



PROGRAM OF STUDY

Biology Associate in Science for Transfer

This curriculum is designed to allow students to study a range of biological topics in cell and molecular biology, survey the diversity of organisms on our planet, and receive additional STEM preparation.

The coursework prepares students to employ the scientific method, think critically and apply reasoning skills to analyze real world situations. All students receiving the AS-T degree in Biology should be fully prepared for transfer to a California State University and have the foundation needed to pursue a baccalaureate degree to prepare for careers as biologists in fields such as research, industry and education. The requirements for the degree include two semesters of biology courses, two semesters of chemistry, two semesters physics and one semester of mathematics. It is strongly recommended that biology majors take an additional mathematics class and two semesters of organic chemistry in addition to the degree requirements, however this cannot be included as a requirement due to unit limitations.

Program Outcomes:

OUTCOME 1:

Use the scientific method to design, carry out, summarize & evaluate tests of biological hypotheses using modern laboratory equipment.

OUTCOME 2:

Describe the biological processes that occur within or among organisms (e.g., protein synthesis, cell-to-cell communication, genetic transmission, digestion, reproduction, and nutrient flow through).

OUTCOME 3:

Students who complete the Associate in Science in Biology for Transfer degree will be able to describe the variations observed in organisms and explain how populations have evolved through time.

OUTCOME 4:

Students who complete the Associate in Science in Biology for Transfer degree will be eligible and prepared for admission (SB 1440 and Education Code 66746) to California State University system.

Courses Needed for Biology (Transfer)

Required Core (9 units):	Units
BIOL A180 Cell and Molecular Biology	4.0
BIOL A185 Diversity of Organisms	5.0
Subtotal	9.0

List A (22 units):	Units
CHEM A180 General Chemistry A	5.0

List A (22 units):	Units
CHEM A185 General Chemistry B	5.0
MATH A180 Calculus 1 <u>or</u> MATH A180 Calculus 1 Honors	4.0
PHYS A120 Algebra Based Physics: Mechanics <u>and</u> PHYS A125 Algebra Based Physics: Electricity/Magnetism <u>or</u> PHYS A185 Calculus Based Physics: Mechanics <u>and</u> PHYS A280 Calculus Based Physics: Electricity/Magnetism	4.0/4.0
Subtotal	22.0

General Education	Units
CSU-GE for Stem: 33 units, 4 units double counted IGETC for Stem: 31 units, 2 units double counted	
Subtotal	29.0

Transfer elective units as needed to satisfy 60-unit degree requirement	Units
Subtotal	Varies

Total Units 60.0