

# PHARMACEUTICAL SCIENCES, MASTER OF SCIENCE

## Graduate Program in Pharmaceutical Sciences

The **Pharmaceutical Sciences Graduate Program** is housed in the Department of Pharmaceutical Sciences in the College of Pharmacy and Health Sciences (COPHS) and is led by a group of active, productive faculty. Over the last several years, COPHS faculty have been successfully developing its research infrastructure and capabilities. Collectively, the Center for Biomedical and Minority Health Research supported by NIMHD, the Center for Comprehensive PK/PD & Formulation supported by CPIRT, and the Institute of Drug Discovery and Development supported by NCI, have contributed significantly to the development of research infrastructure in COPHS.

The Master of Science in Pharmaceutical Sciences with specialization in pharmacology and pharmaceuticals is offered through the program. The M.S. curricula are designed to provide a scientifically integrated training that permits students to:

1. Acquire knowledge and skills that facilitate a comprehensive understanding of the genesis and progression of pathological conditions;
2. Apply knowledge and skills to the discovery, design, development, and delivery of drugs and dosage forms and conduct pharmacokinetics and pharmacodynamics studies;
3. Be prepared to pursue professional careers in academic, pharmaceutical industry, and governmental settings.

## Summary Pharmacology Track

Code	Title	Hours
Core Courses (p. 1)		21
Electives (p. 1)		3
Research and Thesis (p. 1)		9
<b>Total Hours</b>		<b>33</b>

## Core Curriculum

Code	Title	Hours
PHS 800	Bioethics	3
PHS 801	Biostatistics	3
PHS 808	Pathophysiology	3
PHS 809	Pharmacology	3
PHS 811	Pharmacokinetics	3
PHS 812	Advanced Biochem	3
PHS 813	Advanced Organic Chem	3
<b>Total Hours</b>		<b>21</b>

## Electives

Code	Title	Hours
Select one of the following:		3
PHS 806	Admin and the Biomed Scien	
PHS 807	Exp Design/Instr/Clin Measurmt	
PHS 813	Advanced Organic Chem	

PHS 900	Biosyn and Drug Metabolism
PHS 901	Cell Biology
PHS 904	Genetics and Pharmacogenomics
PHS 905	Advanced Medicinal Chem
PHS 910	Endocrine Pharmacology
PHS 912	Neurpharmacology

**Total Hours** 3

1

Pharmacology Track

2

Pharmaceutics Track

## Research and Thesis

Code	Title	Hours
PHS 814	Lab Rotation	3
PHS 815	Masters Research	3
PHS 816	Masters Thesis	3
<b>Total Hours</b>		<b>9</b>

## SUMMARY PHARMaceutics TRACK

Code	Title	Hours
Core Courses (p. 1)		21
Electives (p. 1)		3
Research and Thesis (p. 1)		9
<b>Total Hours</b>		<b>33</b>

## CORE CURRICULUM

Code	Title	Hours
PHS 800	Bioethics	3
PHS 801	Biostatistics	3
PHS 809	Pharmacology	3
PHS 810	Physical Pharmacy	3
PHS 811	Pharmacokinetics	3
PHS 812	Advanced Biochem	3
PHS 908	Advanced Drug Delivery Sys	3
<b>Total Hours</b>		<b>21</b>

## ELECTIVES

Code	Title	Hours
Select one of the following:		3
PHS 806	Admin and the Biomed Scien	
PHS 807	Exp Design/Instr/Clin Measurmt	
PHS 900	Biosyn and Drug Metabolism	
PHS 901	Cell Biology	
PHS 906	Advanced Pharmacokinetics	
PHS 907	Advanced Pharmaceutics	
<b>Total Hours</b>		<b>3</b>

## Research and thesis

Code	Title	Hours
PHS 814	Lab Rotation	3
PHS 815	Masters Research	3
PHS 816	Masters Thesis	3
<b>Total Hours</b>		<b>9</b>

A student should also meet the following requirements:

1. Completion of 33 credit hours of course work.
2. Minimum of one presentation at a national research meeting.
3. Submission of one research paper to indexed-refereed journal.
4. Successful public defense of thesis.