



WESTERN ILLINOIS UNIVERSITY

# Pre-Pharmacy

Department of Chemistry, College of Arts & Sciences

## Major Program

A pharmacist is often the first health professional with whom patients confer regarding a health question and will likely be the final one with whom patients consult about their medication and dosage. In olden days, a pharmacist's responsibility was centered on the preparation (compounding) of medications for patients.

The modern-day pharmacist has a variety of roles and professional responsibilities. Some of these responsibilities are consulting with physicians and other health professionals in the process of pharmacotherapeutic decisionmaking; selecting appropriate dosages for patients; and advising patients about the medication, dosage, possible side effects, etc. In order to excel in their profession, modern-day pharmacists must understand the composition of drugs; their chemical and physical properties; and the physiological effects of medicinals, pharmacokinetics, etc. Pharmacists should also be familiar with the tests for drug purity and strength. Because pharmacists must understand several areas of science, their training includes courses in basic sciences such as chemistry, physics, and biology.

## Faculty

Courses in the major are taught by faculty in Chemistry, Biology, and Physics. All are dedicated educators, skilled in fostering active student participation.

## Pre-Pharmacy Curriculum; Pharmacy School Admission

All pharmacy schools do not have identical admission requirements. Students must tailor their Pre-Pharmacy curriculum at Western to meet the specific pharmacy requirements of the school they are planning to attend. Assuming the student has had an adequate high school preparation (3 years of English; 2 years of mathematics; and a year each of biology, chemistry, and physics). Students are encouraged to visit Western's Pre-Pharmacy website at [wiu.edu/users/michem/Pharmacy](http://wiu.edu/users/michem/Pharmacy) to get additional information on the specific requirements of the schools to which application will be made. Students need to work with their adviser for individual school criteria.

## Scholarships

The Department of Chemistry awards numerous scholarships to Chemistry majors. The department also offers the Margaret and Jack Stites Pre-Pharmacy Scholarship for the top Pre-Pharmacy student each year. Detailed information on scholarships is available from the Chemistry department by calling (309) 298-1538 or visiting our web page at [wiu.edu/chemistry](http://wiu.edu/chemistry), or from Western's Scholarship office by calling (309) 298-2001 or visiting [wiu.edu/Scholarship](http://wiu.edu/Scholarship).

## Honors in Chemistry

To be eligible for the Centennial Honors College, entering freshmen must have an ACT composite score of at least 28 OR have a 26 or 27 composite ACT and be in the top 15% of their graduating class OR have an ACT composite score of at least 24 and be in the top 10% of their high school graduating class. Transfer students with at least 12 semester hours and up to 59 semester hours of undergraduate courses are admitted with a grade point average of at least 3.3 OR 3.4 for 60 semester hours or more. To find out more, visit [wiu.edu/Honors](http://wiu.edu/Honors).

HIGHER VALUES IN HIGHER EDUCATION

General honors seminars in the humanities, sciences, and social sciences provide students with opportunities to explore key academic issues with distinguished faculty members. In the Chemistry department, honors students take courses for honors credits and, as seniors, prepare an honors thesis under the direction of a department faculty member.

### Student Activities

For students interested in chemistry, the department offers the Chemistry Club, an association affiliated with the American Chemical Society.

### Special Opportunities

The department offers small classes with accessible faculty and personal advising in Currens Hall. There are three electronic classrooms and numerous teaching/research laboratories, as well as a Physical Sciences Library that subscribes to more than 60 journals and online literature searching through the Chemical Abstract Service. Undergraduates have access to the department's state-of-the-art equipment and facilities, which are augmented by the existence of a graduate program. The modern instrumentation available for teaching and research includes FPLC, HPLC, FT-NMR, FT-IR, UV-Vis, and GC-MS spectrometers; capillary electrophoresis; and a high-speed centrifuge.

### After College

Pharmacists are employed in a variety of settings. Some are druggists in local independently owned stores. More and more pharmacists are being employed by chain pharmacies and pharmacies associated with department and discount stores. Other venues of employment include healthcare centers, nursing homes, health maintenance organizations, and hospitals. In all the above settings, a pharmacist is directly involved in one-on-one patient care. A hospital pharmacist will also be involved in providing specialized services such as dispensing nuclear pharmaceutical medicines, providing assistance and information about drug and other chemical poison information, and assisting doctors with intravenous therapy.

Pharmacists are also employed by pharmaceutical industries producing pharmaceutical drugs. Pharmacists in such settings will carry out drug discovery research, product development, and quality control. Some are employed as medical representatives to explain the use and merits of new products to practicing physicians and veterinarians. Pharmacists are also employed in state and federal regulatory agencies such as the FDA (Food and Drug Administration) and Public Health Service. Pharmacists with advanced degrees (D. Pharm) also teach in our nation's accredited pharmacy colleges.

### For More Information

The department welcomes visitors. Call the Department of Chemistry at (309) 298-1538 or e-mail the adviser: JL-Sandrik@wiu.edu. You can also learn more about the department by visiting [wiu.edu/users/michem/Pharmacy](http://wiu.edu/users/michem/Pharmacy).

### For Your General Outlook

Detailed descriptions of the courses noted below can be found in the *Undergraduate Catalog*. Students need to work with their adviser for individual school criteria.

<i>Semester 1</i>	<i>Semester 2</i>	<i>Semester 3</i>	<i>Semester 4</i>
Eng 180 (3)	Chem 202 (4)	Chem 331 (5)	Chem 332 (4)
Chem 201 (4)	Biol 103 (4)	Zool 230 (4)	Zool 231 (4)
Biol 102 (4)	Math 133 (3)	Phys 124 (5)	Phys 125 (5)
Math 129 (3)	Math 183 (1)	Eng 280 (3)	Stat 171 or 276 (3)
Elective (3)	Ecom 231 (3)	Micro 200 (3)	Elective (3)
	Comm 130 (3)		



[wiu.edu/users/  
michem/Pharmacy](http://wiu.edu/users/michem/Pharmacy)

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