BIOLOGY - ASSOCIATE IN SCIENCE TRANSFER DEGREE

Plan Code: 5505B/C

This program provides students with a foundation in core principles of biological sciences, including scientific reasoning, cell/molecular biology, principles of genetics, evolution, organismal, and ecology in preparation for transfer to a baccalaureate degree program in biology at a university. Students at the four-year university have the opportunity to pursue a bachelor's degree specializing in areas such as anatomy and physiology, botany, cell and molecular biology, clinical science, ecology, environmental biology, field biology, marine biology, microbiology, organismal biology, or zoology. A bachelor's degree in biology may lead to opportunities in graduate/professional school or careers in research, biotechnology, dentistry, pharmacy, medicine, and veterinary medicine among many other diverse fields.

Program Student Learning Outcomes

- Demonstrate the ability to attain the Institutional Student Learning Outcomes (ISLOs).
- Utilize the components of the scientific method to evaluate appropriately designed experiments, analyze scientific data to formulate reasonable conclusions, and properly communicate the results.
- Recognize and evaluate the relationship between structure and function at all levels: molecular, cellular, and organismal (morphological, physiological, and developmental).
- Apply ecological and evolutionary concepts to explain the diversity and interrelationships of organisms on earth, including human impact on the biosphere.

Program Requirements

This degree requires the completion of General Education coursework plus the following:

Code Number	Course Title	Units
REQUIRED CORE COURSES		
BIO 1A	Biology for Science Majors	5
BIO 1B	Biology for Science Majors	5
Subtotal Units		**10**
IN ADDITION, complete all courses from LIST A:		
LIST A		
CHEM 1A	General Chemistry (5.5)	
CHEM 1B	General Chemistry (5.5)	
MATH 60	First Calculus Course (5)	
PHYS 2A	General Physics (4.5)	
PHYS 2B	General Physics (4.5)	
Subtotal Units		**25**
Required Subtotal		**35**
Complete one of the following: [1]		37-39
CSU GE Breadth (Plan B) (https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-b/)		
IGETC Pattern (Plan C) (https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-c/)		
Transferable Electives (as needed to reach 60 transferable units) [2]		
Degree Total		**60**

1. Units for the major may be double-counted for CSU GE or IGETC; see counselor for limitations.
2. Elective units from course(s) numbered 1-99, if needed, to reach 60 transferable units.

To earn an associate degree for transfer, a student must complete 60 semester units that are eligible for transfer to a CSU that consist of either the IGETC pattern or CSU GE breadth and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

RECOMMENDED but not required courses:

Code Number	Course Title	Units
CHEM 12A	Organic Chemistry	5.5
CHEM 12B	Organic Chemistry	5.5
MATH 70	Second Calculus Course	5
PHYS 3A	Physics for Sci. & Eng. - Mechanics	5.5
PHYS 3B	Physics for Sci. & Eng. - E & M	4.5