

# BIOLOGY, ASSOCIATE IN SCIENCE DEGREE FOR TRANSFER

**Banner Code:** 3\_AST\_BIOL

**Control Number:** 37925

**Financial Aid Eligible**

Biology is the study of living organisms from the macro level to the molecular level. Examples of biological science fields encompassed by biology are ecology, evolutionary biology, zoology, botany, cell, and molecular biology, genetics, marine science, and biotechnology. Many of the core concepts studied in biology also directly relate to various health care disciplines such as anatomy, immunology, microbiology, and physiology.

This Transfer Model Curriculum presumes completion of IGETC or CSU-GE Breadth for STEM, allowing for completion of 6 units of non-STEM GE work after transfer.

Required Core Options 1 and 2 represent Options 1-4 on the TMC.

List B – Additional Major Preparation if possible based on unit limitation and required articulation exists (0-4 units).

Select one (1) additional course that is articulated as a major preparation at a CSU.

Associate Degrees for Transfer (AA-T or AS-T) are open to all Coastline students. Students who do not plan on transferring to a California State University school should consult their Counselor regarding the benefits of an AA-T/AS-T degree based on their goals. Students earning an AA-T or AS-T and intending on transferring to a California State University school receive transfer admission benefits for specific majors at many California State University campuses. Visit the Transfer Information (<https://catalog.cccd.edu/coastline/transfer-information/>) catalog page for more information.

## Program Level Student Learning Outcomes

Upon completion of this program, students will be able to:

1. Explain three fundamental processes present in biology such as metabolism, homeostasis, growth, reproduction, development, genetics or organism physiology.
2. Given the appropriate laboratory setting, design and apply the process of science to address a hypothesis.
3. Communicate biological concepts effectively in written and/or oral forms.
4. Find, select and evaluate scientific information present in primary research literature, mass media, online or other sources.

## Associate Degree for Transfer Requirements

1. Minimum of 60 CSU-transferable semester units. A minimum of 12 units must be in residence at Coastline College.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework.
3. Completion of a minimum of 18 semester units in an Associate Degree for Transfer major as detailed in the catalog.

4. Certified Completion of the California State University General Education-Breadth pattern (CSU GE Breadth - Coastline's Option 2 General Education pattern), OR the Intersegmental General Education Transfer Curriculum (IGETC - Coastline Option 3 General Education pattern).

Course	Title	Units
<b>Required Core</b>		
Complete the following:		
BIOL C180	Cell and Molecular Biology	4
BIOL C185	Diversity of Organisms	5
List A: Supporting science and mathematics		
Chemistry Requirement:		
CHEM C180	General Chemistry A	4
CHEM C180L	General Chemistry A Lab	1
CHEM C185	General Chemistry B	4
CHEM C185L	General Chemistry B Lab	1
Mathematics Requirement:		
MATH C180	Calculus 1	5
Physics Requirement:		
PHYS C120 & PHYS C125	Algebra Based Physics: Mechanics and Algebra Based Physics: Electricity and Magnetism	8
or PHYS C185 & PHYS C280	Calculus Based Physics: Mechanics and Calculus Based Physics: Electricity and Magnetism	
List B: Additional major preparation		
Choose at least one course or combination of courses, not to exceed a total of 5 units:		4-5
CHEM C220 & C220L	Organic Chemistry A and Organic Chemistry A Lab	
MATH C160	Introduction to Statistics	
BIOL C210	General Microbiology	
Units Required for Major		36-37
CSU General Education or IGETC for STEM		31-33
<b>Total Units</b>		<b>60</b>

## Biology ADT Program Map

This Associate Degree for Transfer (ADT) program map is a recommended example of all major (program) requirements as well as general education requirements for two-year completion or transfer. This path may be altered to fit your individual academic needs. These two-year program maps were created by program faculty and counselors and demonstrate a recommended path to completion. **Students are advised to meet with a Coastline Counselor for individualized program planning.**

### Your Path to Success

Follow this path to earn your ADT in Biology in 2 years.

Don't forget to consult a counselor for an education plan!

See a graphic of the Biology Associate Degree for Transfer roadmap.

Course	Title	Units
1st Semester		
MATH C180	Calculus 1	5
ENGL C100	Freshman Composition	4

Course	Title	Units
CHEM C180	General Chemistry A	4
CHEM C180L	General Chemistry A Lab	1
COUN C105	Strategies for College Success	3
<b>2nd Semester</b>		
ENGL C102	Critical Reasoning, Reading, and Writing	3
HIST C175	United States History since 1876	3
CHEM C185	General Chemistry B	4
CHEM C185L	General Chemistry B Lab	1
ANTH C100	Cultural Anthropology	3
CMST C110	Public Speaking	3
<b>3rd Semester</b>		
BIOL C180	Cell and Molecular Biology	4
CHEM C220	Organic Chemistry A	3
CHEM C220L	Organic Chemistry A Lab	2
PHYS C120	Algebra Based Physics: Mechanics	4
ART C102	Contemporary Art History	3
<b>4th Semester</b>		
BIOL C185	Diversity of Organisms	5
PSCI C180	American Government	3
BIOL C122	Bioethics	3
PHYS C125	Algebra Based Physics: Electricity and Magnetism	4
SOC C233	Racial and Ethnic Relations in America	3