

# Biology (BIO)

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**BIO 110. Principles of Biology. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a survey of fundamental biological principles for non-science majors. Emphasis is placed on basic chemistry, cell biology, metabolism, genetics, evolution, ecology, diversity, and other related topics. Upon completion, students should be able to demonstrate increased knowledge and better understanding of biology as it applies to everyday life.

**BIO 111. General Biology I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course introduces the principles and concepts of biology. Emphasis is placed on basic biological chemistry, molecular and cellular biology, metabolism and energy transformation, genetics, evolution, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels.

**BIO 112. General Biology II. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is a continuation of BIO 111. Emphasis is placed on organisms, evolution, biodiversity, plant and animal systems, ecology, and other related topics. Upon completion, students should be able to demonstrate comprehension of life at the organismal and ecological levels. Prerequisites: Take BIO 111 Minimum grade C

**BIO 120. Introductory Botany. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides an introduction to the classification, relationships, structure, and function of plants. Topics include reproduction and development of seed and non-seed plants, levels of organization, form and function of systems, and a survey of major taxa. Upon completion, students should be able to demonstrate comprehension of plant form and function, including selected taxa of both seed and non-seed plants. Prerequisites: Take One: BIO 110 or BIO 111

**BIO 130. Introductory Zoology. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides an introduction to the classification, relationships, structure, and function of major animal phyla. Emphasis is placed on levels of organization, reproduction and development, comparative systems, and a survey of selected phyla. Upon completion, students should be able to demonstrate comprehension of animal form and function including comparative systems of selected groups. Prerequisites: Take One: BIO 110 or BIO 111

**BIO 140A. Environmental Biology Lab. 1.0 Credit.** Class-0.0. Clinical-0.0. Lab-3.0. Work-0.0

This course provides a laboratory component to complement BIO 140. Emphasis is placed on laboratory and field experience. Upon completion, students should be able to demonstrate a practical understanding of environmental interrelationships and of contemporary environmental issues.

Corequisites: Take BIO 140

**BIO 140. Environmental Biology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course introduces environmental processes and the influence of human activities upon them. Topics include ecological concepts, population growth, natural resources, and a focus on current environmental problems from scientific, social, political, and economic perspectives. Upon completion, students should be able to demonstrate an understanding of environmental interrelationships and of contemporary environmental issues.

**BIO 150. Genetics in Human Affairs. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course describes the importance of genetics in everyday life. Topics include the role of genetics in human development, birth defects, cancer and chemical exposure, and current issues including genetic engineering and fertilization methods. Upon completion, students should be able to understand the relationship of genetics to society today and its possible influence on our future.

Prerequisites: Take One: BIO 110 or BIO 111

**BIO 155. Nutrition. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the biochemistry of foods and nutrients with consideration of the physiological effects of specialized diets for specific biological needs. Topics include cultural, religious, and economic factors that influence a person's acceptance of food, as well as nutrient requirements of the various life stages. Upon completion, students should be able to identify the functions and sources of nutrients, the mechanisms of digestion, and the nutritional requirements of all age groups.

**BIO 161. Introduction to Human Biology. 3.0 Credits.** Class-3.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides a basic survey of human biology. Emphasis is placed on the basic structure and function of body systems and the medical terminology used to describe normal and pathological states. Upon completion, students should be able to demonstrate an understanding of normal anatomy and physiology and the appropriate use of medical terminology.

**BIO 163. Basic Anatomy & Physiology. 5.0 Credits.** Class-4.0. Clinical-0.0. Lab-2.0. Work-0.0

This course provides a basic study of the structure and function of the human body. Topics include a basic study of the body systems as well as an introduction to homeostasis, cells, tissues, nutrition, acid-base balance, and electrolytes. Upon completion, students should be able to demonstrate a basic understanding of the fundamental principles of anatomy and physiology and their interrelationships.

**BIO 165. Anatomy and Physiology I. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0. Work-0.0

This course is the first of a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.

**BIO 166. Anatomy and Physiology II. 4.0 Credits.** Class-3.0.

Clinical-0.0. Lab-3.0. Work-0.0

This course is the second in a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and the interrelationships of all body systems.

Prerequisites: Take BIO 165

**BIO 168. Anatomy and Physiology I. 4.0 Credits.** Class-3.0. Clinical-0.0.

Lab-3.0. Work-0.0

This course provides a comprehensive study of the anatomy and physiology of the human body. Topics include body organization, homeostasis, cytology, histology, and the integumentary, skeletal, muscular, and nervous systems and special senses. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.

Prerequisites: Complete one of the following options: Take DRE 098

Take ENG 111 with a minimum grade of C

Take ENG 112 ENG 113 or ENG 114 with a minimum grade of C

**BIO 169. Anatomy and Physiology II. 4.0 Credits.** Class-3.0.

Clinical-0.0. Lab-3.0. Work-0.0

This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems as well as metabolism, nutrition, acid-base balance, and fluid and electrolyte balance. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships.

Prerequisites: Take BIO 168 Minimum grade C

**BIO 175. General Microbiology. 3.0 Credits.** Class-2.0. Clinical-0.0.

Lab-2.0. Work-0.0

This course covers principles of microbiology with emphasis on microorganisms and human disease. Topics include an overview of microbiology and aspects of medical microbiology, identification and control of pathogens, disease transmission, host resistance, and immunity. Upon completion, students should be able to demonstrate knowledge of microorganisms and the disease process as well as aseptic and sterile techniques.

Prerequisites: Take One: BIO 110, BIO 111, BIO 163, BIO 165, or BIO 168

**BIO 275. Microbiology. 4.0 Credits.** Class-3.0. Clinical-0.0. Lab-3.0.

Work-0.0

This course covers principles of microbiology and the impact these organisms have on man and the environment. Topics include the various groups of microorganisms, their structure, physiology, genetics, microbial pathogenicity, infectious diseases, immunology, and selected practical applications. Upon completion, students should be able to demonstrate knowledge and skills including microscopy, aseptic technique, staining, culture methods, and identification of microorganisms.

Prerequisites: Take One: BIO 110, BIO 111, BIO 163, BIO 165, or BIO 168