

## Emphasis - Pharmacology

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### Ph.D. in Pharmaceutical Sciences Description

The Ph.D. in pharmaceutical sciences can be completed with an emphasis in environmental toxicology, medicinal chemistry, pharmaceuticals, pharmacology, pharmacognosy, or pharmacy administration.

**Minimum Total Credit Hours: 57**

#### Course Requirements

Requirements for each emphasis area are given in the respective program description sections.

### Emphasis - Pharmacology Description

The Ph.D. in pharmaceutical sciences with an emphasis in pharmacology or toxicology involves the study of the interaction of drugs, chemicals, and physical agents with biological systems and their constituent parts. This includes determining and understanding the mechanism of action of therapeutic and hazardous substances for the preservation and protection of health and the environment.

#### Goals/Mission Statement

The mission of the Department of Pharmacology is to train future scientists and educators in the fields of pharmacology and toxicology. To accomplish our mission, we provide didactic, practical, and hands-on training in all aspects of these disciplines to our students. The ultimate goals of our program are to contribute to the knowledge base of the disciplines of pharmacology and toxicology and to produce well-trained scientists who can engage in successful and productive careers in pharmacology and toxicology.

#### Course Requirements

The Ph.D. with an emphasis in pharmacology requires the following core course work, along with 18 hours of dissertation:

- Phcl 611, 612-Teaching in Pharmacology and Toxicology
- Phcl 669-Physiological Chemistry
- Phcl 563, 564\*-Introduction to Pharmacology
- Phcl 675, 676\*\*-General Principles of Pharmacology and Toxicology, I, II
- Phcl 661-Advanced Physiology
- Psy 603-Quantitative Methods in Psychology I (or equivalent)
- Phcl 501-Principles of Life Science Research
- Phcl 651-Directed Studies in Pharmacology and Toxicology
- Phcl 643-Pharmacology Seminar (to be taken each semester)

\* Phcl 564-Not required for Toxicology Track \*\* Phcl 676-Not required for Pharmacology Track

The student's adviser will assist in course selection.

#### Other Academic Requirements

Written and oral comprehensive exams precede admission to the dissertation stage. The dissertation represents the results of independent and original research. A manuscript that describes the research and that is suitable for publication in a refereed journal should be presented simultaneously with the dissertation. Degree requirements also include a final oral examination, mainly in defense of the dissertation.

#### 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 Pharmaceutical Sciences

| REQUIREMENT              | HOURS | DESCRIPTION  |
|--------------------------|-------|--|
| Select an emphasis       |       | Student must enroll in one of the Ph. D. in Pharmaceutical Sciences emphasis areas: medicinal chemistry, pharmaceuticals, pharmacognosy, environmental toxicology, pharmacy administration or pharmacology/toxicology,   |
| GPA requirements         |       | A cumulative average of not less than 3.0 (B) must be achieved in all graduate work taken.   |
| Pharmacy Dean's approval |       | This Degree Audit program is an advising tool only. The dean's office will make the final certification that the student qualifies for graduation. The dean's office will also determine if other university or school requirements (GPA, etc.) have been met. |

### Emphasis - Pharmacology

| REQUIREMENT                      | HOURS | DESCRIPTION  |
|----------------------------------|-------|--|
| <a href="#">Phcl 501</a> - C min | 1     | Complete <a href="#">Phcl 501</a> with a grade of C or better. |
| <a href="#">Phcl 563</a> - C min | 4     | Complete <a href="#">Phcl 563</a> with a grade of C or better. |



| REQUIREMENT                      | HOURS | DESCRIPTION  |
|----------------------------------|-------|--|
| <a href="#">Phcl 564</a> - C min | 4     | Complete <a href="#">Phcl 564</a> with a grade of C or better.   |
| <a href="#">Phcl 611</a>         | 1     | Complete <a href="#">Phcl 611</a> .  |
| <a href="#">Phcl 612</a>         | 1     | Complete <a href="#">Phcl 612</a> .  |
| <a href="#">Phcl 643</a>         | 1     | Complete <a href="#">Phcl 643</a> .  |
| <a href="#">Phcl 651</a> - C min | 1     | Complete <a href="#">Phcl 651</a> with a grade of C or better.   |
| <a href="#">Phcl 661</a> - C min | 4     | Complete <a href="#">Phcl 661</a> with a grade of C or better.   |
| <a href="#">Phcl 669</a> - C min | 4     | Complete <a href="#">Phcl 669</a> with a grade of C or better.   |
| <a href="#">Phcl 675</a> - C min | 4     | Complete <a href="#">Phcl 675</a> with a grade of C or better.   |
| <a href="#">Phcl 676</a> - C min | 4     | Complete <a href="#">Phcl 676</a> with a grade of C or better.   |
| <a href="#">Phcl 797</a>         | 18    | Complete at least 18 hours of dissertation ( <a href="#">Phcl 797</a> ).   |
| <a href="#">Psy 603</a> - C min  | 3     | Complete <a href="#">Psy 603</a> with a grade of C or better.  |
| Comprehensive exam               |       | Student must pass both an written and oral comprehensive examination.  |
| Manuscript                       |       | Student must submit a manuscript that describes the dissertation research and is suitable for publication in a refereed journal.   |
| 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.  |
| 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. |

