

Biology

Bachelor of Science (B.S.),
Bachelor of Science in Education (B.S.Ed.)



Explore The Living World

Get in touch with the living world as you explore your interests in plants, animals, medicine, ecosystems, ecology, evolution, and the world in which we live.

Prepare For Your Future

The BHSU biology program opens the door to scientific knowledge. With the biologically and geologically diverse environment of the Black Hills and the surrounding area, you have a laboratory setting right outside your classroom door.

Learn From The Best

BHSU's renowned Biology professors are dedicated to research studies and will guide you using proven scientific methodologies, data analysis models, and common field and laboratory techniques necessary for a career in the life sciences.

Enjoy The Experience

BHSU has the only DNA core facility in a 200 mile radius. The Center for the Conservation of Biological Resources is a state-of-the-art genomics laboratory. The center is leading the future of genomics research by monitoring sensitive aquatic species and the development of indicator organisms, biodiversity management and genomics, and ecological monitoring.

By virtue of its location in the Black Hills, BHSU has access to a multitude of outdoor field research sites and specialized laboratories where faculty and students work closely with scientists at a number of governmental agencies. Just 17 miles from Lead, BHSU students and faculty have an opportunity to be part of world class research at Sanford Underground Lab (SURF). Explore, research, and get in touch with nature with BHSU as your guide. Your ticket awaits!

find your career:

- Physicians, Dentists, Optometrists, Physical Therapists, Chiropractors, Veterinarians, Nurses
- Teaching in Secondary Schools, Universities and Colleges
- Clinics and Hospitals
- Pharmaceutical, Biotech, and Chemical Companies
- Public Health Agencies
- Federal/State/Local Government Laboratories and Agencies
- Medical Research Laboratories
- Private Research Foundation
- Agricultural Industries
- Zoos, Museums, and Libraries
- Food Manufacturers
- Soap/Cosmetics Companies
- U.S. Forest Service
- Food & Drug Administration

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Biology and Biology Education

Required Core

4 BIOL 151 General Biology I AND 151L Lab **
4 BIOL 153 General Biology II AND 153L Lab **
4 BIOL 371 Genetics AND 371L Lab

4 BIOL 373 Evolution AND 373L Lab
2 BIOL 490 Seminar

Major in Biology

*Restricted Electives (17 credits)****

***Restricted Elective courses are taken from the Environmental Biology Emphasis and the Cellular/Physiology Emphasis, with at least two courses from one emphasis and the remainder from the other.

Environmental Biology Emphasis:

BIOL 301 Plant Systematics AND 301L Lab
BIOL 302 Animal Behavior
BIOL 311 Principles of Ecology AND 311L Lab
BIOL 321 Conservation
BIOL 355 Mammalogy AND 355L Lab
BIOL 357 Invertebrate Zoology AND 357L Lab
BIOL 405 Entomology AND 405L Lab
BIOL 415 Mycology AND 415L Lab
BIOL 434 Herpetology AND 434L Lab
BIOL 437 Biometry
BIOL 461 Agrostology AND 461L Lab
BIOL 462 Dendrology AND 462L Lab
BIOL 463 Ornithology AND 463L Lab
**Must take BIOL 311 AND 311L with this emphasis*

Cellular/Physiology Emphasis:

BIOL 317 Electron Microscopy AND 317L Lab
BIOL 325 Physiology AND 325L Lab
BIOL 331 Microbiology AND 331L Lab
BIOL 343 Cell & Molecular Biology AND 343L Lab
BIOL 381 Vertebrate Anatomy AND 381L Lab
BIOL 422 Immunology
BIOL 430 Neurobiology AND 430L Lab
BIOL 437 Biometry
BIOL 460 Evolutionary & Ecological Plant Phys/Lab
BIOL 474 Ecological Genomics AND 474L Lab
**Must take BIOL 343 & 343L with this emphasis*
A minor is required with the Biology major plus electives to total 120 hours, of which 36 hours must be 300/400 level courses.

General Education Requirements

Gen Ed - Mathematics 3 semester hours
Gen Ed - Social Science 6-9 semester hours
Gen Ed - Arts & Humanities 12 semester hours
ENGL 101 - Composition I
ENGL 201 - Composition II
SPCM 101, OR SPCM 215, OR SPCM 222 *Speech*
WEL 100 - Wellness for Life AND WEL 100L

Major in Biology -Teaching

In addition to completing the restricted electives from the two Biology emphasis listed, the following courses are required:

Pre-Professional Teaching Core:

1 EDFN 295 Practicum: Pre-Admission Teaching
2 EDFN 338 Foundations of American Education
3 EPSY 302 Educational Psychology
3 EPSY 428 Child & Adolescent Development
INED 411 South Dakota Indian Studies
PSYC 101 General Psychology**
SPED 405 Educating Secondary Students with Disabilities
OR
SPED 300 Students with Exceptionalities

Professional Secondary Ed Teaching Core:

3 EDFN 365 Computer-Based Technology & Learning
2 MLED 480 Middle Level Methods
3 SEED 408 Plan, Manage & Assess the 7-12 Diverse Classroom
3 SEED 450 7-12 Reading and Content Literacy
1 SEED 495 Practicum: Pre-Student Teaching
3 EDFN 475 Human Relations
9 SEED 488 7-12 Student Teaching

A minor is NOT required with the Biology Teaching major but electives are required to total 120 hours, of which 36 hours must be 300/400 level courses.

Students are encouraged to pursue a minor, but to be certified to teach, a content praxis exam must be passed in both the major & minor areas of study.

**Completes one general education requirement.