

Biology: Bachelor of Science (B.S.)

Degree Type

Bachelor of Science

The biology program gives students a broad background in all areas of biology to prepare them for careers in biology or for further study in graduate or professional school. The program emphasizes the process of doing science in independent lab projects and in the three-semester senior research project. In addition, Colby-Sawyer College has an affiliation agreement with the School for Field Studies (<http://fieldstudies.org>). Students who meet the prerequisites may spend the fall semester of their senior year at one of the School for Field Studies' international locations.

Learning Outcomes

The aim of the biology program is to prepare students with a broad perspective in all areas of biology while emphasizing their ability to use the process of science. We expect that students will be proficient in the following:

- Understanding and applying the theory and concepts of molecular, cell organismal and ecological biology.
- Using logical thinking as demonstrated through sophisticated logic when articulating biological concepts and relations.
- Using the scientific method to develop and recognize interrelated hypotheses.
- Using laboratory and field skills.
- Demonstrating quantitative ability including data analysis.
- Applying Excel and its functions to create clear graphs and tables summarizing data.
- Applying visual skills in posters and presentations.
- Writing scientifically.

Biology B.S. Progress to Completion Requirements:

Students must have a minimum cumulative GPA of C (2.00) in all required courses in the major to graduate.

Item #	Title	Credits
BIO 106	The Chemical and Cellular Basis of Life (+lab)	4.0
BIO 107	Introduction to Ecology (+lab)	4.0
BIO 221	Evolution	2.0
BIO 223	Genetics (+lab)	4.0
BIO 351	Research Design	1.0
BIO 485	Biology Internship	1.0-3
BIO 486	Senior Research I	2.0
BIO 487	Senior Research II (Capstone)	1.0
CHE 101	Principles of Chemistry I (+lab)	4.0
CHE 102	Principles of Chemistry II (+lab)	4.0
	Two courses selected from CHE 307, 308; PHY 101, 102	8
	A total of 16 credits, of which twelve credits are at the 300- to 400-level	16
	MAT 220 or 221	4

Suggested Registration Sequence

First Year - Fall

Two years of high school algebra with a grade of B- or higher is a prerequisite for CHE 101. Students without this should take MAT 206 and enroll in CHE 101, CHE 102 in their second year.

Item #	Title	Credits
	BIO 107 or BIO 106	4
	CHE 101 or MAT 206	4
	WRT 101 or Liberal Education Core Course	4
FYE 101	First Year Experience	4.0

First Year - Spring

Item #	Title	Credits
	BIO 107 or BIO 106	4
	CHE 102 or Lib Education Core Course	4
	WRT 101 or Liberal Education Core Course	4
	Free Elective Course	4

Sophomore Year - Fall

Item #	Title	Credits
BIO 221	Evolution	2.0
	MAT 220 or Free Elective Course	4
	CHE 307 or PHY 101	4
	Lib Ed - Liberal Education Core Course	4

Sophomore Year - Spring

Item #	Title	Credits
	BIO 221 or BIO 223	2-4
	CHE 308 or PHY 102	4
	Lib Ed - Liberal Education Core Course	4
	MAT 221 or Free Elective Course	4

Junior Year - Fall

Item #	Title	Credits
	200- to 400-Level Biology Elective Course	4
	IE - Integrative Experience Course	4
	Free Elective Course	4
	Free Elective Course	4

Junior Year - Spring

Item #	Title	Credits
	300- to 400-Level Biology Elective Course	4
BIO 351	Research Design	1.0
	Lib Ed - Liberal Education Core Course	4
	Free Elective Course	4

Junior Year - Summer

Item #	Title	Credits
BIO 485	Biology Internship	1.0-3

Senior Year - Fall

Item #	Title	Credits
	300- to 400-Level Biology Elective Course	4
BIO 486	Senior Research I	2.0
	Lib Ed - Liberal Education Core Course	4
	Free Elective Course	4

Senior Year - Spring

Item #	Title	Credits
	300- to 400-Level Biology Elective Course	4
BIO 487	Senior Research II (Capstone)	1.0
	Free Elective Course	4
	Free Elective Course	4