

BACHELOR OF SCIENCE, MAJOR IN BIOLOGY

Bachelor of Science, Major in Biology

Core Curriculum (catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum)		
Component Area I (Communication)		6
Component Area II (Mathematics)		3
Component Area III (Life and Physical Science) (Courses for Science Majors)		8
Component Area IV (Language, Philosophy, and Culture)		3
Component Area V (Creative Arts)		3
Component Area VI (U.S. History)		6
Component Area VII (Political Science/Government)		6
Component Area VIII (Social and Behavioral Sciences)		3
Component Area IX (Component Area Option)		4
Degree Specific Requirements		
MATH 1420	Calculus I	4
Select one of the following:		3-4
MATH 1430	Calculus II	
MATH 3379	Statistical Methods In Practice	
STAT 3379	Statistical Methods In Practice	
CHEM 1411	General Chemistry I	4
CHEM 1412	General Chemistry II	4
CHEM 2323 & CHEM 2123	Organic Chemistry I: Lecture and Organic Chemistry I Lab	4
PHYS 1301 & PHYS 1101	General Phy-Mechanics & Heat and General Physics Laboratory I	4
PHYS 1302 & PHYS 1102	Gen Phy-Snd,Lght, Elec, & Mag and General Physics Laboratory II	4
Major Core		
BIOL 1411	General Botany	4
BIOL 1413	General Zoology	4
BIOL 2440	Introductory Cell Biology	4
BIOL 3450	Introductory Genetics	4
BIOL 3409	General Ecology	4
BIOL 3470	General Microbiology	4
BIOL 4110	Undergraduate Seminar	1
BIOL 4111	Undergraduate Seminar	1
BIOL 4361	Introductory Evolutionary Bio	3
Major		
BIOL advanced electives (Select five 3000-4000 level courses) ¹		15-20
Minor (required)		
Recommended minor is CHEM or MATH ²		10
Advanced General Electives		
Any advanced 3000-4000 level courses from any department needed to meet 120 hour and SHSU advanced hour requirements ³		9
Total Hours		120-126

¹ Students who are not Chemistry minors may substitute CHEM 2325 for one of these advanced BIOL electives. Students who take BIOL 4080, BIOL 4394, or BIOL 4095 are allowed to apply only one of these courses to their Advanced Biology Electives requirement.

² Students choosing CHEM as their minor cannot substitute CHEM 2325 for an advanced BIOL elective.

³ Students should use the elective and/or minor hours to meet the 42-advanced hour requirement for graduation.

Note

This total reflects MATH 1420 satisfying Component Area II and one hour of Component Area IX, and BIOL 1411 and BIOL 1413 satisfying Component Area III.

Teacher Certification in the Life Sciences

Biology & Biomedical Sciences Majors

Students may receive teacher certification in the Life Sciences for grades 8-12 by pairing a major in Biology (BS only as outlined above) with a Secondary Teacher Certification from the Department of Curriculum and Instruction. Students pursuing this degree combination should include BIOL 3492 as one of their advanced biology electives.

For students seeking a Secondary Teacher Certification in the Life Sciences, no grade below C in the science coursework in BIOL is accepted. The required education courses are:

Code	Title	Hours	
Course Requirements			
CISE 3384	The Teaching Profession	3	
CISE 4374	Human Growth and Learning	3	
CISE 4364	Mth Tch Secondary Schools	3	
CISE 4377	Assmt Stdnt Lrng In Secondary	3	
CISE 4394	Creatng Env For Lrng-Secondary	3	
CISE 4396	Std Tch Secondary Classroom	3	
CISE 4397	Std Tch Secondary Classroom	3	
READ 4320	Content Area Reading & Writing	3	
Total Hours		24	
First Year			
Fall	Hours Spring	Hours Summer	Hours
ENGL 1301 ¹	3 ENGL 1302 ¹	3 Component Area V (catalog.shsu.edu/ undergraduate/ academic-policies- procedures/degree- requirements- academic-guidelines/ core-curriculum/ #componentareav)	3
BIOL 1411 or 1413 ²	4 BIOL 1411 or 1413 ²	4	
CHEM 1411	4 CHEM 1412	4	
Component Area IV (catalog.shsu.edu/ undergraduate/ academic-policies- procedures/degree- requirements- academic-guidelines/ core-curriculum/ #componentareaiv)	3 MATH 1420 ³	4	
	14	15	3
Second Year			
Fall	Hours Spring	Hours Summer	Hours
BIOL 2440	4 Biology Core	4 General Electives	4
MATH 1430, 3379, or STAT 3379	3-4 BIOL 3409		
HIST 1301 ⁴	3 BIOL 3450		
CHEM 2323 & CHEM 2123	4 BIOL 3470		
	HIST 1302 ⁴	3	

	Component Area IX (catalog.shsu.edu/ undergraduate/ academic-policies- procedures/degree- requirements- academic-guidelines/ core-curriculum/ #componentareaix)	3	
	POLS 2305 ⁵	3	
	14-15	13	4
Third Year			
Fall	Hours Spring	Hours	
Biology Core	4 Biology Core	4	
BIOL 3409	BIOL 3409		
BIOL 3450	BIOL 3450		
BIOL 3470	BIOL 3470		
POLS 2306 ⁵	3 Component Area VIII (catalog.shsu.edu/ undergraduate/ academic-policies- procedures/degree- requirements- academic-guidelines/ core-curriculum/ #componentareaviii)	3	
PHYS 1301 & PHYS 1101	4 PHYS 1302 & PHYS 1102	4	
Minor	4 Biology Elective	3	
	15	14	
Fourth Year			
Fall	Hours Spring	Hours	
BIOL 4361	3 BIOL 4111	1	
BIOL 4110	1 Biology Electives	4	
Biology Electives	8 General Electives	5	
Minor	3 Minor	3	
	15	13	

Total Hours: 120-121

- ¹ Satisfies Component Area I
- ² Satisfies Component Area III
- ³ Satisfies Component Area II and one hour of Component Area IX
- ⁴ Satisfies Component Area VI
- ⁵ Satisfies Component Area VII