

# BIOLOGY (BIO)

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## BIO-104 Introductory Biology With Lab (3)

Includes genetics, cell biology, cellular metabolism, cell division, evolution, ecology, plant and animal reproduction, and biodiversity. Covers current topics in life science. Offers laboratory through investigations, discussion, written expression and readings. Beginning-level course for liberal arts students. Arts & Sciences Elective Code: A

*Hours per week:* 2.0 lecture, 2.0 lab

## BIO-112 General Biology I (4)

Serves as an introductory course for biology, science and health science majors. Covers principles of cellular biology, elementary biochemistry, energy functions, cell division, DNA/RNA, genetics, and evolution theory. Arts & Sciences Elective Code: A; Comments: Besides taking a prerequisite course, proficiency may be demonstrated by a passing score on the Biology Readiness Exam. Contact the Test Center for details.

*Hours per week:* 3.0 lecture, 2.0 lab

*Prerequisite:* Earn a passing grade on the biology readiness exam. You are exempt from the exam if you have completed BIO-104, BIO-110 or CHM-165. To take the test at main campus, go to 2055 Cedar Hall. To take it at the Iowa City campus, an appointment is needed-call 319-887-3642.

## BIO-113 General Biology II (4)

Serves as an introductory course for biology, science and health science majors. Covers principles of organismal biology, ecology, the evolution and diversity of the Bacteria, Archaea, Protista, Fungi, Plantae and Animalia, followed by a comprehensive study of ecology. Includes plant anatomy and physiology, and animal systems including, but not limited to, nervous, circulatory, reproductive and immune systems. Arts & Sciences Elective Code: A; Comments: This course is intended for STEM majors. One year of high school Biology and Chemistry is strongly recommended.

*Hours per week:* 3.0 lecture, 2.0 lab

## BIO-131 Genetics and Society (3)

Provides a fundamental knowledge of genes, genomes, and how they are regulated to affect the function of an organism. Explores patterns of inheritance, and how genetic information can be used to determine genealogy, evolution, and in forensics. Reviews tools needed to critically explore the ethics of how modern genetic techniques will have an impact on us personally and as a society. Teaches the science of genes, genomes, heredity, evolution, crop production, genetics of cancer, genes as medicine, and the ethical considerations of gene manipulation. This is a non-science majors course. Arts & Sciences Elective Code: A

*Hours per week:* 2.0 lecture, 2.0 lab

## BIO-151 Nutrition (3)

Demonstrates the relationship between sound nutrition and good health. Explores energy requirements, carbohydrates, lipids, proteins, vitamins, minerals, metabolism, physical exercise, dieting, weight problems, evaluation of nutritional claims, vegetarianism, and proper nutrition during pregnancy and lactation. Arts & Sciences Elective Code: A

*Hours per week:* 3.0 lecture

## BIO-154 Human Biology (3)

Examines how human form and function work together to maintain homeostatic balance, and how dysfunctions can lead to disease processes. Explores fundamental biological principles as they apply to the human body. Intended for liberal arts students. Arts & Sciences Elective Code: A

*Hours per week:* 3.0 lecture

## BIO-161 Basic Anatomy and Physiology (3)

Presents an overview of human form and function through lecture and laboratory. Arts & Sciences Elective Code: B

*Hours per week:* 2.0 lecture, 2.0 lab

## BIO-168 Human Anatomy and Physiology I (4)

Introduces the structure and function of the human body. Emphasizes organization at the cellular and tissue level, and selected organ systems. Reinforces concepts through laboratory activities in computer simulations, dissection, and/or human specimens. Arts & Sciences Elective Code: A; Comments: One year of recent high school biology/chemistry with a grade of B or higher strongly recommended, or completion of Basic Biological Concepts or other college-level biology course

*Hours per week:* 3.0 lecture, 2.0 lab

## BIO-173 Human Anatomy and Physiology II (4)

Continues the study of human organ systems. Reinforces concepts through laboratory activities in computer simulations, dissection, and/or human specimens. Arts & Sciences Elective Code: A

*Hours per week:* 3.0 lecture, 2.0 lab

*Prerequisite:* Take BIO-168.

## BIO-186 Microbiology (4)

Surveys bacteria, viruses and fungi through their growth characteristics, morphology and pathogenicity. Introduces immunology and explores epidemiology and diagnosis of pathogenic bacteria. Emphasizes culturing, identification, aseptic technique and basic immunological assays in the laboratory. Arts & Sciences Elective Code: A; Comments: One year of recent high school biology/chemistry with a grade of B or higher is strongly recommended, or completion of Basic Biological Concepts or other college-level biology course

*Hours per week:* 3.0 lecture, 2.0 lab

## BIO-195 Human Evolution (3)

Explores biological evolution of the human species, including primate comparisons and prehistoric culture. Examines the development of evolutionary theory, natural selection, principles of inheritance, mechanisms of evolution, human biological diversity and adaptation, the behavioral and ecological diversity of nonhuman primates, and the human fossil and archaeological records. Arts & Sciences Elective Code: A

*Hours per week:* 3.0 lecture

## BIO-208 Agricultural Biology and Chemistry (3)

Provides a basic understanding of the biological and chemical concepts and processes necessary for the study of agricultural crop and livestock production, and their end-use products. Applies these concepts to practical agricultural situations. Arts & Sciences Elective Code: B

*Hours per week:* 3.0 lecture

### **BIO-924 Honors Project (1)**

Allows a qualified honors student to pursue a special concentration of study under the guidance of a faculty member. Requires completion of an honors project contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean

*Hours per week:* 1.0 lecture

### **BIO-928 Independent Study (1)**

Allows for a special concentration of study under the guidance of a faculty member. Requires an independent study contract. May be taken more than once. Arts & Sciences Elective Code: A; Comments: Permission of instructor and dean

*Hours per week:* 2.0 lab