

# BIOLOGY

## undergraduate program

Consistent with the overall mission of the University of Pittsburgh at Bradford, the Bachelor of Science degree in Biology includes a liberal arts core curriculum, much of which is taken during the first two years of study.

**Employment Opportunities:**

Botanist  
Zoo Keeper  
Environmental Impact Specialist  
Park Naturalist/Ranger  
Ecologist  
Fishery Research Biologist  
Horticulturist  
Plant Pathologist  
Range Conservationist  
Marine Biologist  
Science Columnist  
Biological Photographer  
Biological Researcher  
Bacteriologist  
Zoological Researcher  
Dietetic & Nutrition Tech.  
Veterinarian  
Medical Illustrator  
Health Information Specialist  
Hospital Administrator  
Physical Therapist  
Nuclear Medicine Technician  
Biostatistician  
College Professor  
Biochemist  
Pharmaceutical Researcher  
Insurance Claim Examiner  
Toxicologist  
Public Health Officer  
Drug Inspector



Biologists have exciting and rewarding careers in areas such as medicine, biotechnology, ecological conservation, and environmental management. Biologists study living things to understand how they function, survive, and evolve. They may study bacteria and viruses that threaten human health, and/or larger organisms such as red-spotted newts or brown bears. Whatever the scale, biological research increases our understanding of health and wellness and the threats to our environment.

Biology majors at Pitt-Bradford take courses in Anatomy and Physiology, Cell & Molecular Biology, Ecology and Evolution, Genetics, Chemistry, Biodiversity and Physics. Students learn how life works by asking questions, making observations, and evaluating evidence. Besides lectures, biology majors take classes that include hands-on activities in the laboratory and outdoors

**Required Skills:**

- Ability to Work Independently
- Analytical and Quantitative Skills
- Knowledge of Biology Theory
- Innovative talent
- Ability to Operate Scientific Equipment
- Problem Solving Techniques
- Proficiency in Written Communication
- Research Capabilities
- Ability to Work in Teams

**Possible Employers:**

- Medical Corporations
- Device Companies
- Veterinarian
- Engineering Firms
- Agricultural Chemical Companies
- Biological Testing Laboratories
- Business and Industry
- Pharmaceutical Companies
- State and Federal Government
- Colleges and Universities

**PROFESSIONAL ORGANIZATIONS:**

The American Society for Cell Biology  
The American Institute of Biological Sciences  
The Company of Biologists Limited  
International Biometric Society

[www.ascb.org](http://www.ascb.org)  
[www.aibs.org](http://www.aibs.org)  
[www.biologists.com](http://www.biologists.com)  
[www.tibs.org](http://www.tibs.org)

**FIND OUT MORE ABOUT CAREERS IN CHEMISTRY AT:**

Careers in Biological Science  
Science Careers Web  
Center for Health Careers  
Occupational Outlook Handbook  
Career Services

[www.aibs.org](http://www.aibs.org)  
[www.sciencecareerweb.net](http://www.sciencecareerweb.net)  
[www.chc.hcwp.org/occubull.htm](http://www.chc.hcwp.org/occubull.htm)  
[www.bls.gov/oco/ocos047.htm](http://www.bls.gov/oco/ocos047.htm)  
[www.upb.pitt.edu/career.aspx](http://www.upb.pitt.edu/career.aspx)



## Biology (BS) – Curriculum Guide

Student Name: \_\_\_\_\_

Advisor: \_\_\_\_\_

### GENERAL EDUCATION REQUIREMENTS

#### COMPETENCIES

*(Minimum grade of C- required in all competencies)*

FS 0102 Freshman Seminar

*(if transferring in fewer than 18 credits)*

#### Writing

ENG 0101 English Composition I

ENG 0102 English Composition II

#### Mathematics

\* MATH 0098 College Algebra II or Higher *(see major)*

#### THE HUMAN EXPERIENCE

*Students are required to complete two courses designated*

*as "Global"*

#### ARTS & LETTERS *(ONE course MUST be literature;*

*ONE course MUST be a creative, fine or performing Arts course)*

Literature

Arts

Literature, Arts, Language

#### BEHAVIORAL, ECONOMIC, & POLITICAL SCIENCES

*(Two different categories must be represented)*

#### HISTORY, CULTURES, & PHILOSOPHICAL INQUIRY

*(ONE course MUST be History, and ONE course must be Cultures or Philosophical Inquiry)*

HIST

#### PHYSICAL, LIFE, & COMPUTATIONAL SCIENCES

*(ONE course must be a Physical Science, ONE must be a Life Science and ONE must include a lab)*

*(See Major)*

*(See Major)*

*(See Major)*

Lab *(See Major)*

#### PHYSICAL EDUCATION

PEDC

**Students interested in applying to schools of chiropractic, dentistry, medicine, optometry, podiatry, and veterinary medicine must complete:**

\*1 year of Organic Chemistry with labs

*CHEM 0206, 0207, 0208, and 0209*

\*1 year of General Physics with labs

*PHYS 0101 and 0102 or 0201, 0202, 0203, and 0204*

\*1 semester of Calculus *MATH 0140*

### REQUIRED MAJOR COURSES:

BIOL 0101 Intro. to Cell and Molecular Biology *GE*

BIOL 0102 Introduction to Biodiversity *GE*

BIOL 0203 Genetics

BIOL 0217 Principles of Ecology & Evolution *GE*

BIOL 1451 Capstone

#### Upper Level Biology Electives (16 hours)

*2 courses MUST include a Lab*

Upper-Level Biology electives

Upper-Level Biology electives

Upper-Level Biology electives

Upper-Level Biology electives

Upper-Level Biology electives

#### Other Required Courses:

CHEM 0101 General Chemistry I *GE*

CHEM 0102 General Chemistry II (*GE*)

CHEM 0206 Organic Chemistry I

CHEM 0207 Organic Chemistry I Lab

#### Choose ONE of the following:

MATH 0132 Precalculus *GE*

MATH 0136 Applied Calculus *GE*

MATH 0140 Calculus I *GE*

#### Choose ONE of the following:

PHYS 0101 Introduction to Physics I *GE*

PHYS 0103 Concepts of Modern Physics *GE*

PHYS 0201 Foundations of Physics I *GE*

\*MATH 0098 does not meet the mathematics competency  
At the Pittsburgh campus

### According to your Degree Progress Report in MY.PITT.EDU upon successful completion of the current term:

You will have EARNED \_\_\_\_\_ credit hours

You NEED \_\_\_\_\_ for 120 credit hours required for graduation.

You will have earned \_\_\_\_\_ credit hours of Upper Level course work.

You NEED \_\_\_\_\_ for the 30 credit hours required for graduation.

NOTE: This guide is unofficial. Completing the requirements on this sheet does NOT guarantee degree completion. Official degree completion information can be found in **MY.PITT.EDU**. Contact your Faculty Advisor and/or the Registrar's Office with questions or concerns.