Emphasis - Medicinal Chemistry

- 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, pharmaceutics, 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 - Medicinal Chemistry

Description

A Ph.D. in pharmaceutical sciences with an emphasis in medicinal chemistry prepares a graduate to do basic research toward understanding the mechanism of action of drugs. In such research, a medicinal chemist strives to establish correlations between biological properties and physiochemical parameters of drugs. The field is devoted to the discovery and rational development of new agents in the treatment of diseases.

Goals/Mission Statement

The mission of the Department of Medicinal Chemistry is to apply chemistry and the chemically related sciences to the teaching of professional pharmacy students and graduate students. The research mission of the department is the discovery, design, analysis, and the further development of potential drugs and the discovery of potential drug design targets.

Course Requirements

The requirements for the Ph.D. with an emphasis in medicinal chemistry consist of a minimum of 21 graduate course hours in medicinal chemistry, 6 hours of chemistry courses, and 6 hours of elective credit. These requirements can be satisfied in the following way:

1. Advanced Medicinal Chemistry I, II (Medc 501 and Medc 502) (6 hours);
2. Drug Action and Design (DAD) courses (four out of seven) (12 hours);
3. Seminar on Current Medicinal Chemistry Topics (Medc 543 and/or Medc 544) (2 hours);
4. Chemistry courses 500/600 level (6 hours); Advanced Organic Chemistry (Chem 527, 528) is recommended;
5. Graduate-level elective courses (contingent upon research adviser approval) (6 hours); Analysis of Natural Products Drugs (Phcg 632 or 633) is recommended;
6. Problems in Medicinal Chemistry (Medc 541 or Medc 542) (1 hour).

Seminar Requirement - Students are required to register for either Medc 643 (fall) or Medc 644 (spring) every semester, with the exception of those semesters when the student presents a seminar and should register for either Medc 543 (fall) or Medc 544 (spring).

Other Academic Requirements

Cumulative Examinations - Cumulative exams will be administered monthly throughout the calendar year. Once a student has officially entered the exam process, that student will have 18 opportunities to pass five examinations from at least four different department faculty members. He/she is required to pass a minimum of two of the first 12 exams administered.

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 or adviser.

Dissertation - A student must prepare and orally defend a dissertation based on original, independent research.

The University of Mississippi is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award certificates and baccalaureate, master's, specialist, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404-679-4500, or visit online at www.sacscoc.org for questions about the accreditation.