Biology, A.S.

HEGIS: 5604.00
PROGRAM CODE: 01039
PROGRAM DIRECTOR: Dr. Kristin Polizzotto

DEPARTMENT: BIOLOGICAL SCIENCES

The Biology AS degree is designed to provide students with the foundational courses in biology, chemistry, and mathematics in preparation for transfer to baccalaureate programs. Concentrations in Allied Health Transfer or Biology Transfer provides students the opportunity for additional focus on a specific area of interest within the field. Courses promote understanding of modern biological principles, application of methods and process of life science, foster independent thinking, address biology's relevance to modern societal issues, and support quantitative reasoning, scientific writing, and research.

The curriculum presented here applies to students who started the major in Fall 2025 or Spring 2026. If you enrolled as a matriculant prior to that, please see the *College Catalog* for the year you started the major as a matriculant for the curriculum requirements that apply to you.

Consultation with the Program Advisor is required.

Degree Maps:

Degree Map for Biology, A.S. - Allied Health Transfer Concentration
Degree Map for Biology, A.S. - Biology Transfer Concentration

Your Degree Map contains the suggested term-by-term course sequence for your academic path towards graduation.

To ensure successful and timely completion of your degree, it is recommended that you meet with your academic advisor to discuss your unique map.

Please note some courses *may* only be offered once and academic year.

Program Learning Outcomes:

Upon successful completion of the Biology degree program requirements, graduates will:

1. identify and apply the methods and process of life science
2. demonstrate proficiency in quantitative reasoning as it relates to life science data
3. demonstrate an understanding of evolution
4. demonstrate an understanding of the relationship between structure and function
5. demonstrate an understanding of genetics

6. demonstrate an understanding of the pathways of energy and matter that maintain a particular environment in living systems
7. demonstrate an understanding of the levels of biological organization and the interactions among these levels

College Requirements:

English and Math proficient as determined by the CUNY Proficiency Index, unless otherwise exempt, or successful completion of any required developmental course(s).

Civic Engagement Experiences:

One (1) Civic Engagement experience satisfied by Civic Engagement Certified or Civic Engagement Component course or approved outside activity.

Writing Intensive Requirement:

One (1) Writing Intensive Course in any discipline is required.

Required Core (4 Courses, 13 Credits):

When Required Core Courses are specified for a category, they are required for the major

- ENG 1200 - Composition I 3 Credit(s)
- ENG 2400 - Composition II 3 Credit(s)
- **Mathematical & Quantitative Reasoning Course 3 Credit(s)***
  - MAT 9010 - Introduction to Mathematics with College Algebra 3 Credit(s) **or**
  - MAT 9B0 - College Algebra for STEM Majors 3 Credit(s) **or**
  - MAT 900 - College Algebra 3 Credit(s)
- **Life & Physical Sciences Course***
  - BIO 1300 - General Biology I 4 Credit(s)

Flexible Core (6 Courses, 19 Credits):

When Required Core Courses are specified for a category they are strongly suggested and/or required for the major

One course from each Group A to D (Group E is satisfied by the courses shown). **No more than two courses can be selected from the same discipline**

A. World Cultures and Global Issues Designated Course

B. U.S. Experience in its Diversity Designated Course

C. Creative Expression Designated Course

D. Individual and Society Designated Course

E. Scientific World Designated Course*

- BIO 1400 - General Biology II 4 Credit(s)
- MAT 1400 - Analytic Geometry and Pre-Calculus Mathematics 3 Credit(s)

Major Requirements (3 Courses, 11 to 12 Credits):

- CHM 1100 - General Chemistry I 4 Credit(s)
- CHM 1200 - General Chemistry II 4 Credit(s)
  AND
- CP 1100 - Introduction to Computers and Computer Applications 4 Credit(s) **or**
- BIO 6000 - Computer Applications in Bioinformatics 3 Credit(s) **or**
- CIS 6000 - Computer Applications in Bioinformatics 3 Credit(s)

Concentrations (2 Courses, 8 Credits):

Select **one (1)** of the following concentrations:

Allied Health Transfer (2 Courses, 8 Credits):

- BIO 1100 - Human Anatomy and Physiology I 4 Credit(s)
- BIO 1200 - Human Anatomy and Physiology II 4 Credit(s)

Biology Transfer (2 Courses, 8 Credits):

- BIO 2100 - Comparative Anatomy 4 Credit(s) **or**
- BIO 2200 - Developmental Biology 4 Credit(s) **or**
- BIO 5000 - General Microbiology 4 Credit(s) **or**
- BIO 5200 - Marine Biology 4 Credit(s) **or**
- BIO 5300 - Ecology 4 Credit(s) **or**
- BIO 5800 - Recombinant DNA Technology 4 Credit(s) **or**
- BIO 5900 - Genetics 4 Credit(s) **or**
- BIO 6500 - Molecular and Cellular Biology 4 Credit(s)

Electives:

8 to 9 credits sufficient to meet required total of 60 credits

Allied Health Transfer Option, Suggested Elective:

- BIO 9100 - Biostatistics 4 Credit(s) or
- MAT 9100 - Biostatistics 4 Credit(s)

Transfer to a Physician Assistant Program, Suggested Elective:

- BIO 5100 - Microbiology in Health and Disease 4 Credit(s)

Notes:

* This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

Total Credits: 60