

BIOLOGY MAJOR (B.S.)

The B.S. in Biology (major code BIOL) is a program that provides a strong background in the biological sciences in preparation for careers in various areas of biology, veterinary, dentistry, medicine, and related professions. Through biology elective courses, the program gives students the opportunity to become familiar with different specialized areas of biological sciences and to engage in independent library or laboratory research.

In addition to meeting the standards and requirements of the College of Arts and Sciences, degree candidates for B.S. in Biology must complete a minimum of 65 credits in biology, chemistry, mathematics and physics. Students majoring in biology with the intent to earn the B.S. degree follow the College of Arts and Sciences B.S. Core Curriculum.

Link to College Core requirement (<http://catalogue.shu.edu/undergraduate/college-arts-sciences/core-curriculum/>).

B.S. Degree Requirements

Code	Title	Hours
BIOL 1211 & BIOL 1212	General Biology- Organisms and General Biology-Organisms Lab	4
BIOL 1222 & BIOL 1223	General Biology-Cell and General Biology-Cell Lab	4
BIOL 2221 & BIOL 2222	Genetics and Genetics Lab	4
BIOL 2238 & BIOL 2239	Cell Biology and Cell Biology Lab	4
BIOL 4199	Senior Biology Seminar	3
BIOL xxxx	Elective Biology courses (above 3000)	14
CHEM 1123 & CHEM 1124	General Chemistry I and General Chemistry II	6
CHEM 1125 & CHEM 1126	General Chemistry Lab I and General Chemistry II Lab	2
CHEM 2321 & CHEM 2322	Organic Chemistry I and Organic Chemistry II	6
CHEM 2315 & CHEM 2316	Organic Chemistry I-Lab and Organic Chemistry II-Lab	2
MATH 1401	Calculus I	4
MATH 1411 or MATH 2111	Calculus II Statistics for Science Majors	4
PHYS 1701 & PHYS 1702	General Physics I and General Physics II	6
PHYS 1811 & PHYS 1812	Physics Laboratory I and Physics Laboratory II	2
Total Hours		65

A Model 4-Year Plan for the B.S. in Biology

Course	Title	Hours
First Year		
First Semester		
BIOL 1211	General Biology- Organisms	3
BIOL 1212	General Biology-Organisms Lab	1
CHEM 1123	General Chemistry I	3
CHEM 1125	General Chemistry Lab I	1

CORE 1001	University Life	1
CORE 1101	Journey of Transformation	3
MATH 1015 or MATH 1401	Pre Calc Math Alg and Trig or Calculus I	4
Hours		16
Second Semester		
BIOL 1222	General Biology-Cell	3
BIOL 1223	General Biology-Cell Lab	1
CHEM 1124	General Chemistry II	3
CHEM 1126	General Chemistry II Lab	1
ENGL 1201	Core English I	3
Select one of the following:		4
MATH 1401	Calculus I	
MATH 1411	Calculus II	
MATH 2111	Statistics for Science Majors	
Hours		15
Second Year		
First Semester		
BIOL 2221	Genetics	3
BIOL 2222	Genetics Lab	1
CHEM 2321	Organic Chemistry I	3
CHEM 2315	Organic Chemistry I-Lab	1
ENGL 1202	Core English II	3
Select one of the following:		3-4
MATH 1411	Calculus II	
MATH 2111	Statistics for Science Majors	
Arts & Sciences Core *		3-4
Hours		17-19
Second Semester		
BIOL 2238	Cell Biology	3
BIOL 2239	Cell Biology Lab	1
CHEM 2322	Organic Chemistry II	3
CHEM 2316	Organic Chemistry II-Lab	1
CORE 2101	Christianity and Cult in Dial.	3
Arts & Sciences Core *		3
Hours		14
Third Year		
First Semester		
BIOL xxxx	Elective Biology courses (above 3000)	3-4
COST 1500	Foundations in Oral Rhetoric	2
PHYS 1701	General Physics I	3
PHYS 1811	Physics Laboratory I	1
Arts & Sciences Core *		6
Hours		15-16
Second Semester		
BIOL xxxx	Elective Biology courses (above 3000)	3-4
CORE 3XXX: Engaging the World		3
PHYS 1702	General Physics II	3
PHYS 1812	Physics Laboratory II	1
Arts & Sciences Core *		3
General Elective		3
Hours		16-17
Fourth Year		
First Semester		
BIOL 4199	Senior Biology Seminar **	0-3
Select one of the following:		3-4
BIOL xxxx	Elective Biology courses (above 3000)	
Any graduate level biology course (with approval) ***		
Arts & Sciences Core *		3-6
General Electives		3-6
Hours		9-19

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Second Semester

BIOL 4199	Senior Biology Seminar ***	0-3
Select one of the following:		3-4
BIOL xxxx	Elective Biology courses (above 3000)	
Any graduate level biology course (with approval) ***		
Arts & Sciences Core *		3-6
General Electives		0-8
Hours		6-21
Total Hours		108-137

- * Consult the College of Arts and Sciences Core Curriculum for information regarding these courses.
- ** Seniors will take Biology Senior Seminar in the Fall if they expect to graduate in December.
- *** See Graduate Catalogue for course listings.