

BIOLOGY, ASSOCIATE IN SCIENCE FOR TRANSFER

The Associate in Science in Biology is intended to prepare students to transfer into the CSU system with the knowledge and experience to succeed in upper-division coursework in biology to pursue a baccalaureate degree in biology or related majors. The core curriculum of BIOL 21 and BIOL 22 provides students with a strong foundation in biology, and by focusing on key concepts and themes, aims to build a framework for organizing the vast range of topics included in this course of study. In addition, the program seeks to develop an awareness of the nature of scientific inquiry, to build connections between areas within biology and with related disciplines, and to strengthen students' academic and critical thinking skills. Lastly, recognizing that students will be making choices relating to future study and careers, the program aims to engage students in activities, discussions and experiences aimed at forming a concrete basis for these important decisions. Students must complete the Associate Degree for Transfer requirements to earn the AS-T degree.

Learning Outcomes

Upon successful completion of the program, students will be able to:

- Apply major biological concepts and principles when investigating life at all levels, from molecules to ecosystems.
- Learn independently and collaboratively within Biology and related disciplines.
- Employ tools and techniques commonly used in laboratory and field research.
- Apply the scientific method of inquiry to investigate and solve problems in Biology.

Associate in Science for Transfer Degree Major Requirements

Code	Title	Units
Required Core		
BIOL 21	Concepts in Biology I: Cells, Genetics, and Organisms	5
BIOL 22	Concepts in Biology II: Diversity, Ecology, and Evolution	5
List A		22
CHEM 1A	General Chemistry I	
CHEM 1B	General Chemistry II	
MATH 18	Calculus and Analytic Geometry for Biology/Soc Sci/Business	
	or MATH 20A Calculus with Analytic Geometry I	
Select one of the following sequences:		
PHYS 2A & PHYS 2B	General Physics I and General Physics II	
PHYS 3A & PHYS 3B	Science and Engineering Physics I and Science and Engineering Physics II	
List B ¹		0-7
ANAT 1	Human Anatomy with Cadaver Lab	
BIOL 25 & BIOL 26	Applied Microbiology Lecture and Applied Microbiology Laboratory	

CHEM 12A	Organic Chemistry I	
CHEM 12B	Organic Chemistry II	
GEOL 2 & GEOL 2L	Physical Geology and Physical Geology Laboratory	
MATH 13	Pre-Calculus	
	or MATH 13A College Algebra for STEM & MATH 13B and Trigonometry	
MATH 16	Elementary Statistics	
	or PSYC/ SOCI 19 Introduction to Statistics for the Social Sciences	
MATH 20A	Calculus with Analytic Geometry I	
MATH 20B	Calculus with Analytic Geometry II	
PHSO 1 & PHSO 2	Human Physiology and Human Physiology Lab	
TOTAL MAJOR UNITS		32-39
Additional Requirements		21-28
Complete CSU General Education, IGETC, CSU GE for STEM, or IGETC for STEM pattern and electives, if needed, for a total of 60 transferable units.		

Total Units 60

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Recommended major preparation (Optional - not required for the degree but may be required by transfer institution)

Please refer to the graduation requirements section of the Catalog for information about degree and certificate requirements including Reading and Writing, Mathematics, Information Competency, and General Education requirements.