

PHARMACOLOGY M.S.

All students must meet the Requirements for the Master's Degree

OVERVIEW

The objective of the Department of Pharmacology Master's Programs is to provide a broad knowledge base of pharmacological concepts, preparing students for careers in pharmaceutical, biotechnology and related industries or to increase their competitiveness to pursue additional graduate degrees. Research interests in the Department of Pharmacology are diverse, with special emphasis on cardiovascular and cerebrovascular pharmacology, physiology, neurovascular coupling, signal transduction, and medicinal chemistry/cancer chemotherapy.

The Department of Pharmacology offers thesis-based and non-thesis Master of Science degrees. The non-thesis M.S. degree involves taking 30 credits of required and elective Pharmacology or Pharmacology approved courses and does not require a thesis or thesis defense. The thesis-based M.S. degree is a course and research-based program, with a minimum of 15 course credits and 9-15 credits research credits (PHRM 6391). Students may choose thesis advisors from within the Department of Pharmacology, or with approval from the Program Director may choose faculty from outside of the Department. This gives students a wide range of options for selecting thesis advisors conducting pharmacology research. Students in the thesis-based track will write and defend a thesis.

SPECIFIC REQUIREMENTS

Requirements for Admission to Graduate Studies for the Degree of Master of Science

A course background in the sciences (biology, chemistry, physics, etc.) is recommended. Graduate Record Examination (GRE) scores are not required.

Admission to the program requires the following:

- A minimum cumulative grade point average of 3.00 is recommended.
- Completion of the Graduate College Application form that must include at least 3 letters of recommendation.

Minimum Degree Requirements

All students must meet the UVM Graduate College Requirements for the Master's degree. A minimum of 30 credits and successful completion of a written comprehensive exam are required for completion of the Master's degree in Pharmacology. At least 15 coursework credits must be graded, 6 of which must be at the 6000-level. Students enrolled in the thesis-based program must also write, present and successfully defend their research thesis. Courses should be selected from the following lists or from pharmacology-related courses offered by other departments at UVM as approved by the Program Director to complete the 30 credit requirement. Please

contact the Program Director for a current list of courses approved for the Pharmacology M.S.

Requirement Description		Credits
Required Courses:		
PHRM 5400	Molecules & Medicine	3
PHRM 5900	Gr Adv Pharmacology Topics	3
PHRM 6010	Applied Systems Pharmacology	3
PHRM 6080	Integrative Physiol. & Pharm.	3
PHRM 6810	Seminar	1
Required for thesis master's:		
PHRM 6391	Master's Thesis Research	1-18
Additional courses may be selected from the following or by approval of the Program Director:		
PHRM 5720	Gr Toxicology	
PHRM 6020	Pharmacological Techniques	
PHRM 6050	Milestones in Pharmacology	
PHRM 6730	Readings in Pharmacology	
BIOC 6001	General Biochemistry I	
BIOC 6002	General Biochemistry II	
MPBP 6010	Human Physiology & Pharm I	

Comprehensive Examination

Students are required to pass a written comprehensive exam. The format is a take-home written exam. The questions are based on the required courses, which are common to the thesis and non-thesis tracks. Grading is on a 1-10 scale for each question. An average score of 7 or better is required to pass. If a passing grade is not obtained, 1 re-take is permitted.

Requirements for Advancement to Candidacy for the Degree of Master of Science

Advancement to candidacy requires satisfactory completion of the comprehensive exam.