

Pharmacy

Department of Chemistry, College of Arts & Sciences



Major Program

The Department of Chemistry offers a program leading to the Bachelor of Science in Chemistry–Pharmacy option. The B.S. 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 to B.S. Chemistry or B.S. Biology degrees are identified (either on the Web or through the American Chemical Society or the American Institute for Biological Sciences).

Western Illinois University's B.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 at the B.S. or M.S. levels. The Pharmacy option will also be very useful to those students who are seeking careers in forensic pharmacology; pharmaceutical sales; or as certified pharmacy technicians, pharmacy assistants, and other healthcare professionals. Pharmaceutical science is one of the most exciting branches of chemistry. It 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 healthcare 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 B.S. 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. Most studies predict a shortage of chemists of all types, making job markets excellent for many years to come.

Articulation Agreement with University of Illinois–Chicago College of Pharmacy

Western Illinois University has established an articulation agreement with the University of Illinois 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 pre-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's degree in Chemistry provides an opportunity for outstanding undergraduate Chemistry majors to complete both a Bachelor of Science and a Master of Science degree in Chemistry in a single five-year period.

Scholarships

The 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 called the *Maurice Peterson Outstanding Freshman*, *Outstanding Sophomore*, *Outstanding Junior*, and *Outstanding Senior Scholarships*. Additional scholarships are named for distinguished faculty in the department—the *Norbert Goekner 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 of Chemistry also awards an *Incoming Freshman Award* to an entering freshman Chemistry major and selects a *department scholar* from outstanding seniors in the department. 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 or wiu.edu/chemistry.

Honors in Chemistry

Students entering Western with an ACT score of 26 or higher are eligible for the Illinois Centennial Honors College. 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 University of Mysore (India), Kansas State University, Texas A&M University, Texas Tech University, the University of Tennessee, the University of Helsinki, the University of Victoria (Canada), and the University of Loyola. All 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 specialty.



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 FPLC, HPLC, FT-NMR, FT-IR, UV-Vis, and GC-MS spectrometers, capillary electrophoresis, and 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, M.S. 2001; Research Chemist at Pfizer Pharmaceuticals

A student taking the B.S. Chemistry–Pharmacy program would benefit greatly in that it would make them more competitive in a job market that is already very competitive. –Michael Bowsher, B.S. 2003, M.S. 2005; Research Chemist at Bristol Myers-Squibb

For Your General Outlook

Required courses include Chemistry (CHEM) 201 and 202, Inorganic Chemistry I & II (8 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; CHEM 463, Adv. Pharmacology (3 SH); either CHEM 490, Senior Research (3 SH), or CHEM 485, Internship (3 to 8 SH); either CHEM 363, Rational Drug Design (3 SH), or CHEM 440, Elem. Forensic Tech (4 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 Department of Chemistry at (309) 298-1538 or by e-mail at wiu.edu/chemistry.

We Are Here to Serve

WIU is an interactive public university serving more than 12,500 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

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