

BACHELOR OF APPLIED ARTS AND SCIENCES: BIOTECHNOLOGY CONCENTRATION

Code	Title	Hours
Requirements		
General Education Requirements (Core Curriculum/Degree Specific Requirements)		42
Major (A.A.S. degree - in-block transfer courses) ¹		36
Concentration: Biotechnology		
BIOL 2440	Introductory Cell Biology	4
BIOL 3450	Introductory Genetics	4
BIOL 3470	General Microbiology	4
BIOL 4110	Undergraduate Seminar	1
or BIOL 4111	Undergraduate Seminar	
BIOL 4381	Advanced Molecular Biology	3
BIOL 4480	Molecular Genetics	4
CHEM 1411	General Chemistry I ²	4
CHEM 1412	General Chemistry II ²	4
CHEM 2323 & CHEM 2123	Organic Chemistry I: Lecture and Organic Chemistry I: Lab	4
Advanced BIOL Electives ³		20
Total Hours		122

¹ A maximum of 66 semester credit hours are transferable. Additional hours may be needed to meet the total 122 SCH requirement. Students may transfer up to 36 SCH of WECM coursework from their A.A.S. degree. For more detailed information concerning General Education, Major, requirements, and transferable courses, please visit Career and Technology Program (<https://catalog.shsu.edu/archives/2025-2026/undergraduate/colleges-academic-departments/science-and-engineering-technology/agricultural-science/career-technology-program/#text>).

² CHEM 1411 and CHEM 1412 satisfy the Core Curriculum requirement for Component Area III (Life and Physical Science).

³ Select five courses from the Advanced BIOL Electives course listing below.

Notes

Students must earn a 2.0 minimum overall GPA in all coursework.

Students must meet a 2.0 minimum overall major GPA in all major coursework.

Students must earn a 2.0 minimum SHSU GPA in all coursework.

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This degree program is administered by the Department of Agricultural Sciences in the College of Science and Engineering Technology.

Code	Title	Hours
Advanced BIOL Electives ³		
Select five courses from the following:		20
BIOL 3410	Human Biology	
BIOL 3420	Comparative Vertebrate Anatomy	
BIOL 3440	General Physiology	
BIOL 3460	Pathophysiology	
BIOL 3480	Developmental Biology	
BIOL 3490	Histology	
BIOL 4095	Undergraduate Research Topics in Biology	
BIOL 4096	Special Topics In Undergraduate Biology	
BIOL 4460	Parasitology	
BIOL 4490	Cell Biology	
BIOL 4493	Endocrinology	

First Year

Fall	Hours	Spring	Hours
Core Curriculum and/or Major (A.A.S. degree in-block transferred courses) ¹		15 Core Curriculum and/or Major (A.A.S. degree in-block transferred courses) ¹	15
		15	15

Second Year

Fall	Hours	Spring	Hours
Core Curriculum and/or Major (A.A.S. degree in-block transferred courses) ¹		18 Core Curriculum and/or Major (A.A.S. degree in-block transferred courses) ¹	18
		18	18

Third Year

Fall	Hours	Spring	Hours
Advanced BIOL Electives ²		4 Advanced BIOL Electives ²	4
BIOL 2440		4 BIOL 3450	4
CHEM 1411 ³		4 BIOL 3470	4
General Education (As needed)		4 CHEM 1412 ³	4
		16	16

Fourth Year

Fall	Hours	Spring	Hours
Advanced BIOL Electives ²		4 Advanced BIOL Electives ²	8
BIOL 4110 or 4111		1 BIOL 4480	4
BIOL 4381		3	
CHEM 2323 & CHEM 2123		4	
		12	12

Total Hours: 122

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² Select five courses from the Advanced BIOL Electives course listing below.

³ CHEM 1411 and CHEM 1412 satisfy the Core Curriculum requirement for Component Area III (Life and Physical Science).

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Advanced BIOL Electives²		
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BIOL 4095	Undergraduate Research Topics in Biology	
BIOL 4096	Special Topics In Undergraduate Biology	

BIOL 4460	Parasitology
BIOL 4490	Cell Biology
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The Texas Higher Education Coordinating Board (THECB) marketable skills initiative is part of the state's **60x30TX plan** and was designed to help students articulate their skills to employers. Marketable skills are those skills valued by employers and/or graduate programs that can be applied in a variety of work or education settings and may include interpersonal, cognitive, and applied skill areas.

The BAAS: Biotechnology Concentration is designed to provide graduates with the following marketable skills:

- Master the depth of knowledge required for a degree in biotechnology.
- Demonstrate critical thinking.
- Communicate effectively.
- Work collaboratively.