

## Emphasis - Hydrology

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### **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 - Hydrology Description**

A Ph.D. in engineering science with emphasis in hydrology 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 geology and civil engineering.

#### **Course Requirements**

For the Ph.D. with emphasis in hydrology, a student must complete 48 semester hours of course work beyond the bachelor's degree plus 18 hours of dissertation. The 48 hours of course work must include 13 hours of required courses [Hydrogeology (Geol 505), Environmental Geochemistry (G E 503), Groundwater Mechanics (Engr 636), and Contaminant Transport (Engr 645)], and 6 hours from an approved list of electives (G E 518, C E 541, C E 542, C E 543, Ch E 545, Geol 615, Engr 537, Engr 616, Engr 637, Engr 648). Remaining credit hours will be fulfilled with courses approved by the student's committee. Up to 3 hours of Engr 695 (seminar) may be used as part of the required hours provided that the seminar schedule includes critiqued presentations by the enrolled students.

#### **Other Academic Requirements**

Students must pass a written and oral comprehensive exam before completing the dissertation research.

