



MATH, SCIENCE & ENGINEERING DIVISION
 MS3 BUILDING
 ROOM SA-212
 (408) 270-6490

STUDENT SUCCESS CENTER
 STUDENT SERVICES BUILDING
 ROOM SC-230A
 (408) 270-6475

ASSOCIATE IN ARTS

2018-2019

BIOLOGY

The purpose of the associate degree in Biology is to provide a lower division science foundation for those interested in pursuing biology as a major field of study. This major prepares students to transfer to any California State University or University of California campus. Students considering careers in research, teaching, medical fields, biotechnology, or other related fields require a foundation in biological sciences. The Biology major is an ideal academic preparation for entry into these professions. A grade of "C" or better in each major course and major elective course is required for this degree.

Program Learning Outcomes:

- Employ the scientific method to pose testable hypotheses and make predictions.
- Design and implement controlled experiments or observational studies to test predictions.
- Collect, quantify, summarize, interpret, and present biological data.
- Critically assess biological arguments.
- Use computers to access multimedia lessons and conduct Internet searches for information on biological phenomena.
- Write scientific papers and laboratory reports.
- Use scientific terms appropriately.
- Describe the importance of evolution as a guiding principle in biology.
- Explain and apply general biological principles to include biochemistry, cell and molecular biology, organismal biology, genetics, evolutionary biology, and ecology.
- Integrate the concepts and systems of homeostasis.
- Compare and contrast the cells, tissues, organs, and organ systems of plant and animal organisms.
- Apply general chemistry principles to biological processes and systems.

Major Requirements

BIOL	004A	General Principles and Cell Biology	5.0
BIOL	004B	Organismal Biology and Biodiversity	5.0
CHEM	001A	General Chemistry	5.0
CHEM	001B	General Chemistry	5.0

Required Major Electives (*8 units from the following courses*) 8.0

BIOL	020	Human Biology	BIOL	065	Wildlife Biology
BIOL	025	Forensic Biology	BIOL	071	Human Anatomy
BIOL	033	Biotechnology & Society	BIOL	072	Human Physiology
BIOL	061	Human Heredity	BIOL	074	General Microbiology
BIOL	062	Plants and Human Welfare	BIOL	080	Natural History Field Program
BIOL	063	Ecology	ENVIR	010	Environmental Science
BIOL	064	Marine Biology			

Recommended Chemistry/Math Preparation

CHEM	012A	Organic Chemistry
CHEM	012B	Organic Chemistry
MATH	063	Elementary Statistics
MATH	071	Calculus I with Analytic Geometry
MATH	072	Calculus II with Analytic Geometry

Major Requirements	20.0
Required Electives	8.0
General Education Requirements*	33.0
Physical Activity	<u>1.0</u>
Total units	62.0

*6 units of G.E. (Area B) can be met in Physical and Biological Science from required major/elective courses