



University of  
Pittsburgh  
Greensburg

# Biochemistry

## undergraduate program

### Biochemistry

66 credits  
Bachelor of Science

A biochemistry degree from Pitt-Greensburg focuses on the study of the chemical processes of life. It is an interdisciplinary program combining the study of biology and chemistry that equips students with not only the knowledge of biological processes, but also the chemical tools to modify these events. *Forbes* ranks biochemistry as one of the most valuable undergraduate majors, and it is a field with a growth potential of approximately 30 percent.

#### Employment:

- \* Pharmaceutical industries
- \* Cosmetics industries
- \* Hospitals
- \* Research laboratories and organizations
- \* High Schools
- \* Universities and colleges
- \* U.S. Department of Agriculture
- \* Food and Drug Administration
- \* Environmental Protection Agency
- \* Patent Office
- \* Department of Energy
- \* National Institute of Health
- \* Federal Bureau of Investigation
- \* State Health Department
- \* Health and Human Services Commission
- \* Forensic Department



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Fall 2024



#### Biology Core

BIOSC 0170 & 0070  
BIOSC 0180 & 0080  
BIOSC 0080  
BIOSC 1810  
BIOSC 1820  
BIOSC 1825

#### 7 courses - 16 credits

Foundations of Biology 1 & Lab  
Foundations of Biology 2 & Lab  
Foundations of Biology 2 Lab  
Macromolecular Structure and Function  
Metabolic Pathways and Regulation  
Biochemistry Lab

#### Upper Level Biology Course 1 course - 3 to 5 credits

Choose one upper level course and lab (if applicable) from the courses listed below

BIOSC 0350  
BIOSC 1500 & 1510  
BIOSC 1520 & 1530  
BIOSC 1540  
BIOSC 1850 & 1860  
BIOSC 1940 & 1950  
BIOSC

Genetics  
Cell Biology & Lab  
Developmental Biology & Lab  
Computational Biology  
Microbiology & Lab  
Molecular Biology & Lab  
Bioinformatics

#### Chemistry Core

CHEM 0110  
CHEM 0120  
CHEM 0310 & 0330  
CHEM 0320 & 0340  
CHEM 0250 & 0260  
CHEM 1250 & 1255

#### 8 courses - 20 credits

General Chemistry 1 & Lab  
General Chemistry 2 & Lab  
Organic Chemistry 1 & Lab  
Organic Chemistry 2 & Lab  
Introduction to Analytical Chemistry & Lab **OR**  
Instrumental Analysis & Lab

#### Upper Level Chemistry Course 1 - 2 courses - 3 to 5 credits

Choose one upper level course and lab (if applicable) from the courses listed below

CHEM 1035  
CHEM 1130  
CHEM 1311  
CHEM 1330  
CHEM 1380  
CHEM 1410

Introduction to Environmental Chemistry  
Inorganic Chemistry  
Advanced Organic Chemistry  
Medicinal Chemistry  
Techniques of Organic Research \* (2 credits)  
Physical Chemistry 1

#### Other Required Science Courses 5 courses - 18 credits

PHYS 0174  
PHYS 0175 & 0212  
MATH 0220  
MATH 0230

Basic Physics for Science and Engineering 1  
Basic Physics for Science and Engineering 2 & Lab  
Analytic Geometry and Calculus 1  
Analytic Geometry and Calculus 2

#### Additional Requirement 2 courses - 6 credits

*Biochemistry majors must take the following sequence of courses to fulfill the capstone requirement:*

BIOSC 1960  
BIOSC 1962 or BIOC 1963

Scientific Writing  
Biology Undergraduate Research