BIOL A220: HUMAN ANATOMY

Item	Value
Curriculum Committee Approval Date	12/09/2020
Top Code	041000 - Anatomy and Physiology
Units	5 Total Units
Hours	162 Total Hours (Lecture Hours 54; Lab Hours 108)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	Yes
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S)
Associate Arts Local General Education (GE)	• OC Physical/Biological Sci - AA (OB)
Associate Science Local General Education (GE)	• OCC Physical/Biological Sci-AS (OSB)
California General Education Transfer Curriculum (Cal-GETC)	• Cal-GETC 5B Biological Sciences (5B) • Cal-GETC 5C Laboratory Activity (5C)
Intersegmental General Education Transfer Curriculum (IGETC)	• IGETC 5B Biological Sciences (5B) • IGETC 5C Laboratory Activity (5C)
California State University General Education Breadth (CSU GE-Breadth)	• CSU B2 Life Science (B2) • CSU B3 Laboratory Activity (B3)

Course Description

Structural organization of the human body: gross and microscopic structure of the integumentary, skeletal, muscular, nervous, sensory, endocrine, cardiovasuclar, lymphatic, respiratory, digestive, excretory, and reproductive systems from cellular to organ system levels of organization. Taught from a functional perspective, it emphasizes the relationship of structure (Anatomy) to function (Physiology). Laboratory participation is required. This course is primarily intended for nursing, allied health, kinesiology, and other health-related majors. Transfer Credit: CSU; UC: Credit Limitation: Credit for either BIOL A221 or BIOL A220 and BIOL A225. C-ID: BIOL 110B.**C-ID:** BIOL 110B.

Course Level Student Learning Outcome(s)

1. Describe the field of anatomy and identify the structures and structural hierarchy that comprise the organ systems of the human body.
2. Demonstrate the dissection skills and the proper microscope techniques needed to investigate the tissues and organs that comprise the human body.
3. Defend the contention that structure and function are inextricably correlated and apply that understanding to the fields of anatomy and physiology.

Course Objectives

- I Primary Course Objectives
- I. 1. Describe key structural features of different human cell and major tissue types.
- I. 2. Identify and describe the anatomy of the systems of the human body.
- I. 3. Relate structure and function at the cellular through system levels of organization of human body systems.
- I. 4. Describe structural or anatomical changes that occur in disease, injury, or aging of the human body.
- II Additionally
- II. 1. Demonstrate basic dissection skills.
- II. 2. Identify histological specimens of major tissues in the microscope.
- II. 3. Demonstrate skill in the use of a compound light microscope.
- II. 4. Use the language of medicine effectively.

Lecture Content

Introduction/Orientation Cellular structures Cell cycle and cell division Histology Embryology Integumentary System Skeletal System Articulations Cartilage and Osseous Tissue Bone Growth Development Muscular System Surface (External) Anatomy Nervous System including special senses (sensory organs) Central Nervous System Peripheral Nervous System Endocrine System Cardiovascular System Blood Heart Vessels Lymphatic Immune Systems Respiratory System Urinary System Digestive System Reproductive System Comparison of normal versus diseased, injured or age-related structural changes in any or all of the above organ systems.

Lab Content

This course includes a laboratory component with greater than 80% hands-on learning supporting the course outcomes. Students will be able to: 1. Identification of microscopic structures and tissues.

i. Demonstrate skill in the use of a compound light microscope. 2. Identification of bones and bone features. 3. Identification of skeletal musculature and muscle features. 4. Identification of internal organs and internal organ features. Additionally: 1. Dissection of organs or observation of dissected organs. 2. Dissection of organisms or observation of dissected organisms. 3. Identification of structures on models. 4. Use the language of medicine effectively.

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- Lab (04)
- DE Live Online Lab (04S)

Reading Assignments

Appropriate textbook reading assignments are given to coincide with lecture.

Writing Assignments

Students are asked to summarize concepts or specific pathways that pertain to content covered in lecture. For example, students should be able to summarize in a written fashion the steps involved with skeletal

muscle contraction, or the mechanics of the cardiac cycle including blood flow through the heart.

Out-of-class Assignments

Supplementary assignments are posted online to reiterate concepts delivered in lecture. Some are required, some are optional. They might include worksheets (labeling, drawing, short answer, etc), links to videos or interactive websites. (5 hours/week) Publishers websites (e.g. Mastering AP or McGraw Hill Connect) may also be used to deliver quizzes or assignments outside of class. (1.75 hours/week)

Demonstration of Critical Thinking

In the lecture component of the class: Examinations with objective and written components. In the laboratory component of the class: Lab practical examinations.

Required Writing, Problem Solving, Skills Demonstration

Students must be able to relate structure to function (e.g. sliding filament theory), describe processes, and with respect to problem solving students should be able to apply concepts to other situational examples (i.e., critical thinking skills).

Eligible Disciplines

Biological sciences: Masters degree in any biological science OR bachelors degree in any biological science AND masters degree in biochemistry, biophysics, or marine science OR the equivalent. Masters degree required.

Textbooks Resources

1. Required Marieb, E., Wilhelm, P.B., Mallatt, J.. Human Anatomy, 8 ed. Pearson, 2017

Manuals Resources

1. Sabastiani, A.M., and Fishbeck, D.W.. Mammalian Anatomy of the Cat, Morton Publishing , 01-01-2005