

DOCTOR OF PHILOSOPHY IN ELECTRICAL ENGINEERING

The doctoral degree in electrical engineering is awarded in recognition of mastery in the field of electrical engineering and upon demonstration of an ability to make substantial creative contributions to knowledge in that field. The Ph.D. recipient will be capable of a continuing effort toward the advancement of knowledge and achievement in research and other scholarly activities. This program is appropriate for those students with master's degrees who are interested in pursuing an academic or industrial research career.

The Ph.D. program requires a minimum of 72 credit hours beyond the bachelor's degree, including the master's degree studies. A minimum of 24 credit hours are devoted to the student's research work, and a minimum of 15 credit hours are devoted to coursework in electrical and computer engineering and in such basic sciences as mathematics and physics. The selection of courses is considered and approved by the student's adviser and the department's graduate program director on the basis of relevance of course content, rather than along a predetermined sequence announced by the department.

Work toward the Ph.D. generally takes a minimum of three years of study beyond the master's degree. Upon admission to graduate study leading to the Ph.D. degree, each student is assigned an academic adviser, who may eventually serve as the thesis adviser and guide the student's research.

The department requires a qualifying examination within the first three semesters of full-time Ph.D. studies. This is a written examination covering several areas in electrical and computer engineering. This examination is intended to explore both the depth and breadth of the student's academic abilities. At an early stage in the student's research program, and usually about a year after passing the qualifying examination, a comprehensive examination is held in the area of specialization.

The comprehensive examination takes the form of an oral presentation and defense of a thesis research proposal. At this time a thesis committee is appointed by the graduate program director, in consultation with the thesis adviser, to guide the remainder of the program. A written dissertation, oral defense, and publication requirement constitute completion of the Ph.D. degree. The defense takes place no earlier than one year after passing the comprehensive examination. Dissertation format and deadlines are established by the Graduate College.

Curriculum

Requirement	Credits
Minimum Degree Credits	72
Maximum 400-Level Credit	12
Minimum 500-Level Credit	15
Maximum 700-Level Credit	6
Maximum Transfer Credit	36

Code	Title	Credit Hours
Ph.D. Research		(24-25)
ECE 691	Research and Thesis Ph.D.	24-25
Transfer Coursework		(0-36)
Transfer up to 36 credit hours		0-36
General Electives		(15-48)
Select 15-48 credit hours of electives from ECE 400-599, ECE 601-699, and ECE 700-799 to fulfill minimum total credits		15-48