

## Emphasis - Environmental Toxicology

- [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 - Environmental Toxicology Description

The Ph.D. in pharmaceutical sciences with emphasis in environmental toxicology prepares a graduate to perform independent research and solve problems related to environmental health issues. Graduates are likely to find careers in academics, industry, or government service.

#### Course Requirements

The requirements for the Ph.D. with emphasis in environmental toxicology consist of a minimum of 15 core course hours:

Course	Hours
Phcl 675: Principles of Pharmacology and Toxicology	4
Phcl 547: Environmental Toxicology-2h	
BMS 767: Advanced Topics in Toxicology-2h	
Bisc 504 Biometry-4h	
BMS 605: ORP-1h	
BMS 601: Graduate Student Survival Strategies-2h	

Additional coursework consists of a minimum of 13 hours in electives, exclusive of graded seminars (see below), from biomolecular sciences, biology, chemistry, engineering or other graduate-level programs (contingent upon Division of Environmental Toxicology faculty approval).

#### Seminar Requirement

Students are required to register for BMS 643 (Z grade) every semester, with the exception of those semesters in which the student presents a seminar and instead registers for BMS 641 (graded). No more than 8 seminar hours can be used toward the 54 minimum total credit hours. A minimum of 18 hours of dissertation research must also be taken to meet degree requirements.

### Other Academic Requirements

#### Original Research Proposal

A student must prepare, submit, and successfully (orally) defend an original research proposal (ORP). Procedures for this requirement will be provided by the department. Students will register for BMS 605 (Original Research Proposal BioMolecular Sciences) in the semester they anticipate defending their ORP.

#### Dissertation

A student must prepare and orally defend a dissertation based on original, independent research in partial fulfillment of their Ph.D. degree.

