

# BIOLOGY, ASSOCIATE IN SCIENCE DEGREE FOR TRANSFER (AS-T)

Financial Aid Eligible  
Banner Code: 1\_AST\_BIOL  
Control Number: 35918

Students graduating with an Associate in Science in Biology for Transfer Degree are well positioned to complete a Bachelor's Degree in a similar major within the California State University system with 60 units of upper-division coursework. Students who complete the Biology AS-T degree are guaranteed admission to the CSU system, but not to a particular campus or major. Students must maintain a minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework. While a minimum 2.0 is required for CSU admission, some majors may require a higher GPA. Please consult a counselor for more information.

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

1. Use the scientific method to design, carry out, summarize, and evaluate tests of biological hypotheses using modern laboratory equipment.
2. Describe the biological processes that occur within or among organisms (e.g., protein synthesis, cell-to-cell communication, genetic transmission, digestion, reproduction, nutrient flow through an ecosystem).
3. Describe the variations observed in organisms and explain how populations have evolved through time.
4. Students will be eligible and prepared for admission (SB 1440 and Education Code 66746) to California State University system schools.

## Associate Degree for Transfer Requirements

The following is required for all AA-T or AS-T degrees:

1. Minimum of 60 CSU-transferable semester units.
2. Minimum GPA of at least 2.0 in all CSU transferable coursework. While a minimum of 2.0 is required for admission, some majors require a higher GPA. Consult with a counselor for more information.

3. Completion of a minimum of 18-semester units in the major as detailed in the Degree and Certificate section of this catalog. All courses in the major must be completed with a grade of C or better.
4. Certified completion of the California State University General Education-Breadth pattern (CSU General Education Breadth – Option 2 (<https://catalog.cccd.edu/orange-coast/general-education-patterns/associate-degree-general-education-option-2/>)) OR the Intersegmental General Education Transfer Curriculum (IGETC – Option 3 (<https://catalog.cccd.edu/orange-coast/general-education-patterns/associate-degree-general-education-option-3/>)).

Course	Title	Units
<b>Required Courses</b>		
<i>Core Courses</i>		
BIOL A180	Introduction to Biology for Majors 1: Cell and Molecular Biology	4
BIOL A185	Introduction to Biology for Majors 2: Ecology, Evolution, Diversity, and Physiology	5
Core Courses Subtotal		9
<i>List A</i>		
CHEM A180	General Chemistry A	5
CHEM A185	General Chemistry B	5
MATH A180/A180H	Calculus 1	4
Select one of the following:		8
PHYS A120 & PHYS A125	Algebra Based Physics: Mechanics and Algebra Based Physics:Electricity/ Magnetism	
PHYS A185 & PHYS A280	Calculus Based Physics: Mechanics and Calculus Based Physics: Electricity/ Magnetism	
Program Major Units		22
CSU General Education Breadth or IGETC for CSU		37-39
Transferable electives as needed to satisfy unit requirement		Varies
<b>Total Units</b>		<b>60</b>