

## Emphasis - Computer Science

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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 - 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.

#### 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 - Computer Science

| REQUIREMENT        | HOURS | DESCRIPTION  |
|--------------------|-------|--|
| 54 hrs course work | 54    | Student must complete at least 54 hours of course work beyond the bachelor's degree including 18 hours in computer science at the 600-level. No course numbered lower than <a href="#">Csci 510</a> will be counted. The student may also count up to three nonregular courses (9 hours), such as independent study, towards the degree. |



| REQUIREMENT        | HOURS | DESCRIPTION   |
|--------------------|-------|---|
| Comprehensive exam |       | Student must pass four comprehensive examinations: one each in systems, languages, and algorithms. The must also pass one exam selected from the following: artificial intelligence, graphics and visualization, data management and information retrieval, software engineering, or another area approved by petition to the graduate committee. |

