BIOLOGY (BIOL)

BIOL 1010 Introduction to Biology I 3 Credits
Topics to be covered include the chemical basis of cells, general cell biology and genetics, respiration and photosynthesis, patterns of inheritance, natural selection and speciation and an introduction to the major kingdoms of life. The laboratory component provides hands-on experience in analysis and evaluation of biological processes. This course provides a foundation for the non-science pathway in the skills of inquiry, data collection, and critical thinking while introducing the student to the basic concepts of the life sciences.
Co-requisite(s): BIOL 1010L
Notes: Credit for this course is not granted for students with credit in BIOL 1107/BIOL 1107L.

BIOL 1010L Introduction to Biology I Lab 1 Credit
The laboratory component of BIOL 1010 provides hands-on experience in analysis and evaluation of biological processes. Laboratory Fee.
Co-requisite(s): BIOL 1010
Course Fee Required

BIOL 1011K Introductory Biology and Laboratory - eCore 4 Credits
An introduction to fundamental unifying principles in biology. Topics covered in the course include: chemistry of life, cell structure and membranes, cellular functions (metabolism, respiration, photosynthesis, communication, and reproduction), genetics (inheritance patterns, DNA structure and function, gene expression, and biotechnology), and evolution. This course involves both lecture and lab components.

BIOL 1012 Introduction to Biology II 3 Credits
Topics to be covered include evolution and natural selection, diversity of life, senses of the human body, immunity and disease, ecology, and conservation. This course provides a foundation for the non-science major in the skills of inquiry, data collection, and critical thinking while introducing the student to the basic concepts of the life sciences.
Co-requisite(s): BIOL 1012L
Notes: Credit for this course is not granted for students with credit in BIOL 1108/BIOL 1108L.

BIOL 1012K Introductory Biology II and Laboratory - eCore 4 Credits
This course covers the evolution and diversity of organisms, including microbes, protists, fungi, plants, and animals. Additional topics include body systems, the immune system, reproduction and development, and ecology. For non-biology majors only.
Course Fee Required

BIOL 1012L Introduction to Biology II Lab 1 Credit
The laboratory component for BIOL 1012 provides hands-on experience in analysis and evaluation of biological processes. Laboratory Fee.
Co-requisite(s): BIOL 1012
Course Fee Required

BIOL 1020 Plants, Society, and the Environment 3 Credits
This course explores the basic structure and function of plants; how they reproduce; their evolution and adaptation to unique ecosystems; the process of domesticating plants; and the sociocultural, economic, scientific and medical impacts of domesticating plants. This course is designed for non-science majors.

BIOL 1107 Principles of Biology I 3 Credits
Lecture part of a sequence designed for science majors
Prerequisite(s): Satisfactory placement scores of successful completion of all learning support requirements.
Co-requisite(s): BIOL 1107L

BIOL 1107L Principles of Biology I Lab 1 Credit
Laboratory exercises supplement the lecture material of BIOL 1107. Laboratory Fee.
Prerequisite(s): Satisfactory placement scores or successful completion of all learning support requirements.
Co-requisite(s): BIOL 1107
Course Fee Required

BIOL 1108 Principles of Biology II 3 Credits
Lecture part of sequence designed for science majors.
Prerequisite(s): BIOL 1107 and BIOL 1107L with a grade of C or better.
Co-requisite(s): BIOL 1108L

BIOL 1108L Principles of Biology II Lab 1 Credit
Laboratory exercises supplement the lecture material of BIOL 1108. Laboratory Fee.
Prerequisite(s): BIOL 1107 and BIOL 1107L with a grade of C or better.
Co-requisite(s): BIOL 1108
Course Fee Required

BIOL 2154K General Zoology 4 Credits
This course includes an overview of the diversity of the viruses, heterotrophic Bacteria, heterotrophic Protista and the Kingdom Animalia. Animal organ systems will also be studied comparatively in terms of anatomy, function and physiology; special emphasis will be placed on vertebrates. Laboratory Fee.
Course Fee Required

BIOL 2180 Directed Study in Issues in Biological Sciences 1-3 Credits
1-3 semester credit hours based on topic covered (topics covered will vary). This course may consist of individual or independent work under supervision of a member of the faculty with whom specific arrangements have been made (directed reading, research, laboratory or field observation projects). The transferability of credit in this course will depend on the evaluation of the receiving institution. This course may be repeated for credit only once.
Prerequisite(s): Any biological lab science and consent of instructor.
Course Fee Required

BIOL 2190 Principles of Nutrition 3 Credits
This course covers the fundamental principles of human nutrition from a biological perspective. Included will be the study of the major nutrient classes, nutrition and related diseases, role of major nutrients, consumer concerns about food, and the requirements of various stress groups.

BIOL 2251 Anatomy and Physiology I 3 Credits
This lecture course is the first course in a two-semester sequence designed to explore the biological and chemical processes underlying the structure and function of the human body at the cellular, tissue, organ, and whole-body level. Topics to be covered include, but are not limited to, biological chemistry; cellular structure and function; tissues; and the integumentary, skeletal, muscular, and nervous systems. This course includes laboratory exercises that supplement the material covered in lectures. This course is designed primarily for non-biology majors, especially those pursuing majors in nursing and the allied health professions.
Prerequisite(s): Grade of C or better in any lab science and successful completion of all learning support requirements.
Co-requisite(s): BIOL 2251L
Notes: Students may not receive credit for both PHED 2603 and BIOL 2251/BIOL 2251L.

BIOL 2251L Anatomy and Physiology I Laboratory 1 Credit
This course is the laboratory component of BIOL 2251. It is designed to provide hands-on experiences that will enhance and reinforce the content covered in BIOL 2251.
Prerequisite(s): Grade of C or better in any lab science and successful completion of all learning support requirements.
Co-requisite(s): BIOL 2251
Course Fee Required

BIOL 2252 Anatomy and Physiology II 3 Credits
This lecture course is the second course in a two-semester sequence designed to explore the biological and chemical processes underlying the structure and function of the human body at the cellular, tissue, organ, and whole-body level. Topics to be covered include, but are not limited to, the cardiovascular, endocrine, lymphatic and immune, respiratory, digestive, urinary, and reproductive systems. Metabolism and fluid, electrolyte, and acid-base balance will also be covered. This course is designed primarily for non-biology majors, especially those pursuing majors in nursing and the allied health professions.
Prerequisite(s): BIOL 2251 and BIOL 2251L with a grade of C or better.
Co-requisite(s): BIOL 2252L
Notes: Students may not receive credit for both PHED 2603 and BIOL 2252/BIOL 2252L.

BIOL 2252L Anatomy and Physiology II Laboratory 1 Credit
This course is the laboratory component of BIOL 2252. It is designed to provide hands-on experiences that will enhance and reinforce the content covered in BIOL 2252.
Prerequisite(s): BIOL 2251 and BIOL 2251L with a grade of C or better.
Co-requisite(s): BIOL 2252
Course Fee Required

BIOL 2260 Foundations of Microbiology 3 Credits
This integrated lecture and laboratory course provides an introduction to microbiology. This course introduces the student to the diversity and classification of medically significant microorganisms, their modes of pathogenesis and transmission, and the infectious diseases they cause. Topics to be covered include, but are not limited to, microbial cell biology and genetics; major classes of disease-causing microorganisms; host immune response; microbial control; aseptic technique; disinfection; and isolation, culture, staining, and identification of microorganisms. This course is designed primarily for non-biology majors, especially those pursuing majors in nursing and the allied health professions.
Prerequisite(s): BIOL 1010/BIOL 1010L or BIOL 2251/BIOL 2251L with a C or better.
Co-requisite(s): BIOL 2260L

BIOL 2260L Foundations of Microbiology Laboratory 1 Credit
Select laboratory exercises will provide training in the basic laboratory techniques for culture and identification of microbes. Laboratory Fee.
Prerequisite(s): BIOL 1010/BIOL 1010L OR BIOL 2251/BIOL 2251L with a C or better.
Co-requisite(s): BIOL 2260
Course Fee Required

BIOL 2700 Genetics 3 Credits
This course presents an introduction to the basic principles of genetics, including patterns of Mendelian and non-Mendelian inheritance, the molecular basis of heredity, DNA structure and function, biotechnological applications, and population genetics.
Prerequisite(s): BIOL#1107/BIOL 1107L#and CHEM#1211/CHEM 1211L with a grade of C or better.
Co-requisite(s): BIOL 2700L

BIOL 2700L Genetics Laboratory 1 Credit
Laboratory is designed to provide students with experience using fundamental techniques of genetic analysis. Laboratory Fee.
Prerequisite(s): BIOL#1107/BIOL 1107L #and#CHEM#1211/CHEM 1211L with a grade of C or better.
Co-requisite(s): BIOL 2700
Course Fee Required