

GRADUATE

Pharmaceutical Sciences

School of Pharmacy
Department of Pharmaceutical Sciences

SIUE

SIUE
School of Pharmacy

siue.edu/grad/pharmaceutical-sciences

Pharmaceutical Sciences at SIUE

While pharmacists work to manage patient care with emphasis on therapies using existing drugs, pharmaceutical scientists are engaged in the discovery and development of new drugs. At SIUE, a multidisciplinary approach is used to not only determine the detailed biological mechanism of disease, but develop the molecular interventions that can provide the treatment or cure. Students are taught in state-of-the-art laboratories by an internationally recognized faculty with many years of both academic and pharmaceutical industry experience.

Program Format

The program can be completed through traditional daytime courses. Lab and research courses are offered on evenings/weekends.

Degrees Available at SIUE

- Master of Science

Areas of Concentration

- Medicinal Chemistry
- Pharmacology
- Pharmaceuticals

What can I do with a degree in pharmaceutical sciences?

This program prepares students for:

- Research positions in the pharmaceutical sciences
- Industrial
- Academic
- Government
- Doctoral degrees in health sciences, medical and drug discovery research
- Science components of other non-research but science- and technology-related positions relevant to the pharmaceutical industry
- Evaluation of new technologies for business development units
- Scientific patent advising
- Administration

- Consulting

Data from the Bureau of Labor Statistics, U.S. Department of Labor, indicates a continued growth rate for medical scientists of 8% through 2024.

Graduate Assistantships

Graduate assistantships for teaching, research and related administrative duties are available and include a tuition waiver and monthly stipend. A graduate assistantship enhances your educational experience and helps to develop valuable professional skills.

Admission Requirements

1. Graduate School application and \$40 fee
2. Submission of all postsecondary academic transcripts
3. Completion of a baccalaureate degree in pharmacy, chemistry, or the biological sciences. Prior academic work should include a year each of biology or biochemistry and organic chemistry.
4. GPA: At least 3.00 (A=4.00) for the final 60 semester hours of baccalaureate study
5. Graduate Record Examination (GRE) general is required. The GRE advanced subject (chemistry, biochemistry or biology) test is optional.
6. International Applicants: Proof of English Proficiency, minimum requirements are TOEFL (79), IELTS (6.5) or equivalent
7. Three Letters of Recommendation are Required
8. Personal Statement is Required

Program application materials may be uploaded during the application process, but official transcripts must be sent directly from the school attended, and test scores must be verifiable with the appropriate testing service. Please contact the Graduate Admissions office with questions regarding the application submission process at graduateadmissions@siue.edu.

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GRADUATE SCHOOL

Curriculum – Students will consult with their advisor to tailor a program to their own research interests within the pharmaceutical sciences. The following are examples of a typical two-year program for each track.

Medicinal Chemistry Track

Required Credit Hours/Tuition and Fees

- 34
- Visit siue.edu/graduate-tuition for detailed tuition information

Fall Semester

Spring Semester

Year 1	PHPS 500 Cellular Targets For Drug Discovery	3	PHPS 501 Principles of Rational Drug Discovery	3
	PHPS 420 Principles of Pharmacology	4	PHPS 540 Pharmacokinetics	3
	PHPS 510 Pharmaceutical Sciences Foundations and Research Methods	1	PHPS 598 Pharmaceutical Sciences Research	2
	PHPS 595 Graduate Seminar in the Pharmaceutical Sciences	1	Total Credits	8
	Total Credits	9		

Year 1 (Summer Semester)

PHPS 598 Pharmaceutical Sciences Research	3
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Year 2	PHPS Elective-1	2	PHPS Elective-2	3
	PHPS 595 Graduate Seminar in the Pharmaceutical Sciences	1	PHPS 598 Pharmaceutical Sciences Research	3
	PHPS 598 Pharmaceutical Sciences Research	2	Total Credits	6
	Total Credits	5		

Year 2 (Summer Semester)

PHPS 599 Pharmaceutical Sciences Thesis Preparation	3
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Total Hours: 34

Pharmacology Track

Required Credit Hours/Tuition and Fees

- 34
- Visit siue.edu/graduate-tuition for detailed tuition information

Fall Semester

Spring Semester

Year 1	PHPS 420 Principles of Pharmacology	4	PHPS 501 Principles of Rational Drug Discovery	3
	PHPS 500 Cellular Targets For Drug Discovery	3	PHPS 540 Pharmacokinetics	3
	PHPS 510 Pharmaceutical Sciences Foundations and Research Methods	1	PHPS 598 Pharmaceutical Sciences Research	2
	PHPS 595 Graduate Seminar in the Pharmaceutical Sciences	1	Total Credits	8
	Total Credits	9		

Year 1 (Summer Semester)

PHPS 598 Pharmaceutical Sciences Research	3
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Year 2	PHPS Elective-1	2	PHPS Elective-2	3
	PHPS 595 Graduate Seminar in the Pharmaceutical Sciences	1	PHPS 598 Pharmaceutical Sciences Research	3
	PHPS 598 Pharmaceutical Sciences Research	2	Total Credits	6
	Total Credits	5		

Year 2 (Summer Semester)

PHPS 599 Pharmaceutical Sciences Thesis Preparation	3
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Total Hours: 34

Pharmaceutics Track

Required Credit Hours/Tuition and Fees

- 33
- Visit siue.edu/graduate-tuition for detailed tuition information

Fall Semester

Spring Semester

Year 1	PHPS 500 Cellular Targets For Drug Discovery	3	PHPS 501 Principles of Rational Drug Discovery	3
	PHPS 541 Drug Delivery	3	PHPS 540 Pharmacokinetics	3
	PHPS 510 Pharmaceutical Sciences Foundations and Research Methods	1	PHPS 598 Pharmaceutical Sciences Research	2
	PHPS 595 Graduate Seminar in the Pharmaceutical Sciences	1	Total Credits	8
	Total Credits	8		

Year 1 (Summer Semester)

PHPS 598 Pharmaceutical Sciences Research	3
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Year 2	PHPS Elective-1	2	PHPS Elective-2	3
	PHPS 595 Graduate Seminar in the Pharmaceutical Sciences	1	PHPS 598 Pharmaceutical Sciences Research	3
	PHPS 598 Pharmaceutical Sciences Research	2	Total Credits	6
	Total Credits	5		

Year 2 (Summer Semester) *if needed

PHPS 599 Pharmaceutical Sciences Thesis Preparation	3
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Total Hours: 33

Graduation Requirements

Students will be required to complete at least 30 hours of acceptable graduate credit with a GPA of 3.0 or higher (A=4.0). At least 12 semester hours must be earned from core courses and two semester hours from graduate seminar. Students must take a minimum of four hours of electives.

At least 10 semester hours must be earned for research and students must be enrolled in a minimum of one hour of research per semester after choosing an advisor. Students must complete a thesis based upon the student's original research work.

Finally, students must assemble an advisory committee and meet with this committee for a public presentation and oral defense of the thesis.

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Contact Information

Graduate Program Director
School of Pharmacy
Phone: 618-650-5129
Email: joschob@siue.edu