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

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 1.0
Total units 62.0

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

June 2017