



Twin Cities Campus

Pharmaceutics M.S.

Graduate Studies in Pharmaceutics

College of Pharmacy

Link to a [list of faculty](#) for this program.

Contact Information:

Department of Pharmaceutics

Room 9-177 Weaver-Densford Hall

308 Harvard Street SE

Minneapolis, MN 55455

USA

Phone: 612-624-5151

Fax: 612-626-2125

Email: pceuts@umn.edu

Website: <http://www.pharmacy.umn.edu/pharmaceutics>

- Program Type: Master's
- Requirements for this program are current for Spring 2021
- Length of program in credits: 30
- This program does not require summer semesters for timely completion.
- Degree: Master of Science

Along with the program-specific requirements listed below, please read the [General Information](#) section of the catalog website for requirements that apply to all major fields.

The Pharmaceutics program offers emphases in physical pharmacy, biopharmaceutics, and pharmacokinetics.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission

The preferred undergraduate GPA for admittance to the program is 3.20.

Other requirements to be completed before admission:

Undergraduate (and graduate, if applicable) scholastic records, recent GRE scores (with a preferred minimum 80% quantitative reasoning score and 3.5 analytical writing score), a statement of career goals and research interests, and three letters of recommendation.

International applicants must submit results from the TOEFL (with a preferred minimum 100 total score and 23 speaking score, and a required minimum 21 writing score and 19 reading score) or IELTS (with a required minimum 6.5 total score, 6.5 reading score, and 6.5 writing score, and a preferred 6.5 speaking score). Prefer "First Class" or the equivalent on transcripts from foreign institutions.

All of the above are collectively used to determine each candidate's admissibility. Fall admission is highly preferred and the deadline to apply is November 30.

Applicants must submit their test score(s) from the following:

- GRE

International applicants must submit score(s) from one of the following tests:

- TOEFL
- IELTS

The preferred English language test is Test of English as Foreign Language

Key to [test abbreviations](#)(GRE, TOEFL, IELTS).

For an online application or for more information about graduate education admissions, see the [General Information](#) section of the catalog website.



Program Requirements

Plan A: Plan A requires 14 major credits, 6 credits outside the major, and 10 thesis credits. The final exam is oral.

This program may be completed with a minor.

Use of 4xxx courses toward program requirements is permitted under certain conditions with adviser approval.

A minimum GPA of 2.80 is required for students to remain in good standing.

Coursework offered on both the A/F and S/N grade basis must be taken A/F, with a minimum grade of B- earned for each.

Required Background:

Students must demonstrate sufficient background knowledge in Pharmacology. Equivalent coursework or previous experience, with approval of the program faculty, may be substituted in lieu of required background coursework.

Required Courses (8 credits)

Pharmaceutics Modules (4 credits)

Take the following courses:

[PHM 8210](#) - Pharmacokinetics Module (1.0 cr)

[PHM 8220](#) - Physical Pharmacy Module I (1.0 cr)

[PHM 8230](#) - Physical Pharmacy Module II (1.0 cr)

[PHM 8240](#) - Biopharmaceutics Module (1.0 cr)

Pharmaceutics 84xx Courses (4 credits)

Select one of the following courses in consultation with the advisor:

[PHM 8421](#) - Advanced Pharmacokinetics (4.0 cr)

[PHM 8431](#) - Controlled Drug and Gene Delivery: Materials, Mechanisms, and Models (4.0 cr)

[PHM 8441](#) - Solubility and Solid-State Properties of Drugs (4.0 cr)

[PHM 8481](#) - Advanced Neuropharmaceutics (4.0 cr)

Electives (6 credits)

Take at least 6 credits of electives in the major, which can include PHAR-designated courses noted below taken to satisfy the background knowledge requirement, or other PHAR- and PHM-designated coursework. All courses must be selected in consultation with the advisor.

Pharmacology Background

[PHAR 6726](#) - Principles of Pharmacology (2.3 cr)

[PHAR 6762](#) - Medicinal Chemistry and Neuropharmacology (2.8 cr)

Outside Coursework (6 credits)

Take at least 6 credits of coursework outside the major, which can include non-PHAR- and non-PHM-designated courses noted below taken to satisfy the background knowledge requirement, or other non-PHAR- and non-PHM-designated coursework. All courses must be selected in consultation with the advisor.

Pharmacology Background

[NSC 5461](#) - Cellular and Molecular Neuroscience (3.0 cr)

[PHCL 5110](#) - Introduction to Pharmacology (3.0 cr)

Thesis Credits

Take 10 master's thesis credits.

[PHM 8777](#) - Thesis Credits: Master's (1.0 - 18.0 cr)