BIOLOGY IS THE STUDY of living things, which includes concepts of molecular, cellular, organismal, population and ecosystem levels of biological organization. Students learn basic biological principles and gain experience in careful observation, controlled experimentation and thoughtful analysis of scientific data.

Bachelor of Science (BS) in:
- Biology
- Applied Biology: Cooperative Forestry & Environmental Management Program
- Natural Sciences: For premedical and pre-dental students
- Medical Technology
- Teaching Life Sciences: In cooperation with the Department of Education
- Life Sciences for Business – in cooperation with the Williams College of Business
- Environmental Science

Minors: Biology, natural sciences and environmental studies

The Xavier Advantage:
- Engage in on-campus research with Xavier faculty or study at such sites as the Mayo Clinic, Cincinnati Children’s Hospital Research Foundation and Amboseli National Park in Kenya.
- Study abroad to explore tropical biodiversity in Costa Rica or conservation biology in Ireland.
- Work with the Office of Pre-Professional Health Advising to prepare for admission into medical, dental, physical therapy or other health professional schools.

Xavier biology graduates go on to:
- Eli Lilly and Company
- Procter & Gamble
- Occupational Safety and Health Administration (OSHA)
- Boston University School of Medicine
- Georgetown University School of Law

Learn more www.xavier.edu/biology
Ask us xuadmit@xavier.edu
Visit campus www.xavier.edu/visit
THE PROGRAM

The Department of Biology is housed in Albers Hall, which features classrooms and offices, teaching laboratories, faculty/student research laboratories, a small animal facility, a modified greenhouse and storage areas. Adjoining Logan Hall is also used for biology research.

Important admission information: Undergraduate biology programs have a limited number of spaces each year. Admission is competitive, and students may be placed on a waitlist. It is advisable to apply early and indicate biology as the intended major. For more information on admission requirements, visit www.xavier.edu/undergraduate-admission/admission-process.

Biology faculty members are readily available to the students, including a high degree of student-faculty interaction in laboratory instruction. During senior year, a small group of students works with each faculty member to accomplish a research project in the professor’s area of specialization. In addition to on-campus research with Xavier professors, students also may study at such off-campus locations as:

► Wood Hudson Cancer Research Laboratory, Newport, KY
► Cincinnati Children’s Hospital Research Foundation
► Akron General Medical Center
► Cleveland Clinic Foundation
► Pfizer Global Research and Development
► Black Swamp Bird Observatory, Oak Harbor, OH
► Amboseli National Park, Kenya
► Center for Wildlife Management Studies, Nairobi, Kenya
► Mayo Clinic, Rochester, Minnesota

Biology studies can include field trips to such local sites as the Cincinnati Zoo and Botanical Garden, the Newport Aquarium and the Cincinnati Museum of Natural History. Specialized courses also travel to ecological sites like Ault Park, Mt. Airy Forest and Spring Grove Cemetery. Students participate in the Biology Club and Pre-Med Society.

Students present their research every spring in two on-campus events: the University-wide Celebration of Student Research, when students use posters to describe their research projects to other students and faculty from all disciplines, and the Department of Biology’s Senior Research Presentations when students give oral presentations on their research to younger students. Biology students also have presented their work at various national conferences and to the U.S. Congress.

RESOURCES

The department’s specialized equipment and state-of-the-art resources include:

► Anatomy: Animal bone specimens, including articulated dog skeleton, horse skull, articulated fore and hind limbs
► Ecology, plant biology: Soil analysis equipment, chemical analyzers, greenhouse room
► Field and marine biology: Binoculars, mist nets, video cameras, underwater sound recording equipment, computerized sound analysis equipment
► Microbiology: Incubators, autoclave, microscopes, including fluorescence and phase contrast
► Molecular and cellular biology: Fluorescent microscopes with digital-imaging capability, gel electrophoresis equipment, photo-documentation station, DNA amplification technology, mammalian cell culture equipment

OUTCOMES

Biology majors are prepared for graduate study in biology, professional schools in the health sciences (veterinary, medical, dental and others) or immediate employment. Students have gone on to positions as aquatic biologist, federal government investigator, lead bio-medical technician, toxicologist, veterinarian, pharmacist, pediatrician and more.

A range of companies and government agencies have hired Xavier biology graduates, including: Procter & Gamble, Environmental Protection Agency, Food and Drug Administration, Occupational Safety and Health Administration, Genetica DNA Laboratories, Inc., Trek Diagnostic Systems, Inc., Eli Lilly and Company, and Children’s Hospital Research Foundation.

Xavier biology students are accepted at medical and dental schools across the country. Over the past five years, approximately 81 percent of Xavier pre-medical graduates have been accepted into professional schools, as compared to 45 percent nationally. The rate for dental schools is almost 100 percent. Xavier graduates also have pursued doctoral and master’s degrees, and professional degrees in law.

A sampling of the hundreds of medical and other professional schools that have accepted Xavier graduates include:

► Boston University School of Medicine
► Case Western Reserve University
► Creighton University
► Duke University
► Finch University of Health Sciences/Chicago Medical School
► Georgetown University
► Harvard Graduate School
► Indiana University Schools of Medicine & Dentistry
► Johns Hopkins School of Medicine
► Loyola University of Chicago
► Marquette University, College of Dentistry
► Medical College of Wisconsin
► Michigan State University College of Osteopathic Medicine
► Northeastern Ohio Universities College of Medicine
► Northwestern University
► Ohio State University (Schools of Medicine, Dentistry, Pharmacy, Optometry, Veterinary Sciences, and Graduate Physical Therapy)
► Ohio University College of Osteopathic Medicine
► Purdue University
► Scholl College of Podiatric Medicine
► St. Louis University
► University of Cincinnati Schools of Medicine, Pharmacy, Physical Therapy and graduate Nursing)
► University of Kentucky Schools of Medicine, Pharmacy and Dentistry
► University of Louisville (Schools of Medicine and Dentistry)
► University of Southern California, School of Optometry
► Washington University
► West Virginia University
► West Virginia University
XAVIER AT A GLANCE
Founded in 1831, Xavier University is a Jesuit Catholic university in Cincinnati, Ohio, annually ranked among the nation’s best universities. Its three colleges offer 85 undergraduate majors, 54 minors and 11 graduate programs to 7,019 total students, including 4,368 undergraduates.

CORE CURRICULUM
The foundation of Xavier’s success is its commitment to its Jesuit heritage. The Core Curriculum embodies Xavier’s mission and philosophy of education and serves as a valuable foundation for all undergraduate students. Within the Core, the four-course Ethics/Religion and Society (E/RS) Focus fosters students’ understanding of socially significant issues through study of the humanities, especially literature, philosophy and theology, as well as the social and natural sciences. Along with courses in their major, Xavier students also take Core courses in: cultural diversity, English composition, fine arts, foreign language, history, literature, mathematics, philosophy, science, social science and theology.

ACADEMIC REQUIREMENTS
Core Curriculum: Minimum 64 credit hours

Major in biology: All biology majors complete 20 semester hours (SH) of required biology courses including general biology I and II, genetics, vertebrate physiology and methods of biological research, plus 16 SH of biology electives. At least one course must be taken from each of these three categories: botany-bacteriology, ecology evolution-animal behavior, cell biology-immunology biochemistry-virology. Majors must also complete 8 SH of physics; 16 SH of chemistry (including organic), and 6 SH of mathematics.

Major in applied biology: Six semesters of undergraduate study at Xavier University and four semesters of graduate study at Duke University. At Xavier, majors complete 27 SH of biology, 8 SH of general chemistry; 8 SH of physics; and 6 SH of economics, including natural resource economics. The BS in Applied Biology will be awarded by Xavier upon the student’s satisfactory completion of one year of full-time study at Duke. At the completion of the five-year program, students also earn either a Master of Forestry (MF) or Master of Environmental Management (MEM) from Duke University.

Major in medical technology: 19 SH of biology, 18 SH of chemistry and 8 SH of physics. The medical technology program includes three years of undergraduate study at Xavier and one full year gaining clinical experience at a hospital. In the third year, students must apply and be accepted at a hospital accredited by the Committee on Allied Health Education and Accreditation and approved by the University.

Major in natural sciences: Please review the separate academic brochure for natural sciences.

Major in environmental science: 23 SH of required biology, 8 SH of physics, 8 SH of chemistry, 6 SH of economics, 6 SH of mathematics, 9 SH of science and math electives, and 6 SH of non-science electives.

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FOR MORE INFORMATION
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Xavier is an equal opportunity educator and employer. Information in this brochure is correct as of 8/11.