COMPUTER SCIENCE, PH.D.

Degree Requirements (60 Post Baccalaureate Hours)

Requirements for the Ph.D. degree in computer science fall into four categories: course requirements, the qualifying examination, the comprehensive examination, and the dissertation.

Core (13 hours)

The coursework must include the following core courses

Course	Title	Credits
CSCE 513	Computer Architecture	3
CSCE 531	Compiler Construction	3
CSCE 551	Theory of Computation	3
CSCE 750	Analysis of Algorithms	3
CSCE 791	Seminar in Advances in Computing	1
Total Credit Hours		**13**

Dissertation Preparation (12 hours)

Course	Title	Credits
CSCE 899	Dissertation Preparation	12
Total Credit Hours		**12**

Advanced CSCE Electives (20 hours)

- In addition to the above requirements, students must complete 20 hours in CSCE courses numbered 700 or above.

Other Electives (15 hours)

- In addition to the above requirements, students must complete 15 hours of CSCE courses numbered above 500.
- Graduate level courses from other departments, with approval from Graduate Director, can satisfy this requirement.
- Students who enter the program with a Master's degree in Computer Science are exempt from this requirement.

Note: Students entering the program without a Masters degree are encouraged to concurrently enroll in and earn an MS in Computer Science.

At most 9 hours of CSCE 798 and not more than 12 hours of CSCE 899 may be applied toward the degree. Neither CSCE 797 nor CSCE 799 may be applied toward the degree.

The student's dissertation committee must approve the program of study, so this committee should be formed as early in a student's course of study as possible. The dissertation committee must consist of not fewer than 5 members, including one external member outside the Department of Computer Science and Engineering,

Prior to admission to candidacy, the student is required to pass a written qualifying examination. This examination is designed to test fundamental knowledge and conceptual understanding of the mainstream areas of computer science and engineering.

The Ph.D. comprehensive examination combines a written and an oral examination and seeks to discover whether the student has a sufficiently deep understanding of topics in the area of interest to carry out the proposed research. The written examination consists of two portions: the core, including architecture, algorithms, theory and compiler construction; and the research area of the student. The core portion is constructed and graded by the faculty as a whole. The dissertation committee, which will also make the final decision on whether the student has passed, constructs the research component. The oral examination is an in-depth test on the subject matter related to the student's dissertation topic and written exam. The committee may also examine the student on any other material it deems relevant. After completing the research and writing the dissertation, the student must defend the work in a public presentation.