



Summer 2022 course offerings

BIOL 1550 - Basic Biology: Ecology and the Diversity of Life

Introduces the process of science, gene expression, biological diversity, evolution, and ecology. Highlights applications to contemporary issues. Lecture and lab course. Note: For students who are not majoring in biology.

BIOL 2010 - Organisms to Ecosystems (Gen Bio)

Introduces four major areas of study: (1) evolution, (2) animal structure and function, (3) plant structure and function and (4) ecology. Note: This class is intended for students planning to take upper division biology courses and for biology majors.

BIOL 2011 - Organisms to Ecosystems Lab (Gen Bio)

Investigations, observations, and experiments in evolution, bioinformatics, ecology, and animal behavior, anatomy, and physiology; requires off-campus field work. Note: This class is intended for students planning to take upper division biology courses and for biology majors.

BIOL 2020 - Molecules to Cells (Gen Bio)

Introduces four major areas of study: (1) the chemistry of biological systems; (2) the structure and function of the cell; (3) cellular energy transformations (photosynthesis and respiration); and (4) genetics (mitosis, meiosis, patterns of inheritance, molecular genetics). Note: This class is intended for students planning to take upper division biology courses and for biology majors.

BIOL 3134: Advanced Topics: Evolution of viruses and epidemiological impacts

Provides an understanding of basic evolutionary concepts in the context of viruses and their epidemiological impacts. An emphasis on RNA viruses, specifically SARS-CoV-2, and how genetic modifications affect transmissibility, evasion of immune responses, and vaccine considerations.

BIOL 3225 - Human Physiology

The basic orientation of the course is toward understanding the functioning of the body as a set of homeostatic mechanisms. Particular emphasis is placed on membrane potentials, muscle, circulation, respiration, digestion, the kidney, the control of metabolism and acid-based balance. Note: This is a combined lecture and lab course.

BIOL 3244 - Human Anatomy

This course introduces structural aspects of the human body from a systems-based approach, in both lecture and laboratory. The systems addressed include the integument, skeletal, muscular, nervous, digestive, respiratory, circulatory, immune, renal, reproductive and endocrine systems.

BIOL 3411 - Principles of Ecology

A lecture course that examines the interrelationships between organisms and their environments. Subject matter includes organism, population and ecosystem levels of study and application to current environmental issues. The emphasis is on the underlying principles of ecology that involve all types of organisms.

BIOL 3445 - Introduction to Evolution

Introduction to the processes and patterns of evolution. Topics include: history of evolutionary thought, origin of life, evidence for evolution, phylogenetics, evolutionary genetics, natural selection and other evolutionary forces, speciation and biodiversity, evolution of sexual reproduction and social organization.

BIOL 3611 - General Cell Biology

Covers the structure and function of the cell including bioenergetics, membranes, secretion, respiration and the cell cycle.

BIOL 3832 - General Genetics

Introduces molecular, classical, developmental and population genetics.

BIOL 2840/ 3840/ 4840/ 5840 Independent Study

Student will contribute to ongoing faculty or graduate student's lab or field-based investigation that makes an original intellectual or creative contribution to the discipline. Associated coursework includes scientific reading/writing/presentation(s).

<https://clas.ucdenver.edu/integrative-biology/research/undergraduate-research-opportunities>

BIOL 2939/ 3939/ 5939 Internship

Approved internships will provide opportunities to apply classroom knowledge in a professional environment and expand the student's knowledge of biology. Associated coursework includes scientific reading/writing and presentation(s).

<https://clas.ucdenver.edu/integrative-biology/internships-biol-3939>

Approval from lisa.johansen@ucdenver.edu

BIOL 4165/ 5165 - Neurobiology

Overview of neuroscience, covering the cellular basis of neuronal activity, muscle, sensory structures and the structure and function of the human brain.

BIOL 4880/ 6880 Directed Research

A student designed lab or field-based investigation that involves data collection, and that makes an original intellectual or creative contribution to the discipline.

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