

# BACHELOR OF ARTS, MAJOR IN BIOLOGY

Code	Title	Hours
<b>Bachelor of Arts, Major in Biology</b>		
<b>Core Curriculum</b> (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
<b>Degree Specific Requirements</b>		
Select one of the following:		3
BIOL 4374	Biostatistics	
MATH 3379	Statistical Methods in Practice	
STAT 3379	Statistical Methods in Practice	
CHEM 1411	General Chemistry I	4
CHEM 1412	General Chemistry II	4
MATH 1410	Elementary Functions	4
WOLC 1411	Beginning Foreign Language I	4
WOLC 1412	Beginning Foreign Language II (same field)	4
WOLC 2311	Intermediate Foreign Language	3
WOLC 2312	Intermediate Foreign Language II (same field)	3
<b>Major Core</b>		
BIOL 1411	General Botany	4
BIOL 1413	General Zoology	4
BIOL 2440	Introductory Cell Biology	4
BIOL 3409	General Ecology	4
BIOL 3450	Introductory Genetics	4
BIOL 3470	General Microbiology	4
BIOL 4110	Undergraduate Seminar	1
BIOL 4111	Undergraduate Seminar	1
BIOL 4361	Introductory Evolutionary Bio	3
<b>Major</b>		
Advanced BIOL electives (Select four 3000-4000 level courses) <sup>1</sup>		14
<b>Minor (required)</b>		
Select any minor <sup>2</sup>		18
<b>Advanced General Electives</b>		
Any advanced (3000-4000 level) courses from any department needed to meet 120 hour and SHSU advanced hour requirements <sup>3</sup>		6
Total Hours		120

<sup>1</sup> Advanced Biology Electives should be selected according to specific areas of study as determined by the student and their academic advisor. 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.

<sup>2</sup> Recommended minor is Chemistry or Mathematics.

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

**Note:** This total reflects MATH 1314 satisfying the Core Curriculum requirement for Component Area II (Mathematics), BIOL 1411 and BIOL 1413 satisfying the Core Curriculum requirement for Component Area III (Life and Physical Science), and WOLC 2311 satisfying part (3 semester credit hours) of Component Area IV (Language, Philosophy, and Culture) .

## 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
<b>Course Requirements</b>		
CISE 3384	The Teaching Profession	3
CISE 4364	Mth Tch Secondary Schools	3
CISE 4378	Content Literacy	3
CISE 4380	Respon Of Pro Educator	3
CISE 4394	Creatng Env For Lrng-Secondary	3
CISE 4396	Std Tch Secondary Classroom	3
CISE 4397	Std Tch Secondary Classroom	3
Total Hours		21

#### First Year

Fall	Hours Spring	Hours Summer	Hours
BIOL 1411 or 1413 <sup>1</sup>	4 BIOL 1413 or 1411 <sup>1</sup>	4 Component Area V (catalog.shsu.edu/ undergraduate/ academic-policies- procedures/degree- requirements- academic-guidelines/ core-curriculum/ #componentareav)	3
CHEM 1411	4 CHEM 1412	4	
ENGL 1301 <sup>2</sup>	3 ENGL 1302 <sup>2</sup>	3	
WOLC 1411	4 WOLC 1412	4	
	15	15	3

#### Second Year

Fall	Hours Spring	Hours Summer	Hours
BIOL 2440	4 BIOL 3409, 3450, or 3470	4 General Elective (Advanced)	3
HIST 1301 <sup>4</sup>	3 HIST 1302 <sup>5</sup>	3	
MATH 1410 <sup>5</sup>	4 POLS 2305 <sup>7</sup>	3	
WOLC 2311 <sup>6</sup>	3 WOLC 2312 <sup>6</sup>	3	
	14	13	3

**Third Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours Summer</b>	<b>Hours</b>
BIOL 3409, 3450, or 3470	4 Component Area VIII (catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaviii)	3 General Elective (Advanced)	3
BIOL 4374, MATH 3379, or STAT 3379	3 BIOL 3409, 3450, or 3470	4	
Minor Course <sup>8</sup>	3 Biology Elective (Advanced) <sup>9</sup>	3	
POLS 2306 <sup>7</sup>	3 Minor Course	3	
	13	13	3

**Fourth Year**

<b>Fall</b>	<b>Hours Spring</b>	<b>Hours</b>
BIOL 4110	1 BIOL 4111	1
BIOL 4361	3 Biology Electives (Advanced) <sup>9</sup>	8
Biology Elective (Advanced) <sup>9</sup>	3 Minor Courses (Advanced)	6
Minor Courses	6	
	13	15

Total Hours: 120

- 1 Satisfies Core Curriculum requirement for Component Area III (Life and Physical Science)
- 2 Satisfies Core Curriculum requirement for Component Area I (Communication)
- 3 Satisfies Core Curriculum requirement for Component Area IV Language, Philosophy, and Culture).
- 4 Satisfies Core Curriculum requirement for Component Area VI (U.S. History).
- 5 Satisfies Core Curriculum requirement for Component Area II (Mathematics) and one hour of Component Area IX (Component Area Option).
- 6 Satisfies three semester credit hours of the Core Curriculum requirement for Component Area IX (Component Area Option).
- 7 Satisfies Core Curriculum requirement for Component Area VII (Political Science/Government).
- 8 Recommended minor is Chemistry or Mathematics.
- 9 Advanced Biology Electives should be selected according to specific areas of study as determined by the student and their academic advisor. Students who take BIOL 4080 (catalog.shsu.edu/archives/2019-2020/search/?P=BIOL%204080), BIOL 4394 (catalog.shsu.edu/archives/2019-2020/search/?P=BIOL%204394), or BIOL 4095 (catalog.shsu.edu/archives/2019-2020/search/?P=BIOL%204095) are allowed to apply only one of these courses to their Advanced Biology Electives requirement.

**Note:** This total reflects MATH 1314 satisfying the Core Curriculum requirement for Component Area II (Mathematics), BIOL 1411 and BIOL 1413 satisfying the Core Curriculum requirement for Component Area III (Life and Physical Science), and WOLC 2311 satisfying part (3 semester credit hours) of Component Area IV (Language, Philosophy, and Culture) .