

BIOLOGY

Biology (BIOL)

BIOL 10 - Principles of Biology (4 units)

Letter Grade (LG) or Pass/No Pass (P/NP) • Total hours: 51 hours lecture; 51 hours lab

This course surveys modern biology, including concepts of cell and molecular biology, genetics, biodiversity, ecology, and evolution. Portions of instruction may be offered online; may also be offered fully online.

*Advisory: Completion of or concurrent enrollment in ENGL 1A or ENGL 1AE
Credit transferable: Transfers to CSU & UC*

UC Transfer Limits: No credit if taken after BIOL 21 or BIOL 22

GE Credit: CSU B2 Life Science, B3 Laboratory Activity; IGETC 5B Biological Science, 5C Science Laboratory; MPC B Natural Sciences (must include lab)

BIOL 13 - Marine Biology (4 units)

Letter Grade (LG) or Pass/No Pass (P/NP) • Total hours: 51 hours lecture; 51 hours lab

Students are introduced to the fundamentals of marine science, with an emphasis on marine ecology, organisms, and habitats. Topics include current research, technology, and sampling, with a focus on the local Monterey Bay region. Field trips are required. Portions of instruction may be offered online; may also be offered fully online.

*Advisory: Completion of or concurrent enrollment in ENGL 1A or ENGL 1AE
Credit transferable: Transfers to CSU & UC*

GE Credit: CSU B2 Life Science, B3 Laboratory Activity; IGETC 5B Biological Science, 5C Science Laboratory; MPC B Natural Sciences (must include lab)

BIOL 21 - Concepts in Biology I: Cells, Genetics and Organisms (5 units)

Letter Grade (LG) Only • Total hours: 68 hours lecture; 51 hours lab

This course, intended for majors, covers principles and applications of prokaryotic and eukaryotic cell structure and function, biological molecules, homeostasis, cell reproduction and its controls, molecular genetics, classical/Mendelian genetics, cell metabolism including photosynthesis and respiration, cellular communication, physiology, development, biotechnology, and genomics. The philosophy of science, methods of scientific inquiry and experimental design are foundational to the course. Portions of instruction may be offered online; may also be offered fully online. [C-ID BIOL 135S with BIOL 22; BIOL 190]

Prerequisite(s): CHEM 1A; MATH 263 or higher

*Advisory: Completion of or concurrent enrollment in ENGL 1A or ENGL 1AE
Credit transferable: Transfers to CSU & UC*

GE Credit: CSU B2 Life Science, B3 Laboratory Activity; IGETC 5B Biological Science, 5C Science Laboratory; MPC B Natural Sciences (must include lab)

BIOL 22 - Concepts in Biology II: Diversity, Ecology, and Evolution (5 units)

Letter Grade (LG) Only • Total hours: 51 hours lecture; 102 hours lab

This course, intended for biology majors, is a survey of the basic biology and diversity of unicellular and multicellular organisms. It emphasizes general biological principles, classification, structure, function, fundamentals of ecological principles, and evolutionary adaptations of organisms (including plants, fungi, animals, and unicellular organisms) to their environments. Portions of instruction may be offered online; may also be offered fully online. [C-ID BIOL 135S with BIOL 21; BIOL 140]

Prerequisite(s): MATH 263 or higher

Pre/Corequisite(s): CHEM 1A

*Advisory: Completion of or concurrent enrollment in ENGL 1A or ENGL 1AE
Credit transferable: Transfers to CSU & UC*

GE Credit: CSU B2 Life Science, B3 Laboratory Activity; IGETC 5B Biological Science, 5C Science Laboratory; MPC B Natural Sciences (must include lab)

BIOL 25 - Applied Microbiology Lecture (3 units)

Letter Grade (LG) Only • Total hours: 51 hours lecture

This course covers bacterial structure, genetics and physiology, microbial causes of infectious diseases, modes of disease transmission, treatment and prevention, and the immune system. It is designed for paramedical training programs, including RN, LVN, and veterinary assisting. Portions of instruction may be offered online; may also be offered fully online.

Prerequisite(s): CHEM 1A or CHEM 30A

Advisory: Completion of or concurrent enrollment in ENGL 1A

Credit transferable: Transfers to CSU & UC

GE Credit: CSU B2 Life Science; IGETC 5B Biological Science; MPC B Natural Sciences (must include lab)

BIOL 26 - Applied Microbiology Laboratory (1 unit)

Letter Grade (LG) Only • Total hours: 51 hours lab

This class covers aseptic techniques, culture of microbes, identification of microbes, and the clinical uses of physiological testing on bacterial species. It is designed for those entering paramedical training programs, including Nursing, Nutrition, Dental Hygiene, Veterinary Technician, Physician Assistant, and Nurse Practitioner. Portions of instruction may be offered online; may also be offered fully online.

Prerequisite(s): CHEM 1A; or CHEM 30A

Corequisite(s): BIOL 25

Advisory: Completion of or concurrent enrollment in ENGL 1A or ENGL 1AE

Credit transferable: Transfers to CSU & UC

GE Credit: CSU B3 Laboratory Activity; IGETC 5C Science Laboratory; MPC B Natural Sciences (must include lab)

BIOL 30 - Introduction to Genetics (3 units)

Letter Grade (LG) or Pass/No Pass (P/NP) • Total hours: 51 hours lecture

This course is an introduction to the principles of Genetics and is not intended for biology majors. Topics covered include basic principles of cell/molecular biology, transmission and molecular genetics, genetic testing, the basis of inherited disease, genetic engineering, cloning, stem cells, GMOs and evolution.

Advisory: Completion of or concurrent enrollment in ENGL 1A

Credit transferable: Transfers to CSU & UC

GE Credit: CSU B2 Life Science; IGETC 5B Biological Science

BIOL 31 - Introduction to Environmental Science (3 units)

Letter Grade (LG) or Pass/No Pass (P/NP) • Total hours: 51 hours lecture

Introduction to environmental issues from a scientific perspective, focusing on physical, chemical, and biological processes within the Earth system, the interaction between humans and these processes, and the role of science in finding sustainable solutions. Topics include ecological principles, biodiversity, climate change, sustainability, renewable and non-renewable energy, water resources, air and water pollution, and solid waste management. Portions of instruction may be offered online; may also be offered fully online.

Advisory: Completion of or concurrent enrollment in ENGL 1A or ENGL 1AE

Credit transferable: Transfers to CSU & UC

GE Credit: CSU B1 Physical Science, B2 Life Science; IGETC 5A Physical Science, 5B Biological Science; MPC B Natural Sciences (must include lab), E1 Wellness

BIOL 32 - Environmental Science Laboratory (1 unit)

Letter Grade (LG) or Pass/No Pass (P/NP) • Total hours: 51 hours lab

This lab class surveys many of the diverse ways in which humans interact with the environment, focusing on local field trips to directly investigate issues such as sustainable fuels, solar energy, water resources, recycling, green building, and habitat preservation. Portions of instruction may be offered online; may also be offered fully online.

Pre/Corequisite(s): BIOL 31

Advisory: Completion of or concurrent enrollment in ENGL 1A or ENGL 1AE

Credit transferable: Transfers to CSU & UC

GE Credit: CSU B3 Laboratory Activity; IGETC 5C Science Laboratory; MPC B Natural Sciences (must include lab)