

Standard  Institutionally Developed College: N/A

EDGE Compatible: No

**Pre-requisites**

Program Admission

**Co-requisites**

**Course Description**

Focuses on basic normal structure and function of the human body. Topics include general plan and function of the human body, integumentary system, skeletal system, muscular system, nervous and sensory systems, endocrine system, cardiovascular system, lymphatic system, respiratory system, digestive system, urinary system, and reproductive system.

**Course Length**

	Minutes	Contact Unit
Lecture:	3750	
Lab 2:	0	
Lab 3:	0	
Practicum/Internship:	0	
Clinical:	0	
Total:	3750	5

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Semester Credit Hours: 5

**Competencies**

Order	Description	Lecture	Lab2	Lab3	Practicum/Internship	Clinical	Total Minutes	Semester Credit Hrs
1	General Plan and Function of the Human Body	500	0	0	0	0	500	0
2	Integumentary System	250	0	0	0	0	250	0
3	Skeletal System	250	0	0	0	0	250	0
4	Muscular System	250	0	0	0	0	250	0
5	Nervous and Sensory Systems	500	0	0	0	0	500	0
6	Endocrine System	250	0	0	0	0	250	0
7	Cardiovascular System	500	0	0	0	0	500	0
8	Lymphatic System	250	0	0	0	0	250	0

Order	Description	Lecture	Lab2	Lab3	Practicum/ Internship	Clinical	Total Minutes	Semester Credit Hrs
9	Respiratory System	250	0	0	0	0	250	0
10	Digestive System	250	0	0	0	0	250	0
11	Urinary System	250	0	0	0	0	250	0
12	Reproductive System	250	0	0	0	0	250	0
<b>Totals for Course ALHS 1011 - Anatomy and Physiology ( version 201003 ):</b>		<b>3750</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3750</b>	<b>5</b>

## Learning Outcomes

### General Plan and Function of the Human Body

Order	Description	Learning Domain	Level of Learning
1	Define anatomy and physiology.	Cognitive	Knowledge
2	Describe anatomical position.	Cognitive	Knowledge
3	Define and use the principle directional terms in human anatomy.	Cognitive	Knowledge
4	Identify the sagittal , transverse and frontal sections of the body.	Cognitive	Knowledge
5	Define and locate the principle regions and cavities of the human body.	Cognitive	Knowledge
6	Identify the structure of a cell tissue, organ, and system, and explain the relationship among these structures as they constitute an organism.	Cognitive	Knowledge
7	Define the term homeostasis and metabolism, and cellular respiration.	Cognitive	Knowledge
8	Differentiate between inorganic and organic compounds and give examples of each.	Cognitive	Analysis
9	Describe the properties of water that make it essential for body functions.	Cognitive	Knowledge
10	Contrast acids and bases and use pH scale in describing acidity and alkalinity of a solution.	Cognitive	Analysis
11	Identify the biologically significant elements from a given list by their chemical symbols and summarize the main functions of each in the body.	Cognitive	Knowledge
12	Describe the structure of a typical cell.	Cognitive	Knowledge
13	List organelles and discuss the functions of each.	Cognitive	Knowledge
14	Describe active and passive transport mechanisms.	Cognitive	Knowledge
15	Define mitosis and meiosis.	Cognitive	Knowledge
16	Define the term tissue and list the four major types.	Cognitive	Knowledge
17	List and describe major types of epithelial, connective, and muscle tissues.	Cognitive	Knowledge
18	Locate and describe different categories of membranes in the body.	Cognitive	Comprehension

### Integumentary System

Order	Description	Learning Domain	Level of Learning
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Order	Description	Learning Domain	Level of Learning
2	Discuss function of the skin in homeostasis of body temperature.	Cognitive	Comprehension

### Skeletal System

Order	Description	Learning Domain	Level of Learning
1	Describe functions of the skeletal system.	Cognitive	Knowledge
2	Identify major bones of the axial and appendicular skeletons.	Cognitive	Knowledge
3	Explain relationships of the endocrine system to the skeletal system.	Cognitive	Comprehension
4	Describe development of the skeletal system.	Cognitive	Knowledge
5	Define articulation and identify types of joints.	Cognitive	Knowledge

### Muscular System

Order	Description	Learning Domain	Level of Learning
1	Explain functions of skeletal muscular system.	Cognitive	Comprehension
2	Identify major skeletal muscles and functions.	Cognitive	Knowledge
3	Explain physiology of a muscle contraction.	Cognitive	Comprehension
4	Describe actions of muscles.	Cognitive	Knowledge

### Nervous and Sensory Systems

Order	Description	Learning Domain	Level of Learning
1	Identify the general functions of the nervous system.	Cognitive	Knowledge
2	Explain the anatomical and functional classification of the nervous system.	Cognitive	Comprehension
3	Identify types of neurons and describe their functions.	Cognitive	Knowledge
4	Identify parts of a neuron.	Cognitive	Knowledge
5	Describe the physiology nerve impulse transmission.	Cognitive	Knowledge
6	Describe spinal cord and spinal reflexes.	Cognitive	Knowledge
7	Describe and give the functions of the layers of the meninges and cerebral spinal fluid.	Cognitive	Knowledge
8	Identify spinal nerves and define plexus.	Cognitive	Knowledge
9	Identify cranial nerves and give functions of each.	Cognitive	Knowledge
10	Compare and Contrast the sympathetic with the parasympathetic nervous system.	Cognitive	Evaluation
11	Name the principle areas and functions associated with the lobes of the cerebrum.	Cognitive	Knowledge
12	Identify and describe the functions of the major regions of the brain.	Cognitive	Knowledge
13	Describe the structure and functions of the three major parts of the ear.	Cognitive	Knowledge
14	Describe the structure and functions of the eye.	Cognitive	Knowledge
15	Describe the physiology of vision.	Cognitive	Knowledge
16	Trace sound waves through the ear.	Cognitive	Comprehension

Order	Description	Learning Domain	Level of Learning
17	Differentiate special and general senses.	Cognitive	Analysis
18	Describe tactile sensation and proprioception.	Cognitive	Knowledge

#### Endocrine System

Order	Description	Learning Domain	Level of Learning
1	Define the endocrine gland and hormones; describe how the endocrine system works to maintain homeostasis.	Cognitive	Knowledge
2	Locate the principle endocrine glands, and identify the principle hormones, functions, and target tissues.	Cognitive	Comprehension
3	Describe the mechanism by which the hypothalamus links the nervous and endocrine systems.	Cognitive	Knowledge
4	Describe feedback mechanisms.	Cognitive	Knowledge

#### Cardiovascular System

Order	Description	Learning Domain	Level of Learning
1	Describe the functions of the cardiovascular system.	Cognitive	Knowledge
2	Describe the major components of the cardiovascular system.	Cognitive	Knowledge
3	Describe the components of plasma and the functions of each.	Cognitive	Knowledge
4	Describe and give the function of each type of formed element.	Cognitive	Knowledge
5	Explain the ABO and Rh blood grouping systems.	Cognitive	Comprehension
6	Describe the location of the heart in relation to other organs of the thoracic cavity and the associated serous membranes.	Cognitive	Knowledge
7	Identify the chambers, valves, and associated vessels of the heart.	Cognitive	Knowledge
8	Trace flow of blood through the heart, and distinguish between the pulmonary and systemic circulation.	Cognitive	Comprehension
9	Describe location of the parts of the conduction system of the heart, and trace the pathway of impulses initiation and conduction.	Cognitive	Knowledge
10	Identify major blood vessels.	Cognitive	Knowledge
11	Describe the structure and function of the different kinds of blood vessels.	Cognitive	Knowledge
12	Define blood pressure and contrast the clinical significance of systolic, diastolic, and pulse pressure.	Cognitive	Knowledge

#### Lymphatic System

Order	Description	Learning Domain	Level of Learning
1	Describe the structures of the lymphatic system and their functions.	Cognitive	Knowledge
2	Explain adaptive and innate resistance to disease.	Cognitive	Comprehension

#### Respiratory System

Order	Description	Learning Domain	Level of Learning
1	Describe parts of the upper and lower respiratory tract.	Cognitive	Knowledge
2	Trace the pathway of air into and out of the respiratory tract.	Cognitive	Comprehension
3	Explain the physiology of breathing.	Cognitive	Comprehension
4	Differentiate external and internal respirations.	Cognitive	Analysis
5	Explain how oxygen and carbon dioxide are carried by the blood.	Cognitive	Comprehension

#### Digestive System

Order	Description	Learning Domain	Level of Learning
1	Differentiate chemical and mechanical digestion.	Cognitive	Analysis
2	Identify the parts of the digestive system, their locations, and explain the function of each.	Cognitive	Knowledge
3	Trace the pathway of food through the gastrointestinal system.	Cognitive	Comprehension
4	Identify the major digestive secretions and their functions.	Cognitive	Knowledge
5	Describe the process of absorption.	Cognitive	Knowledge

#### Urinary System

Order	Description	Learning Domain	Level of Learning
1	Identify the parts of the urinary system.	Cognitive	Knowledge
2	Explain general functions of the urinary system.	Cognitive	Comprehension
3	Explain the relationships of the urinary system to the endocrine and circulatory system.	Cognitive	Comprehension
4	Describe the structure and function of the nephron.	Cognitive	Knowledge
5	Compare the urinary system of the female with that of the male.	Cognitive	Synthesis
6	Identify the constituents of urine.	Cognitive	Knowledge
7	Differentiate the processes of secretion, filtration, and reabsorption and where they occur in the nephron.	Cognitive	Analysis

#### Reproductive System

Order	Description	Learning Domain	Level of Learning
1	Describe the anatomy and physiology of the female reproductive system.	Cognitive	Knowledge
2	Explain the relationship of the endocrine system to the menstrual cycle and the function of the female reproductive system.	Cognitive	Comprehension
3	Describe the physiology of the male and female gonads and the production of gametes.	Cognitive	Knowledge
4	Describe the anatomy and physiology of the male reproductive system.	Cognitive	Knowledge
5	Relate the urinary system to the reproductive system of the male.	Cognitive	Analysis
6	Explain the relationship of the endocrine system to the function of the male reproductive system.	Cognitive	Comprehension

## References

Order	Reference Type	Description
1	Essays or Chapters in Edited Books - One Author	Cohen, B. & Taylor, J.. (2008). Memmler's structure and function of the human body. 9th. pp. 496 Philadelphia, PA: Lippincott
2	Essays or Chapters in Edited Books - One Author	Longenbaker, S.. (2007). Mader's understanding human anatomy and physiology. 6th. pp. 496 New York, NY: McGraw Hill
3	Essays or Chapters in Edited Books - One Author	Marieb, E.. (2008). Essentials of human anatomy and physiology. 9th. pp. 640 Menio Park, CA: Benjamin Cummings
4	Essays or Chapters in Edited Books - One Author	Rice, J.. (2004). Medical terminology with anatomy and physiology. 2nd. pp. 736 Upper Saddle River, NJ: Prentice Hall
5	Essays or Chapters in Edited Books - One Author	Rizzo, D.. (2005). Fundamentals of anatomy and physiology. 2nd. pp. 522 Clifton Park, NY: Centgage Delmar
6	Essays or Chapters in Edited Books - One Author	Scanlon, V. & Sanders, T.. (2007). Essentials of anatomy and physiology. 5th. pp. 603 Philadelphia, PA: F.A. Davis
7	Essays or Chapters in Edited Books - One Author	Scott, A. & Fong, E.. (2004). Body structures and functions. 10th. pp. 520 Clifton Park, NY: Centgage Delmar
8	Essays or Chapters in Edited Books - One Author	Shier, Butler & Lewis. (2007). Hole's essentials of human anatomy and physiology. 11th. pp. 1043 New York, NY: McGraw Hill
9	Essays or Chapters in Edited Books - One Author	Thibodeau, G. & Patton, K.. (2004). Structure and function of the body. 12th. pp. 547 Philadelphia, PA: Elsevier: Mosby
10	Essays or Chapters in Edited Books - One Author	Thomas, C.. (2005). Taber's cyclopedic medical dictionary. 20th. pp. 278 Philadelphia, PA: F.A. Davis