

PHARMACEUTICAL SCIENCES: RESEARCH, M.S.

This is a named option in the Pharmaceutical Sciences M.S. (<http://guide.wisc.edu/graduate/pharmacy-school-wide/pharmaceutical-sciences-ms/>) Please use the links on the right to learn more about the Pharmaceutical Sciences Research, M.S.

ADMISSIONS

This master's program is offered for work leading to the Ph.D. Students may not apply directly for the master's, and should instead see the admissions information for the Ph.D. (<http://guide.wisc.edu/graduate/pharmacy-school-wide/pharmaceutical-sciences-phd/>)

This program also offers a M.S. named option in Applied Drug Development (<http://guide.wisc.edu/graduate/pharmacy-school-wide/pharmaceutical-sciences-ms/pharmaceutical-sciences-applied-drug-development-ms/>) and M.S. named option in Psychoactive Pharmaceutical Investigation (<https://guide.wisc.edu/graduate/pharmacy-school-wide/pharmaceutical-sciences-ms/pharmaceutical-sciences-psychoactive-pharmaceutical-investigation-ms/>).

FUNDING

GRADUATE SCHOOL RESOURCES

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (<https://grad.wisc.edu/funding/>) is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (<http://guide.wisc.edu/graduate/#policiesandrequirements>), in addition to the program requirements listed below.

NAMED OPTION REQUIREMENTS

MODE OF INSTRUCTION

Face to Face	Evening/ Weekend	Online	Hybrid	Accelerated
Yes	No	No	No	No

Mode of Instruction Definitions

Accelerated: Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.

Evening/Weekend: Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

Face-to-Face: Courses typically meet during weekdays on the UW–Madison Campus.

Hybrid: These programs combine face-to-face and online learning formats. Contact the program for more specific information.

Online: These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

CURRICULAR REQUIREMENTS

Requirement Detail

Minimum Requirement	30 credits
Minimum Residence Requirement	16 credits
Minimum Graduate Coursework Requirement	15 credits must be graduate-level coursework. Details can be found in the Graduate School's Minimum Graduate Coursework (50%) Requirement Policy: https://policy.wisc.edu/library/UW-1244 (https://policy.wisc.edu/library/UW-1244/)
Overall Graduate GPA Requirement	3.00 GPA required. This program follows the Graduate School's policy: https://policy.wisc.edu/library/UW-1203 (https://policy.wisc.edu/library/UW-1203/).
Other Grade Requirements	Candidates will be dropped from the program if they receive more than 7 credits of grades at the BC level or lower. This applies to formal courses and research credits.
Assessments and Examinations	The program expects the M.S. candidate to engage in a research project of a scope appropriate to the time devoted to earning the degree. The M.S. degree may be awarded following approval of the candidate's committee after either of the following: 1) passing of the preliminary exam or 2) writing a M.S. thesis describing the candidate's research that is presented and defended before the student's M.S. thesis committee.
Language Requirements	No language requirements.

REQUIRED COURSES

Code	Title	Credits
Foundational Content		
PHM SCI 780	Principles of Pharmaceutical Sciences	3
Select 6 credits from two Core Areas:		6
<i>Drug Discovery Core:</i>		
PHM SCI 786	Natural Product Synthesis, Biosynthesis and Drug Discovery	
<i>Drug Action Core:</i>		
PATH 750	Cellular and Molecular Biology/ Pathology	

PHM COL-M 781	Molecular and Cellular Principles in Pharmacology	
BIOCHEM 630		
<i>Drug Delivery Core:</i>		
PHM SCI/ CHEM 766	Molecular Recognition	
PHM SCI 773	Molecular Solids	
PHM SCI 775	Polymeric Drug Delivery	
Research ethics/Responsible conduct of research		
PHARMACY 800	Research Ethics: Scientific Integrity and the Responsible Conduct of Research	2
Seminar & Research		16
PHM SCI 931	Pharmaceutical Sciences Seminar (required every fall term during enrollment as a graduate student in the program) ¹	
PHM SCI 932	Pharmaceutical Sciences Seminar (required every spring during enrollment as a graduate student in the program) ¹	
PHM SCI 990	Research ²	
PHM SCI 999	Advanced Independent Study ³	
Three additional credits from the Drug Action, Drug Delivery, or Drug Discovery electives.		3
Courses with the graduate attribute in the following subject listings can count toward this requirement: ANATOMY, ANAT&PHYS, BIOCHEM, BSE, BIOLOGY, BME, BMOLCHEM, BMI, BOTANY, CRB, CBE, CHEM, COMP BIO, COMP SCI, ECE, EP, FAM MED, FOOD SCI, GENETICS, H ONCOL, ISY E, MS & E, MATH, MD GENET, M M&I, MED PHYS, MED SC-M, MED SC-V, MEDICINE, MICROBIO, M&ENVTOX, MOL BIOL, NEUROL, NEURODPT, NTP, NURSING, NUTR, SCI, ONCOLOGY, PATH-BIO, PATH, PHM SCI, PHM COL-M, PHS, PHYSICS, PL PATH, PSYCH, RADIOL, SOIL SCI, SURGERY, SURG SCI, ZOOLOGY. A list of popular elective courses at this level taken by recent Pharmaceutical Sciences graduate students is maintained at https://pharmacy.wisc.edu/programs/pharmsci/curriculum/electives (https://pharmacy.wisc.edu/programs/pharmsci/curriculum/electives/).		

Total Credits **30**

1

Seminar is required every fall and spring semester during enrollment as a graduate student in the program.

2

Research credits are typically taken every semester in the program, beginning in the second semester. Credits will vary.

3

Research rotations in first semester of first year. At least one credit required.

To enhance a required core curriculum, an individualized course of study is planned with a faculty advisor. Faculty advisors have the option to require additional courses beyond the minimum requirements listed above.

POLICIES

GRADUATE SCHOOL POLICIES

The Graduate School's Academic Policies and Procedures (<https://grad.wisc.edu/acadpolicy/>) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

NAMED OPTION-SPECIFIC POLICIES

PRIOR COURSEWORK

Graduate Work from Other Institutions

With program approval, students are allowed to count no more than 9 credits of graduate coursework from other institutions (the student must have graduate student status on the other institution's transcript at the time the courses were taken). Coursework should be presented to the SoP graduate dean in the first semester of enrollment for consideration. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

UW-Madison Undergraduate

With program approval, students are allowed to count no more than 7 credits of UW-Madison courses numbered 500 or above (earned as a UW-Madison undergraduate) toward the M.S. degree. Coursework should be presented to the SoP Associate Dean for Graduate Education in the first semester of enrollment for consideration. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

UW-Madison University Special

With program approval, students are allowed to count no more than 9 credits of coursework numbered 500 or above taken as a UW-Madison special student. Coursework should be presented to the SoP graduate dean in the first semester of enrollment for consideration. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

PROBATION

This program follows the Graduate School's Probation policy. (<https://policy.wisc.edu/library/UW-1217/>)

ADVISOR / COMMITTEE

Students are required to maintain a pharmaceutical sciences faculty member as an M.S. advisor through the duration of their studies. Typically a permanent advisor is found by the end of one's first semester.

An M.S. thesis committee in the Pharmaceutical Sciences Division (PSD) consists of at least three graduate faculty members of the PSD (one of whom is the student's thesis advisor).

CREDITS PER TERM ALLOWED

15 credits

TIME LIMITS

This program follows the Graduate School's Time Limits policy. (<https://policy.wisc.edu/library/UW-1221/>)

GRIEVANCES AND APPEALS

These resources may be helpful in addressing your concerns:

- Bias or Hate Reporting (<https://doso.students.wisc.edu/bias-or-hate-reporting/>)
- Graduate Assistantship Policies and Procedures (<https://hr.wisc.edu/policies/gapp/#grievance-procedure>)
- Hostile and Intimidating Behavior Policies and Procedures (<https://hr.wisc.edu/hib/>)
 - Office of the Provost for Faculty and Staff Affairs (<https://facstaff.provost.wisc.edu/>)
- Dean of Students Office (<https://doso.students.wisc.edu/>) (for all students to seek grievance assistance and support)
- Employee Assistance (<http://www.eao.wisc.edu/>) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, post-doctoral students, faculty and staff)
- Employee Disability Resource Office (<https://employeedisabilities.wisc.edu/>) (for qualified employees or applicants with disabilities to have equal employment opportunities)
- Graduate School (<https://grad.wisc.edu/>) (for informal advice at any level of review and for official appeals of program/departmental or school/college grievance decisions)
- Office of Compliance (<https://compliance.wisc.edu/>) (for class harassment and discrimination, including sexual harassment and sexual violence)
- Office of Student Conduct and Community Standards (<https://conduct.students.wisc.edu/>) (for conflicts involving students)
- Ombuds Office for Faculty and Staff (<http://www.ombuds.wisc.edu/>) (for employed graduate students and post-docs, as well as faculty and staff)
- Title IX (<https://compliance.wisc.edu/titleix/>) (for concerns about discrimination)

Grievance Policy for Graduate Programs in the School of Pharmacy

Any student in a School of Pharmacy graduate program who feels that they have been treated unfairly by a faculty member, staff member, postdoc, or student has the right to have a complaint heard about the treatment and to receive a prompt hearing of the grievance, following these grievance procedures. Any student who discusses, inquires about, or participates in the grievance procedure may do so openly and shall not be subject to intimidation, discipline, or retaliation because of such activity. The person whom the complaint is directed against must be an employee of the School of Pharmacy. Any student or potential student may use these procedures unless the complaint is covered by other campus rules or contracts.

Exclusions

This policy does not apply to employment-related issues for Graduate Assistants in TA, PA and/or RA appointments. Graduate Assistants will utilize the Graduate Assistantship Policies and Procedures (<https://hr.wisc.edu/policies/gapp/>) (GAPP) grievance process to resolve employment-related issues.

Requirements for Programs

The School of Pharmacy requires that each director of graduate studies (DGS) serve as a grievance advisor for the school. The program must notify students of the grievance advisors, including posting the grievance advisor's names in the program handbook. The student will be able to select the grievance advisor of the student's choice and does not need to use the grievance advisor from the student's program.

A grievance advisor may be approached for possible grievances of all types. They will spearhead the grievance response process described below for issues specific to the graduate program, including but not limited to academic standing, progress to degree, professional activities, appropriate advising, and a program's community standards. They will ensure students are advised on reporting procedures for other types of possible grievances and are supported throughout the reporting process. Resources (<https://grad.wisc.edu/current-students/#reporting-incidents>) on identifying and reporting other issues have been compiled by the Graduate School.

Procedures

1. The student is advised to initiate a written record containing dates, times, persons, and description of activities, and to update this record while completing the procedures described below.
2. If the student is comfortable doing so, efforts should be made to resolve complaints informally between individuals before pursuing a formal grievance. If students would like to seek guidance at this informal step, the student can contact the Assistant Dean of Diversity, Equity, and Inclusion, the DGS for the student's program, or the UW Ombuds Office.
3. Should a satisfactory resolution not be achieved AND the complaint does not involve an academic program, the procedure outlined in Step 6 below should be followed. Should a satisfactory resolution not be achieved in step 2, the student should contact an SOP grievance advisor of one's choice to discuss the complaint. The grievance advisor should keep a record of contacts with regards to possible grievances. The first attempt is to help the student informally address the complaint prior to pursuing a formal grievance and should occur within 10 days of notifying the grievance advisor. The student is also encouraged to talk with their faculty advisor regarding concerns or difficulties.
4. If the issue is not resolved to the student's satisfaction, the student may submit a formal grievance to the grievance advisor in writing, within 60 calendar days from the date the grievant first became aware of, or should have become aware of with the exercise of reasonable diligence, the cause of the grievance. To the fullest extent possible, a grievance shall contain a clear and concise statement of the grievance and indicate the issue(s) involved including individuals, the relief sought, the date(s) the incident or violation took place, and any specific policy involved.
5. On receipt of a written grievance, the following steps will occur. The final step must be completed within 30 working days from the date the formal written grievance was received. The program must store documentation of the grievance for seven years. Significant grievances that set a precedent may be stored indefinitely.
 - a. The grievance advisor will convene a SOP faculty committee with at least 3 members to facilitate the grievance following step b, c, and d. The grievance advisor assumes the role of coordinator. Any faculty member involved in the grievance or who feels that they cannot be impartial may not participate in the committee.

Committee composition will include at least one member from outside the student's home program.

- b. The faculty committee, through the grievance advisor, will obtain a written response from the person or persons toward whom the grievance is directed. The grievance advisor will inform this person that their response will be shared with the student filing the grievance.
 - c. The grievance advisor will share the response with the student filing the grievance.
 - d. The faculty committee will make a decision regarding the grievance. The committee's review shall be fair, impartial, and timely. The grievance advisor will report on the action taken by the committee in writing to both the student and the person toward whom the grievance was directed.
6. If either party (the student or the person or persons toward whom the grievance is directed) is unsatisfied with the decision of the program's faculty committee, the party may file a written appeal to the SOP Associate Dean for Research and Graduate Education within 10 working days from the date of notification of the program's faculty committee. The following steps will occur:
- a. The grievant will be notified in writing, within 5 business days of the written appeal, acknowledging receipt of the formal appeal and establishing a timeline for the review to be completed.
 - b. The associate dean or their designee may request additional materials and/or arrange meetings with the grievant and/or others. If meetings occur, the associate dean or their designee will meet with both the grievant and the person or persons toward whom the grievance is directed.
 - c. The associate dean or their designee will make a final decision within 20 working days of receipt of the committee's recommendation.
 - d. The SOP Associate Dean for Research and Graduate Education must store documentation of the grievance for seven years. Significant grievances that set a precedent may be stored indefinitely.
7. The student may file an appeal of the School of Pharmacy decision with the Graduate School. See the Grievances and Appeals section of the Graduate School's Academic Policies and Procedures (<https://grad.wisc.edu/documents/grievances-and-appeals/>).

OTHER

First-year students are typically offered fellowships and School of Pharmacy teaching assistantships in their initial two semesters. Funding as research assistants is assumed by the student's principal investigator/thesis advisor in the first summer. Subsequently (year 2 and beyond), students are funded by RA-ships, TA-ships and via other extramural funding (fellowship) support.

PROFESSIONAL DEVELOPMENT

GRADUATE SCHOOL RESOURCES

Take advantage of the Graduate School's professional development resources (<https://grad.wisc.edu/pd/>) to build skills, thrive academically, and launch your career.

PEOPLE

The Pharmaceutical Sciences Graduate Program has educated generations of scientists for challenging positions in industry, academia, and government.

Students should refer to the following for the named option master's degree faculty listings:

- M.S. Named Option in Applied Drug Development - Faculty (<https://pharmacy.wisc.edu/academics/applied-drug-development/faculty-staff/>)
- M.S. Named Option in Psychoactive Pharmaceutical Investigation - Faculty (<https://pharmacy.wisc.edu/academics/psychoactive-pharmaceutical-investigation/faculty-staff/>)

Students should refer to the following for the research-based Ph.D. degree faculty information:

- Pharmaceutical Sciences Research Faculty (<https://pharmacy.wisc.edu/psd/faculty-research/>)