

ELECTRICAL ENGINEERING, PH.D.

The general requirements for the Ph.D. degree in Electrical Engineering are equivalent to those of The Graduate School.

Learning Outcomes

- An expertise in their specialty area that is requisite for conducting research in that area.
- An understanding of fundamental concepts and an ability to solve problems in their major area of research.
- An ability to solve basic problems in related areas of research other than their major area.
- Demonstrate an ability to perform research in one of the major areas of the department.
- Demonstrate an understanding of the discovery and innovation process as it relates to electrical engineering.
- Demonstrate the ability to describe complex ideas to others.

Degree Requirements

Students entering the Ph.D. program with a B.S. degree are required to complete a minimum of 48 hours of course work and 12 hours of dissertation preparation. At least 24 hours of coursework must be in the major and the level of 700 or above.

Students entering into the Ph.D. program with an approved M.S. or M.E. degree are required to complete 18 hours of course work and 12 hours of dissertation preparation. At least nine hours of coursework must be at the level of 700 or above.

The Program of Study (POS) must be defined in consultation with the student's advisor and approved by the graduate director. Changes in the POS require permission of the student's advisor and approval of the Graduate Director. Any such changes must be approved before the beginning of a student's final semester.

Not more than 12 hours of ELCT 797 and not more than six hours of ELCT 897 may be approved. Ph.D. students conducting research in the area of Signal Integrity are required to complete three credit hours of ELCT 897.

Additional Requirements

Ph.D. Students must take and pass a Qualifying Examination within three academic semesters of initial enrollment in the program. The exam will be administered by a departmental committee for the purpose of ascertaining that the student has mastered the essentials of electrical engineering. Details of the exam format and contents will be made available to the concerned students well in advance of the exam. Students are allowed to take the qualifying exam not more than twice.

Students must be admitted to Ph.D. Candidacy at least one year before graduation. Admission to candidacy requires passing the qualifying Exam and filing an approved Program of Study. Each Ph.D. student must write and present a dissertation proposal and have it approved by his/her advisory committee, which constitutes the Comprehensive Exam. The dissertation proposal and its presentation must delineate the scope and depth of the original research that the student proposes to undertake.