

## What can I do with this major?

Students with degrees in biology currently have careers as:

### Health Sciences Track (Pre-Professional)

- Dentist or Orthodontist
- Medical Doctor
- Medical Scribe
- Osteopathic Medicine
- Pathologist Assistant
- Pharmacist
- Physician Assistant
- Public Health Educator
- Veterinary Doctor

### Cell, Molecular & Biotechnology Track

- Cancer Biologist
- College Faculty
- Forensic Investigator
- Genetic Engineer
- Laboratory Technician
- Microbiologist
- Patent Examiner
- Quality Control Scientist
- Research Scientist

### Organismal & Evolutionary Biology Track

- Agriculture and Food Scientist
- Arborist
- Botanist
- Conservation Biologist
- Museum Curator
- Oceanographer
- Paleontologist
- Water Quality Specialist
- Wildlife Rehabilitation
- Zoologist

## Experiential learning

Faculty often invite students to work with them on their own research projects in areas including:

- Cancer biology
- Entomology
- Molecular mechanisms of embryonic development in zebrafish
- Molecular microbiology of infectious diseases
- Physiological adaptations of plants to environmental stress
- Physiology of hibernation in marmots
- Plant genetics and breeding

## Why should I major in biology at HPU?

- Jobs in health care consistently rank among the highest in-demand jobs in the USA. Our Health Science track can prepare you with the coursework needed for these professional programs.
- Coronavirus/Covid-19. Cancer. Climate Change. Through biology, you can be part of the solution to some of the world's greatest challenges.
- In the midst of our planet's 6th major mass extinction, the demand for citizens equipped with the knowledge and skills to solve current and future ecological and environmental challenges is greater than ever.
- Biology sharpens critical thinking and analytical skills, which are applicable to a variety of professional positions, even outside of the sciences.
- We are standing at the precipice of a DNA revolution—our Cellular and Molecular Biology track will prepare you for a future in these cutting-edge fields.

## Global experiences

The Biology Department offers a variety of Global Experience opportunities for students in the program. Students have the opportunity to travel to Australia, Ecuador and the Galapagos Islands to study diversity and culture as a part of the HPU Global Experience Program. Biology students can journey to the Philippines and discover the diverse country, from sprawling rice fields to bustling urban cities, as well as ecotourism and conservation efforts. Students have also conducted research projects in the beech forests of New Zealand, the páramo of Colombia and the Rocky Mountains, USA.

## Top pre-professional tracks

- Dentistry
- Medicine
- Pharmacy
- Physician Assistant
- Veterinary

## Holistic learning

Within our program, special emphasis is placed on science as a process. As a result, hands-on, experiential learning opportunities are abundant, both within classrooms and teaching laboratories and through original research. As a result, our curricula foster within students not only the knowledge base, but also the critical thinking, communication and collaboration skills that prepare them for success in their future careers and for leadership roles within society.



## Research opportunities

Students are invited to work with faculty on research projects in the following areas:

- Agricultural genetics
- Cancer biology
- Endocrine disrupting compounds and toxicology
- Insect ecology and physiology
- Intracellular trafficking
- Mammalian hibernation
- Microbiology of infectious disease
- Neurobiology
- Paleobiology
- Plant stress physiology

Students and faculty present research at prestigious academic conferences and symposia:

- American Society for Cell Biology
- American Society of Microbiology Conference for Undergraduate Educators
- American Society for Microbiology Microbe
- American Society of Parasitologists
- Annual Biomedical Research Conference for Minority Students
- Association of Biology Laboratory Educators
- Association of Southeastern Biologists Meeting
- Beta Beta Beta Biology Honor Society National Convention
- Cellular Biology of Eukaryotic Pathogens Symposium
- Ecological Society of America
- International Congress of Entomology
- International Workshop on Anthocyanins
- North Carolina Academy of Science
- North Carolina Branch of the American Society for Microbiology
- State of North Carolina Undergraduate Research and Creativity Symposium

Summer research opportunities on campus:

- The HPU Summer Research Program in the Sciences provides an opportunity for selected students and faculty in the Departments of Biology, Chemistry and Physics to work together on research projects for eight weeks at High Point University. Housing, meals and stipend are provided to participants.

Extramural grants:

- Association of Biology Laboratory Educators – Development of Inquiry-Based Laboratory Exercises
- National Science Foundation – Plant Adaptation to Regional Cloud Regimes
- NC Biotechnology Center – Development of an Interdisciplinary Cell Culture Facility
- United States Forest Service – Insect Response to Prescribed Fire and Fuel Reduction

## Innovation Corridor

Since 2005, HPU has invested \$250 million in STEM programs, faculty and facilities. The result is a half-mile stretch of campus that includes these two brand new buildings and state-of-the-art areas that HPU's scientists call home.

**The Caine Conservatory** provides 15,000-square-feet of space for students and faculty to conduct botanical research and propagate plants for the Mariana H. Qubein Arboretum and Gardens. The facility which houses a classroom, working greenhouse, new eatery and planting display space for the community opened in 2020.



**The Wanek School of Natural Sciences** is a 128,000 square-foot facility that features four stories of innovative lab and classroom space, as well as the Culp Planetarium. The \$65 million state-of-the-art building, that houses the departments of Biology, Chemistry and Physics, opened in 2019.



## Meet Elizabeth

**Hometown:** East Sandwich, Mass.

**Major:** Biology, Organismal and Evolutionary Biology Track

**Clubs:** Alpha Phi Omega National Service Fraternity, Biology Club, Academic Tutor, Beta Beta Beta National Biological Honor Society, Habitat for Humanity, Panther PAL for Office of Study Abroad, International Ambassador

**Research Experience:** Field and lab research technician with the USDA; researched the biology and ecology of the emerald ash borer

Summer Research Intern at the Smithsonian Institution Museum of Natural History in Washington D.C.; worked on a bioinformatics project in the Department of Vertebrate Zoology

**My Favorite Thing About Biology at HPU:** "One of the most impactful aspects of the Biology department is the close community fostered there. Professors have been available to serve as mentors for not only academic classes, but advice on post-graduate experiences and professional development as a scientist. I have had the opportunity to make lasting friendships with my peers, whom I have been challenged and encouraged by through research, challenging courses and department affiliated organizations."



For more information about HPU's Biology Program, contact: