Biology

Degrees Offered

- Bachelor of Science

Nature of the Program

The Department of Biology offers a Bachelor of Science degree with two majors: the Bachelor of Science in Biology and the Bachelor of Science in Biology Pre-medical. These two programs are structured to meet the foundational needs of all students who are interested in a career in the broad area of the life sciences or health sciences. In the Biology major, these requirements are complemented by additional coursework in communication and statistics; in the Biology Pre-medical major, these requirements are complemented by chemistry, physics, and social foundations of health.

After completing an initial four-semester core sequence in the biological sciences, students in the Biology major may choose an Area of Emphasis in Cell/Molecular Biology, Ecology/Ecosystems/Global Change, or Integrative Biology. Students in the Biology Pre-medical major may choose an Area of Emphasis in Human Health or Global Health. All students must complete 7 upper-division electives, including 2 laboratory courses.

The undergraduate programs in biology provide excellent preparation for students planning to apply to graduate programs in the biological sciences or to professional schools and programs including medical, osteopathic, dental, physical or occupational therapy, optometry, pharmacy, veterinary medicine, physician assistant, and chiropractic. A degree in biology prepares students for a wide range of careers in the biological sciences including medicine, biotechnology, genetics, forensics, ecology, environmental biology, and other biologically-related technical fields in government and private industry. With appropriate electives, a student with a degree in biology may also choose to enter the fields of law, journalism, education, business, health care administration, pharmaceutical sales, or work for a variety of federal agencies.

Regardless of the degree program chosen, students will experience a wide variety of classroom environments from large lecture sections to small group discussions and intensive laboratory-oriented courses. Laboratory courses include topics such as human anatomy, molecular genetics, plant ecology, and plant physiology as well as many other laboratory experiences across the biological disciplines.

Students who earn a degree in the Eberly College of Arts and Sciences must complete the University requirements, the College requirements for their specific degree program, and their major requirements.

Minors

All students have the possibility of earning one or more minors; follow link for a list of all available minors and their requirements. (http://catalog.wvu.edu/undergraduate/minors/)Please note that students may not earn a minor in their major field.

FACULTY

CHAIR

- Jennifer Hawkins - Ph.D. (University of Iowa)

ASSOCIATE CHAIRS

- Edward Brzostek - Ph.D. (Boston University)
  Associate Chair of Graduate Studies
- Nisan Hubbard - Ph.D. (Northwestern University)
  Associate Chair for Undergraduate Advising, Recruitment, and Retention
- Dana Huebert Lima - Ph.D. (University of Wisconsin)
  Associate Chair for Undergraduate Studies

PROFESSORS

- Ashok P. Bidwai - Ph.D. (University of Utah)
  Regular Graduate Faculty, Molecular genetic analysis of protein kinase, CK2 in Drosophila
- Andrew Dacks - Ph.D. (University of Arizona)
  Regular Graduate Faculty, Neurobiology
- Kevin C. Daly - Ph.D. (University of Arizona)
  Regular Graduate Faculty, Sensory neurobiology, Neural coding, Brain-behavior interactions, Comparative psycho-biology
- Donna Ford-Werntz - Ph.D. (Washington University/Missouri Botanical Garden)
  Plant systematics: Portulacaceae, West Virginia flora.
- Jennifer Hawkins - Ph.D. (University of Iowa)
  Plant comparative genomics, molecular evolution

- William T. Peterjohn - Ph.D. (Duke University)
  Regular Graduate Faculty, Ecosystem ecology: Effects of global change on ecosystem dynamics, Nitrogen cycling in natural ecosystems.
- Rita V.M. Rio - Ph.D. (Yale University)
  Regular Graduate Faculty, Symbioses
- Jennifer Stueckle - Ph.D. (West Virginia University)
  Associate Graduate Faculty, Aquatic toxicology
- Richard B. Thomas - Ph.D. (Clemson University)
  Regular Graduate Faculty, Physiological plant ecology, Forest ecology, Global climate change

ASSOCIATE PROFESSORS

- Craig Barrett - Ph.D. (Ohio State University)
  Regular Graduate Faculty, Plant Evolutionary Biology
- Sadie Bergeron - Ph.D. (University of Massachusetts - Amherst)
  Regular Graduate Faculty, Developmental Neurobiology
- Edward Brzostek - Ph.D. (Boston University)
  Regular Graduate Faculty, Forest ecology, ecosystem modeling
- Timothy Driscoll - Ph.D. (Virginia Tech)
  Regular Graduate Faculty, Bioinformatics, microbial metagenomics
- Sarah M. Farris - Ph.D. (University of Illinois at Urbana-Champaign)
  Regular Graduate Faculty, Evolution and development of the insect brain, Neuroanatomy
- Zachariah Fowler - Ph.D (West Virginia University)
  Forest ecology
- Jennifer Gallagher - Ph.D. (Yale University)
  Regular Graduate Faculty, Functional genomics of yeast
- Dana Huebert Lima - Ph.D. (University of Wisconsin)
  Associate Graduate Faculty, Cellular and Molecular Biology, Epigenetics, Science Communication
- Gary Marsat - Ph.D. (McGill University)
  Regular Graduate Faculty, Neurobiology
- Ember Morrissey - Ph.D. (Virginia Commonwealth University)
  Regualr Graduate Faculty, Soil microbial ecology
- John Navaratnam - Ph.D. (West Virginia University)
  Wetland Biogeochemistry
- Stephanie T. Young - Ph.D. (West Virginia University)
  Molecular and Forensic biology

ASSITANT PROFESSORS

- Chris Arnold - Ph.D. (Stanford University)
  Development, regeneration, and asexual reproduction
- Kevin Barry - Ph.D. (University of Maryland)
  Conservation ecology
- Becca Coltogirone - Ph.D. (West Virginia University)
  Developmental Neuroscience and Molecular Biology
- Amaris Guardiola - Ph.D. (Duke University)
- Eric Horstick - Ph.D. (University of Michigan)
  Developmental genetics, neuroscience, behavioral genetics
- Nisan Hubbard - Ph.D. (Northwestern University)
  Reproductive Biology and Physiology
- Steve Kannenberg - Ph.D. (Indiana University)
  Eco-physiology, ecosystem ecology, and global change
- Justin Mathias - Ph.D. (West Virginia University)
  Forest biogeochemistry and ecophysiology
- Grace Savoy-Burke - Ph.D. (University of Delaware)
  Entomology

PROFESSORS EMERITI

- Clifton P. Bishop - Ph.D. (University of Virginia)
- Jorge Flores - Ph.D. (George Washington University)

- Philip E. Keeting - Ph.D. (University of Medicine and Dentistry of New Jersey)
- Gerald E. Lang - Ph.D. (Rutgers University)
- Kevin Lee - Ph.D. (Temple University SoM.)
- Joseph A. Marshall - Ph.D. (University of Maryland)
- James B. McGraw - Ph.D. (Duke University)

Admissions for 2025-2026

- First Time Freshmen are admitted directly to the Biology or Biology Pre-Medical majors. For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 20, a MATH SAT of 520, or an ALEKS score of 40.
- Students moving from another WVU major must have an overall GPA of a 2.0 and meet the following requirements prior to being admitted to either major: completion of BIOL 115, BIOL 115L, BIOL 117 , BIOL 117L, CHEM 115 , and CHEM 115L with a minimum grade of C-.
- Students transferring from another institution must have an overall GPA of a 2.0 and meet the following requirements prior to being admitted to either major: completion of BIOL 115, BIOL 115L, BIOL 117 , BIOL 117L, CHEM 115 , and CHEM 115L with a minimum grade of C-.

Major Code: 1436

Degree Progress

Students remain in the Biology major provided they meet the benchmark expectations listed below.

B.S. Biology:

- By the end of the second semester in the major (excluding summer), students must have, at minimum, completed either MATH 124 orMATH 126 with a minimum grade of C-.
- By the end of their third semester into the major, students intending to graduate with a B.S. in Biology are expected to have completed BIOL 115, BIOL 115L, BIOL 117, BIOL 117L, CHEM 115, and CHEM 115L with a minimum grade of C- in each course and a 2.0 GPA overall. In addition, students must meet with their Biology adviser every semester. Students who do not meet their benchmarks will be removed from their major.
- **Readmission after being removed from the Biology - B.S.:** Students must meet the benchmarks listed below.
  - Completed (BIOL 219 AND BIOL 219L) or BIOL 221 with a minimum grade of C- in each course.
  - Have an overall GPA of 2.0.
  - Have a Biology GPA of 2.0.