

## Emphasis - Pharmacology

- [Ph.D. in Pharmaceutical Sciences](#)
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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.

