of Engineering. A summary of the current structure and rules surrounding the comprehensive exam as they pertain to each department are also provided to highlight the compatibility among all departments with specific differences noted where appropriate.

Eligibility

The following criteria must be satisfied for all departments:

- In each department, the student may enroll to take the exam no sooner than the final semester of coursework.
- The student must inform the department about his intentions of taking the comprehensive exam and the courses he will be examined on before the add/drop deadline of the semester in which the exam will be taken. The student must consult with his/her advisor before contacting the department.
- The student must have completed all the requisites (i.e. required courses, advisor approval, and departmental approval as they apply to each department) by the time of the application for the exam.
- The student must register for the one credit comp course with the proper course number COMP 998 or COMP 999 to be eligible to take the examination.
- The student must complete his application before the add/drop deadline of the semester s/he is planning on taking the exam.

Exam Structure

The precise structure of the examination varies between departments, but in each case the student must show proficiency in “core” or “major” areas, as well as in at least one chosen area of specialization. Written exams are required by all departments. BE, CE and EECS require only written exams. ME integrates an oral exam along with written exams.

The following table summarizes the exam structure across the departments:
<table>
<thead>
<tr>
<th>Department</th>
<th>Exam structure</th>
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</thead>
<tbody>
<tr>
<td>BE</td>
<td>Exam topics chosen from departmental list. Questions are determined on a per-student basis, in coordination with the student’s advisor.</td>
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<tr>
<td>CE</td>
<td>50% closed-book session + 50% open book session. Questions are determined on a per-student basis, in coordination with student’s advisor.</td>
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<tr>
<td>EECS</td>
<td>2 exams from courses in Major area (The major areas and their required courses are provided, and the student selects from the list) + one exam in minor area (the required courses for the minor are provided and the student chooses from the list). Questions are determined on per-student basis, according to major and minor topics chosen.</td>
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<tr>
<td>ME</td>
<td>Two topics from one of the two broad areas (= 2 written exams) + one oral exam on research preparation.</td>
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</tbody>
</table>

**Failure Policy**

In case any segment of the exam does not meet the passing grade, the student is considered to have failed the comprehensive exam, even if the remaining segments were successfully passed. The student may appeal for a second and final chance, and no sooner than the following semester, to take the comprehensive exam again in its entirety. The rules governing the exam structure on the second attempt are as for the first attempt. A student who fails the comprehensive exam a second time is dismissed from the PhD program.

A passing score on the comprehensive exam should satisfy the following minimum requirements:

- Each segment must score 60/100 or better;
- The average score over the three segments should be 70/100 or better.