

BIOLOGY (BIOL)

BIOL 004A General Principles and Cell Biology 5 Units

BIOL 004A is the first course in a two term majors-sequence for students preparing for careers in the sciences, science education, or medicine. This lecture and laboratory course emphasizes the nature of science and the scientific method, fundamental principles and theories in biology at the molecular and cellular level. Topics will include biological chemistry, cell structure and function, bioenergetics, respiration, photosynthesis, cell reproduction, cell communication and regulation, genetics, microevolution, and laboratory techniques and experience. Field trips may be required. (C-ID BIOL 190)

Lecture Hours: 3 Lab Hours: 6 Repeatable: No Grading: L
 Prerequisite: MATH 013 and CHEM 001A both with C or better
 Recommended: Recently completed biology lecture and lab course with a grade of B or better in high school or college
 Advisory Level: Read: 3 Write: 3 Math: None
 Transfer Status: CSU/UC Degree Applicable: AA/AS
 CSU GE: B2, B3 IGETC: 5B, 5C District GE: B2, B3

BIOL 004B Organismal Biology and Biodiversity 5 Units

Biology 004B is the second course in a two semester majors-level sequence for students preparing for careers in the sciences, science education, or medicine. This lecture and laboratory course emphasizes the form and function, evolution, and biodiversity of unicellular and multicellular organisms. Topics include protists, fungi, plants, and animals including the phylogenetic relationships among major taxa, macroevolution and Earth history, ecology, and adaptation. Science, the scientific method, and laboratory techniques are also covered. Field trips may be required. (C-ID BIOL 140)

Lecture Hours: 3 Lab Hours: 6 Repeatable: No Grading: L
 Prerequisite: BIOL 004A or its equivalent, with C or better
 Advisory Level: Read: 4 Write: 4 Math: None
 Transfer Status: CSU/UC Degree Applicable: AA/AS
 CSU GE: B2, B3 IGETC: 5B, 5C District GE: B2, B3

BIOL 020 Human Biology 4 Units

This course introduces students to the form and function of the human body. BIOL 020 includes an overview of atoms and molecules, acids and bases, movement in solutions, important classes of biological molecules, the cell, human genetics, biotechnology, and issues in human ecology. Emphasis is on the basic anatomy and physiology of the body's major organ systems. The course is tailored for non-science majors and meets the General Education requirement for life science with a lab.

Lecture Hours: 3 Lab Hours: 3 Repeatable: No Grading: L
 Advisory Level: Read: 3 Write: 3 Math: 2
 Transfer Status: CSU/UC Degree Applicable: AA/AS
 CSU GE: B2, B3 IGETC: 5B, 5C District GE: B2, B3

BIOL 021 General Biology 4 Units

This is an introductory biology course for non-science majors. The course covers the general principles and basic concepts of biology including the characteristics and classification of living systems, cells, metabolism, development, health, reproduction, genetics, evolution and ecology. This course may be a prerequisite, but it is not designed to fulfill requirements of the biology or pre-professional majors.

Lecture Hours: 3 Lab Hours: 3 Repeatable: No Grading: L
 Advisory Level: Read: 3 Write: 3 Math: 2
 Transfer Status: CSU/UC Degree Applicable: AA/AS
 CSU GE: B2, B3 IGETC: 5B, 5C District GE: B2, B3

BIOL 025 Forensic Biology 3 Units

This lecture-only science course is intended for those who have a general interest in the application of biological concepts to forensic science. Students will examine case studies involving crimes to demonstrate how the principles of science are used to analyze physical evidence. Scientific method, mathematical computations, and fundamental principles of physics, chemistry and biology will be applied to various forms of evidence to derive information about a crime scene.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
 Advisory Level: Read: 3 Write: 3 Math: 3
 Transfer Status: CSU/UC Degree Applicable: AA/AS
 CSU GE: None IGETC: None District GE: None

BIOL 061 Human Heredity 3 Units

This course introduces students to the study of human heredity including the cellular basis of heredity and gene expression, Mendelian and non-Mendelian patterns of inheritance, the nature of selected genetic disorders, genetic screening and testing, bioethics, the role of genetic counseling, and biotechnology including recombinant DNA techniques, assisted reproductive technologies, the human genome project, and bioinformatics.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
 Advisory Level: Read: 3 Write: 3 Math: 2
 Transfer Status: CSU/UC Degree Applicable: AA/AS
 CSU GE: B2 IGETC: 5B District GE: B2

BIOL 062 Plants and Human Welfare 3 Units

Students are introduced to the world of plants and their ecological importance to humans. Topics include the impact of plants on development of civilizations; the need for conservation; and the role of plants in the total environment. Class meetings may be held at alternative off campus sites.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
 Advisory Level: Read: 3 Write: 3 Math: 2
 Transfer Status: CSU/UC Degree Applicable: AA/AS
 CSU GE: B2 IGETC: 5B District GE: B2

BIOL 063 Ecology 3 Units

This course introduces students to the science of ecology, the branch of biology that studies the abundance and distribution of plants and animals, and their interrelationships with the environment. Topics covered include the intersection of evolution and ecology, population biology, community organization, ecosystem function, biodiversity, preservation and conservation, and human ecology.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: 2
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: B2 IGETC: 5B District GE: B2

BIOL 064 Marine Biology 4 Units

BIOL 064 is a lecture and laboratory course introducing students to the study of marine life. The course will cover physical and biological aspects of life in the sea including marine geology, physical oceanography, marine ecology, a comparative study of major marine taxa, and human exploitation and oceanic history. Special topics and required field trips to local marine habitats are an integral part of the course.

Lecture Hours: 3 Lab Hours: 3 Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: 3
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: B2, B3 IGETC: 5B, 5C District GE: B2, B3

BIOL 065 Wildlife Biology 3 Units

A General Biology course designed for non-science majors and carrying elective science transfer credit. Emphasis is on wildlife, and its relationship to ecological succession and conservation, energy, mass, and to ecological crises resulting from human exploitation and the explosion in human population. Field trips may be required.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Recommended: A general science course at the high school level.
Advisory Level: Read: 3 Write: 3 Math: 3
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: B2 IGETC: 5B District GE: B2

BIOL 071 Human Anatomy 5 Units

This course covers the structure of the human body including identifying parts, understanding interrelationships, and making clinical applications. Laboratory activity includes the study of models, dissection of a human cadaver and other selected mammalian organs, and use of the microscope to study different cell types and major tissue types. This course is primarily intended for nursing, OT, PT, RT, Chiropractic, and other health-related majors. (C-ID BIOL 110B)

Lecture Hours: 3 Lab Hours: 6 Repeatable: No Grading: L
Prerequisite: BIOL 021 with C or better
Advisory Level: Read: 3 Write: 3 Math: 3
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: B2, B3 IGETC: 5B, 5C District GE: B2, B3

BIOL 072 Human Physiology 5 Units

Students are introduced to cellular physiology and metabolism. Students study the physiological processes of the human body systems including nervous, endocrine, muscular, urinary, respiratory, sensory, digestive, cardiovascular and reproductive. Other topics include disease and the loss of homeostasis in the body. This course is designed for college degrees in nursing, physical and occupational therapy, and certain science and preprofessional majors. (C-ID BIOL 120B)

Lecture Hours: 3 Lab Hours: 6 Repeatable: No Grading: L
Prerequisite: BIOL 071 and (CHEM 001A or CHEM 015 or CHEM 030A) and MATH 013; all with C or better
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: B2, B3 IGETC: 5B, 5C District GE: B2, B3

BIOL 074 General Microbiology 5 Units

General Microbiology covers the structure and activities of microorganisms, including bacteria, viruses, protozoa, fungi, helminths, and algae. This course also covers principles of microbial control, metabolism, environmental microorganism genetics, genetic engineering, disease, modes of infection, and immunity. Emphasis is on aseptic laboratory technique, and the application of microbiology to human welfare.

Lecture Hours: 3 Lab Hours: 6 Repeatable: No Grading: L
Prerequisite: (CHEM 001A or CHEM 015 or CHEM 030A) and (BIOL 004A or BIOL 071 or BIOL 072); all with C or better
Advisory Level: Read: 3 Write: 3 Math: 3
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: B2, B3 IGETC: 5B, 5C District GE: B2, B3

BIOL 080 Biology Field Program 1 Unit

The field biology courses introduce students to the human and natural histories of a variety of ecosystems. This course may emphasize the natural and human histories of a variety of ecosystems, the specific area to be determined with the offering of the course. This course entails on-campus lectures and overnight field excursions. Course participation involves camping, hiking, and automobile travel. Additional fees are required.

Lecture Hours: 0.44 Lab Hours: 2.11 Repeatable: No Grading: O
Advisory Level: Read: 3 Write: 3 Math: 3
Transfer Status: CSU Degree Applicable: AA/AS
CSU GE: None IGETC: None District GE: None

BIOL 080A Field Biology - Zion National Park 1 Unit

EVC's field-biology courses introduce students to the human and natural histories of a variety of ecosystems. BIOL 080A emphasizes the biodiversity and geology of Zion National Park and its unique mix of desert and riparian ecosystems. The course covers general ecological principles, common flora and fauna of Zion National Park, the geologic history of the Kayenta formation, and human history in the area. The course entails on-campus lectures and the equivalent of one week in the field. Course participation requires camping, hiking, and automobile travel. Additional fees are required.

Lecture Hours: 0.44 Lab Hours: 2.11 Repeatable: No Grading: O
Advisory Level: Read: 3 Write: 3 Math: 2
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: None IGETC: None District GE: None

BIOL 080B Field Biology - Anza-Borrego Desert 1 Unit

The field-biology courses introduce students to the human and natural histories of a variety of ecosystems. This course emphasizes the biodiversity and geology of the Anza-Borrego Desert located east of San Diego. There lies California's largest state park in what was once an ocean floor and now comprises part of the Mojave and Colorado Desert ecosystems. The course covers general ecological principles, common flora and fauna of Anza-Borrego State Park, the geologic history of this desert region, and human history in the area. Anza Borrego Desert is famous for fields of spring wildflowers, hidden oases lined with palm trees, and the native bighorn sheep hiding among the steep, barren hillsides. The course entails on-campus lectures and the equivalent of one week in the field. Course participation requires camping, hiking, and automobile travel. Additional fees are required.

Lecture Hours: 0.44 Lab Hours: 2.11 Repeatable: No Grading: O
 Recommended: This is a field oriented course so physical preparation for camping and hiking is recommended.
 Advisory Level: Read: 3 Write: 3 Math: 3
 Transfer Status: CSU/UC Degree Applicable: AA/AS
 CSU GE: None IGETC: None District GE: None

BIOL 080C Field Biology - Coastal California 1 Unit

The field biology courses introduce students to the human and natural histories of a variety of ecosystems. This course explores the biodiversity, geology, and human history of the central California coast with emphasis on Monterey Bay and Point Reyes National Seashore. The course entails on-campus lectures and field excursions. Course participation involves camping, hiking, and automobile travel. Additional fees are required.

Lecture Hours: 0.44 Lab Hours: 2.11 Repeatable: No Grading: O
 Recommended: This is a field oriented course so physical preparation for camping and hiking is recommended.
 Advisory Level: Read: 3 Write: 3 Math: 3
 Transfer Status: CSU/UC Degree Applicable: AA/AS
 CSU GE: None IGETC: None District GE: None

BIOL 080D Field Biology - Death Valley National Park 1 Unit

This course introduces students to selected desert ecosystems of the Mojave Desert and to Death Valley National Park, the largest national park in the lower forty-eight states. This course takes students from mountain peaks and passes to the lowest point in North America, to dune fields and waterfalls, and to canyons and ghost towns. General ecological and geological principles, and the flora, fauna, and human histories of the areas visited are emphasized. The course entails on-campus lectures and the equivalent of one week in the field. Course participation requires camping, hiking, and automobile travel. Additional fees are required.

Lecture Hours: 0.44 Lab Hours: 2.11 Repeatable: No Grading: O
 Advisory Level: Read: 3 Write: 3 Math: 3
 Transfer Status: CSU Degree Applicable: AA/AS
 CSU GE: None IGETC: None District GE: None

BIOL 080E Field Biology - Natural History of the Eastern Sierra 1 Unit

This course explores the biodiversity, geology, and human history of the eastern Sierra region of California. The course entails on-campus lectures and field excursions. Course participation involves camping, hiking, and automobile travel. Additional fees are required.

Lecture Hours: 0.44 Lab Hours: 2.11 Repeatable: No Grading: O
 Advisory Level: Read: 3 Write: 3 Math: 3
 Transfer Status: CSU Degree Applicable: AA/AS
 CSU GE: None IGETC: None District GE: None

BIOL 080F Field Biology - Forest and River Ecology 1 Unit

This course focuses on the forest and river ecosystems of west-central California. The course introduces students to the geology, biological communities, and human histories of this area including past and present human influences. This course entails on-campus lectures, and field excursions that involve overnight camping. Automobile travel to remote destinations may be necessary. Additional fees are required.

Lecture Hours: 0.44 Lab Hours: 2.11 Repeatable: No Grading: O
 Advisory Level: Read: 3 Write: 3 Math: 3
 Transfer Status: CSU Degree Applicable: AA/AS
 CSU GE: None IGETC: None District GE: None

BIOL 080G Field Biology - Volcanic Northern California 1 Unit

This course emphasizes the biological and ecological diversity, geology, and human history of Lassen Volcanic National Park and Lava Beds National Monument. Lassen Volcanic National Park is famous for Lassen Peak, the largest plug dome volcano in the world. Lava Beds National Monument is known for its many lava tubes, Amerindian rock art sites, and historic battlefields. The course entails on-campus lectures and the equivalent of one week in the field. Course participation requires camping, hiking, and automobile travel. Additional fees are required.

Lecture Hours: 0.44 Lab Hours: 2.11 Repeatable: No Grading: O
 Advisory Level: Read: 3 Write: 3 Math: 3
 Transfer Status: CSU Degree Applicable: AA/AS
 CSU GE: None IGETC: None District GE: None