Florida CTE

Health Science Anatomy & Physiology (2024)

Analyze and interpret an overview of the human body, including organization and chemical process. The student will be able to: 01.0	**1** Evaluate interrelationships of the basic structural and functional organization of the human body including chemical, cellular, tissue and organ systems. 01.01
	2 Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules. 01.02
	3 Examine medical implications of body planes, directional terms, cavities, abdominal regions, and quadrants. 01.03
	4 Discuss the chemical processes that maintain life, including homeostasis, cellular respiration, the role of enzymes as catalysts and the basic concepts of metabolism. 01.04
Apply correct medical terminology relating to body structure and function within a real-world application. The student will be able to: 02.0	**1** Evaluate and apply anatomical terminology to describe location of parts or areas of the body and to describe the relation of one part to another. 02.01
	2 Interpret correct medical terminology including roots, prefixes and suffixes to indicate anatomical structures and function. 02.02
	3 Extend medical terminology to real-world applications. 02.03
Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions. – The student will be able to: 03.0	**1** Discuss and describe cell structure and function in healthy tissue. 03.01
	2 Discuss and describe cell structure and function in diseased tissue including how damage to one tissue may impact the function of another tissue. 03.02
	3 Compare and contrast the four main types of tissue including the interrelationships of tissues. 03.03
	4 Discuss the location and function of tissues as it relates to homeostasis. 03.04
Analyze the integumentary system in relation to health and disease. The student will be	**1** Apply medical terminology as related to the integumentary system. 04.01
	2 Discuss and describe the structure and function of the integumentary system across the lifespan. 04.02
	3 Demonstrate knowledge of cells and tissues in the integumentary system. 04.03

Skip to main content

	4 Identify and analyze common diseases and disorders of the integumentary system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation. 04.04
	5 Discuss or research health careers related to the integumentary system. 04.05
	6 Demonstrate knowledge of skills related to the integumentary system which may include infection control and hand washing skills. 04.06
Analyze the skeletal system in relation to health and disease. The student will be able to: 05.0	1 Apply medical terminology as related to the skeletal system. 05.01
	2 Discuss and describe the structure and function of the skeletal system across the lifespan. 05.02
	3 Identify and explain major bone markings and their implications. 05.03
	4 Identify and explain joints and their implications. 05.04
	5 Discuss the interrelationship between calcium, hormones, and the skeletal system. 05.05
	6 Apply knowledge of cells and tissues in the skeletal system. 05.06
	7 Identify and analyze common diseases and disorders of the skeletal system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation. 05.07
	8 Discuss or research health careers related to the skeletal system. 05.08
	9 Demonstrate knowledge of skills related to the skeletal system which may include range of motion. 05.09
Analyze the muscular system in relation to health and disease. The student will be able to: 06.0	1 Apply medical terminology as related to the muscular system. 06.01
	2 Discuss and describe the structure and function of the muscular system across the lifespan. 06.02
	3 Identify and explain the 3 main types of muscles and their implications. 06.03
	4 Interpret muscle function by examining attachment to bone. 06.04
	5 Discuss the interrelationship between calcium, ions, and the muscular system. 06.05
	6 Apply knowledge of cells and tissues in the muscular system. 06.06
	7 List the steps involved in the sliding filament of muscle contraction. 06.07
	)escribe signal transmission across a myoneural/neuromuscular junction. 06.08

Skip to main content

	9 Identify and analyze common diseases and disorders of the muscular system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation. 06.09
	10 Discuss or research health careers related to the muscular system. 06.10
	11 Demonstrate knowledge of skills related to the muscular system which may include isometric and isotonic contractions. 06.11
Analyze the nervous system in relation to health and disease. The student will be able to: 07.0	1 Apply medical terminology as related to the nervous system. 07.01
	2 Discuss and describe the structure and function of the nervous system across the lifespan. 07.02
	3 Identify and explain the interrelatedness of the Central Nervous System (CNS) and Peripheral Nervous System (PNS). 07.03
	4 Compare and contrast the divisions of the Autonomic Nervous System (ANS). 07.04
	5 Apply knowledge of cells and tissues in the nervous system. 07.05
	6 Explain how neurotransmitters help propagate electrical impulses. 07.06
	7 Describe reflex pathways and their importance. 07.07
	8 Identify and analyze common diseases and disorders of the nervous system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation. 07.08
	9 Discuss or research health careers related to the nervous system. 07.09
	10 Demonstrate knowledge of skills related to the nervous system which may include recognizing signs and symptoms of a stroke. 07.10
Analyze the endocrine system in relation to health and disease. The student will be able to: 08.0	1 Apply medical terminology as related to the endocrine system. 08.01
	2 Discuss and describe the structure and function of the endocrine system across the lifespan. 08.02
	3 Compare and contrast endocrine and exocrine glands. 08.03
	4 Compare and contrast negative and positive feedback loops. 08.04
	5 Evaluate the relationship between the endocrine system and homeostasis in health and disease. 08.05
	ıpply knowledge of cells and tissues in the endocrine system. 08.06

Skip to main content

	7 Identify and analyze common diseases and disorders of the endocrine system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation. 08.07
	8 Discuss or research health careers related to the endocrine system. 08.08
	9 Demonstrate knowledge of skills related to the endocrine system which may include recognizing the signs and symptoms of low blood sugar. 08.09
Analyze the cardiovascular/circulatory system in relation to health and disease. The student will be able to: 09.0	1 Apply medical terminology as related to the cardiovascular system. 09.01
	2 Discuss and describe the structure and function of the cardiovascular system across the lifespan. 09.02
	3 Demonstrate knowledge of major blood vessels. 09.03
	4 Compare and contrast the structure and function of arteries, veins, and capillaries. 09.04
	5 Analyze the interdependence between systemic and pulmonary circulation. 09.05
	6 Design a map or flow chart depicting the normal pathway of blood flow through the heart. 09.06
	7 Design a map or flow chart depicting the normal electrical pathway through the heart. 09.07
	8 Apply knowledge of cells and tissues in the cardiovascular system. 09.08
	9 Demonstrate knowledge of the composition of blood to include formed elements and plasma. 09.09
	10 Evaluate ABO blood types and Rh factor. 09.10
	11 Predict potential blood donors for a transfusion through the analysis of blood types with ABO and/or Rh compatibility. 09.11
	12 Identify and analyze common diseases and disorders of the cardiovascular system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation. 09.12
	13 Discuss or research health careers related to the cardiovascular system. 09.13
	14 Demonstrate knowledge of skills related to the cardiovascular system which might include assessing pulse. 09.14
Analyze the lymphatic an rel	1 Apply medical terminology as related to the lymphatic and immune ystems. 10.01

Skip to main content

disease. The student will be able to: 10.0	**2** Discuss and describe the structure and function of the lymphatic and immune systems across the lifespan. 10.02
	3 Explain the importance of the accessory organs (thymus, tonsils, spleen, appendix, Peyer's patch) promoting the effectiveness of the lymphatic and immune system. 10.03
	4 Compare and contrast passive and active immunity. 10.04
	5 Discuss the impact of B cells and T cells on diseases of the immune system. 10.05
	6 Evaluate and discuss the body's defense mechanisms in relation to common communicable diseases. 10.06
	7 Apply knowledge of cells and tissues in the lymphatic and immune systems. 10.07
	8 Identify and analyze common diseases and disorders of the lymphatic and immune system including etiology, prevention, pathology, diagnosis, and treatment/rehabilitation. 10.08
	9 Discuss or research health careers related to the lymphatic and immune systems. 10.09
Analyze the respiratory system in relation to health and disease. The student will be able to: 11.0	**1** Apply medical terminology as related to the respiratory system. 11.01
	2 Discuss and describe the structure and function of the respiratory system across the lifespan. 11.02
	3 Evaluate the interrelatedness of the cardiovascular and respiratory systems. 11.03
	4 Apply knowledge of cells and tissues in the respiratory system. 11.04
	5 Identify and analyze common diseases and disorders of the respiratory system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation. 11.05
	6 Discuss or research health careers related to the respiratory system. 11.06
	7 Demonstrate knowledge of skills related to the respiratory system which might include monitoring respirations. 11.07
Analyze the digestive system in relation to health and disease. The student will be able to:	**1** Apply medical terminology as related to the digestive system. 12.01
	2 Discuss and describe the structure and function of the digestive system across the lifespan. 12.02
	3 Apply knowledge of cells and tissues in the digestive system. 12.03

Skip to main content

	4 Identify and analyze common diseases and disorders of the digestive system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation. 12.04
	5 Discuss or research health careers related to the digestive system. 12.05
	6 Demonstrate knowledge of skills related to the digestive system which might include a nutritional self-assessment. 12.06
Analyze the urinary system in relation to health and disease. The student will be able to: 13.0	1 Apply medical terminology as related to the urinary system. 13.01
	2 Discuss and describe the structure and function of the urinary system across the lifespan. 13.02
	3 Justify the interrelatedness of the urinary and cardiovascular system in promoting homeostasis. 13.03
	4 Apply knowledge of cells and tissues in the urinary system. 13.04
	5 Identify and analyze common diseases and disorders of the urinary system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation. 13.05
	6 Discuss or research health careers related to the urinary system. 13.06
	7 Demonstrate knowledge of skills related to the urinary system which may include how to use urine test strips. 13.07
Analyze the both the male and female reproductive systems in relation to health and disease. The student will be able to: 14.0	1 Apply medical terminology as related to the each of the male and female reproductive systems. 14.01
	2 Discuss and describe the structure and function of both reproductive systems across the lifespan. 14.02
	3 Apply knowledge of cells and tissues of both reproductive systems. 14.03
	4 Identify and analyze common diseases and disorders of both reproductive systems including etiology, prevention, pathology, diagnosis and treatment/rehabilitation. 14.04
	5 Discuss or research health careers related to both reproductive systems. 14.05
	6 Explain fetal development with regard to trimesters and measuring according to the fetal growth chart. 14.06
Identify and explain fac ge	1 Discuss DNA and its role in human heredity. 15.01
	escribe the role of human genetics in relation to genetic diseases. 15.02

Skip to main content

The student will be able to: 15.0	**3** Discuss or research current issues related to genetic research. 15.03
	4 Explore the relationship between mutation, cell cycle and uncontrolled cell growth that can result in cancer. 15.04
	5 Explore how environmental factors contribute to an individual's overall wellness and quality of life. 15.05
Evaluate and apply the principles of disease transmission and control to real-world scenarios. The student will be able to: 16.0	**1** Discuss and explain the direct and indirect transmission of disease. 16.01
	2 Discuss and apply the principles of the chain of infection to real-world scenarios. 16.02
	3 Categorize the common morphology of microorganisms affecting the human body. 16.03
	4 Identify and analyze common diseases caused by microorganisms. 16.04