Emphasis - Civil Engineering

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 engineering, 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 - Civil Engineering

Description

A Ph.D. in engineering science with emphasis in civil engineering prepares a student with advanced technical knowledge and communication skills for pursuing a career in engineering research and development, education, industry, or public service. The program offers a choice of several concentration areas: structures, geotechnical engineering, construction materials, water resource engineering, environmental engineering, transportation systems, infrastructure asset management, and earthquake and disaster response management.

Goals/Mission Statement

The program will provide high quality graduate education in a range of civil engineering disciplines and will produce research and scholarship that is nationally recognized and supports the economic development of the state, the region, and the nation.

Course Requirements

The Ph.D. degree with emphasis in civil engineering requires the following coursework:

- For students entering the Ph.D. directly from a B.S.: 36 hours of coursework and 18 hours of dissertation.
- For students entering the Ph.D. from an M.S.: 24 hours of coursework and 18 hours of dissertation.
- For students entering the Ph.D. from an M.S. at the University of Mississippi: 12 hours of coursework and 18 hours of dissertation.

Combining the student's M.S. and Ph.D. programs, at least two courses need to be in mathematics (e.g., Engr 591-Engineering Analysis I, Engr 592-Engineering Analysis II, Math 555-Advanced Calculus I, Math 556-Advanced Calculus II, Math 575-Mathematical Statistics I), one course in numerical methods (e.g., Engr 590-Finite Element Analysis), and one course in mechanics (e.g., Engr 617-Continuum Mechanics). Additional hours of Graduate Seminar may be required. Other graduate coursework must be approved by the student's advisory committee.

Other Academic Requirements

A qualifying examination, comprehensive examination, dissertation prospectus, and dissertation defense are needed. Before admission to candidacy, the student must pass written and oral comprehensive exams.