Biology: General Biology, BA

Studies in biology can serve as preparation for graduate study in the biological sciences, graduate training in health-related professions, teaching, or employment in a laboratory or conservation-related job. The Biology Department offers courses in many areas of biology, ranging from the workings of cells and cellular components to species interactions and ecosystem function. Penn’s curriculum keeps pace with recent developments in molecular biology and the study of evolutionary processes, including proteomics, computational genomics, molecular evolution, and epigenetics. The General Biology Major allows students to explore the wide range of topics in Biology, while also providing a strong foundation in core subject areas such as cell and molecular biology, genetics, physiology, and ecology and evolution.

The minimum total course units (https://www.college.upenn.edu/credits-needed-major) for graduation in this major is 36. Double majors may entail more course units.

With permission from the Undergraduate Chair, two course units away or LPS courses may count toward the Biology major. This limit does not apply to Study Abroad.

For more information: http://www.bio.upenn.edu/undergraduate/current-students/major-requirements

For information about the General Education requirements, please visit the College of Arts & Sciences Curriculum (https://www.college.upenn.edu/curriculum) page.

### Code | Title | Course Units
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College General Education Requirements and Free Electives

- **Foundational Approaches + Sectors + Free Electives** 20

Major Requirements

**Introductory Biology Requirement**

Select one of the following Tracks: 2

- **Track 1 (2 course units):**
  - **BIOL 121** Introduction to Biology - The Molecular Biology of Life
  - **BIOL 123** Introductory Molecular Biology Laboratory
  - **BIOL 124** Introductory Organismal Biology Lab

- **Track 2 (3 course units):**
  - **BIOL 101** Introduction to Biology A
  - **BIOL 102** Introduction to Biology B

**Chemistry Requirement**

Select 2 course units of Chemistry 2

**Additional Chemistry and/or Physics Requirement**

Select 2 course units of additional Chemistry and/or Physics 2

**Calculus/Statistics Requirement**

Select 2 course units of Calculus/Statistics 2

**Intermediate Level Biology Courses**

Select one of the following Tracks: 4

- **Track 1:** Select four courses from four different groups (4 course units):
- **Track 2:** Select three courses from three different groups (3 course units):

  - **Group 1:**
    - **BIOL 204** Biochemistry
    - or **BIOL 205** Cell Biology

  - **Group 2:**
    - **BIOL 221** Molecular Biology and Genetics

  - **Group 3:**
    - **BIOL 215** Vertebrate Physiology
  - **BIOL 231** The Evolution of Animal Behavior
  - **BIOL 251** Molecular and Cellular Neurobiology

  - **Group 4:**
    - **BIOL 230** Evolutionary Biology
    - **BIOL 240** Ecology: From individuals to ecosystems

**Additional Biology/Biology-Related Requirement**

Select 4 course units of Biology (Two of them may be Biology related courses) 4

**Total Course Units** 36

1. You may count no more than one course toward both a Major and a Sector requirement. For Exceptions, check the Policy Statement (http://www.college.upenn.edu/sectors-policy).

2. A third course is needed if the additional CHEM or PHYS courses total less than 2 course units.

### Honors

Applicants must have a minimum GPA of 3.25 in the major and the thesis must be approved by the departmental honors committee.

The degree and major requirements displayed are intended as a guide for students entering in the Fall of 2020 and later. Students should consult with their academic program regarding final certifications and requirements for graduation.