

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.

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. (Iowa State University)

ASSOCIATE CHAIRS

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

PROFESSORS

- 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)
Regular Graduate Faculty, Plant comparative genomics, molecular evolution
- Dana Huebert Lima - Ph.D. (University of Wisconsin)
Associate Graduate Faculty, Cellular & Molecular Biology
- 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
- Stephanie Young - Ph.D. (West Virginia University)
Molecular & Forensic Biology

ASSOCIATE PROFESSORS

- Craig Barrett - Ph.D. (Ohio State University)
Regular Graduate Faculty, Plant Evolutionary Biology
- Kevin Barry - Ph.D. (University of Maryland)
Conservation ecology
- 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)
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
- Amaris Guardiola - Ph.D. (Duke University)
- Gary Marsat - Ph.D. (McGill University)
Regular Graduate Faculty, Neurobiology
- Ember Morrissey - Ph.D. (Virginia Commonwealth University)
Regular Graduate Faculty, Soil microbial ecology
- John Navaratnam - Ph.D. (West Virginia University)
Wetland Biogeochemistry

ASSISTANT PROFESSORS

- Chris Arnold - Ph.D. (Stanford University)
Regular Graduate Faculty, Development, regeneration, and asexual reproduction
- Becca Coltogirone - Ph.D. (West Virginia University)
Developmental Neuroscience and Molecular Biology
- Eric Horstick - Ph.D. (University of Michigan)
Regular Graduate Faculty, Developmental genetics, neuroscience, behavioral genetics
- Kathryn Jewett - Ph.D. (Washington State University)
Neuroscience
- Steve Kannenberg - Ph.D. (Indiana University)
Regular Graduate Faculty, Eco-physiology, ecosystem ecology, and global change
- Justin Mathias - Ph.D. (West Virginia University)
Regular Graduate Faculty, Forest biogeochemistry and ecophysiology
- Gabriela Pacheco Sanchez - Ph.D., D.V.M. (University of Sao Paulo, National University of San Marcos)
- Grace Savoy-Burke - Ph.D. (University of Delaware)
Entomology
- Katrina Stewart - Ph.D. (West Virginia University)
- Christine Zawaski - Ph.D. (Michigan Technological University)
Greenhouse Manager

PROFESSORS EMERITI

- Clifton P. Bishop - Ph.D. (University of Virginia)
- Jonathan Cumming - Ph.D. (Cornell University)
- 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)
- William T. Peterjohn - Ph.D. (Duke University)
- Elizabeth Thomas - M.S.

Admissions for 2026-2027

- First Time Freshmen are admitted directly to the major. For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 22, a MATH SAT of 540, or an ALEKS score of 40.
- Students transferring from another WVU major or from another institution with fewer than 24 credits and at least a 2.0 overall GPA are admitted directly to the major. For the timely completion of the degree, it is recommended that students have a minimum MATH ACT of 22, a MATH SAT of 540, or an ALEKS score of 40.
- Students transferring from another WVU major or from another institution with 24 credits or more and at least a 2.0 overall GPA must meet the following requirements prior to being admitted to the major: BIOL 115, BIOL 115L or BIOL 119L, BIOL 117, BIOL 117L or BIOL 120L, CHEM 115 (<http://catalog.wvu.edu/search/?P=CHEM%20115>), and CHEM 115L (<http://catalog.wvu.edu/search/?P=CHEM%20115L>), with a minimum grade of C-.

Major Code:

Biology: **1436**

Biology Pre-Medical: **14F8**

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 or MATH 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.