The Department of Biological Sciences offers a major leading to the Bachelor of Science Degree. The program prepares students for employment in a variety of biological areas in government, education, and industry, for entrance into graduate study in a biological discipline, and for professional schools such as medical, dental, podiatric medicine, optometry, veterinary medicine, and pharmacy. With some additional course work and student teaching, students may also be certified to teach at the middle school and high school levels (Biology and General Science).

### Clubs and Groups
- Anatomy Club
- Phi Sigma Science Biological Sciences Honors Society
- Committee for the Preservation of Wildlife
- Pre-Professional Association
- Pre-Veterinary Medicine Association

### Research Facilities
Our teaching laboratories will provide you with extensive experience with living organisms and experimental equipment and technology, including live animal quarters, greenhouses, anatomy lab, confocal and electron microscopy, flow cytometer, molecular core services, X-ray and radioisotope laboratories.

### Engaged Learning
#### Research in a Biology Professor’s Lab:
Being involved in actual research is the best way to learn the process of science. Here at NIU, students can work closely with a professor in a lab setting and gain valuable experience in the general principles of experimental design, analyses, interpretation, literature search, and scientific writing.

#### Research Collaboration
In addition to our own state-of-the-art facilities, we collaborate with several top-ranked institutions in our area:

- Argonne National Laboratory
- Brookfield Zoo
- Burpee Museum of Natural History
- Center and Ball Seed Company
- Fermi National Accelerator Laboratory
- Field Museum of Natural History
- Lincoln Park Zoo
- The Morton Arboretum
- Monsanto - Waterman Seed Technology
- John G. Shedd Aquarium
- University of Illinois College of Medicine – Rockford

“Through their substantial research and teaching experience, the faculty and staff of NIU’s Biology program provide a fertile environment in which a student may develop and nurture intellectual curiosity for processes of the natural world.”

Evan Wittke, BIOS, 2014
BIOLOGICAL SCIENCES AT NORTHERN ILLINOIS UNIVERSITY

Degree Requirements

Biology is a diverse and rapidly expanding field of study that addresses issues relevant to health, agriculture, industry, and the environment. Biologists are responsible for new discoveries in medicine and molecular biology, increasing crop yields and pest resistance, defining the ecological relationships that maintain our planet, and examining the origins and evolution of species, to name just a few. As the scope and pace of biological discoveries increase, so do the career opportunities for students in this exciting and rapidly expanding field of study.

Major Requirements (46 hrs.)

Requirements in Department
Note: There is a 50-semester-hour limit of biology courses whether or not they apply to the major.

BIOS 208 Fund. of Cellular Biology
BIOS 210 Fund. of Cellular Biology Lab
BIOS 209 Fund. of Organismal Biology
BIOS 211 Fund. of Organismal Biology Lab
BIOS 308 Genetics
BIOS 494 Biology Senior Assessment
Electives from biological sciences courses at the 300 or 400 level (34)

Biology electives are offered in six primary areas of departmental specialization and include:
1) Biomedical Pre-Professional
2) Molecular Bioinformatics
3) Microbiology
4) Ecology, Evolution, Behavior and Conservation
5) Plant Science
6) Biology Teaching

Requirements outside Department (31-33) Chemistry
CHEM 210 General Chemistry I*
and
CHEM 212 General Chemistry Lab I*
CHEM 211 General Chemistry II*
and
CHEM 213 General Chemistry Lab II *
CHEM 350 General Organic Chemistry I
CHEM 356 Organic Chemistry I
CHEM 331 General Organic Chemistry II
CHEM 337 Organic Chemistry II

Math
MATH 155 Trig. and Elem. Functions* or satisfactory performance on the
Math Placement Exam
MATH 229 Calculus I*
and
MATH 230 Calculus II
MATH 211 Calculus for Business and Social Science*
and
STAT 301 Elementary Statistics

Physics
PHYS 210 General Physics I*
PHYS 211 General Physics II*
or
PHYS 253 Fund. of Physics I: Mechanics*
and
PHYS 273 Fund. of Physics II: Electromagnetism*
*Available for general education credit.
Total Hours in Biological Sciences: 78-80

Careers In the Biological Sciences

This program prepares students for employment in a variety of biological areas in government, education, and industry, for entrance into graduate study in a biological discipline, and for professional schools such as medical, dental, podiatric medicine, optometry, veterinary medicine, and pharmacy.

Physician
Teacher / Professor
Dentist
Zoo Keeper
Pharmacist
Park Naturalist
Physician Assistant
Museum Curator
Veterinarian
Horticulturist
Plant Genetic Engineer
Political Consultant
Industrial Molecular Biologist
Forensic Biologist
Research Technician
Bioinformatics
Microbiologist
Environmental Consultant
Biomedical Scientist
Food/Water Quality Control
Biological Patent Attorney
Nuclear Medicine Technicians
Pharmaceutical Sales
Biotechnology Technician
Genetic Counselor
Conservation Biologist

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