

BIOLOGY (BIO)

0150 Foundations of Biology I

This is an introductory course divided into two parts. The first part covers the cellular basis of life including a discussion of simple chemistry; cells as units of structure and function; and energy transformations. The second part includes an examination of those functions common to all organisms such as nutrition, gas and fluid transport and hormonal and neuronal control. Throughout, the emphasis is on the mechanisms used to accomplish these basic functions.

3 credits

0057 Foundations of Biology Laboratory I

This is the first course of a two-course series on the study of organisms in the laboratory and the field. We will work with techniques that are important in biology and apply these techniques to illustrate basic biological principles, with an emphasis on living organisms. The laboratory exercises focus on cell structure and function, basic cellular processes, plant structure and function, and basic anatomy and physiology.

1 credit

0058 Foundations of Biology Sea-Phages Laboratory I

This research-focused version of BIOSC 0050 uses bacteriophage discovery to introduce biology as an experimental science. Students learn current laboratory techniques through discovery, isolation, and characterization of their own novel virus. Students will be introduced to concepts in microbiology, evolution, and molecular biology through hands-on experiments driven by results obtained during class. This course is the first half of a two-part course. Students who enroll should plan on taking BIOSC 0068 in the subsequent term. This course is equivalent to BIOSC 0050.

0160 Foundations of Biology II

This course covers the basic principles of classical and molecular genetics, evolution and ecology. Emphasis will be placed on the experimental and observational basis for our knowledge of these subjects.

3 credits

0060 Foundations of Biology Laboratory II

This is the second course of a two-course sequence on the study of organisms in the laboratory and the field. We will work with techniques that are important in biology and apply these techniques to illustrate basic biological principles, with an emphasis on living organisms. The laboratory exercises focus on cell division, genetics, reproduction, evolution and ecology.

1 credit

0067 Foundations of Biology Research Laboratory II

This research-focused version of BIOSC 0060 uses real research projects to introduce biology as an experimental science. Students learn current laboratory techniques through an inquiry-based project or set of projects throughout the semester. Experiments can focus on genetics, molecular biology, evolution, and ecology. There is a lab fee attached to this course. This course is equivalent to BIOSC 0060.

0068 Foundations of Biology Sea-Phages Laboratory II

This research-focused version of BIOSC 0060 uses bacteriophage genomics to introduce biology as an experimental science. Students learn current computational biological techniques through annotation and characterization of novel viral genomes. Students will be introduced to concepts in bioinformatics, microbiology, evolution, and molecular biology through hands-on experiments driven by results obtained during class. There is a lab fee attached to this course. This course is the second half of a two-part course. Students who enroll should be currently enrolled in BIOSC 0058. This course is equivalent to BIOSC 0060.