

COURSE OUTLINE**Biology 120
Human Anatomy****I. Catalog Statement**

Biology 120 covers the systems of the human body including microscopic and gross anatomy of the following systems: integumentary, skeletal, muscular, nervous, circulatory, respiratory, lymphatic and immune, digestive, urinary, male and female reproductive, and endocrine. The laboratory includes the study of tissues using the microscope, a study of bones of the human skeleton, and the use of models to illustrate respective systems of the human body. Dissections of a sheep brain, cow heart, and cow eye are made to illustrate comparative parts of human anatomy. Observations are also made of a human cadaver.

Units - 5.0

Lecture Hours - 3.0

Laboratory Hours - 6.0

(Faculty Lab Hours 6.0 + Student Lab Hours 0.0 = Total Laboratory Hours 6.0)

Recommended preparation: Biology 115 is strongly recommended for students with limited background in the biological sciences.

II. Course Entry Expectations

Skill Level Ranges: Reading 5; Writing 5; Listening/Speaking 5; Math 2.

III. Course Exit Standards

Upon successful completion of the required course work, the student will be able to:

1. describe the structure of the human body;
2. identify the basic features of cells and their organization as tissues;
3. describe the general structure-function relationship of each organ because structure determines function;
4. use a microscope and employ dissection techniques.

IV. Course Content**Total Contact Hours =144****A. Cells and Tissues****27 hours**

1. Levels of structural organization in the human body
2. Use of the microscope
3. Cells and organelles
4. The four human tissue types
5. Integumentary system
6. Process of cell division

- B. The Skeletal System 18 hours
 - 1. The axial skeleton
 - 2. The appendicular skeleton
 - 3. Joint classification
- C. The Muscular System 27 hours
 - 1. Muscles of the head and neck
 - 2. Vertebral muscles
 - 3. Muscles of the thorax and abdomen
 - 4. Muscles of the pelvis and perineum
 - 5. Muscles of the shoulder, arm, forearm, and hand
 - 6. Muscles of the hip, thigh, leg, and foot
 - 7. Muscle of the back
- D. The Circulatory, Respiratory, and Lymphatic Systems 27 hours
 - 1. The circulatory system
 - a. The heart
 - b. Arteries and veins
 - c. Blood
 - 2. The respiratory system
 - 3. The lymphatic system
- E. The Digestive, Urinary, Reproductive, and Endocrine Systems 18 hours
 - 1. The digestive system
 - a. The gastrointestinal tract
 - b. The accessory organs
 - 2. The urinary system
 - 3. The reproductive systems
 - a. The male reproductive system
 - b. The female reproductive system
 - 4. The endocrine system
- F. The Nervous System 27 hours
 - 1. The central nervous system
 - a. The brain
 - b. The spinal cord
 - 2. The Peripheral Nervous System
 - a. Cranial nerves
 - b. Spinal nerves
 - c. Autonomic nervous system

V. **Methods of Presentation**

The following instructional methodologies may be used in the course:

1. lecture;
2. multi-media;
3. laboratory demonstrations;
4. online.

VI. Assignments and Methods of Evaluation

1. Unit examinations (each including a laboratory practical).
2. Final examination.

VII. Textbook

Marieb, E., J. Mallatt, and P. Wilhelm, Human Anatomy. Current Edition.
San Francisco: Pearson, 2010.
13th Grade Textbook Reading Level. ISBN: 0-8053-4789-5.

VIII. Student Learning Outcomes

1. Students will be able to identify, describe, and give examples of the major cellular organelles, their structures and the four major human tissue types.
2. Students will be able to identify and name all the bones and their markings in the human body in addition to being able to explain the process of bone development.
3. Students will be able to identify, name and explain the actions of all the major muscle groups in the human body in addition to understanding how muscles contract.
4. Students will be able to identify and name the structures of the heart and the large and medium blood vessels of the circulatory system, to comprehend the flow of blood, to explain the functions and significance of the lymphatic system, and describe the pathway of air in the respiratory system.
5. Students will examine the different functions of the digestive, urinary, endocrine and reproductive systems in the human body and identify and describe the major organs of these systems.
6. Students will examine the different functions of the central nervous system (brain and spinal cord) and peripheral nervous system, in addition to naming and describing the neurons and structures involved in both systems.