

BIOLOGY (BIOL)

BIOL-100 Human Biology **4 Units (LBE 48-54, LEC 48-54)**

This course is an introduction to scientific and biological principles presented in a human context. Topics covered include the scientific method, cell structure and function, biochemistry, metabolism, genetics, human anatomy and physiology with a review of organ systems and the application of biotechnology.

Transfers to both UC/CSU
IGETC Area(s): 5B, 5C
CSU Area(s): B2, B3
AA/AS General Education: AA/AS A

BIOL-100H Honors Human Biology **4 Units (LBE 48-54, LEC 48-54)**

This course is an introduction to scientific and biological principles presented in a human context. Topics covered include the scientific method, cell structure and function, biochemistry, metabolism, genetics, human anatomy and physiology with a review of organ systems and the application of biotechnology.

Prerequisite: Acceptance into the Honors Enrichment Program.

Transfers to both UC/CSU
IGETC Area(s): 5B, 5C
CSU Area(s): B2, B3
AA/AS General Education: AA/AS A

BIOL-115 Introductory Topics in Biology: Cells to Ecosystems (formerly Topics in Biology) **4 Units (LBE 48-54, LEC 48-54)**

This introductory course investigates topics in biology from cells to ecosystems. Topics include molecules of life, metabolism, information flow, evolution, biodiversity, ecological interactions, and current issues in science. Students will apply the process of science in the laboratory to investigate the course topics. Field trips may be part of the course.

Transfers to both UC/CSU
IGETC Area(s): 5B, 5C
CSU Area(s): B2, B3
AA/AS General Education: AA/AS A

BIOL-115H Honors Introductory Topics in Biology: Cells to Ecosystems (formerly Honors Topics in Biology) **4 Units (LBE 48-54, LEC 48-54)**

This introductory course investigates topics in biology from cells to ecosystems. Topics include molecules of life, metabolism, information flow, evolution, biodiversity, ecological interactions, and current issues in science. Students will apply the process of science in the laboratory to investigate the course topics. Field trips may be part of the course.

Prerequisite: Acceptance into the Honors Enrichment Program.

Transfers to both UC/CSU
IGETC Area(s): 5B, 5C
CSU Area(s): B2, B3
AA/AS General Education: AA/AS A

BIOL-117 Conservation Biology **3 Units (LEC 48-54)**

This course investigates the science of preserving biodiversity and sustaining the earth. This is an interdisciplinary, introductory course that examines the human impact on biodiversity and the earth. The course synthesizes the fields of ecology, evolution, genetics, philosophy, economics, sociology, and political science with emphasis on the development of strategies for preserving populations, species, biological communities, and ecosystems. This course is not intended for biology majors.

Transfers to both UC/CSU
IGETC Area(s): 5B
CSU Area(s): B2
AA/AS General Education: AA/AS A

BIOL-125 Microbiology **4 Units (LBE 72-81, LEC 40-45)**

This course covers general microbiology, including topics on morphology, metabolism, genetics, epidemiology, infectious diseases, immunity and control of microorganisms. Students will learn aseptic laboratory techniques and the importance of aseptic procedures in clinical settings.

Prerequisite: ANAT-101 or BIOL-115 or BIOL-100 (with a grade of C or better) and CHEM-107, CHEM-100 or CHEM-101 (with a grade of C or better).

Transfers to both UC/CSU
IGETC Area(s): 5B, 5C
CSU Area(s): B2, B3
AA/AS General Education: AA/AS A

BIOL-125H Honors Microbiology **4 Units (LBE 72-81, LEC 40-45)**

This course covers general microbiology, including topics on morphology, metabolism, genetics, epidemiology, infectious diseases, immunity and control of microorganisms. Students will learn aseptic laboratory techniques and the importance of aseptic procedures in clinical settings.

Prerequisite: Acceptance into the Honors Enrichment Program., ANAT-101 or BIOL-115 or BIOL-100 (with a grade of C or better) and CHEM-107, CHEM-100 or CHEM-101 (with a grade of C or better).

Transfers to both UC/CSU
IGETC Area(s): 5B, 5C
CSU Area(s): B2, B3
AA/AS General Education: AA/AS A

BIOL-128 History of Science
3 Units (LEC 48-54)

This course surveys the history of science from its early beginnings to its development in various civilizations, eras and regions. Students explore the impact of science on humanity in the context of the economic, social, and political realities of different cultures. Underlying assumptions, methods and key ideas in science are surveyed from ancient insights through the Scientific Revolution and recent biotechnology innovations, with particular emphasis on the intersection of science and popular belief. *Cross-listed as HIST-128.

Recommended Preparation: ENGL-101 or concurrent enrollment in ENGL-101.

Transfers to both UC/CSU

IGETC Area(s): 4F, 4G

CSU Area(s): D6, D7

AA/AS General Education: AA/AS B2

BIOL-128H Honors History of Science
3 Units (LEC 48-54)

This course surveys the history of science from its early beginnings to its development in various civilizations, eras and regions. Students explore the impact of science on humanity in the context of the economic, social, and political realities of different cultures. Underlying assumptions, methods and key ideas in science are surveyed from ancient insights through the Scientific Revolution and recent biotechnology innovations, with particular emphasis on the intersection of science and popular belief. *Cross-listed as HIST-128H.

Prerequisite: Acceptance into the Honors Enrichment Program.

Recommended Preparation: ENGL-101 or concurrent enrollment in ENGL-101.

Transfers to both UC/CSU

IGETC Area(s): 4F, 4G

CSU Area(s): D6, D7

AA/AS General Education: AA/AS B2

BIOL-130 Marine Biology
4 Units (LBE 48-54, LEC 48-54)

This course explores biology by examining the characteristics of marine organisms and the ocean environment. Some of the topics covered in this course are the physical and chemical environment of the ocean, diversity of marine organisms, marine ecosystems and interactions, adaptations to the marine environment, and human impacts on the oceans. Students may be required to attend field trips. This course is not intended for biology majors.

Transfers to both UC/CSU

IGETC Area(s): 5B, 5C

CSU Area(s): B2, B3

AA/AS General Education: AA/AS A

BIOL-131 Genes and Biotechnology in Society
4 Units (LBE 48-54, LEC 48-54)

This course examines a variety of topics in biology related to genes and DNA technologies. Topics emphasized include the structure and biochemical processes of cells, classical and molecular genetics, gene expression, stem cell technologies and biotechnology. The laboratory experience develops fundamental skills used in biotechnology labs including performing biological assays, laboratory documentation, microscopy, DNA manipulation, and genetic modification of bacterial cells. Field trips may be required.

Transfers to both UC/CSU

IGETC Area(s): 5B, 5C

CSU Area(s): B2, B3

AA/AS General Education: AA/AS A

BIOL-131H Honors Genes and Biotechnology in Society
4 Units (LBE 48-54, LEC 48-54)

This course examines a variety of topics in biology related to genes and DNA technologies. Topics emphasized include the structure and biochemical processes of cells, classical and molecular genetics, gene expression, stem cell technologies and biotechnology. The laboratory experience develops fundamental skills used in biotechnology labs including performing biological assays, laboratory documentation, microscopy, DNA manipulation, and genetic modification of bacterial cells. Field trips may be required.

Prerequisite: Acceptance into the Honors Enrichment Program.

Transfers to both UC/CSU

IGETC Area(s): 5B, 5C

CSU Area(s): B2, B3

AA/AS General Education: AA/AS A

BIOL-134 Human Heredity and Evolution
3 Units (LEC 48-54)

This is an introductory course in molecular genetics with an emphasis on basic human genetics and evolution. This course introduces students to central theories of the biological sciences using chemical and biological aspects of human genetics as its main theme. In addition, students are introduced to the political, philosophical, social, and ethical implications of genetics including genetic modification. This course is not intended for biology majors.

Transfers to both UC/CSU

IGETC Area(s): 5B

CSU Area(s): B2

AA/AS General Education: AA/AS A

BIOL-140 Ecology
4 Units (LBE 48-54, LEC 48-54)

This course covers ecological principles with a focus on biodiversity, ecosystem function, and the inter-relationship of the biotic and abiotic components of the environment. Several major ecosystem types will be emphasized including ocean, mountain, chaparral, and desert biomes.

Transfers to both UC/CSU

IGETC Area(s): 5B, 5C

CSU Area(s): B2, B3

AA/AS General Education: AA/AS A

BIOL-144 Plant Biology
4 Units (LBE 48-54, LEC 48-54)

This course is a survey of the biology of plants, other photosynthetic organisms and fungi. It explores the structure, function, evolution, reproduction, genetics, and ecology of plants in addition to their importance to people. The lab component provides experience with plant anatomy, morphology, growth, metabolism, reproduction and propagation. Field trips may be required. This course is not intended for biology majors.

Transfers to both UC/CSU

IGETC Area(s): 5B, 5C

CSU Area(s): B2, B3

AA/AS General Education: AA/AS A

BIOL-144H Honors Plant Biology
4 Units (LBE 48-54, LEC 48-54)

This course is a survey of the biology of plants, other photosynthetic organisms and fungi. It explores the structure, function, evolution, reproduction, genetics, and ecology of plants in addition to their importance to people. The lab component provides experience with plant anatomy, morphology, growth, metabolism, reproduction and propagation. Field trips may be required. This course is not intended for biology majors.

Prerequisite: Acceptance into the Honors Enrichment Program.

Transfers to both UC/CSU

IGETC Area(s): 5B, 5C

CSU Area(s): B2, B3

AA/AS General Education: AA/AS A

BIOL-146 Biodiversity
3 Units (LEC 48-54)

This course examines the biodiversity of life. Theories about the evolution and diversity of life are introduced with an emphasis on current threats to biodiversity by human activity. This course is a survey of the biodiversity of life on earth through an exploration of the structure, function, evolution, reproduction, genetics, and ecology of organisms past and present. Field trips may be required. This course is not intended for biology majors.

Transfers to both UC/CSU

IGETC Area(s): 5B

CSU Area(s): B2

AA/AS General Education: AA/AS A

BIOL-150 General Biology I
4 Units (LBE 48-54, LEC 48-54)

This course, intended for science majors, is an intensive modern study of biology designed to prepare students for upper-division science courses. Topics include the biochemical, molecular, metabolic, genetic, and evolutionary aspects of cells and organisms. Students will apply their understanding of biology concepts in the laboratory to develop an understanding of the philosophy of science, methods of scientific inquiry and experimental design. Field trips may be required.

Prerequisite: Completion of intermediate algebra or eligibility into college-level math as determined by college assessment or other appropriate methods.

Recommended Preparation: Additional high school or college Biology and Chemistry courses., ENGL-101.

Transfers to both UC/CSU

C-ID: BIOL 190

C-ID: BIOL 135S

IGETC Area(s): 5B, 5C

CSU Area(s): B2, B3

AA/AS General Education: AA/AS A

BIOL-150H Honors General Biology I
4 Units (LBE 48-54, LEC 48-54)

This course, intended for science majors, is an intensive modern study of biology designed to prepare students for upper-division science courses. Topics include the biochemical, molecular, metabolic, genetic, and evolutionary aspects of cells and organisms. Students will apply their understanding of biology concepts in the laboratory to develop an understanding of the philosophy of science, methods of scientific inquiry and experimental design. Field trips may be required.

Prerequisite: Acceptance into the Honors Enrichment Program., Completion of intermediate algebra or eligibility into college-level math as determined by college assessment or other appropriate methods.

Recommended Preparation: Additional high school or college Biology and Chemistry courses., ENGL-101.

Transfers to both UC/CSU

C-ID: BIOL 190

C-ID: BIOL 135S

IGETC Area(s): 5B, 5C

CSU Area(s): B2, B3

AA/AS General Education: AA/AS A

BIOL-151 General Biology II
4 Units (LBE 48-54, LEC 48-54)

This course, intended for science majors, is the second in a two-semester sequence of intensive modern biology study designed to prepare science majors for upper-division science courses. Topics include the biodiversity, phylogeny, anatomy, physiology and ecology of bacteria, archaea, simple eukaryotic organisms, plants and animals. Students will investigate these topics through laboratory activities that include extensive specimen observation, dissection, and field experiences. Field trips may be required.

Prerequisite: BIOL-150 (with a grade of C or better).

Recommended Preparation: ENGL-101.

Transfers to both UC/CSU

C-ID: BIOL 135S

IGETC Area(s): 5B, 5C

CSU Area(s): B2, B3

AA/AS General Education: AA/AS A

BIOL-151H Honors General Biology II
4 Units (LBE 48-54, LEC 48-54)

This course, intended for science majors, is the second in a two-semester sequence of intensive modern biology study designed to prepare science majors for upper-division science courses. Topics include the biodiversity, phylogeny, anatomy, physiology and ecology of bacteria, archaea, simple eukaryotic organisms, plants and animals. Students will investigate these topics through laboratory activities that include extensive specimen observation, dissection, and field experiences. Field trips may be required.

Prerequisite: BIOL-150 (with a grade of C or better), Acceptance into the Honors Enrichment Program.

Recommended Preparation: ENGL-101.

Transfers to both UC/CSU

C-ID: BIOL 135S

IGETC Area(s): 5B, 5C

CSU Area(s): B2, B3

AA/AS General Education: AA/AS A

BIOL-299 Special Projects: Biology
1-5 Unit (IS 16-90)

This is an arranged class to study a selected topic or experimental design by contract with the instructor for students with previous course work in the specific program area. Arrangements may be made with the instructor to supervise the special project. These projects are available for variable units and involve research and special study in areas of interest within a given subject field. The actual nature of the project MUST be determined in consultation with the supervising instructor.

Prerequisite: Two Biology classes must be completed prior to enrollment; a contract must be completed with the instructor prior to enrollment.

Transfers to CSU only