

## BIOL - Biology Courses

### BIOL B3A General Biology I

5 units

**Prerequisites:** BC placement into reading level 06 and math level 04 or successful completion of ACDV B50 or ACDV B61 or equivalent and MATH B70 or equivalent with a grade of C or better.

**Description:** This course is intended for biology majors. It is considered a survey course, as it covers basic biology and the diversity of unicellular and multicellular organisms.

This course also emphasizes general biological principles, classification, structure, function and evolutionary adaptations of organisms (including plants, fungi, animals, and unicellular organisms) to their environments.

**Hours:** 54 lecture, 108 lab

**C-ID:** BIOL B135S (When BIOL B3A and B3B are both taken)

**Transferable:** CSU, UC, and private colleges; IGETC 5.B; IGETC 5.C; CSU GE B.2; CSU GE B.3; BC GE B.1

### BIOL B3B General Biology II

5 units

**Prerequisites:** Successful completion of CHEM B1A or equivalent with a grade of C or better.

**Description:** Principles of cell biology, molecular biology, metabolism, biochemistry, molecular genetics, and physiology. Field trips required.

**Hours:** 54 lecture, 108 lab

**C-ID:** BIOL 135S (When BIOL B3A and B3B are both taken)

**Transferable:** CSU, UC, and private colleges; IGETC 5.B; IGETC 5.C; CSU GE B.2; CSU GE B.3; BC GE Area B.1

### BIOL B8 Introduction to Environmental Science

3 units

**Recommended:** BC placement into writing level 06 or successful completion of ENGL B50 or ENGL B53, or EMLS B50 or equivalent with a grade of C or better.

**Description:** Introduction to environmental issues from a scientific perspective, focusing on physical, chemical, and biological processes within the Earth system, the interaction between humans and these processes, and the role of science in finding sustainable solutions. Topics include ecological principles, biodiversity, climate change, sustainability, renewable and non-renewable energy, water resources, air and water pollution, and solid waste management.

**Hours:** 54 Lecture

**Transferable:** CSU and private colleges.

### BIOL B11 Concepts of Biology

4 units

**Prerequisites:** BC placement into reading level 06 or successful completion of ACDV B50 or ACDV B61 or equivalent with a grade of C or better.

**Description:** A non-majors introductory course that applies biological concepts to issues of everyday life. Concepts considered include scientific method; ecosystems and energy flow; organization, structure, function, behavior and evolution of organisms; inheritance; disease; ethics. Field trips may be required.

**Hours:** 54 lecture, 54 lab

**Transferable:** CSU, UC, and private colleges; IGETC 5.B; IGETC 5.C; CSU GE B.2; CSU GE B.3; BC GE B.1

### BIOL B16 General Microbiology

5 units

**Prerequisites:** BC placement into reading level 06 or successful completion of ACDV B50 or ACDV B61 and BIOL B3A or BIOL B3B or BIOL B32 or BIOL B33 or BIOL B20 and CHEM B11 or CHEM B1A or CHEM B18 or equivalent with a grade of C or better.

**Description:** Introduction to the study of microorganisms including: survey of microorganisms, history of microbiology, microbial control through physical and chemical agents, bacterial genetics and biogenetic engineering, bacterial metabolism, bacterial, fungal, protozoal, helminth and viral diseases by transmission. In addition, immunology, public health epidemiology, nosocomial infections, and microbial applications to food, water and sewage treatment are discussed. Field trips required.

**Hours:** 54 lecture, 108 lab

**Transferable:** CSU, UC, and private colleges; IGETC 5.B; IGETC 5.C; CSU GE B.2; CSU GE B.3; BC GE B.1

### BIOL B18 Essentials of Human Anatomy and Physiology

4 units

**Prerequisites:** BC placement into writing level 06 or successful completion of ENGL B50 or equivalent with a grade of C or better and reading level 06 or successful completion of ACDV 50 or ACDV B61 or equivalent with a grade of C or better.

**Description:** An integrated life science course specifically targeted for students in allied health programs. Topics include microscopic and gross anatomy as well as physiology of all human organ systems; skeletal, muscular, cardiovascular, lymphatic/immune, respiratory, digestive, excretory, nervous, endocrine, reproductive and integumentary. Additional topics will address cell structure and function, human development and human heredity.

**Hours:** 54 lecture, 54 lab

**Transferable:** CSU and private colleges; CSU GE B.2; CSU GE B.3; BC GE B.1

### BIOL B21 Special Projects in Biology

0.5-2 units

**Prerequisites:** BC placement into reading level 06 or successful completion of ACDV B50 or ACDV B61 or equivalent with a grade of C or better and any college biology course with a grade of C or better.

**Description:** Individually directed work in biology lab. Students will learn biological preparation, and/or development of teaching materials while assisting in a biology lab.

**Hours:** 27 lab hours for each .5 unit (27-108)

**Transferable:** CSU and private colleges.

### BIOL B32 Human Anatomy and Physiology I

4 units

**Prerequisites:** BC placement into reading level 06 or successful completion of ACDV B50 or ACDV B61 or equivalent with a grade of C or better.

**Description:** This is the first part of a two-semester integrated anatomy and physiology sequence that covers the structure, function, integration and homeostasis of the human body at the cellular, tissue, organ, organ system and organism level, including the integumentary, skeletal, muscular, nervous, sensory, cardiovascular, lymphatic, immune, respiratory, urinary, digestive, endocrine, and reproductive systems. This series meets the diverse needs of students seeking careers in such allied health fields as nursing, pharmacy, and physician's assistant. It is strongly recommended that students complete the entire Anatomy and Physiology sequence at the same institution as the material may

not be covered in the same semester order at different schools. Therefore students taking one semester at one school may not be given credit for the same semester at a different school.

**Note:** Completion of BIOL B32 and B33 is equivalent to C-ID BIOL 115S, where credit is given for both Human Anatomy (C-ID BIOL 110) and Human Physiology (C-ID BIOL 112) by completing a two-semester blended course. BIOL B32 or BIOL B33 alone do not give credit for C-ID BIOL 110 (Anatomy) or C-ID BIOL 112 (Physiology) but only 4 units for a GE lab science.

**Hours:** 54 lecture, 54 lab

**C-ID:** BIOL 115S (When BIOL B32 and B33 are both taken)

**Transferable:** CSU, UC, and private colleges; IGETC 5.B; IGETC 5.C; CSU GE B.2; CSU GE B.3; BC GE B.1

### **BIOL B33 Human Anatomy and Physiology II**

*4 units*

**Prerequisites:** Successful completion of BIOL B32 with a grade of C or better.

**Description:** This is the second part of a two-semester integrated anatomy and physiology sequence that covers the structure, function, integration and homeostasis of the human body at the cellular, tissue, organ, organ system and organism level, including the integumentary, skeletal, muscular, nervous, sensory, cardiovascular, lymphatic, immune, respiratory, urinary, digestive, endocrine, and reproductive systems. This series meets the diverse needs of students seeking careers in such allied health fields as nursing, pharmacy, and physician's assistant. It is strongly recommended that students complete the entire Anatomy and Physiology sequence at the same institution as the material may not be covered in the same semester order at different schools. Therefore, students taking one semester at one school may not be given credit for the same semester at a different school.

**Note:** Completion of BIOL B32 + BIOL B33 is equivalent to C-ID BIOL 115S, where credit is given for both Human Anatomy (C-ID BIOL 110) and Human Physiology (C-ID BIOL 112) by completing a 2 semester blended course. BIOL B32 or BIOL B33 alone do not give credit for C-ID BIOL 110 (Anatomy) or C-ID BIOL 112 (Physiology) but only 4 units for a G.E. lab science.

**Hours:** 54 lecture, 54 lab

**C-ID:** BIOL 115S (When BIOL B32 and B33 are both taken)

**Transferable:** CSU, UC, and private colleges; IGETC 5.B; IGETC 5.C; CSU GE B.2; CSU GE B.3; BC GE B.1