

# BI - BIOLOGY AND ANATOMY

## BI100 Survey of Body Systems ★

Credits 4

Summer/Fall/Winter/Spring

**Registration Requirement:** RD090 and WR090, or IECC201R and IECC201W, each with a grade of "C" or better; and MTH020; or placement above stated course levels. Recommended prerequisite: High-school-level cell biology and chemistry.

This course is an introduction to human anatomy and physiology to fulfill the requirements for Health professional/technical programs, and as a survey for students interested in building a foundation for higher levels of study in anatomy and physiology. Lecture includes a brief study of the structure and function of the 10 major body systems. Laboratory includes a study of the various systems.

**This course fulfills:** Lab Science

## BI101 General Biology: Cellular Biology ★

Credits 4

Summer/Fall/Winter/Spring

**Registration Requirement:** RD090 and WR090, or IECC201R and IECC201W, each with a grade of "C" or better; and MTH020; or placement above stated course levels. Co-requisite: MTH058 or MTH060.

BI101 introduces the discipline of cellular biology, exploring topics including the cellular basis of life, cell structure and function and the metabolic processes that affect cells. BI101 introduces students to biology as a scientific discipline and engages students in the process of scientific discovery. BI101, BI102 and BI103 are non-sequential and can be taken in any order. Students considering majors in science or pre-professional health occupations are advised to eventually take BI211, BI212 and BI213.

**This course fulfills:** Lab Science

## BI102 General Biology: Molecular Biology ★

Credits 4

Summer/Fall/Winter/Spring

**Registration Requirement:** RD090, WR090 and MTH020, each with a grade of "C" or better; or placement above stated course levels. Co-requisite: MTH058 or MTH060.

BI102 introduces the discipline of molecular biology and genetics, exploring topics including cell division, protein production, inheritance and microevolution. BI101, BI102, and BI103 are non-sequential and can be taken in any order. This course has both a lecture and a lab component. Students considering majors in science or pre-professional health occupations are advised to eventually take BI211, BI212 and BI213.

**This course fulfills:** Lab Science

## BI103 General Biology: Ecology and Evolution

Credits 4

Spring

**Registration Requirement:** RD090, WR090 and MTH020, each with a grade of "C" or better; or placement above stated course levels. Co-requisite: MTH058 or MTH060.

BI103 uses ecology and evolution as a theme to explore biology and to develop your ability to ask and answer questions scientifically. In BI103 you will develop expertise in the scientific method, understand how evolution is an organizing theme in biology, and develop the ecological background to participate as a citizen of the world. BI101, BI102, and BI103 are non-sequential and can be taken in any order. Students considering majors in science or pre-professional health occupations are advised to eventually take BI211, BI212 and BI213.

**This course fulfills:** Lab Science

## BI112 Biology for Health Professions

Credits 5

Summer/Fall/Winter/Spring

**Registration Requirement:** RD090 and WR090, or IECC201R and IECC201W, each with a grade of "C" or better; or placement above stated course levels. Co-requisite: MTH058 or MTH065. Recommended CH104.

This course is an introduction to cellular biology and genetics for students intending to take Anatomy and Physiology (BI231-233). BI112 lecture includes the principles of the scientific method, basic cell structure and function, cellular respiration, cell division, Mendelian and non-Mendelian genetics, and molecular genetics. Laboratory will require group collaboration in hands-on demonstration of course concepts.

**This course fulfills:** Lab Science

## BI121 Essentials of Human Anatomy and Physiology I ★

Credits 4

Summer/Fall/Winter/Spring

**Registration Requirement:** RD090 and WR090, or IECC201R and IECC201W, each with a grade of "C" or better; or placement above stated course levels. Co-requisite: MTH058 or MTH065. Recommended prerequisite: BI112 and CH104.

This course covers basic human anatomy and physiology: body organization, cell structure and function, tissues and membranes, and the integumentary, skeletal, muscular, nervous (with special senses) and endocrine systems.

**This course fulfills:** Lab Science

## BI122 Essentials of Human Anatomy and Physiology II ★

Credits 4

Fall/Winter/Spring

**Registration Requirement:** BI121 and completion of MTH058 or MTH065 with a grade "C" or higher.

BI122 covers the cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive (with development) systems.

**This course fulfills:** Lab Science

**BI132 Introduction to Animal Behavior ★**

Credits 4

Winter

**Registration Requirement:** RD090 and WR090, or IECC201R and IECC201W, each with a grade of "C" or better; or placement above stated course levels. Co-requisite: MTH058 or MTH060.

BI132 provides an introduction to the scientific discipline of animal behavior and engages students in the process of scientific discovery. We take a biological perspective to investigate both the proximate and ultimate causes of behavior. Topics include the development of behavior and how animals solve ecological and evolutionary challenges through behavior. Students considering majors in science or pre-professional health occupations are advised to eventually take BI211, BI212 and BI213.

**Additional Course Fee:** \$20.00

**This course fulfills:** Lab Science

**BI133 Northwest Forest Ecology**

Credits 4

Fall

**Registration Requirement:** RD090 and WR090, or IECC201R and IECC201W, each with a grade of "C" or better; or placement above stated course levels. Co-requisite: MTH058 or MTH060.

This course will explore topics in ecology and evolution, while introducing students to biology as a scientific discipline and engaging students in the process of scientific discovery. BI133 provides students with an introduction to the ecology of forests with emphasis on interactions between species within the ecological communities of the Pacific Northwest.

**Additional Course Fee:** \$20.00

**This course fulfills:** Lab Science

**BI211 Principles of Biology I**

Credits 5

Fall

**Registration Requirement:** RD090, WR090, and MTH095 each with a "C" or better; or placement above stated levels. Recommended requisite: Co-enrollment in or prior completion of a college-level chemistry class, or instructor approval.

The Principles of Biology sequence (BI 211, 212 and 213) introduces biology as a scientific discipline for students planning to major in biology or other science disciplines. Laboratories and classroom activities introduce techniques used to study biological processes and provide opportunities for students to develop their ability to conduct research. BI211 focuses on how structure defines function in organisms and the pathways and transformation of energy in living systems.

**Additional Course Fee:** \$20.00

**This course fulfills:** Lab Science

**BI212 Principles of Biology II**

Credits 5

Winter

**Registration Requirement:** BI211 with a "C" or better. Co-enrollment or prior completion of a college-level chemistry class is recommended.

Principles of Biology introduces biology as a scientific discipline for students planning to major in biology and other science disciplines. Laboratories and classroom activities introduce techniques used to study biological processes and provide opportunities for students to develop their ability to conduct research. This course uses genetics as a model system to understand information flow in living organisms.

**Additional Course Fee:** \$20.00

**This course fulfills:** Lab Science

**BI213 Principles of Biology III**

Credits 5

Spring

**Registration Requirement:** BI212 with a "C" or better. Co-enrollment or prior completion of a college-level chemistry class is recommended. Principles of Biology sequence introduces biology as a scientific discipline for students planning to major in biology and other science disciplines. Laboratories and classroom activities introduce techniques used to study biological processes and provide opportunities for students to develop their ability to conduct research. The course focus of BI213 is on the interactions of living systems and the ecology and evolution of biodiversity.

**Additional Course Fee:** \$20.00

**This course fulfills:** Lab Science

**BI231 Human Anatomy and Physiology I ★**

Credits 4

Summer/Fall/Winter/Spring

**Registration Requirement:** RD090 and WR090, or IECC201R and IECC201W, each with a grade of "C" or better; or placement above stated course levels. Co-requisite: MTH058 or MTH065. Recommended requisite: Biology course with genetics (BI102, BI112, or BI212) and CH104.

This course is designed for the pre-professional student planning a career in medicine, dentistry, physical therapy, nursing (RN) or a related field of healthcare. Mastery of the body's structure and function, as well as the application of this knowledge, is emphasized. BI231 includes both a lecture and a laboratory component that covers cell structure and function, tissues and membranes, and the integumentary, skeletal, muscular and endocrine systems. A grade of "C" or better is considered passing.

**Additional Course Fee:** \$25.00

**This course fulfills:** Lab Science

**BI232 Human Anatomy and Physiology II ★**

Credits 4

Summer/Fall/Winter/Spring

**Registration Requirement:** BI231 with a grade of "C" or better and completion of either MTH058 or MTH065.

This course is designed for the pre-professional student planning a career in medicine, dentistry, physical therapy, nursing (RN) or a related field of healthcare. Mastery of the body's structure and function, as well as the application of this knowledge, is emphasized. BI232 includes both a lecture and a laboratory component that covers the nervous system, special senses, lymphatic/body defenses and cardiovascular systems.

**Additional Course Fee:** \$25.00

**This course fulfills:** Lab Science

**BI233 Human Anatomy and Physiology III ★**

Credits 4

Summer/Fall/Winter/Spring

**Registration Requirement:** BI232 with a grade of "C" or better.

This course is designed for the pre-professional student planning a career in medicine, dentistry, physical therapy, nursing (RN) or a related field of health care. Mastery of the body's structure and function, as well as the application of this knowledge, is emphasized. BI233 includes both a lecture and a laboratory component that covers the human respiratory system, urinary system, water and electrolyte balance, digestive system, nutrition and metabolism, reproductive system and human development.

**Additional Course Fee:** \$25.00

**This course fulfills:** Lab Science

**BI234 Microbiology**

Credits 4

Summer/Fall/Winter/Spring

**Registration Requirement:** RD090 and WR090, or IECC201R and IECC201W, each with a grade of "C" or better; and MTH020; or placement above stated course levels.

This course provides students with basic knowledge of microbes and their role in infection/disease processes. Emphasis is placed on bacteria and viruses with some consideration of fungi, protozoa, and helminths. Bacterial structure is examined in detail followed by discussion of growth, metabolism and genetics of microorganisms. Discussion topics include: microbial diversity, growth, inhibition of growth; the role of immunity and host defense mechanisms; an introduction to major types of anti-microbial chemotherapeutics; transmissible diseases of concern to the healthcare provider with a heavy emphasis on case-study applications; and laboratory techniques for the study and identification of bacteria utilizing aseptic techniques.

**Additional Course Fee:** \$35.00

**This course fulfills:** Lab Science

*Course fees are subject to change. Additional section fees (web, hybrid, etc.) may apply.*

★ Course offered online

🌐 Cultural Literacy course