

## **Comprehensive Examination – Formats by Area (Plan II)**

The different Program Areas (CE, CCSP, and EP) have slightly different formats for the exam, which are described below.

### **Computer Engineering (CE)**

For students with a Computer Engineering emphasis, the examination may be oral or written at the discretion of the examination committee (but not at the discretion of the student).

The MS comprehensive exam committee must consist of three faculty members with whom the student has taken, collectively, a total of three or more graduate-level CE courses. A faculty member with whom the student has taken at least one graduate-level ECE course shall chair the committee. The names of the faculty are given to the ECE Graduate Student Office, which then sends a form to the faculty involved for their signature.

The CE group makes a commitment to schedule the exam within one month of the committee formation.

### **Communications, Control & Signal Processing (CCSP)**

For students with a Communications, Control & Signal Processing emphasis, the comprehensive examination may take one of the following three forms:

- a) an oral examination on a subset of course material from ECE classes taken by the candidate and taught by faculty on the exam committee,
- b) a written examination on a subset of course material from ECE classes taken by the candidate and taught by faculty on the exam committee, or
- c) a seminar presentation of a topic, or project, based on coursework or research.

The exam committee chair decides on the form of the exam after consulting with the student and exam committee members.

In case of a course-based oral or written examination (a or b), the candidate must compile, in consultation with the committee members, a list specifying the scope of the material on which s/he is to be examined on. This list must be approved by the committee chair and made available to all committee members no later than four weeks before the scheduled exam date.

In case of a seminar presentation (c), the candidate is required to prepare a 20-30 minute oral presentation (typically supported by slides) on a topic related to his/her course selections or a research project s/he has carried out.

The committee chair must approve the topic no later than 4 weeks before the scheduled exam date. The oral presentation is followed by a questions and answer session led by the committee members.

A second exam attempt cannot be scheduled less than 4 weeks after a failed attempt. Candidates are therefore strongly encouraged to schedule their exam early in the quarter to minimize delays in case of a failed attempt.

### **Electronics and Photonics (EP)**

For students with an Electronics and photonics emphasis, the examination is always oral. As a point of departure for the exam, students are required to prepare a 20-minute oral power point presentation on a topic of their choosing. The topic presumably should relate to an area of concentration that the student has already chosen by his or her course selections. Prior approval of the topic by the Exam Committee Chair must be obtained.

Electronics and Photonics students opting to take the oral comprehensive exam are allowed only two chances to pass the exam.