

## Emphasis - Computational Hydroscience

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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: 66**

#### 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 - Computational Hydroscience Description

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

#### Course Requirements

The Ph.D. in engineering science with an emphasis in computational hydroscience and engineering involves 48 credit hours of course work, including core courses and electives, 12 hours of research topics, and 18 dissertation hours. Students may specialize in either hydroscience/engineering system modeling or computational methodologies applicable to hydro-systems modeling.

#### Other Academic Requirements

Other requirements include publishing at least two refereed papers (preferably one of them to be published in a professional journal); participating in research seminars; completing assigned research projects; and passing written and oral comprehensive exams.

#### Degree Requirements

The academic regulations for this degree program, as entered in the University of Mississippi Catalog, are in effect for the current or selected academic year and semester. The University of Mississippi reserves the right to 1) change or withdraw courses; 2) change rules for registration, instruction, and graduation; and 3) change other regulations affecting the student body at any time.

### Ph.D. in Engineering Science

| REQUIREMENT                 | HOURS | DESCRIPTION  |
|-----------------------------|-------|--|
| <a href="#">Engr 797</a>    | 18    | Complete at least 18 hours of dissertation credit ( <a href="#">Engr 797</a> ).  |
| Dissertation prospectus     |       | Student must submit and defend a dissertation prospectus.  |
| Oral defense                |       | Every candidate for the Ph.D. degree must successfully pass a final oral examination (defense of dissertation) administered by the student's dissertation committee and scheduled by the Graduate School.  |
| Select an emphasis          |       | Student must enroll in one of the PhD in Engineering Science emphasis areas: aeroacoustics, chemical engineering, civil engineering, computational hydroscience and engineering, computer science, electrical engineering, electromagnetics, environmental engineering, geological engineering, geology, hydrology, materials science and engineering, or mechanical engineering.  |
| Submit Dissertation         |       | Student must submit a dissertation to his/her GPC/Chair. The dissertation must conform to the regulations governing style set forth in "A Manual of Thesis and Dissertations Preparations", available in the Graduate School Office. Two copies of the dissertation must be presented to the Graduate School after the final examination for the doctorate has been accepted and before the beginning of the regular examination period for the semester in which the candidate plans to graduate. |
| GPA requirements            |       | A cumulative average of not less than 3.0 (B) must be achieved in all graduate work taken.   |
| Engineering Dean's approval |       | This Degree Audit program is an advising tool only. The student must still apply for a degree by submitting their degree application to <a href="mailto:engineer@olemiss.edu">engineer@olemiss.edu</a> . The dean's office will make the final certification that the courses listed on the application qualify the student for graduation. The Dean's Office will also determine if other university requirements (GPA, etc.) have been met.  |

### Emphasis - Computational Hydroscience

| REQUIREMENT        | HOURS | DESCRIPTION   |
|--------------------|-------|---|
| 12 hrs research    |       | Student must complete at least 12 hours of research.  |
| 48 hrs course work | 48    | Student must complete at least 48 hours of course work approved by the student's GPC/Chair. |
| Comprehensive exam |       | Student must pass written and oral comprehensive exams.                                     |



| REQUIREMENT       | HOURS | DESCRIPTION   |
|-------------------|-------|---|
| Research project  |       | Student must complete his/her assigned research project.  |
| Research seminars |       | Student must participate in research seminars.  |
| Scholarly papers  |       | Student must publish at least two refereed papers (preferably one of them to be published in a professional journal.) |

