

# MSPS IN INDUSTRIAL PHARMACY

The Master of Science in pharmaceutical sciences degree is designed to prepare an individual for responsibilities in professional practice, the pharmaceutical industry and scientific research beyond those possible with a baccalaureate.

Although a single degree is conferred, specialization is possible in that the curriculum is organized into three distinct disciplines, referred to here as "options". Applicants must select the program of study (option) they wish to pursue. The options available to graduate students are:

- pharmacology/toxicology,
- health outcomes and socioeconomic sciences, and
- industrial pharmacy.

The requirements for the Master of Science in pharmaceutical sciences degree differ according to the option. The minimum course work for the industrial pharmacy major is 24 semester hours, for the pharmacology/toxicology major 28 semester hours and for the health outcomes and socioeconomic sciences major 27 semester hours. In addition, each major requires a minimum of 6 semester hours of thesis research.

In general, a baccalaureate in the sciences is required for admission, although applicants possessing other bachelor's degrees will be considered if the latter represent adequate preparation. Certain options and graduate courses require undergraduate preparation as prerequisites, and this preparation should be completed as soon as possible upon admission. The total time required for completion of the graduate program leading to the Master of Science in pharmaceutical sciences degree will depend upon the preparation of the student entering the program. Normally two years of study and research are required.

The admission requirements of the College of Graduate Studies of the University apply. The basic requirement is a 2.7 (on a 4.0 scale) GPA on all undergraduate work leading to the bachelor's degree. Applicants having less than a 2.7 GPA on all undergraduate work will be considered for admission if other criteria for estimation of potential success in graduate studies are positive.

Each student must submit three copies of transcripts, one of which must be official and show all post-secondary academic work and degrees granted, three letters of recommendation from college faculty members acquainted with the applicant's character and ability, and scores from the aptitude portion of the GRE.

International students are required to take the TOEFL, which will be given in their own country by the Educational Testing Service.

Normally, acceptance will be decided by April 1 for admission during the following fall semester. The priority deadline for completed applications is January 15th. Complete applications received by this deadline will be considered for admission. Applications received after the January 15th deadline may also be considered, if positions are available in a program. International students are encouraged to submit applications one month prior to the stated deadline to allow for delays in international correspondence.

A minimum of 24 credit hours of course work and a minimum of 6 credit hours of thesis work for a total of 30 required minimum credit hours for the degree.

Code	Title	Hours
<b>Undergraduate Courses Required <sup>1</sup></b>		
MBC 3550	Physiological Chemistry I: Structure And Function Of Biological Macromolecules	3
MBC 3560	Physiological Chemistry II: Chemical Regulation Of Cells And Organisms	3
Select one of the following:		8-9
PHPR 3070 & PHPR 3080	Pharmaceutics and Pharmaceutical Technology I and PPD-2	
CHEM 3710 & CHEM 3720 & CHEM 3730	Physical Chemistry For The Biosciences I and Physical Chemistry For The Biosciences II and Physical Chemistry I	
<b>Graduate Required Courses</b>		
MBC 5620	Biochemical Techniques	2
PHPR 5710	Selected Topics In Pharmaceutical Technology	2-3
PHPR 5990	Problems In Pharmacy Practice	1-6
PHPR 6530	Research Methods In Pharmacy Practice	2
CHEM 6810	Materials Science I	4
PHPR 5700	Equilibrium Phenomenon	2
PHPR 5780	Advanced Drug Delivery Systems-2	2
CHEM 6310	Separation Methods	3
<b>Electives (Not required, optional)</b>		
Elective <sup>3</sup>		
PHPR 5720	Pharmaceutical Rate Processes	
PHCL 5760	Toxicokinetics	
PHPR 5770	Advanced Drug Delivery Systems – I	
PUBH 6000	Biostatistics	
CHEM 6300	Advanced Analytical Chemistry	
MBC 5100	Ethical Conduct Research	
PHPR 6850	Product Development Laboratory	
PHPR 6950	Seminar In Industrial Pharmacy <sup>2</sup>	
PHPR 6960	M.s. Thesis Research In Pharmacy (6 hours minimum*)	

<sup>1</sup> Courses will be evaluated for students with a B.S. in pharmacy, Pharm.D. or B.S.P.S. degree.

<sup>2</sup> Seminar course must be taken 2 times therefore 2 credit hours total to meet requirements.

<sup>3</sup> Two credit hours of electives must be satisfied by taking courses within the PHPR Department.

\*6 thesis credit hours are the required minimum; more than 6 credit hours can be taken.

Successful oral defense of the thesis before the thesis advisory committee (consisting of the thesis adviser and two other members) and presentation of the results of the thesis research in a seminar before the Division of Industrial Pharmacy.

Acceptance of thesis by the M.S. thesis advisor and the thesis advisory committee.

Applicants for the health outcomes and socioeconomic sciences and industrial pharmacy options who possess a B.S. in pharmacy, Pharm.D. or bachelor of science in pharmaceutical sciences degree from an ACPE-accredited institution will be given preference for admission into those options. International applicants must have earned pharmacy degrees from their home institutions.