

BIOLOGY, BS

Code	Title	Credits
Biology		34-38
BIO-105 & BIO-106	BIOLOGICAL SCIENCE I and BIOLOGICAL SCIENCE II	
BIO-291	GENETICS	
BIO-292	CELL BIOLOGY	
BIOL-293	GENETICS/CELL BIO LABORATORY	
BIO-399	BIOLOGY SEMINAR	
BIO-456 & BIO-457	SENIOR FACULTY COLLOQUIUM and SENIOR FACULTY COLLOQUIUM	
Biology Electives ¹		
General Education Requirements (https://catalog.sbu.edu/undergraduate/degree-requirements)		37
Foreign Language ²		3
Mathematics		7-8
Chemistry		16
Physics		8
Electives		10-15
Total Credits		115-125

¹ To ensure that Biology majors are exposed to a breadth of subjects within the field of Biology, Biology majors must complete at least one course in each of the following three elective concentrations.

² The foreign language must be at the level of 202 or higher. Students not prepared to begin at this level will need to take additional courses in language.

Molecular and Cellular Biology

Code	Title	Credits
BIO-321	GEN. MICROBIOLOGY	3
BIO-371	BIOCHEMISTRY	4
BIO-466	MOLECULAR BIOLOGY	4
BIO-494	GENOMICS	3
Total Credits		14

Animal Biology

Code	Title	Credits
BIO-331	PHYSIOL & ANAT OF HUMAN I	4
BIO-350	NEUROBIOLOGY	3
BIO-362	ANIMAL DEVELOPMENT	3
BIO-472	IMMUNOLOGY	3
Total Credits		13

Biological Diversity

Code	Title	Credits
BIO-310	PLANT BIOLOGY	3
BIO-341	ECOLOGY	3
BIO-390	EVOLUTION	3
BIO-403	FRESHWATER ECOSYSTEMS	3

BIO-406	PLANT DEVELOPEMENT & PHYSIOLOGY	3
Total Credits		15

In addition to these three courses, Biology majors must complete three more Biology courses of 3-4 credit hours each. These electives must be chosen from among the following:

Code	Title	Credits
BIO-310	PLANT BIOLOGY	3
BIO-321	GEN. MICROBIOLOGY	3
BIO-331	PHYSIOL & ANAT OF HUMAN I	4
BIO-332	PHYSIOL & ANAT OF HUMAN II	4
BIO-341	ECOLOGY	3
BIO-350	NEUROBIOLOGY	3
BIO-362	ANIMAL DEVELOPMENT	3
BIO-371	BIOCHEMISTRY	4
BIO-390	EVOLUTION	3
BIO-403	FRESHWATER ECOSYSTEMS	3
BIO-406	PLANT DEVELOPEMENT & PHYSIOLOGY	3
BIO-466	MOLECULAR BIOLOGY	4
BIO-472	IMMUNOLOGY	3
BIO-490	SPECIAL TOPICS IN BIOLOGY	3
BIO-494	GENOMICS	3

Research participation (BIO-318, BIO-319, BIO-418, BIO-419) credits may fulfill one or two courses of this requirement, in 3-credit-hour increments.

First Year		
Fall	Credits Spring	Credits
BIO-105 & BIOL-105	4 BIO-106 & BIOL-106	4
CHEM-101 & CHML-101	4 CHEM-102 & CHML-102	4
Foreign Language 201 ¹ /General Elective	3 Foreign Language 202 ¹	3
SBU-101	2 MATH-151	4
THFS-101	3 SBU-102	1
		16

Second Year		
Fall	Credits Spring	Credits
BIO-291	3 BIO-292	3
CHEM-301 & CHML-301	4 BIOL-293	1
MATH-117 or 152 ²	3-4 CHEM-301 & CHML-302	4
ENG-101	3 ENG-102	3
General Education Requirement	3 General Education Requirement	3
		16-17

Third Year		
Fall	Credits Spring	Credits
Biology Elective	3-4 Biology Elective	3-4
BIO-399	1 PHYS-104 & PHYL-104	4
PHYS-103 & PHYL-103	4 General Education Requirements	3
General Education Requirements	6 General Elective	3
		14-15

Fourth Year		
Fall	Credits Spring	Credits
BIO-456	0 BIO-457	0
Biology Electives	6-8 Biology Electives	6-8

2 *Biology, BS*

General Education Requirements	3 General Electives	9-10
General Electives	6	
	15-17	15-18

Total Credits 119-127

- ¹ Previous education and aptitude determine whether a student takes foreign language 101, 102 and/or 201 before taking 202 or higher. Courses below 202 will count as general electives.
- ² Biology majors may take either MATH-117 (Statistics) or MATH-152 (Calculus II) to satisfy the second part of the departmental quantitative reasoning requirement. Some graduate schools require 2 semesters of calculus. It is the responsibility of the student, in consultation with the academic adviser, to determine which math course would be most suitable.

The course sequence listed above is typical. Individual students may take the required courses in a different sequence, but these changes must be made in consultation with the student's academic adviser.

The comprehensive requirement for biology majors is the successful completion of BIO-456 and BIO-457.