

# PHARMACEUTICAL SCIENCES, PHD

## 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.

### MAJOR 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 Credit Requirement 51 credits

Minimum Residence Credit Requirement 32 credits

Minimum Graduate Coursework Requirement 26 credits must be graduate-level coursework. Refer to the Graduate School: 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. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: <https://policy.wisc.edu/library/UW-1203> (<https://policy.wisc.edu/library/UW-1203/>).

**Other Grade Requirements** Candidates may 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 preliminary examination is expected to be completed before the beginning of the third year of graduate study. For specifics regarding the preliminary examination's structure and requirements, see Preliminary Examination in the Pharmaceutical Sciences Division Student Handbook (<https://students.pharmacy.wisc.edu/pharmsci-handbook/o-preliminary-exam>) (<https://students.pharmacy.wisc.edu/pharmsci-handbook/o-preliminary-exam/>).

A final oral defense of the dissertation is required; for more on the dissertation defense, see PhD Thesis Defense in the Pharmaceutical Sciences Division Student Handbook (<https://students.pharmacy.wisc.edu/pharmsci-handbook/q-phd-thesis-defense>) (<https://students.pharmacy.wisc.edu/pharmsci-handbook/q-phd-thesis-defense/>).

**Language Requirements** There are no language requirements in the Pharmaceutical Sciences PhD program.

**Graduate School Breadth Requirement** A doctoral minor or graduate/professional certificate is not required.

### REQUIRED COURSES

Code	Title	Credits
<b>Foundational Content</b>		
PHM SCI 780	Principles of Pharmaceutical Sciences	3

#### Core Areas 6

Students must select at least 3 credits from two different Core Areas (minimum 6 credits).

#### Drug Discovery Core:

PHM SCI 786	Natural Product Synthesis, Biosynthesis and Drug Discovery
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#### Drug Action Core:

PATH 750 & PATH 752	Cellular and Molecular Biology/ Pathology and Cellular and Molecular Biology/ Pathology Seminar
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PHM COL-M 781	Molecular and Cellular Principles in Pharmacology
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#### Drug Delivery Core:

PHM SCI/ CHEM 766	Molecular Recognition
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PHM SCI 773	Molecular Solids
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PHM SCI 775	Polymeric Drug Delivery
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#### Research ethics/Responsible conduct of research

PHARMACY 800	Research Ethics: Scientific Integrity and the Responsible Conduct of Research	2
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#### Seminar Research 37

PHM SCI 931	Pharmaceutical Sciences Seminar (required every fall term during enrollment as a graduate student in the program)
PHM SCI 932	Pharmaceutical Sciences Seminar (required every fall term during enrollment as a graduate student in the program)
PHM SCI 990	Research (usually every semester starting in second semester. Credits vary.)
PHM SCI 999	Advanced Independent Study (Rotations during first semester in first year - minimum 1 credit)

**Additional credits from the Drug Action, Drug Delivery, or Drug Discovery electives 3**

Courses approved by the student's advisor that have the graduate attribute in the following subject listings may be appropriate: ANATOMY, ANAT&PHYS, BIOCHEM, BSE, BIOLOGY, B M E, BMOLCHEM, B M I, BOTANY, CRB, CBE, CHEM, COMP BIO, COMP SCI, E C E, E P, FAM MED, FOOD SCI, GENETICS, H ONCOL, I SY E, M S & 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, PHMCMOL-M, 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 51**

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.