

Electrical Engineering Ph.D. Qualifying Examination

Guidelines for the Graduate Student

The Ph.D. Qualifying Examination (QE) in the Department of Electrical Engineering consists of an oral examination. The purpose of this QE is to assess your readiness to conduct research in your chosen field by testing your ability to apply what you have learned in classes to analyzing research literature. A student entering the Ph.D. program already having an M.S.E.E. must pass this exam within 3 long semesters, and a student entering without already having an M.S.E.E. within 4 long semesters. Admission to Ph.D. candidacy is based on two criteria: performance in the oral QE and GPA in graduate level organized courses. Each student has at most two attempts at this qualifying exam.

Oral Examination:

- You must declare intent to take the exam in the first two weeks of the semester using the “Application for the Doctoral Qualifying Examination” form. (Deadlines for application will be advertised to graduate students as early as possible each semester.) You must be registered for the semester in which you are taking the QE.
- You will be given a set of two to four papers from refereed journals or conference proceedings by the QE committee. The papers should be related to the chosen field of research.
- The QE committee is approved by the Dept. Chair or his/her representative. It will consist of three (3) tenure track faculty in your general field of study (consult your advisor and propose these names on the application form) plus one (1) tenured faculty member from outside this general field of study (appointed by the Dept. Chair as chair of the examination committee).
- You must demonstrate an excellent ability to understand, analyze and present these papers by applying what you learned in previous coursework. You will be given a preparation period of 3-4 weeks in which to read these papers and analyze them using what you have learned in your undergraduate and graduate coursework. In addition to proving that you can analyze the material quantitatively you should explain how the papers are related and identify any limitations to the results presented.
- You will make an oral presentation of about 20-30 minutes and spend a few minutes talking about your goals for doctoral research.
- Finally, you will have to answer questions about your presentation and any coursework background required to understand this material. Those questions will probe your level of ability to understand, analyze, compare and apply the results in research literature.

Evaluation Procedure:

- The final evaluation will be based on two components:
 - The “average exam score”: Each committee member will grade your performance on a scale of 0 to 4. The scores will be averaged.
 - The “GPA score”: Your GPA in graduate level organized courses will be used as the “GPA score.”
- The final evaluation score shall be calculated by the examination committee chair as: **(average exam score)*2/3 + (GPA score)*1/3**
- The final decision of pass, fail or conditional pass shall be communicated to you as expeditiously as possible by the examination committee chair.