

**BIOL 107 Anatomy and Physiology I****Credit Hours:** 4**Scheduled hours per week**

Lecture: 3

Lab: 2

Field:

Experience:

**Catalog Course Description:**

An introduction to normal structure and function of the human body. The course covers principles of the chemistry compounds (biochemistry), cellular, tissue, organs of the body. Four systems are studied for gross and microscopic anatomy and normal functioning; these are integumentary, skeletal, muscular, and nervous systems. The lab work emphasizes microscopic work on cells and tissues, study of bones and muscles, and dissections of brain and eyeball.

**Pre-requisites:** None**Co-requisites:** 107L**Course Learning Outcomes (CLO):**

1. Explain chemistry concepts important in anatomical studies.
2. Describe the cell and its organelles as a basic building block for living organisms.
3. Identify tissues and their functions in the human body.
4. Use anatomical terminology to identify and describe locations of major organs and structures of each system.
5. Explain interrelationships among molecular, cellular, tissue and organ functions in each system covered.
6. Describe the interdependency and interactions of the systems.
7. Explain contributions of organs and systems to the maintenance of homeostasis.
8. Identify causes and effects of homeostatic imbalances.
9. Apply appropriate safety and ethical standards.
10. Locate and identify anatomical structures.
11. Appropriately utilize laboratory equipment (e.g. microscopes, dissection tools, general lab ware).
12. Work collaboratively to perform experiments.
13. Demonstrate the steps involved in the scientific method.
14. Communicate results of scientific investigations, analyze data, and formulate conclusions.
15. Use critical thinking and scientific problem-solving skills, including but not limited to, inferring, integrating, synthesizing and summarizing to make decisions, recommendations, and predictions.

**CLO Assessment Methods:** Methods of Evaluation of each CLO

- In-class discussions and activities
- Research papers
- Laboratory activity/reports

- Oral presentations
- Explanation of models
- Completion and discussion of dissections
- Homework questions
- Quiz/Exam questions

**Topics to be studied:**

- Anatomical terminology
- Chemicals of the body – basic chemistry and organic compounds
- Cellular structure and function
- Tissues and organ structure
- Survey of the integumentary system
- Survey of the skeletal system
- Survey of the muscular system
- Survey of nervous system

**Relationship of Course to Program Learning Outcomes (PLO) or Institutional Learning Outcomes:**

<p>Scientific Inquiry Category Outcome: Demonstrate the ability to apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.</p>			
<p>List course learning outcomes in this column. Indicate which course learning outcomes align with the Institutional Learning Category outcome by placing an X in each applicable box. You can adjust the number of rows needed for the number of course learning outcomes.</p>	<p>Demonstrate the ability to apply systematic methods of analysis to the natural and physical world</p>	<p>Demonstrate an understanding of scientific knowledge as empirical</p>	<p>Demonstrate the ability to refer to data as a basis for conclusions</p>
<p>1. Explain chemistry concepts important in anatomical studies.</p>	X	X	X
<p>2. Describe the cell and its organelles as a basic building block for living organisms.</p>	X	X	X
<p>3. Identify tissues and their functions in the human body.</p>	X	X	X
<p>4. Use anatomical terminology to identify and describe locations of major organs and structures of each system.</p>	X	X	
<p>5. Explain interrelationships among molecular, cellular, tissue and organ functions in each system covered.</p>	X	X	X

6. Describe the interdependency and interactions of the systems.	X	X	X
7. Explain contributions of organs and systems to the maintenance of homeostasis.	X	X	X
8. Identify causes and effects of homeostatic imbalances.	X	X	X
9. Apply appropriate safety and ethical standards.	X		
10. Locate and identify anatomical structures.	X	X	
11. Appropriately utilize laboratory equipment (e.g. microscopes, dissection tools, general lab ware).	X		
12. Work collaboratively to perform experiments.	X	X	X
13. Demonstrate the steps involved in the scientific method.	X	X	X
14. Communicate results of scientific investigations, analyze data, and formulate conclusions.	X	X	X
15. Use critical thinking and scientific problem-solving skills, including but not limited to, inferring, integrating, synthesizing and summarizing to make decisions, recommendations, and predictions.	X	X	X

Check if approved as:  Foundational Learning Course     Reinforcement Learning Course

**Special requirements of the course:** None

**Additional information:** None

**Prepared by:** Holly Martin

**Date:** January 21, 2022