

# BIOLOGY – ASSOCIATE IN SCIENCE DEGREE FOR TRANSFER TO CSU

Top Code:

0401.00

The Associate in Science in Biology for Transfer provides student with a foundation in the biological and physical sciences for upper division in course work in the biological sciences or related fields. The Associate in Science in Biology for Transfer is designed to provide students a clear transfer pathway to the CSU within the biology major and the completion of baccalaureate degree, with guaranteed admission to a CSU to a similar major with junior standing, and the ability to complete their remaining requirements within 60 semester or 90 quarter units.

The biological sciences have a wide range of career choices available. Earning a degree in Biology is a starting point for careers in the biological sciences, biomedical sciences, biotechnology, environmental biology, agriculture and other related fields.

## Associate Degree for Transfer Requirements

- 60 semester or 90 quarter CSU-transferable units.
- the California State University-General Education-Breadth pattern (CSU GE-Breadth); or the Intersegmental General Education Transfer Curriculum (IGETC) pattern.
- a minimum of 18 semester or 27 quarter units in the major or area of emphasis as determined by the community college district.
- obtainment of a minimum grade point average (GPA) of 2.0.
- earn a grade of C or better in all courses required for the major or area of emphasis, or P if the course is graded on a P/NP basis.

**Please note:** The courses that universities and colleges require for transfer vary. When selecting courses for transfer purposes, students should consult with Counseling Services to determine the particular transfer requirements of specific institutions.

## Program Outcomes

- Create scientific presentations and/or papers based on the students' own novel experimental findings and research.
- Recognize biological problems, propose testable solutions, and implement those tests through diverse methods.
- Ability to analyze and summarize data and to infer conclusions based on those data.
- Apply appropriate technological and computational tools to solve biological problems.
- Diagnose and classify biological diversity, and understand of the functions and interactions of the components of diversity in ecosystems.

## Associate in Science in Biology for Transfer Degree

Code	Title	Units
<b>Required Core</b>		
BIOL 010A	CELLULAR BIOLOGY, GENETICS AND EVOLUTION	5
BIOL 010B	THE DIVERSITY OF LIFE ON EARTH: STRUCTURE, FUNCTION AND ECOLOGY	4
<b>List A</b>		
CHEM 001A & CHEM 001B	GENERAL CHEMISTRY AND CHEMICAL ANALYSIS I and GENERAL CHEMISTRY AND CHEMICAL ANALYSIS	10
MATH 005A	SINGLE VARIABLE CALCULUS I	3-5
	or MATH 005A HONORS SINGLE VARIABLE CALCULUS I	
	or MATH 006A CALCULUS FOR LIFE SCIENCES I	
PHYS 002A & PHYS 002B	GENERAL PHYSICS and GENERAL PHYSICS	8
<b>Required Subtotal</b>		<b>30-32</b>
CSU General Education or IGETC CSU Pattern		31-33
Transferable Electives (as needed to reach 60 transferable units)		
<b>Degree Total *</b>		<b>60</b>

\* This AS-T can be earned by completing IGETC for STEM or CSU GE for STEM, which results in two fewer courses than the traditional GE patterns. IGETC for STEM requires all courses in Areas 1, 2, and 5 of the traditional IGETC; one course in Area 3A; one course in Area 3B; and two courses in Area 4 from two different disciplines. CSU GE for STEM requires all courses in Areas A, B, and E of the traditional CSU GE; one course in Area C1; one course in Area C2; one course in Area D; and one course in Area F. See a counselor for more information.

Visit the Program Mapper (<https://pasadena-city.programmapper.ws/academics/interest-clusters/35afad1b-8598-4ecf-a320-0ed4834a7df8/programs/9384e1f8-ae88-2f09-f1bc-c6c311d89921/>) for a suggested sequence of courses.

## General Education Requirements for the Associate in Science Degree for Transfer

- General Information (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/>)
- CSU Breadth (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#csubreadthtext>)
- IGETC (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#igetctext>)