# Emphasis - Computer Science



# Ph.D. in Engineering Science

## Description

The Ph.D. in engineering science is offered in a number of emphasis areas: aeroacoustics, chemical engineering, civil engineering, computational hydroscience, computer science, electrical engineering, electromagnetics, environmental engineering, geology, geological engineering, hydrology, mechanical engineering, and material science and engineering.

## Minimum Total Credit Hours: 54

## Course Requirements

A student must complete the requirements for one of the emphasis areas. All doctoral programs require completion of a comprehensive examination, dissertation prospectus, and a dissertation. See the department chair or adviser for specific requirements for an emphasis area.

# Emphasis - Computer Science

## Description

A Ph.D. in engineering science with emphasis in computer science prepares a student with advanced technical knowledge and communication skills for pursuing a career in industry, research and development, or public/government service. Students entering the program come from a variety of engineering and nonengineering disciplines such as electrical engineering, physics, biology, and the liberal arts.

## Course Requirements

For the Ph.D. in engineering science with an emphasis in computer science, the student must present a master's degree in the field or the equivalent and take additional classes adding up to 54 hours of course work beyond the bachelor's degree. This may include no course numbered lower than Csci 510, and a minimum of 18 hours must be in computer science courses at the 600 level. The student may count up to three nonregular courses (9 hours), such as independent study, towards the degree.

## Other Academic Requirements

The student must pass four written comprehensive exams: one each in systems, languages, and algorithms, and one selected from the following: artificial intelligence, graphics and visualization, data management and retrieval, software engineering, or another area approved by petition to the graduate committee.