

# TRANSFER ARTICULATION: BIOLOGY

Biology, the study of living things, is an exciting and dynamic field that offers many areas of focus. Students may choose to study how life functions at the molecular, cellular, organismal, or ecological levels. The biological sciences provide opportunities to study viruses, bacteria, fungi, plants, and animals and to investigate the biochemical, physiological, morphological, anatomical, behavioral, ecological, and evolutionary processes that make each organism unique.

The Bachelor of Arts or Bachelor of Science in Biology are ideal degrees for students interested in gaining a broad background in the biological sciences, while allowing flexibility to focus on a specific biology sub-discipline. All students majoring in biology will develop competence in the fundamental principles of biology and will gain experience in botany, zoology, cellular biology, microbiology, genetics, ecology and evolution. Students take an active role in creating a degree plan that best meets their interests and their career goals. Most students pursue careers in terrestrial ecology, animal physiology, animal behavior, medical professions, biotechnology, or teacher education. Students interested in forensic science combine an extensive background in biology with substantial coursework in chemistry and criminal justice to prepare them for work with state and federal agencies

The Biomedical Sciences degree offered by the Department of Biological Sciences provides a robust, yet flexible curriculum with an emphasis on studying the biological basis of health and disease. All students majoring in Biomedical Sciences will develop competence in the fundamental principles of biology and will gain experience in botany, zoology, cellular biology, microbiology, genetics, chemistry, mathematics and evolution. The Biomedical Sciences degree is designed to thoroughly prepare students for entrance into medical, dental, pharmacy, physician assistant, and other professional schools, as well as graduate study in the biomedical sciences and employment as a laboratory research assistant. No minor is required for the degree.

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**Location:** Life Sciences Building, Room 105

## Courses Transfer Students Should Take:\*

SHSU Course Number	College/TCCN	SHSU Course Title	Semester Credit Hours
BIOL 1406	BIOL 1406	General Biology I	4
BIOL 1407	BIOL 1407	General Biology II	4
CHEM 1411	CHEM 1411	General Chemistry I	4
CHEM 1412	CHEM 1412	General Chemistry II	4
CHEM 2323	CHEM 2323	Organic Chemistry I: Lecture	3
CHEM 2123	CHEM 2123	Organic Chemistry I Lab	1
PHYS 1101	PHYS 1101	General Physics Laboratory I	1
PHYS 1301	PHYS 1301	General Phy-Mechanics & Heat	3

**\*Note:** Other courses may transfer, depending upon the selected degree or program. Meet with your academic advisor to confirm whether coursework will transfer from another institution. For a complete listing of degree-specific requirements, please, review the degree plan within the Undergraduate Catalog (<http://catalog.shsu.edu/archives/2023-2024/undergraduate/>).

- Bachelor of Arts, Major in Biology (<http://catalog.shsu.edu/archives/2023-2024/undergraduate/colleges-academic-departments/science-and-engineering-technology/biological-science/ba-biology/>)
- Bachelor of Science, Major in Biology (<http://catalog.shsu.edu/archives/2023-2024/undergraduate/colleges-academic-departments/science-and-engineering-technology/biological-science/bs-biology/>)
- Bachelor of Science, Major in Biomedical Sciences (<http://catalog.shsu.edu/archives/2023-2024/undergraduate/colleges-academic-departments/science-and-engineering-technology/biological-science/bs-biomedical-science/>)
- Minor in Biology (<http://catalog.shsu.edu/archives/2023-2024/undergraduate/colleges-academic-departments/science-and-engineering-technology/biological-science/minor-biology/>)
- Minor in Conservation Biology (<http://catalog.shsu.edu/archives/2023-2024/undergraduate/colleges-academic-departments/science-and-engineering-technology/biological-science/minor-conservation-biology/>)
- Minor in Environmental Science (<http://catalog.shsu.edu/archives/2023-2024/colleges-academic-departments/science-and-engineering-technology/environmental-geosciences/minor-environmental-science/>)

## Field of Study

Sam Houston State University supports the State of Texas Fields of Study (<https://www.highered.texas.gov/our-work/supporting-our-institutions/program-development/texas-transfer-framework/>).

Most institutions offer a General Biology I and General Biology II series as freshman course. At SHSU, we also use General Biology I and General Biology II as freshman courses. It is recommended that students take BIOL 1406 and 1407, as well as CHEM 1411, 1412, and 2323.

The Bachelor of Arts with a major in Biology requires students to meet the foreign language requirements (4 courses in the same language).

### Forensic Science and Biology

Transfer students seeking the Bachelor of Science with a Biology major and with a Forensics emphasis should consider a minor in Chemistry and/or Criminal Justice. The required first two years of core courses for the Forensics emphasis are the same as the above listed courses for the major in Biology. The emphasis in Forensics is accomplished by selecting from appropriate upper division courses (i.e., junior and senior level).

- A maximum of 66 transfer credit hours ("C" or better excluding kinesiology) may be applied to a degree at SHSU. Students should carefully select courses to complete the associate degree while minimizing the number of hours that might exceed the 66-hour cap for transfer credit.
- **In addition to the major core above, transfer students should complete all or as much as possible of the state mandated 42-hour core curriculum** including: Communications; Mathematics; Life & Physical Science; Language, Philosophy and Culture; Social and Behavioral Science; and Component Area Option if available. **Use your institution's 42-hour core as a guide to maximizing courses in the SHSU Biology major core (i.e., select courses in your institution's state mandated core which match those in the SHSU Biology major core).**

The Core Curriculum (<http://catalog.shsu.edu/archives/2023-2024/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/>) at Sam Houston State University (to be used by all incoming students as of fall 2014) contains 42 semester credit hours, encompassing nine component areas. Each component area has a minimum credit hour requirement and a selection of specific courses that may be used to satisfy the requirement. The Core Curriculum (<http://catalog.shsu.edu/archives/2023-2024/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/>) details Sam Houston State University courses and their Texas Common Course Number (TCCN) equivalents for college transfer students which comprise SHSU's core curriculum.

Many SHSU disciplines including the sciences, business, and education require specific courses from the SHSU core as degree specific graduation requirements. To minimize cost and time to complete degree requirements always select SHSU/transfer core courses specified as degree requirements in your intended major. If you have not decided on a major, select core courses supporting your intended area of academic concentration.

Prior to enrolling in core classes, students are encouraged to review specific degree requirements for their major. Selection of major-specified core courses reduces the total number of hours required for graduation.

If you do not see a Texas Common Course Number (TCCN) mapping a specific core course to your transfer institution, please go to Transfer Course Equivalency Guide (<https://ww2.shsu.edu/regr27wp/>) and select your institution from the drop-down menu. The result will list all currently mapped transfer courses from your institution to SHSU courses.