

# BSC-BIOLOGICAL SCIENCES

## **BSC 1005 Introduction to Life Science (3 Credits)**

This course applies the scientific method to critically examine and explain the natural world including but not limited to cells, organisms, genetics, evolution, ecology, and behavior. Student Learning Outcomes: -Students will evaluate data regarding validity. -Students will read and interpret a variety of scientific data. -Students will describe the natural world. -Students will articulate and practice the scientific method.

General Education, Area V: Natural Sciences

## **BSC 1010C General Biology I w/Lab (4 Credits)**

In this course students will apply the scientific method to critically examine and explain the natural world. This course will cover molecular biology, cellular biology, genetics, metabolism, and replication. Student Learning Outcomes: -Students will demonstrate scientific literacy by articulating and practicing the scientific method. -Students will evaluate data regarding validity. -Students will read and interpret a variety of scientific data. -Students will identify major macromolecules and state their importance to living organisms. -Students will explain metabolism. -Students will compare and contrast prokaryotic and eukaryotic structures and processes of cell division and replication. -Students will explain gene expression. -Students will solve problems in transmission genetics.

**Prerequisite:** Successful completion of all developmental writing and reading courses indicated through placement testing

General Education, Area V: Natural Sciences

## **BSC 1011C General Biology II w/Lab (4 Credits)**

This course is a continuation of General Biology I. Topics include surveys of the plant and animal kingdoms, comparative physiology of vertebrate and invertebrate systems, plant and animal development, evolution, and ecology. The course provides laboratory support for the concepts taught in lecture. Laboratory experiences include use of clinical microscope, dissections of selected animal and plant specimens, and field trips through the nature trail and other central Florida forests and fields.

**Prerequisite:** C or higher in BSC 1010C

General Education, Area V: Natural Sciences

## **BSC 2085C Human Anatomy & Physiology I with Lab (4 Credits)**

This course is the first part of a two-semester sequence in which students examine human anatomy and physiology through a systems approach based on the interaction between form and function, from the microscopic components of cells and tissues to the organismal level. Emphasis is placed on histology and the integumentary, skeletal, muscular, and nervous systems. Student Learning Outcomes: -Students will identify cell structures and describe their functions. -Students will distinguish tissues by structure, location in the body, and contrast their normal physiology. -Students will demonstrate an understanding of anatomical structure, organization of the body, cavities, planes, and directional terms. -Students will identify and describe structures of integumentary, skeletal, muscular, and nervous systems. -Students will interpret the functions of the integumentary, skeletal, muscular, and nervous systems. -Students will explain how the components of the human body maintain homeostasis. -Students will analyze and interpret physiological data. Prerequisite: BSC 1010C is strongly suggested prior to taking this course

General Education, Area V: Natural Sciences

## **BSC 2086C Human Anatomy & Physiology II with Lab (4 Credits)**

This course deals with the structure, function and chemistry of the human body including respiratory, cardiovascular, lymphatic, digestive, urinary, and reproductive systems. It also covers metabolism, electrolytes, and acid-base balance. The laboratory exercises emphasize anatomical, physiological and biochemical principles associated with classroom work.

**Prerequisite:** C or higher in BSC 2085C

General Education, Area V: Natural Sciences

## **BSC 2930C Special Topics in Biology (1-3 Credits)**

The purpose of this course is to expose students to some of the different types of research being done in the biological community. There is an emphasis on learning to read and decipher scientific literature within the biological discipline. Other topics may be added at the discretion of the instructor.

## **BSC 2949 Internship in Biological Science (1-3 Credits)**

This course is designed to provide students the opportunity to apply classroom theory to practical, work-related applications. Students may earn internship credits based on the completion of the required work experience and satisfactory completion of assignments. This course may be repeated based upon the student's academic program.