

MSPS IN HEALTH OUTCOMES & SOCIOECONOMIC SCIENCES

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. The Graduate Record Exam (GRE) is not required for admission, but is highly recommended for International students.

International students are required to take an English language test (<https://www.utoledo.edu/graduate/prospectivestudents/admission/guidelines.html>), 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 27 semester hours of course work plus a minimum of 6 thesis hours are needed for the degree.

Code	Title	Hours
Core Courses		
PHPR 5260	Pharmacy and Healthcare Administration	2
PUBH 6000	Quantitative and Qualitative Data Analysis in Public Health	3
PHPR 5590	Readings in Access and Cultural Competence	2
PHPR 5610	Pharmacoeconomics and Outcomes Research I	2
PHPR 6520	Analysis Of The Pharmaceutical Environment	2
PHPR 6530	Research Methods In Pharmacy Practice	2
or PUBH 6080	Social Determinants of Health	
PHPR 6600	Seminar In Administrative Pharmacy	1
PHPR 6960	M.S. Thesis Research In Pharmacy ¹	1-6
PUBH 6060	Advanced Biostatistics	3
PHPR 5620	Pharmacoeconomics and Outcomes Research II	3

¹ A minimum of 6 credit hours of Thesis Research in Pharmacy is required.

Track Courses

This major has 2 tracks. Each student must pick a tract in their first semester. Track courses must be approved by the student's major advisor. Students may pick from the courses listed below or an equivalent/alternative course as deemed appropriate by their major advisor. Minimum of 9 credit hours of track courses required.

Program Tracks, with approved track courses are listed below:

Code	Title	Hours
Track Courses		
Select a minimum of 9 credit hours of one of the following tracks:		9
<i>1. Pharmacoeconomics and Outcomes Research</i>		
PUBH 6010	Public Health Epidemiology	
PUBH 6030	Advanced Epidemiology	
PUBH 6110	Categorical Data Analysis	
ECON 5750	Health Economics	
ECON 5810	Econometrics Models And Methods I	
ECON 5820	Econometrics Models And Methods II	
PUBH 6110	Categorical Data Analysis	
<i>2. Social Behavior Sciences</i>		
PUBH 6600	Health Behavior	
PUBH 6460	Health Promotion Programs	
RESM 6220	Measurement I	
PUBH 6090	Issues in Public Health	
PUBH 6800	Evaluation Of Health Programs	

All students admitted to this option, must comply with the policies and procedures stated in the 'graduate student handbook,' provided to students during orientation. Additional requirements, for successful completion of this degree option, are stated in the graduate handbook.

- PLO 1. Interpret and critically evaluate literature in the respective discipline and identify gaps in current knowledge.
- PLO 2. Design, implement, and analyze the results of an independent research project in the respective discipline.
- PLO 3. Effectively communicate and defend research findings orally and in writing.
- PLO 4. Describe and comply with standards of ethical conduct of research.
- PLO 5. Effectively work in a team of colleagues within the discipline.