

BIOLOGY (BIOL)

BIOL 1 General Biology

4 Units (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Prerequisite: Eligibility for ENGL 68

Advisory: READ 90

Major principles and concepts, including cellular biology, energy relationships, biological systems, heredity, evolution and ecology for non-science majors.

Course Schedule

BIOL 2 Plant and Animal Biology

4 Units (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Prerequisite: BIOL 1 or BIOL 4; and MATH 71

Organismal biology including concepts in systematics, evolution, plant and animal physiology, ecology, and biotic relationships. Field trips are required.

Course Schedule

BIOL 3 Ecology and Field Biology

4 Units (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 54

Advisory: Eligibility for ENGL 1A

Identification and ecological relationships of common local plants and animals. Emphasizes evolutionary relationships; ecology including animal behavior, communities, ecosystems, wilderness and wildlife preservation, and population dynamics. Techniques of collecting and preserving. Many laboratory meetings conducted off campus; most trips require walking and/or hiking. Hiking, weekend and other field trips required.

Course Schedule

BIOL 4 Biology for Majors

4 Units (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 71

Prerequisite: (CHEM 10 or CHEM 40) and MATH 71

Advisory: Eligibility for ENGL 1A

Principles of biology required for advanced study, including cellular and molecular biology, bioenergetics, genetics, reproduction, evolution, biodiversity, and ecology. General Biology for science majors. One hour discussion group per week. Field trips with extensive hiking required.

Course Schedule

BIOL 4H Biology for Majors - Honors

4 Units (Degree Applicable, CSU, UC)

Lecture: 54 Lab: 71

Prerequisite: Acceptance into the Honors Program; (CHEM 40 or CHEM 10) and MATH 71

Principles of biology required for advanced study including concepts of cellular and molecular biology, bioenergetics, genetics, reproduction, evolution, biodiversity and ecology. An honors course designed to provide an enriched experience. Students may not receive credit for both BIOL 4 and BIOL 4H. Field trips with extensive hiking required.

Course Schedule

BIOL 5 Contemporary Health Issues

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Contemporary health issues known to affect the quality and longevity of life. Topics include sexuality and reproduction, stress management, fitness and nutrition, substance use and abuse, and environmental quality. Emphasis on prevention of illness and injuries.

Course Schedule

BIOL 6 Humans and the Environment

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Ecological concepts to aid understanding the Earth's environmental crisis and determining courses of action to correct the problem. Emphasis will be placed on specific problems of population, pollution, preservation of wildlife and wilderness, and open space. A historical appraisal of human attitudes toward the land and of the necessity of developing a new land ethic.

Course Schedule

BIOL 6L Humans and the Environment Laboratory

2 Units (Degree Applicable, CSU, UC)

Lab: 108

Prerequisite: BIOL 6 (may be taken concurrently)

Investigates major principles and problems of humans and the environment in the field and in the biological science laboratory. Most laboratory meetings will be conducted at off-campus locations. Some trips will require significant amounts of walking. Course includes one weekend field trip.

Course Schedule

BIOL 8 Cell and Molecular Biology

4 Units (Degree Applicable, CSU, UC, C-ID #: BIOL 190)

Lecture: 54 Lab: 54

Prerequisite: (BIOL 4 or BIOL 4H) and (CHEM 50 or CHEM 50H)

Cell and molecular biology including eukaryotic cells, eukaryotic organelles, protein structure and functions; DNA and RNA structure and functions; protein synthesis; genome organization in viruses, prokaryotes, and eukaryotes; gene cloning; protein and DNA technology and applications of genetic engineering.

Course Schedule

BIOL 13 Human Reproduction, Development and Aging

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Human Development, from conception to death. Conception, growth, maturation and aging are studied as a natural continuum, influenced by our biophysical and psychosocial environment. Includes developmental theories and scientific methods used to study development. Field trips to several off-campus sites are required

Course Schedule

BIOL 15 Human Sexuality

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 68

Surveys biological, behavioral, cultural and ethical aspects of human sexuality. Contains mature and sexually explicit content.

Course Schedule

BIOL 15H Human Sexuality - Honors

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Acceptance into the Honors Program

Surveys biological, behavioral, cultural and ethical aspects of human sexuality. Contains mature and sexually explicit content. An honors course designed to provide an enriched experience. Students may not receive credit for both BIOL 15 and BIOL 15H.

Course Schedule

BIOL 17 Neurobiology and Behavior

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

An integrated analysis of the biological, ecological and evolutionary bases of animal behavior (ethology.) Historical and evolutionary contexts are emphasized through a detailed consideration of the psychobiological, ecological, ontological and sociobiological determinants of animal behavior. Field trip required.

Course Schedule

BIOL 20 Marine Biology

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Marine environment including the principles of marine science, biology of marine invertebrates and vertebrates, structure and function of marine ecosystems, and human impact on the ocean. Field trip required.

Course Schedule

BIOL 21 Marine Biology Laboratory

1 Unit (Degree Applicable, CSU, UC)

Lab: 54

Corequisite: BIOL 20 (May have been taken previously)

Field and laboratory aspects of the marine environment. Emphasizes the structure and functional biology of marine invertebrates and vertebrates, ecology of intertidal organisms, and ecology of estuaries. Completion or concurrent enrollment in BIOL 20 is required. Field trips are required.

Course Schedule

BIOL 25 Conservation Biology

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: Eligibility for ENGL 1A

Concepts of conservation biology for natural resources, including biogeography, biodiversity and extinction, environmental law, public lands, and conservation organizations. Emphasis on strategies important to addressing biological conservation and sustainable management of natural and managed ecosystems. A field trip is required.

Course Schedule

BIOL 34 Fundamentals of Genetics

3 Units (Degree Applicable, CSU, UC)

Lecture: 54

Prerequisite: BIOL 4 or BIOL 4H

Theory and applications of genetics. Major topics include Mendelian and molecular genetics, mechanisms of inheritance, gene expression, linkage and chromosome mapping, mutations and evolution, population genetics, and ethical and moral implications of biotechnology.

Course Schedule

BIOL 34L Fundamentals of Genetics Lab

1 Unit (Degree Applicable, CSU, UC)

Lab: 54

Corequisite: BIOL 34 (May have been taken previously).

Experiments and problem solving in genetics including Mendelian Genetics, linkage and recombination, cell division, mutation, molecular genetics including use of polymerase chain reaction (PCR) and electrophoresis, population genetics, and bioinformatics.

Course Schedule

BIOL 50 Biology Basic Skills

0.5 Units (Not Degree Applicable)

(May be taken for Pass/No Pass only)

Lecture: 9

Basic skills needed for students to succeed in biological science classes. Topics include a contrast of the academic demands of science to non-science disciplines, preparation for biological laboratory experiences as well as lectures, development of personal study plan to manage the large volume of information, introduction to common Latin and Greek words to build vocabulary, use of memorization techniques, application of test-taking strategies for exams, especially lab practica, and analysis of test results. These techniques and strategies will be discussed using biological concepts and vocabularies as examples. It is recommended that this class be taken concurrently with another biological science class.

Course Schedule

BIOL 99A Special Projects in Biology

1-2 Units (Degree Applicable, CSU)

Lecture: 18-36

In order to offer students recognition for their academic interests and ability and the opportunity to explore their disciplines to greater depth, the various departments from time to time offer Special Projects courses. The content of each course and the methods of study vary from semester to semester and depend on the particular project under consideration. Students must have instructor's authorization before enrolling in this course.

Course Schedule