



Undergraduate Programs

Life Sciences

Academic Units:

- > **Biochemistry and Molecular Biology**
bmb.psu.edu
- > **Biology**
bio.psu.edu

Are you fascinated by the basis of life and living things?

Life scientists investigate the structure and function of living things, ranging from small things like molecules to whole living ecosystems.

Studying the life sciences can help you better understand human and animal health and the environment we live in as you prepare for an exciting career.

If you think you might be interested in the life sciences, check out these majors:

- **Biochemistry and Molecular Biology**
- **Biology**
- **Biotechnology**
- **Microbiology**

The Eberly College of Science

is one of the most recognized and respected science colleges in the country.

Whether you know exactly which area of science you'd like to study, or if you're still deciding what your major will be—the opportunities for you are endless. From finding a career path to spending a semester studying abroad, securing an internship or doing groundbreaking research with our faculty—you'll discover which area of science is right for you.

Our team is here to help.

Still have questions?

Contact us at

futurestudents@science.psu.edu

Undergraduate Major Options in Life Sciences

A variety of degree options allows you to tailor your education to match your goals and interests.

Biochemistry & Molecular Biology

Biochemists and molecular biologists study the molecular basis of life. In this major you can apply basic principles of chemistry and physics to the study of living cells and their components, to explain life at its molecular, genetic, and cellular levels.

Program Options:

- Biochemistry option
- Molecular and Cell Biology option

You might like this program if...

- You want to know how life works at the most-fundamental levels.
- You want to learn how molecules can be manipulated to address global challenges such as disease, famine, and energy needs.

Biology

Biologists investigate ways to cure neurological diseases, conserve coral populations in tropical oceans, discover more-efficient ways to use plants for food and bio-energy, develop vaccines for infectious diseases, and examine many other aspects of life. In this major, you can explore the diversity and organization of organisms—from single-celled bacteria to multi-cellular plants and animals, including humans.

Program Options:

- General Biology option
- Genetics and Development option
- Neuroscience option
- Plant Biology option
- Vertebrate Physiology option
- Ecology option

You might like this program if...

- You are interested in learning about the biological details of the Earth's many organisms.
- You enjoy a dynamic field of study, with new discoveries being made every day.

Biotechnology

Biotechnologists apply principles of molecular and cellular science to produce biologically important and industrially useful products. In this major, you can explore topics such as genetic engineering, pharmaceutical development, and bio-manufacturing.

Program Options:

- General option
- Clinical Laboratory Science option

You might like this program if...

- You want to understand how to apply scientific concepts to the development of new products and technologies for the benefit of humanity and our surroundings.
- You are interested in medicine but don't want to work in a clinical setting.

Microbiology

Microbiologists study microscopic organisms and how they interact with other organisms and the environment. In this major, you could study how microbes both benefit and harm human health; the role of microbes in the environment; or how microbes can be used in medicine, agriculture, and engineering.

You might like this program if...

- You are interested in learning about the interplay between infectious diseases and the immune response.
- You want to pursue a career in genetic engineering, medicine, public health, or environmental studies.

Additional Resources:

- > **Office of Diversity and Inclusion**
science.psu.edu/diversity
sci-diversity@science.psu.edu

