

CHEMISTRY

At Wichita State University you may pursue a program in chemistry, biochemistry, chemistry premedicine, chemistry/business, or forensic science. If you want to teach chemistry, you should pursue the Bachelor of Arts in education offered by the College of Education.

A career in chemistry provides ample opportunities for you to make an innovative and positive difference. Materials chemists prepare substances with enormous societal and economic impact. Biochemists modify, alter or redesign genes of living cells to cure diseases and produce better crops, plants, medicines, and other useful biotechnological products. Medicinal chemists continue to develop new drugs for disease control. Chemistry-related businesses and industries are at the foundation of the nation's economic growth.

WSU's Department of Chemistry occupies a 98,000 square-foot modern teaching and research facility. Renovated McKinley Hall houses 14 faculty members who have expertise in all sub-disciplines of chemistry.

Our department offers you a broad and flexible curriculum including the Bachelor of Science in chemistry, the BS in biochemistry, the BS in chemistry pre-medicine, the BA in chemistry, and field majors in biochemistry or chemistry/business. The BS and BA programs can lead to master and doctoral chemistry degrees, both of which are offered at Wichita State.

Bachelor of Science in Chemistry

Chemists involved in the research and development of new products are responsible for change in many vital areas. The BS in chemistry is for you if you are interested in developing new medicines and vaccines, biomaterials and biosensors, ceramic materials, energy sources, pollution control devices, clean industrial resources, disease- and insect-resistant food crops, pesticides, herbicides, cosmetics and food additives—all products that improve the quality of life.

When you receive the BS in chemistry or the biochemistry option—both certified by the American Chemical Society—you are prepared in the basics of inorganic, organic, analytical, physical chemistry and biochemistry, and are introduced to chemical literature.

Bachelor of Arts in Chemistry

Chemistry-related research meets the challenge of the future head on. Chemists create the materials necessary for an improved quality of life, such as gasoline, plastics, pharmaceutical drugs, and food. They design products to moderate environmental chemicals and develop new energy sources for the future.

Wichita State's BA degree in chemistry prepares you for a wide variety of entry-level positions. The BA program requires fewer hours of chemistry than the BS, but by taking additional courses, you may earn certification by the American Chemical Society.

Bachelor of Science in Chemistry Pre-medicine

New research in medicine and treatment modalities means more career opportunities for people with specialized chemistry backgrounds. The chemistry pre-medicine program, with its background in the molecular basis of life processes, is excellent preparation if you are interested in further studies in such professional areas as medicine, dentistry, veterinary medicine, optometry, or pharmacology.

Admission

When you choose to study chemistry, you will be admitted to the Fairmount College of Liberal Arts and Sciences. You will be assigned a faculty adviser in the chemistry department who will help you develop your program of study and outline specific requirements.

If you are still deciding on a major when you start at Wichita State, the Liberal Arts and Sciences Advising Center can help you explore career and major options.

Related Opportunities

To broaden your scope, chemistry majors may participate in the American Chemical Society Student Affiliates and regional and national meetings of the American Chemical Society. If eligible, you may be selected for University academic honor societies such as Omicron Delta Kappa, Phi Kappa Phi and Mortar Board.

GENERAL EDUCATION PROGRAM REQUIREMENTS

The General Education Program is an integral component of every degree at Wichita State University. These courses make up about one third of any degree. The goals of the General Education program are:

- To study and apply mathematical principles;
- To study and apply principles of written and oral communication;
- To study and apply basic library research skills including basic assessment of various kinds of sources;
- To study the natural sciences, social and behavioral sciences, humanities and fine arts in order to understand how scholars in those fields work;
- To study human diversity and its implications for society on a global basis.

Successful completion of the General Education Program and LAS College requirements provides knowledge and skills leading to life-long learning in an ever-changing global world.

Descriptions of the General Education Program and of the courses that are included in it are available both in the *University Catalog* and in the *Schedule of Courses*. These documents are available both in hard copy form and online at the WSU Web site: www.wichita.edu. Click on "Browse A-Z" and use C for the *Catalog* and S for the *Schedule of Courses* menu option, and then select "General Education."

When you enter the university, you will work with an academic advisor to select general education courses for your major and your degree choice.

For More Information

To receive more information, or to arrange a campus visit, contact:

Office of Admissions
Wichita State University
1845 Fairmount St.
Wichita, Kansas 67260-0124
Telephone (316) 978-3085
Toll-free (800) 362-2594
www.wichita.edu/admissions

Major Requirements	
BS Chemistry	
American Chemical Society (ACS) certified	
General Chemistry (211, 212)	10
Organic Chemistry (531, 532)	10
Inorganic Chemistry with lab (514, 615, 616)	8
Analytical Chemistry (523)	4
Instrumental Methods (524)	4
Physical Chemistry with lab (545, 546, 547)	8
Biochemistry (either 661 or both 662 and 663)	3 or 6
Independent Study and Research (690)	2
General Biology 1 (210)	4
Precalculus Mathematics and Calculus I-III	18
University Physics I and II with labs	10
Professional electives	4
If ACS certification for the BS in chemistry with Biochemistry Option is desired, add:	
Biochemistry lab (664)	3
General Biology II (211)	4
Molecular Cell Biology (420)	4
BA Chemistry	
General Chemistry (211, 212)	10
Organic Chemistry (531, 532)	10
Analytical Chemistry (523)	4
Instrumental Methods (524)	4
Physical Chemistry with lab (545, 546, 547)	8
Precalculus Mathematics and Calculus I-III	18
University Physics I and II with labs	10
Foreign Language	15
If ACS certification for the BA in chemistry is desired, add:	
Inorganic Chemistry with lab (514, 615, 616)	8
Professional development courses	6
BS Chemistry – Pre-medicine	
General Chemistry (211, 212)	10
Organic Chemistry (531, 532)	10
Analytical Chemistry (523)	4
Biochemistry (662, 663)	6
Independent Study and Research (690)	2
Upper-division chemistry electives	9
Calculus I	5
Physics courses above 200 (one year sequence)	10
General Biology (210, 211)	8
Advanced biology elective(s)	4 or 5
BS Chemistry, Chemistry/Business Field Major	
General Chemistry (211, 212)	10
Organic Chemistry (531, 532)	10
Analytical Chemistry (523)	4
Inorganic (514) or Instrumental Methods (524)	3 or 4
Biochemistry (either 661 or both 662 and 663)	3 or 6
Calculus I (242) or Business Calculus (144)	5 or 3
Accounting (210 and 220)	6
Economics (201 and 202)	6
Legal Environment of Business (BLAW 431)	3
Financial Management I (340)	3
Management and Organizational Behavior (360)	3
Marketing (300, 405, 608)	9
BS Chemistry, Field Major Biochemistry	
General Chemistry (211, 212)	10
Organic Chemistry (531, 532)	10
Analytical Chemistry (523)	4
Biochemistry (662, 663, 664)	9
Special Topics in Biochemistry (666)	3
Research in Biochemistry (669)	4
General Biology (210, 211)	8
Genetics (419)	4
Molecular Cell Biology (420)	4
Precalculus Mathematics (112)	5
General College Physics (213, 214)	10
Biochemistry electives	21
Please contact the chemistry department for specific course information or visit our Web site at www.wichita.edu/chem .	
There are additional requirements to earn certification to teach chemistry. Consult the College of Education or request the "Secondary Education: Sciences" information sheet.	
Some of the complementary courses listed will count toward the General Education Requirements.	

The University reserves the right to revise or change rules, charges, fees, schedules, courses, requirements for degrees, and any other regulations affecting students whenever considered necessary or desirable.

Notice of Nondiscrimination: Wichita State University does not discriminate on the basis of race, religion, color, national origin, gender, age, marital status, sexual orientation, status as a Vietnam-era veteran, or disability. Any person having inquiries concerning this may contact the Office of Equal Employment Opportunity, Wichita State University, 1845 Fairmount St., Wichita, Kansas 67260-0145; telephone (316) 978-3001.