# BIOL A120: ANATOMY DISCUSSION

| Item | Value |
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| Curriculum Committee Approval Date | 12/04/2024 |
| Top Code | 041000 - Anatomy and Physiology |
| Units | 1 Total Units |
| Hours | 18 Total Hours (Lecture Hours 18) |
| Total Outside of Class Hours | 0 |
| Course Credit Status | Credit: Degree Applicable (D) |
| Material Fee | No |
| Basic Skills | Not Basic Skills (N) |
| Repeatable | No |
| Open Entry/Open Exit | No |
| Grading Policy | Standard Letter (S),<br>• Pass/No Pass (B) |

## Course Description

Student-centric discussion of topics covered within BIOL A220 (Human Anatomy): structural organization of the human body, gross and microscopic structure of the integumentary, skeletal, muscular, nervous, sensory, endocrine, cardiovascular, 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). This course is primarily intended for students concurrently enrolled in BIOL A220 (Human Anatomy), as well as nursing, allied health, kinesiology, and other health-related majors. ADVISORY: Concurrent enrollment in BIOL A220. Transfer Credit: CSU; UC.

## 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. Analyze anatomical concepts and structures as they relate to the function of the human body.
- I. 2. Present, discuss, and evaluate basic physiological concepts as related to the study of anatomy.
- I. 3. Assess personal performance and success with respect to time management and study skills as applied to BIO 220 learning outcomes.
- II Secondary Course Objectives
- II. 1. Describe key structural features of different human cell and major tissue types.
- II. 2. Relate structure and function at the cellular through system levels of organization of human body systems.
- II. 3. Identify and describe the anatomy of the systems of the human body.
- II. 4. Describe structural or anatomical changes that occur in disease, injury, or aging of the human body.
- II. 5. Demonstrate basic dissection skills.
- II. 6. Identify histological specimens of major tissues in the microscope.
- II. 7. Demonstrate skill in the use of a compound light microscope.
- II. 8. 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.

## Method(s) of Instruction

- Lecture (02)

## Instructional Techniques

1. Collaborative group work 2. Interactive discussion 3. Question and answer 4. Cooperative demonstration

## Reading Assignments

Appropriate textbook reading assignments are given to coincide with BIO 220 (Human Anatomy) 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. Students will also be asked to evaluate, discuss, and present ideas and concepts related to topics presented in lecture. (1 hr/wk)

## 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. (1 hr/wk)

## Demonstration of Critical Thinking

In the discussion component of the class: oral and demonstrative assessments with objective and written components.

## 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: Master's degree in any biological science OR bachelor's degree in any biological science AND master's degree in biochemistry, biophysics, or marine science OR the equivalent. Master's degree required.

## Textbooks Resources

1. Required Marieb, E., Wilhelm, P.B., Mallatt, J.. Human Anatomy, 8 ed. Pearson, 2017 2. Required Tortora. Principles of Human Anatomy, 14 ed. Wiley, 2018 3. Required McKinley. Human Anatomy, 6th ed. McGraw Hill, 2021

## Manuals Resources

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