

BIOLOGY (BIO)

BIO-1201: Biology in the World Today (4 hours)

Basic biological principles of human impact on the environment. Cannot be used for credit in any science major. Fee: Required for face-to-face sections only. Includes a Lab.

BIO-1500: Medical Terminology (3 hours)

A course for medical terminology. The course will cover word prefixes, suffixes and roots, and provides an opportunity for students to develop a medical vocabulary that is extremely useful for all the preprofessional health careers. Cross-Listed: NSCI-1500.

BIO-2011: General Biology I (4 hours)

An introductory study of living things with emphasis on cell chemistry, structure and function of cells, principles of Mendelian genetics, elementary molecular biology, and principles and mechanisms of evolution. Fee: Required. Prerequisite: C or higher in MAT-0110 or higher. Includes a Lab.

BIO-2012: General Biology II (4 hours)

A continuation of BIO-2011 emphasizing the diversity of living organisms, form and function in plants and animals, and principles of ecology. Fee: Required. Prerequisite: C or higher in BIO-2011. Includes a Lab.

BIO-2111: Anatomy and Physiology I (4 hours)

Basic structure and function of cells, tissues and organ systems of the body; skeletal, muscle, nervous and endocrine systems. Fee: Required. Prerequisite: C or higher in BIO-2011. Replaces: BIO-2600. Includes a Lab.

BIO-2112: Anatomy and Physiology II (4 hours)

A continuation of BIO-2111, including cardiovascular, digestive, respiratory, urinary and reproductive systems; metabolism, thermoregulation, fluid/electrolyte balance. Fee: Required. Prerequisite: C or higher in BIO-2111. Replaces: BIO-2650. Includes a Lab.

BIO-2500: Fundamentals of Microbiology (4 hours)

Principles of microbiology including the structure, classification, cultivation and distribution of microorganisms, use of microbes in biotechnology, properties of pathogenic microbes and host defense. Fee: Required. Includes a Lab.

BIO-3215: Microbiology (4 hours)

Principles of microbiology including an in-depth study of the structure, classification and cultivation of microorganisms including viruses, bacteria and fungi with a heavy emphasis on medical, centenary and biotechnology applications. Fee: Required. Prerequisite: C or higher in BIO-2012 and CHE-2212. Includes a Lab.

BIO-3230: Cell Biology (4 hours)

Study of physiological, structural and functional properties of both prokaryotic and eukaryotic cells including their interaction with their environment, life cycles and death. Fee: Required. Prerequisite: C or higher in BIO-2012 and CHE-2200 or CHE-2211. Includes a Lab.

BIO-3235: Molecular Biology (4 hours)

Structure and function of nucleic acids; DNA replication, transcription and translation; regulation of gene expression; recombinant DNA; applications of current molecular techniques in genomics (QTL mapping), forensics, medicine and ecology. Fee: Required. Prerequisite: C or higher in BIO-2012 and CHE-2200 or CHE-2211. Includes a Lab.

BIO-3310: General Ecology (4 hours)

Biotic communities with an emphasis on local plants and animals. Succession, ecosystem, biogeochemical cycles, energy in ecological systems. Several field trips. Fee: Required. Prerequisite: C or higher in BIO-2012. Includes a Lab.

BIO-4225: Genetics (4 hours)

A study of the principles and mechanisms of inheritance including the molecular organization, replication, transmission and expression of genetic traits. Fee: Required. Prerequisite: C or higher in BIO-2012 and Junior standing. Includes a Lab.

BIO-4235: Embryology (4 hours)

Explores the development of the human embryo from fertilization to birth. Fee: Required. Prerequisite: C or higher in BIO-2012.

BIO-4340: Regulation of Biological Systems (3 hours)

Systems and processes involved in maintaining homeostasis in plants and animals. Prerequisite: C or higher in BIO-2012.

BIO-4400: Forensic Science (3 hours)

Study and application of science to the process of law including analysis of drugs, different forms of trace evidence, identification of biological fluids, forensic pathology and forensic toxicology. Prerequisite: C or higher in BIO-2012.

BIO-4511: Biotechnology (3 hours)

Principles and applications of modern molecular biology methods. Prerequisite: C or higher in BIO-3215 or BIO-3230.

BIO-4710: ACCA - Morton Arboretum Botany (4 hours)

A limited number of botany courses are offered by the Associated Colleges of the Chicago Area. Consult the Natural Science Department for details on specific courses. Fee: Required.

BIO-4720: ACCA - Biology (2 hours)

Ten-week speaker series on a biological topic. Topic changes each semester. Consult the Natural Science Department for details. A maximum of four hours in BIO-4720 may be applied to a biology program.

BIO-4730: ACCA - Shedd Aquarium (4 hours)

A limited number of biology courses are offered by the Associated Colleges of the Chicago Area. Consult the Natural Science Department for details on specific courses. Fee: Required.

BIO-4900: Seminar in Biology (3 hours)

Readings, discussion and oral and written presentation of current topics in a selected biological area. Cross-Listed: CHE-4901 and EAS-4901. Prerequisite: Senior college standing and 16 hours of biology.

BIO-4950: Independent Study in Biology (6 hours)

Limitations: Department approval: one independent study per semester and cumulative GPA of 2.00; and minimum GPA 2.75 GPA in major.

BIO-4990: Internship in Biology (4 hours)

Limitations: Department approval: Supervised involvement in a biology-related work experience. Prerequisite: Minimum cumulative GPA of 2.75; minimum GPA of 2.75 in 18+ hours of biology.