

BIOLOGY (BIOL)

BIOL 101 The Pine Barrens 3 cr.

An investigation into the ecological aspects of the natural history of the New Jersey Pine Barrens. The course will explore the geography, plants and animals of New Jersey's most famous wilderness. Students must provide their own transportation for required monthly field trips to the Pine Barrens. Code 4 course fee.

BIOL 114 Principles of Biological Science 4 cr.

A one-semester laboratory course designed for those who have not had a high school science background, or for those who have graduated from high school ten or more years ago. Includes a study of the cell, its physiology and relationship to the more complicated organism. A study of genetics and heredity as well as evolution is included. It is recommended that this course not be taken concurrently with or after a science course with a higher course number. Code 5 course fee.

BIOL 119 Science and the Human Body 4 cr.

A one semester laboratory course for non-science majors or prospective health science students focuses on the nature of Science as a field of inquiry. Emphasis is on the scientific method as a natural outcome of human curiosity. The human body acts as a vehicle to explore the unity of life. Critical thinking is stressed as preparation to fully enjoy a society shaped largely by science and technology. Current trends and/or news articles are incorporated for their topics and exploration of methods used to obtain conclusions. Code 5 course fee.

BIOL 130 Human Anatomy and Physiology I 4 cr.

This course studies terminology associated with the study of human anatomy and physiology, homeostasis, feedback mechanisms; the chemical, cellular, and tissue level of organization as well as the integumentary, skeletal, muscular, and nervous systems. Dissection and laboratory instrumentation reinforce all lecture material. It is highly recommended that students enrolling in this course have taken (a) high school biology or BIOL 114 or BIOL 119 and (b) high school chemistry or CHEM 180. Code 5 course fee.

BIOL 131 Human Anatomy & Physiology II 4 cr.

This course studies the endocrine, cardiovascular, immune respiratory, digestive, and urinary systems; fluid and electrolyte balance; and reproduction. Dissection and instrumentation reinforce all lecture materials. Code 5 course fee.

Prerequisite(s): Take BIOL 130; Minimum grade C;

BIOL 161 General Biology I 4 cr.

Major concepts discussed include cell structure, bio-chemical reactions, energy relationships, evolution and the dynamics of plant functions. It is highly recommended that students enrolling in this course have taken high school biology and high school chemistry or BIOL 114 and high school chemistry. Code 5 course fee.

BIOL 162 General Biology II 4 cr.

This course is a continuation of BIOL 161, with emphasis on animal diversity, reproduction, development, physiology of various systems, ecology, and evolution/histories. Code 5 course fee.

Prerequisite(s): BIOL 161

BIOL 163 Introductory Botany 4 cr.

Presents beginning botany students with an application of the diverse organisms we call plants. Discusses the role that plants have in the biosphere, the environmental issues involved, and a basic understanding of plant diversity and their biology. Botany as a scientific process is stressed throughout the courses. Code 5 course fee.

BIOL 232 Microbiology 4 cr.

A course concerned primarily with microorganisms as they pertain to human welfare. Laboratory activities relate to isolation, culture, identification and control of microorganisms. Code 5 course fee.

Prerequisite(s): BIOL 131 or BIOL 162

BIOL 261 Ecology 4 cr.

This course is an introduction to ecology emphasizing the physical and biological factors affecting distribution, abundance and adaptations of organisms. Statistical analyses of population, community and ecosystem structure and function are performed. Fundamental concepts of behavioral ecology and evolutionary processes in ecology are stressed. Consideration of ecological principles is emphasized by field study in natural habitats and in the laboratory. Students will be required to travel to offsite laboratory locations. Code 5 course fee.

Prerequisite(s): BIOL 161

BIOL 265 Marine Biology 4 cr.

This course is a field and laboratory approach to the understanding of the complexity of marine organisms including the study of ecological principles that act to structure marine associations. Emphasis on local coastal and estuarine communities. Code 5 course fee.

Prerequisite(s): BIOL 161