

BIOLOGY (BI)

BI-101 General Biology; Cellular Biology

4 credits, Fall/Winter/Spring/Summer

An inquiry-based laboratory course focusing on cellular biology, genetics, epigenetics, biotechnology and natural selection. Class uses student centered activities in a collaborative learning environment to enhance appreciation of the biological world.

Recommended Prerequisites: MTH-060 or MTH-098 or placement in MTH-065; and WRD-098 or placement in WR-121Z

Corequisites: BI-101L

BI-102 General Biology; Animal Systems

4 credits, Fall/Winter/Spring/Summer

An inquiry-based laboratory course focusing on human and animal body systems; including teratogens, Hox genes and hormone mimics in embryonic development. Activities emphasize comparisons across animal phyla to better understand the diversity of life. The class uses student centered activities in a collaborative learning environment to enhance appreciation of the animal kingdom.

Recommended Prerequisites: MTH-060 or MTH-098 or placement in MTH-065; and WRD-098 or placement in WR-121Z

Corequisites: BI-102L

BI-103 General Biology; Plants & The Ecosystem

4 credits, Summer/Fall/Spring

An inquiry-based laboratory course focusing on plants and the ecosystem; including plant identification, population dynamics, productivity and energy flow. Activities include an integrated approach to understanding environmental issues and the impact of humans on the biosphere. The class uses student centered activities in a collaborative learning environment to enhance appreciation of the biological world.

Recommended Prerequisites: MTH-060 or MTH-098 or placement in MTH-065; and WRD-098 or placement in WR-121Z

Corequisites: BI-103L

BI-112 General Biology for Health Sciences

4 credits, Fall/Winter/Spring/Summer

A one-term preparatory course that introduces the Health Occupations student to the scientific method, molecular and cellular biology, principles of inheritance, homeostasis, natural selection, tissues, and organ systems. Topics and skills covered prepare students to enter BI-231 and BI-234.

Recommended Prerequisites: MTH-060 or MTH-098 or placement in MTH-065, and WRD-098 or placement in WR-121Z

Recommended Corequisite: CH-112

Corequisites: BI-112L

BI-120 Introduction to Human Anatomy and Physiology

4 credits, Fall/Winter/Spring

This course is designed to serve students as an overview introductory course to human anatomy and physiology. Material covered includes the structure and function of the human body. Basic chemistry and cell structures are covered, as well as the organization of tissues, organs, and organ systems. Correlations can then be made between this material and disease states commonly encountered in health care. Dissection of animal tissues is required.

Corequisites: BI-120L

BI-160 Bird Identification & Taxonomy

3 credits, Not Offered Every Year

Lecture course introducing bird taxonomy, evolution, anatomy and physiology, identification, and behaviors. Identification techniques applied to regional birds through lectures, slides and other activities.

BI-160L Bird Identification & Taxonomy with Lab

4 credits, Not Offered Every Year

Lecture course introducing bird taxonomy, evolution, anatomy and physiology, identification, and behaviors. Identification techniques applied to regional birds through lectures, slides and other activities. Includes field identification of common Oregon birds by sight, sound, and habitat. Field trips required along with online research.

BI-163 Malheur Field Trip

1 credits, Not Offered Every Year

Four day field trip. Study of plants, animals, geology, and history of the Northern Basin and Range ecoregion at the Malheur Environmental Field Station in southeast Oregon. Required: Student Petition.

Required: Field trip

BI-165C Natural History of the Oregon Coast

3 credits, Not Offered Every Year

Explores the natural processes that form our Northwest coastal environment: geologic development, shoreline processes, oceanography, and environmental hazards. Topics include the ecology of marine mammals, fish, birds, estuaries, tidepools, sand dunes, and coastal forests.

BI-165CL Natural History of the Oregon Coast with Lab

4 credits, Not Offered Every Year

Explores the natural processes that form our Northwest coastal environment: geologic development, shoreline processes, oceanography, and environmental hazards. Topics include the ecology of marine mammals and birds, estuaries, tide pools, sand dunes and coastal forests. Lab included with field trips and lab activities.

BI-165D Natural History of the Western Deserts

4 credits, Winter

A lecture and lab course studying plants, animals, geology, ecology and environmental issues of western deserts. This intensive nine-day field course travels through western desert regions. Required: Student Petition.

Prerequisites: WRD-098 or placement in WR-121Z

Recommended: One term of college-level science

Corequisites: BI-165DL

BI-175 Integrated Science Inquiry

4 credits, Fall

An introductory laboratory course for liberal arts majors emphasizing an evolutionary approach to major topics in science through the use of integrated themes. The themes focus on the scientific discoveries and people that shape our understanding of the world. The course emphasizes an interdisciplinary perspective on science, collaborative scientific investigations and critical thinking. Themes have included: Evolution: the Idea that Shocked the World, the People and Animals of Africa, and the Lewis and Clark Expedition.

Recommended Prerequisites: WRD-098 or placement in WR-121Z

Corequisites: BI-175L

BI-176 Integrated Science Inquiry

4 credits, Winter

An introductory laboratory course for liberal arts majors emphasizing an evolutionary approach to major topics in science through the use of integrated themes. The themes focus on the scientific discoveries and people that shape our understanding of the world. The course emphasizes an interdisciplinary perspective on science, collaborative scientific investigations and critical thinking. Themes have included: Human Evolution, Diseases of Africa, and the Lewis and Clark Expedition.

Recommended Prerequisites: WRD-098 or placement in WR-121Z

Corequisites: BI-176L

BI-177 Integrated Science Inquiry

4 credits, Fall

An introductory laboratory course for liberal arts majors emphasizing an evolutionary approach to major topics in science through the use of integrated themes. The themes focus on the scientific discoveries and people that shape our understanding of the world. The course emphasizes an interdisciplinary perspective on science, collaborative scientific investigations and critical thinking. Themes have included Evolution & Contemporary Issues, Africa, and the Lewis and Clark Expedition.

Recommended Prerequisites: WRD-098 or placement in WR-121Z

Corequisites: BI-177L

BI-204 Elementary Microbiology

4 credits, Winter

A lab class with environmental focus. This class explores microscopic life and its importance in the environment and in industry. We also learn about the causes and implications of waterborne pathogens. Labs will provide practice with aseptic techniques and introduce tools and current methodologies used in the study of microorganisms.

BI-215 General Zoology

4 credits, Fall

A lecture and lab course offering cellular and molecular basis of animal life including genetics, embryology, evolution, systematics, and protozoan diversity.

Prerequisites: MTH-095 or placement in MTH-111Z

Recommended Prerequisites: WRD-098 or placement in WR-121Z

Corequisites: BI-215L

BI-216 General Zoology

4 credits, Winter

A lecture and lab course covering the maintenance of the cellular, tissue, & organ levels of invertebrates, evolution of animal systems and the diversity of the invertebrate animal phyla.

Prerequisites: MTH-095 with a C or better or placement in MTH-111Z

Recommended Prerequisites: WRD-098 or placement in WR-121Z

Corequisites: BI-216L

BI-217 General Zoology

4 credits, Spring

A lab course covering diversity of the more complex invertebrate and vertebrate animal phyla. Includes animal anatomy/physiology, animal behavior, distribution, ecology and conservation.

Prerequisites: MTH-095 with a C or better or placement in MTH-111Z

Recommended Prerequisites: WRD-098 or placement in WR-121Z

Corequisites: BI-217L

BI-221Z Principles of Biology: Cells

5 credits, Fall

Explores fundamental biological concepts and theories about the cellular and molecular basis of life including cell structure and function, metabolism, genetic basis of inheritance and how information flows from DNA to proteins, with a focus on the iterative process of science. Intended for science majors.

Prerequisite or Corequisite: CH-104, or CH-221Z and CH-227Z

Prerequisites: MTH-111Z or placement in MTH-112Z

Recommended Prerequisites: WRD-098 or placement in WR-121Z

Corequisites: BI-221LZ

BI-222Z Principles of Biology: Organisms

5 credits, Winter

Explores fundamental biological concepts and theories about the structure and function of diverse organisms (including plants and animals), evolution and development, transformation of energy and matter, and body systems at a multicellular organismal level. Intended for science majors.

Prerequisite or Corequisite: CH-105, or CH-222Z and CH-228Z

Corequisites: BI-222LZ

BI-223Z Principles of Biology: Ecology and Evolution

5 credits, Spring

Explores the unity and diversity of life through evolutionary mechanisms and relationships, and adaptation to the environment. Examines population, community, and ecosystem ecology. Intended for science majors.

Prerequisite or Corequisite: CH-105, or CH-222Z and CH-228Z

Corequisites: BI-223LZ

BI-231 Human Anatomy & Physiology I

4 credits, Fall/Winter/Spring/Summer

A lab course designed for students entering the physical education or medically-related fields. Includes body organization, terminology, tissues and systemic study of the integumentary, skeletal and nervous systems. Animal organ dissection required.

Prerequisites: BI-112 (preferred), or BI-101 and BI-102, or BI-221Z

Prerequisites: CH-112 (preferred), or CH-104 and CH-105, or CH-221Z, CH-227Z, CH-222Z and CH-228Z

Corequisites: BI-231L

BI-232 Human Anatomy & Physiology II

4 credits, Fall/Winter/Spring/Summer

Lab course covering structure and function of the muscular, cardiovascular, lymphatic, and respiratory systems. Animal organ dissection required.

Prerequisites: BI-231 with a C or better

Corequisites: BI-232L

BI-233 Human Anatomy & Physiology III

4 credits, Fall/Winter/Spring/Summer

Lab course covering neuroendocrine control, digestive, excretory and reproductive systems. Study of fluid, electrolyte and acid-base balance. Animal organ dissection required.

Prerequisites: BI-232 with a C or better

Corequisites: BI-233L

BI-234 Introductory Microbiology

4 credits, Fall/Winter/Spring/Summer

An introductory microbiology lab course required for health science and science majors. Includes characteristics, physiology and growth requirements of microorganisms, interactions between humans and microorganisms, immunology, infection, and principles of microbial control. This course emphasizes critical thinking and analytical skills in a collaborative laboratory environment.

Prerequisites: BI-101, BI-112 or BI-221Z

Prerequisites: CH-104, CH-112, or CH-221Z and CH-227Z

Corequisites: BI-234L