ECE Qualifying Examination – Effective January 1, 2016:

The following is a new set of guidelines to govern the administration of the School of Electrical and Computer Engineering (ECE) Graduate Field's Qualifying Examination. The purpose of these guidelines is to create a uniform, rigorous standard by which the ECE Graduate Field can assess the qualifications and preparation of students to continue in the ECE Ph.D. program.

Format of the Qualifying Examination:
The Qualifying Examination is an assessment of the qualification of incoming graduate students for a program in Electrical and Computer Engineering. The outcome of the Qualification Examination is determined during a Graduate Annual Review by the entire ECE Field and will holistically consider the following components to award one of two possible outcomes.

- Results for a set of Subject Examinations
- Grades for all graduate-level coursework
- Letter from the student's Special Committee Chair describing the student's research progress

The two possible outcomes of the Qualifying Examination are:

- **PASS:** Performance on Subject Examinations, graduate-level coursework, and research demonstrates the student is qualified to continue in the ECE Ph.D. program.

- **FAIL:** Performance on Subject Examinations, graduate-level coursework, and research demonstrates the student is not qualified to continue in the ECE Ph.D. program. The student will be instructed to meet with the Director of Graduate Studies and his/her Special Committee Chair to discuss the proper course of action.

Timing of the Qualifying Examination
The student's Qualifying Examination will be considered during a Graduate Annual Review which usually takes place soon after the Subject Examinations.

Students are eligible to pass the Qualifying Examination at any time during the first four semesters of graduate study.

Students must pass the Qualifying Examination by the end of their **fourth semester** of graduate study in order to remain in good academic standing within the Electrical and Computer Engineering Graduate Field.

Format of the Subject Examinations
Subject Examinations are oral examinations lasting approximately 20-30 minutes.

Each Subject Examination focuses on a specific subject within the ECE Graduate Field. Example subjects include:

- VLSI
- computer architecture
- linear signals and systems theory
- probability and random processes
• devices and circuits
• optics and electromagnetism

Each Subject Examination will focus on material covered in a reasonable undergraduate curriculum on electrical and computer engineering. Each Subject Examination will have an associated syllabus to act as a study guide.

Subject Examinations are administered by a Subject Examination Committee of at least two ECE Graduate Field Faculty Members that are well-versed in the corresponding subject. The Subject Examination Committee must not include a student’s Special Committee Chair.

Students are required to take at least two Subject Examinations, and may not take more than four Subject Examinations.

For each Subject Examination, the Subject Examination Committee will award one of three possible outcomes:

**EXCELLENT:** Student has demonstrated excellent understanding of the corresponding subject that exceeds the expectations of a reasonable Ph.D. candidate within the ECE Graduate Field.

**SATISFACTORY:** Student has demonstrated satisfactory understanding of the corresponding subject that meets the expectations of a reasonable Ph.D. candidate within the ECE Graduate Field.

**UNSATISFACTORY:** Student has demonstrated unsatisfactory understanding of the corresponding subject that is beneath the expectations of a reasonable Ph.D. candidate within the ECE Graduate Field.

The Subject Examination Committee will prepare a written review of the students’ performance on the Subject Examination and the justification for the awarded outcome.

Achieving an outcome of either **SATISFACTORY** or **EXCELLENT** on two or more Subject Examinations covering at least two distinct subjects is sufficient to pass the Qualifying Examination.

**Timing of the Subject Examination**
Subject Examinations are administered annually during a two-week period near the end of the spring semester.

All Subject Examinations on a given subject will be administered on the same day.

Subject Examinations may be administered at other times due to family or medical emergency or other exceptional circumstances only.

The subjects of the Subject Examinations are chosen by the Graduate Committee and will be announced approximately one year in advance. The syllabus for each Subject Examination will also be available one year in advance.

As an exception, during the first year (i.e., 2015-2016 academic year) of the new Qualifying Examination, the subjects of the Subject Examinations and the corresponding syllabi will be available approximately nine months in advance.
The dates of the Subject Examinations are chosen by the Director of Graduate Studies in consultation with the ECE Graduate Field and will be announced near the beginning of the spring semester.

Students are encouraged to take exactly two Subject Examinations on distinct subjects in their first year of graduate study.

**Appeals of the Subject Examination**
Students may appeal the result of a Subject Examination if the student believes an error has been in his or her case.

The student must file a written appeal with the Director of Graduate Studies within one-week of receiving the results from the Subject Examination Committee.

The written appeal should be in the form of a signed letter detailing the reasons why the student believes the outcome of the Subject Exam should be changed.

A decision on the appeal will be made by the Director of Graduate Studies in consultation with the Graduate Committee.