

BIOLOGY, AS-T

Program Description

The major in biology prepares students for careers in the health professions, teaching, forestry, agriculture, environmental protection and conservation, wildlife biology, biotechnology, microbiology, genetics, basic research, and many other fields.

The Associate in Science in Biology for Transfer degree prepares students for transfer to California State Universities (CSUs). Students who complete the Associate in Science in Biology for Transfer degree will be ensured preferential transfer status to CSUs for Biology majors and majors in related disciplines. The Associate in Science in Biology for Transfer degree requirements will fulfill the lower division major requirements at many CSUs. Students are advised, however, to meet with a counselor to determine the lower division course requirements for specific CSUs. This degree may also provide excellent preparation for other majors.

Learn more about the program on the [Biology website](#).

Program Learning Outcomes

- Graduates will be able to use the scientific process to formulate questions, design experiments to test hypotheses, interpret experimental results to draw conclusions, communicate results both orally and in writing, and critically evaluate the use of the scientific method from published sources.
- Graduates will be able to apply evolutionary theory at the molecular, cellular, organismal, and population levels to explain the unity and diversity of living things.

Units Required

- Major: 55-58

Associate Degree Requirements

Associate in Science in Biology for Transfer requires completion of a minimum of 90 units, including:

- Core and support courses for the major (55-58 units)¹
- **Summer Session 2025 only**—CSU General Education Breadth (CSU GE Breadth) or Intersegmental General Education Transfer Curriculum (IGETC)² (49-58 units) (full certification is required). For this Associate Degree for Transfer, students have the additional option of completing CSU GE Breadth for STEM Majors or IGETC for STEM Majors (41-44 units)
- **Beginning Fall Quarter 2025**—California General Education Transfer Curriculum (Cal-GETC)³ (45 units) (full certification is required)
- Transferable electives necessary to meet the 90-unit minimum requirement

to transfer to CSU should complete this course as part of their GE or elective units.

³ Cal-GETC begins in Fall Quarter 2025. Please see a counselor for more information.

Note: All courses pertaining to the major must be completed with a grade of "C" (or "P") or better. In addition, the student must obtain a minimum GPA of 2.0.

Core and Support Courses

Code	Title	Units
Core Courses		
BIOL 1A	PRINCIPLES OF CELL BIOLOGY	6
BIOL 1B	FORM & FUNCTION IN PLANTS & ANIMALS	6
BIOL 1C	EVOLUTION, SYSTEMATICS & ECOLOGY	6
Support Courses		
<i>List A</i>		
CHEM 1A	GENERAL CHEMISTRY	5
CHEM 1B	GENERAL CHEMISTRY	5
CHEM 1C	GENERAL CHEMISTRY & QUALITATIVE ANALYSIS	5
MATH 1A	CALCULUS	5
or MATH 1AH	HONORS CALCULUS I	
MATH 1B	CALCULUS	5
or MATH 1BH	HONORS CALCULUS II	
And complete one of the two sections below:		12-15
Section 1		
PHYS 2A & PHYS 2B & PHYS 2C	GENERAL PHYSICS and GENERAL PHYSICS and GENERAL PHYSICS	
Section 2		
PHYS 4A & PHYS 4B	GENERAL PHYSICS (CALCULUS) and GENERAL PHYSICS (CALCULUS)	
Total Units		55-58

¹ Some units from the core and support courses may be used to satisfy the GE requirement. Please see a counselor for more information.

² Summer Session 2025 is the final term during which CSU GE Breadth and IGETC may be used. Please see a counselor for more information. Important Note: Although it is possible to fulfill the requirements for the Associate Degree for Transfer by completing the IGETC for UC pattern, admission to CSU requires completion of an Oral Communication course (IGETC Area 1C; CSU GE Area A-1); therefore, students who plan