

Drug Discovery MS

SCHOOL OF PHARMACY

Learn more about the Master of Science in Drug Discovery.

About the Program

The School of Pharmacy offers a graduate program leading to the MS, with a choice of Thesis or Non-Thesis Option, and the PhD in Pharmaceutical Sciences. The program is designed to prepare students for positions in the pharmaceutical industry, government agencies, and as faculty in schools of pharmacy.

Time Limit for Degree Completion: 5 years

Campus Location: Health Sciences Center, Main

Some courses may be offered at the Fort Washington campus. Research must be carried out at the Health Sciences Center campus under the supervision of an advisor who is a member of the Graduate Faculty.

Full-Time/Part-Time Status: Full-time status is recommended due to the nature of ongoing research.

Interdisciplinary Study: The program encourages interdisciplinary coursework, research and collaborations among faculty and students with interests in biochemistry, molecular modeling, organic chemistry and pharmacology.

Areas of Specialization: The focus is Medicinal and Pharmaceutical Chemistry, including design and synthesis of ligands for nicotinic receptors and ligands for retinoic acid receptors, novel anticonvulsants, and the development of analytical methodologies.

Job Prospects: The program primarily concentrates on providing research scientists for the pharmaceutical industry and government agencies, as well as faculty for schools of pharmacy.

Non-Matriculated Student Policy: Non-matriculated students are able to take up to 9 credits before formal application must be made to the program.

Financing Opportunities: Master's students are generally not considered for financial support. Financial support in the form of University fellowships, teaching assistantships and research assistantships is generally available to PhD candidates only. Only under rare circumstances are MS students considered for support.

Admission Requirements and Deadlines

Application Deadline:

Fall: December 15

All applications are evaluated together after the deadline.

APPLY ONLINE to this graduate program.

Letters of Reference:

Number Required: 3

From Whom: Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence and professionals in a supervisory position.

Coursework Required for Admission Consideration: It is recommended that applicants complete the courses (or their equivalent, as determined by the School of Pharmacy) to obtain a BS in Chemistry, preferably Organic Chemistry, before entering the program.

Bachelor's Degree in Discipline/Related Discipline: A baccalaureate degree in Biochemistry, Chemistry (preferably Organic Chemistry), or Pharmacy is required.

Transcripts from all post-secondary institutions attended may be sent electronically to tuspsgrad@temple.edu. Alternately, unopened official transcripts bearing the school's seal must be sent directly from the Registrar at each institution to the School of Pharmacy's Office of Graduate Studies.

Applicants who earned a degree at a non-U.S. institution must submit an equivalency evaluation of their transcript(s) through a third-party provider, either World Education Services (WES) or Educational Credential Evaluators (ECE).

Statement of Goals: In approximately 500 to 1,000 words, state your specific interest in Temple's program, research goals, future career goals, and academic and research achievements.

Standardized Test Scores:

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master's degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 85
- IELTS Academic: 6.5
- PTE Academic: 58

Resume: Current resume or CV required.

Transfer Credit: With approval, courses specific to Medicinal Chemistry or Organic Chemistry may be transferred into the program. Applicants must present supporting documentation (syllabus, course description, and/or transcript) for transfer consideration at the time of application. The maximum number of credits a student may transfer into the MS program is 6.

Program Requirements

General Program Requirements:

Number of Credits Required Beyond the Baccalaureate: 30

Thesis-based MS requirements:

Code	Title	Credit Hours
Core Courses		
PS 8002	Pharmaceutical Analysis	3
PS 8121	Department of Pharmaceutical Sciences Seminar Series	1
PS 8127	Pharmacokinetics	3
PS 8128	Principles in Drug Discovery	3
PS 8129	Bioethics in Research	2
PS 8131	Principles of Biochemistry	4
PS 8403	Advanced Pharmacogenomics	2
STAT 5002	Introduction to Biostatistics	3
Electives ¹		3
Research Course		
PS 9996	Master's Research	6
Total Credit Hours		30

¹ Suggested electives include CHEM 4201 Organic Structure and Mechanisms, CHEM 5202 Organic Reaction Mechanisms, PS 8009 Advanced Medicinal Chemistry I, and PS 8011 Advanced Medicinal Chemistry II. Electives should be taken primarily in Chemistry. Coursework in Biomedical Sciences, Computer and Information Science, and other disciplines is also permissible with guidance from the advisor.

Non-thesis based MS requirements:

Code	Title	Credit Hours
Core Courses		
PS 8002	Pharmaceutical Analysis	3
PS 8121	Department of Pharmaceutical Sciences Seminar Series	1
PS 8127	Pharmacokinetics	3
PS 8128	Principles in Drug Discovery	3
PS 8129	Bioethics in Research	2
PS 8131	Principles of Biochemistry	4
PS 8403	Advanced Pharmacogenomics	2
STAT 5002	Introduction to Biostatistics	3
Electives ¹		9
Total Credit Hours		30

- ¹ Suggested electives include CHEM 4201 Organic Structure and Mechanisms, CHEM 5202 Organic Reaction Mechanisms, PS 8009 Advanced Medicinal Chemistry I, and PS 8011 Advanced Medicinal Chemistry II. Electives should be taken primarily in Chemistry. Coursework in Biomedical Sciences, Computer and Information Science, and other disciplines is also permissible with guidance from the advisor.

Culminating Events:*Thesis Option:*

A thesis is required when choosing the Thesis Option. The MS thesis is an original, theoretical and/or empirical study that contributes to the field of Medicinal/Pharmaceutical Chemistry. It should expand existing knowledge and demonstrate the student's knowledge of research methods and a mastery of their primary area of interest. The thesis should be rigorously investigated; uphold the ethics and standards of the pharmaceutical sciences; demonstrate an understanding of the relationship between the primary area of interest and the broader field of medicinal chemistry; and be prepared for publication in a professional journal.

Students who are preparing to defend their thesis should confirm a time and date with their advisor and register with the Administrative Assistant at least 15 days before the defense is to be scheduled. The Administrative Assistant arranges the time, date and room within two working days and forwards to the student the appropriate forms. Once approved, the public announcement of the defense is posted.

The Thesis Examining Committee evaluates the student's ability to express verbally their research question, methodological approach, primary findings and implications. This committee is comprised of at least three Graduate Faculty members. Two members, including the Chair, must be members of the Graduate Faculty of the School of Pharmacy. The Thesis Examining Committee votes to pass or fail the thesis and the defense at the conclusion of the public presentation.

Non-Thesis Option:

Successful completion of coursework constitutes the culminating event for this option.

Contacts**Program Web Address:**

<https://pharmacy.temple.edu/academics/phdms-pharmaceutical-sciences>

Department Information:

Dept. of Pharmaceutical Sciences Office of Graduate Studies
School of Pharmacy
3307 N. Broad Street, Suite 528
Philadelphia, PA 19140
tuspggrad@temple.edu
215-707-4972

Submission Address for Application Materials:

https://apply.temple.edu/PHARM_GRAD/

Department Contacts:*Admissions:*

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