

# Pharmacy

Department of Chemistry, College of Arts and Sciences



## Major Program

The WIU Department of Chemistry offers a program leading to the Bachelor of Science in Chemistry–Pharmacy option. The bachelor's degree in chemistry–pharmacy option is a focused degree in chemistry that emphasizes the chemical nature, effect, action and metabolism of drugs. This program is unique, as no other pharmacy options for degrees in chemistry or biology are identified (either on the web or through the American Chemical Society or the American Institute for Biological Sciences).

Western Illinois University's chemistry–pharmacy option program targets those students who seek a career as a pharmacist (Pharm.D.) or pharmacologist (Ph.D.), but it would also benefit students who wish to work in the pharmaceutical or biotech industries. The pharmacy option will also be useful to students seeking careers in forensic pharmacology; pharmaceutical sales or as certified pharmacy technicians, pharmacy assistants and other healthcare professionals. Pharmaceutical science has seen enormous growth in the past 30 years. As medical knowledge increases, new drugs are constantly being designed, developed and formulated. With an aging population in the United States, employment in the health care industry is likely to increase over the next couple of decades.

## Career Opportunities

Individuals trained as chemists with a focus in pharmacy have a variety of employment opportunities available. The Bachelor of Science in Chemistry–Pharmacy option is designed to better prepare students interested in careers in pharmacy for either Pharm.D. or Ph.D. programs in pharmacology. Those choosing not to pursue advanced training in graduate or pharmacy school generally find employment working in pharmaceutical industry labs, government/health department labs or in a pharmacy or hospital laboratory setting. Additionally, the chemistry–pharmacy option will greatly aid those individuals who seek careers in pharmaceutical sales and marketing. Industries hiring chemists include, but are not limited to, pharmaceuticals, foods and the emerging biotechnology industry.

## Articulation Agreement with University of Illinois at Chicago College of Pharmacy

Western Illinois University has established an articulation agreement with the University of Illinois at Chicago College of Pharmacy for implementation of guaranteed admission of WIU students into its Doctorate of Pharmacy program. The conditions for retention and matriculation include that students earn a baccalaureate degree within five years of freshman enrollment; complete specific chemistry and pharmacy coursework with a 3.5 GPA or higher; take the Pharmacy College admissions test and demonstrate an interest in pharmacy through an internship, research, etc.

## Integrated Baccalaureate and Master's Degree in Chemistry

The Integrated Baccalaureate and Master of Science in Chemistry provides an opportunity for outstanding undergraduate chemistry majors to complete both a Bachelor of Science and a Master of Science in chemistry in a single five-year period.

## Scholarships

The WIU Department of Chemistry offers the Margaret and Jack Stites Memorial Scholarship especially for students pursuing a career in pharmacy. The department also offers four scholarships for chemistry majors in all options: Maurice Peterson Outstanding Freshman, Outstanding Sophomore, Outstanding Junior and Outstanding Senior Scholarships. Additional scholarships are named for distinguished faculty in the department. The Norbert Goeckner Scholarship is awarded annually to a chemistry major

(undergraduate or graduate), with preference given to a Burmese student (if there is no eligible Burmese student, the award will be open to all chemistry majors), the Dr. and Mrs. R. L. Hardin Scholarship is awarded to a junior chemistry major, and the F. H. Currens Award is given to an outstanding senior chemistry major. The department also awards an Incoming Freshman Award to an entering freshman Chemistry major and selects a department scholar from outstanding seniors in the department. Additional scholarships are available through the WIU Women in Science program and the Research Inspiring Student Excellence (RISE) program. Detailed information on scholarships is available from the department, (309) 298-1538; Western's Scholarship Office, (309) 298-2001; or on the web at [wiu.edu/scholarship](http://wiu.edu/scholarship) or [wiu.edu/chemistry](http://wiu.edu/chemistry).



### Honors in Chemistry

To be eligible for the Centennial Honors College, entering freshmen must meet two of the following three criteria: Have an 1160 SAT (24 ACT), have a 3.4/4.0 GPA or higher, or be in the top 15 percent of their graduating class. 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.

### Faculty

Courses in the department are taught by faculty holding doctoral degrees from distinguished universities around the world, such as the State University of New York, Kansas State University, Texas A&M University, Texas Tech University, the University of Illinois, the University of Victoria (Canada), University of Missouri, University of California–Davis, and the Loyola University. All faculty are dedicated educators, skilled in fostering active student participation. They are also active researchers and have to their credit many research publications and presentations in the areas of their specialties.

### Special Opportunities

The department offers small classes with accessible faculty in Currens Hall and personalized advising. 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 a fluorometer, HPLC, FT-NMR, FT-IR, UV-Vis and GC-MS spectrometers; a capillary electrophoresis and a high-speed centrifuge.

### Undergraduate Research Opportunities

There are many opportunities for students in the pharmacy option to work with WIU chemistry faculty on research projects that involve organic, biochemistry, and medicinal chemistry in drug development and testing; forensic, analytical and environmental chemistry in drug analysis; physical/food chemistry in food and nutritional supplement development, as well as many other projects. Undergraduate students involved in research get to travel to professional conferences, meet professionals from around the country and serve as coauthors on journal article publications.

### Testimonials from Alumni of Western Illinois University

*I think the pharmacy option would be beneficial to students seeking careers as pharmacists in research or private practice, which has continued to provide opportunities for qualified graduates.* –Michael Curtis, MS 2001; Research Chemist at Pfizer Pharmaceuticals

*A student taking the chemistry–pharmacy program would benefit greatly in that it would make him or her more competitive in a job market that is already very competitive.* –Michael Bowsher, BS 2003, MS 2005; Research Chemist at Bristol Myers-Squibb

### For Your General Outlook

Required courses include Chemistry (CHEM) 201 and 202, General Chemistry I & II (8 SH); CHEM 241, Chemical Calculations (2 SH); CHEM 331 and 332, Organic Chemistry I & II (9 SH); CHEM 341, Analytical Techniques (3 SH); CHEM 370, Elem. Physical Chemistry (4 SH); CHEM 421, Biochemistry (4 SH); CHEM 422, Advanced Biochemistry (4 SH); CHEM 263, Elem. Pharmacology (3 SH); CHEM 264, Pharmacy Methods (3 SH); CHEM 452, Forensic Toxicology (4 SH); either CHEM 490, Senior Research (3 SH), or CHEM 485, Internship (3 to 8 SH); CHEM 363, Rational Drug Design (3 SH); CHEM 416, Chemical Literature (1 SH); MATH 133, Calculus I (4 SH); either STAT 171, Elem. Statistics (3 SH), or STAT 276, Intro Prob and Stat. (3 SH); PHYS 124 and 125, General Physics (10 SH); and either Zoology, Microbiology or Neuroscience minor (19-21 SH).

### For More Information

Contact the WIU Department of Chemistry at (309) 298-1538 or by email at [wiu.edu/chemistry](mailto:wiu.edu/chemistry).

### We Are Here to Serve

WIU is an interactive public university serving more than 11,000 enrolled students. Along with its comment to students, WIU recognizes the needs of the region, state and society, and it plays a significant role in cultural, economic and educational developments.

[wiu.edu/chemistry](http://wiu.edu/chemistry)

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