

BIOLOGICAL SCIENCES

Contemporary biological science covers a range of diverse and overlapping subspecialties. You might study organisms interacting in and with their environment, or the study of life processes at the molecular level. The rapidly growing biotechnology field includes recent advances in cellular and molecular biology.

Wichita State University's Department of Biological Sciences offers courses in most aspects of contemporary biological science. Our required core courses will expose you to the breadth of the discipline. After completion of the core, each student, in consultation with a departmental adviser, chooses electives from the departmental course offerings to complete his or her degree requirements.

This program allows each student to expand on the core into his or her own interest area with choices in molecular biology, ecology and physiology, as well as advanced courses in the core areas. In addition, each student must complete courses in general inorganic and organic chemistry and physics as part of the degree program. Students also may consider a field major in biochemistry.

Our department has modern, well-equipped research laboratories, including core laboratories for protein analysis, molecular biology, microscopic

imaging and cell culture work. Major instrumentation is available for protein sequencing, amino acid analysis, peptide synthesis, DNA sequencing and synthesis, PCR and carbohydrate analysis, as well as state-of-the-art cell culture, chromatography and electrophoresis systems. Additional facilities include isolated animal rooms, climate-controlled greenhouse, cell structure laboratory, environmental growth chambers, herbarium and vertebrate study collections. And you will find that our nearby biological field station sites (Ninnescah, Sellers, and Gerber Reserves) and large areas of prairie habitats provide excellent opportunities for aquatic and field research.

Admission

When you choose to study biological science, you will be admitted to the Fairmount College of Liberal Arts and Sciences. All students who intend to pursue one of the programs within the Department of Biological Sciences should contact the department as early in their educational careers as possible for assignment to a faculty academic adviser.

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

We offer attractive scholarships and credit-earning opportunities for student participation in faculty research programs. You may also participate in departmental seminars. Each year you will have the opportunity to interact with internationally renowned scientists brought to campus through the Watkins Visiting Professorship program.

If eligible, you may be selected for University academic honor societies such as Omicron Delta Kappa, Phi Kappa Phi and Mortar Board.

Related Programs

The Department of Biological Sciences offers a broad and flexible curriculum leading to the bachelor of arts, the bachelor of science, the field major in biochemistry (BS), and the bachelor degree programs (BA and BS) to teach in secondary education. Students interested in an interdisciplinary program with a biological focus are encouraged to consider the Fairmount College of Liberal Arts and Sciences field major (BA) or the Bachelor of General Studies (BGS) programs. We also offer coursework in the Bachelor of Science in the Forensic Science and the Bioengineering programs.

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:

Major in Biological Sciences with Biological/ Biomedical Emphasis

A major in biological sciences leading to the BA with a biological/biomedical emphasis requires a minimum of 30 semester hours of biological sciences course work; up to 40 semester hours may be taken for credit. A major in biological sciences leading to the BS with a biological/biomedical emphasis requires a minimum of 40 semester hours of biological sciences course work; up to 50 semester hours may be taken for credit. Candidates for either degree must complete BIOL 210, 211, 418, 419, 420; either BIOL 497 or 499; and one course chosen from the following: BIOL 330, 502, 503, 523, 524, or 528. Candidates for either degree must also complete CHEM 211, 212, 531, and 532. Candidates for the BS degree must also complete PHYS 213 and 214. Candidates will also be required to participate in the departmental assessment program by completing the ETS Major Field Assessment Test in biology prior to graduation.

Major in Biological Sciences with Ecological/ Environmental/Organismal Emphasis

A major in biological sciences leading to the BA with an ecological/environmental/organismal emphasis requires 35 semester hours of biological sciences course work. A major in biological sciences leading to the BS with an ecological/environmental/ organismal emphasis requires 50 semester hours of biological sciences course work. Candidates for either degree must complete BIOL 210, 211, 418, 419, 420; either BIOL 497 or 499; and one course chosen from the following: BIOL 330, 502, 503, 523, 524, or 528. Candidates for the BA degree must also complete a minimum of 5 additional hours of courses chosen from among those approved for the ecological/environmental/organismal emphasis (see academic adviser or departmental offices for approved courses); CHEM 211, 212, and 531. Candidates for the BS degree must also complete 15 additional elective hours from biological sciences chosen in consultation with a departmental adviser; CHEM 111, 112, 531; and PHYS 213. Candidates will also be required to participate in the departmental assessment program by completing the ETS Major Field Assessment Test in biology prior to graduation.

Biochemistry Field Major

The departments of biological sciences and chemistry participate jointly in this program. Required courses are BIOL 210, 211, 419, and 420; CHEM 211, 212, 523, 531, 532, 662, 663, and 664; PHYS 213 and 214; and MATH 112 (or 111 and 123). Also required are BIOL (CHEM) 666 and 669 (two enrollments); and 21 elective hours chosen in consultation with a biochemistry academic adviser.

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.