South Carolina CTE

Human Structure, Function & Disease (2025)

MEDICAL TERMINOLOGY: Demonstrate methods of delivering and obtaining information, while communicating effectively 1.0

1. **Use common roots, prefixes, and suffixes to communicate information regarding body systems, diseases, and disorders.** 1.1
2. **Interpret common medical abbreviations.** 1.2

ANATOMY AND PHYSIOLOGY PART A: Understand human anatomy, physiology, common diseases and disorders, and medical math principles. 2.0

1. **Identify basic levels of organization of the human body.** 2.1
2. **Identify body planes, directional terms, cavities, and quadrants.** 2.2
3. **Investigate the process of homeostasis.** 2.3
4. **Skeletal System** 2.4
    1. Structures of the skeletal system 2.4.1
        1. Distinguish between axial and appendicular skeletons 2.4.1.1
        2. Describe long bone anatomy 2.4.1.2
        3. Identify joint types and movement 2.4.1.3
        4. Name and classify all bones (206) 2.4.1.4
    2. Functions of the skeletal system 2.4.2
        1. Structure and support 2.4.2.1
        2. Muscle attachment and movement 2.4.2.2
        3. Mineral storage 2.4.2.3
        4. Hematopoiesis 2.4.2.4
        5. Ossification 2.4.2.5
5. **Muscular System** 2.5
    1. Structures of the muscular system 2.5.1
        1. Identify types of muscle tissue 2.5.1.1
        2. Identify major muscle groups of neck, shoulder, chest, abdomen, back, arms and legs 2.5.1.2

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2 Functions of the muscular system 2.5.2

1 Body movement 2.5.2.1

2 Posture 2.5.2.2

3 Protection 2.5.2.3

6 Integumentary System 2.6

1 Structures of the integumentary system 2.6.1

1 Identify integumentary components 2.6.1.1

2 Label the layers of skin 2.6.1.2

2 Functions of the integumentary system 2.6.2

1 Infection protection 2.6.2.1

2 Sensory organ 2.6.2.2

3 Temperature regulation 2.6.2.3

4 UV light protection 2.6.2.4

5 Vitamin D production 2.6.2.5

7 Cardiovascular System 2.7

1 Structures of the cardiovascular system 2.7.1

1 Distinguish blood components 2.7.1.1

2 Identify cardiovascular organs 2.7.1.2

3 Label the parts of the heart 2.7.1.3

2 Functions of the cardiovascular system 2.7.2

1 Blood flow through the heart and body 2.7.2.1

2 Cardiac conduction system 2.7.2.2

3 Transportation of nutrients, waste, antibodies, hormones, and gases 2.7.2.3

8 Lymphatic/Immune System 2.8

1 Structures of the lymphatic system 2.8.1

1 Identify lymphatic organs 2.8.1.1

2 Functions of the lymphatic system 2.8.2

1 Movement of lymph fluid 2.8.2.1

2 Provides protection against disease 2.8.2.2

9 Respiratory System 2.9

1 Structures of the respiratory system 2.9.1

1 Identify respiratory organs 2.9.1.1

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2 Functions of the respiratory system 2.9.2

1 Gas exchange 2.9.2.1

Cellular 2.1.1	**1 Cellular** 2.1.1
Chemical 2.1.2	**2 Chemical** 2.1.2
Organ 2.1.3	**3 Organ** 2.1.3
Organism 2.1.4	**4 Organism** 2.1.4
Systems 2.1.5	**5 Systems** 2.1.5
Tissue 2.1.6	**6 Tissue** 2.1.6
Body planes (sagittal, mid-sagittal, coronal/frontal, transverse/horizontal) 2.2.1	**1 Body planes (sagittal, mid-sagittal, coronal/frontal, transverse/horizontal)** 2.2.1
Directional terms (superior, inferior, anterior/ventral, posterior/dorsal, medial, lateral, proximal, distal, superficial, and deep) 2.2.2	**2 Directional terms (superior, inferior, anterior/ventral, posterior/dorsal, medial, lateral, proximal, distal, superficial, and deep)** 2.2.2
Cavities (dorsal, cranial, orbital, nasal, oral, spinal, thoracic, abdominal, and pelvic) 2.2.3	**3 Cavities (dorsal, cranial, orbital, nasal, oral, spinal, thoracic, abdominal, and pelvic)** 2.2.3
Quadrants (upper right, lower right, upper left, and lower left) 2.2.4	**4 Quadrants (upper right, lower right, upper left, and lower left)** 2.2.4
DISEASES AND DISORDERS- PART A 3.0	**1 Describe etiology, pathology, diagnosis, treatment, and prevention of common diseases and disorders, including, but not limited to the following:** 3.1.A
Ar	**rthritis** 3.1.A.1

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Asthma 3.1.A.2	2 **Asthma** 3.1.A.2
Cancer 3.1.A.3	3 **Cancer** 3.1.A.3
Cystic fibrosis 3.1.A.4	4 **Cystic fibrosis** 3.1.A.4
Melanoma 3.1.A.5	5 **Melanoma** 3.1.A.5
Muscular dystrophy 3.1.A.6	6 **Muscular dystrophy** 3.1.A.6
Myocardial infarction (MI) 3.1.A.7	7 **Myocardial infarction (MI)** 3.1.A.7
Stroke/Cerebrovascular Accident (CVA) 3.1.A.8	8 **Stroke/Cerebrovascular Accident (CVA)** 3.1.A.8
Tuberculosis 3.1.A.9	9 **Tuberculosis** 3.1.A.9
Anatomy and Physiology- Part B: Understand human anatomy, physiology, common diseases and disorders, and medical math principles. 2.0	10 **Nervous System** 2.10 1 Structures of the nervous system 2.10.1 1 Identify organs of the nervous system 2.10.1.1 2 Identify structures of the “special sense” organs 2.10.1.2 3 Differentiate CNS and PNS 2.10.1.3 4 Differentiate sympathetic and parasympathetic 2.10.1.4 2 Functions of the nervous system 2.10.2 1 Sensation 2.10.2.1 2 Movement 2.10.2.2 3 Processing 2.10.2.3
	11 **Endocrine System** 2.11 1 Structures of the endocrine system 2.11.1 1 Identify endocrine glands 2.11.1.1 2 Functions of the Endocrine System 2.11.2 1 Production of hormones 2.11.2.1 2 Regulation of body processes 2.11.2.2 3 Controls metabolism 2.11.2.3 4 Regulates growth, development, and maturation 2.11.2.4
	12 **Digestive System** 2.12

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1 Structures of the digestive system 2.12.1

1 Identify digestive organs in sequence 2.12.1.1

2 Differentiate between alimentary and accessory organs 2.12.1.2

2 Functions of the digestive system 2.12.2

1 Chemical and mechanical digestion 2.12.2.1

2 Absorption of nutrients 2.12.2.2

3 Excretion of waste 2.12.2.3

13 Urinary System 2.13

1 Structures of the urinary system 2.13.1

1 Identify urinary organs 2.13.1.1

2 Identify gross and microscopic anatomy of the kidney 2.13.1.2

2 Functions of the urinary system 2.13.2

1 Process of urine formation 2.13.2.1

2 Urine composition 2.13.2.2

3 Homeostatic balance 2.13.2.

14 Reproductive System 2.14

1 Structures of the reproductive system 2.14.1

1 Identify female reproductive organs 2.14.1.1

2 Identify male reproductive organs 2.14.1.2

2 Functions of the reproductive system 2.14.2

1 Formation of gametes 2.14.2.1

2 Production of hormones 2.14.2.2

15 The Special Senses 2.15

1 Structures of the Eyes and Ears 2.15.1

1 Identify structures of the eyes 2.15.1.1

2 Identify structures of the ears 2.15.1.2

2 Functions of the Eyes and Ears 2.15.2

1 Eyes are the receptor organs of sight; receive and transmit images to the brain 2.15.2.1

2 Ears are the receptor organs of hearing; receive and transmit sound impulses to the brain, helps maintain balance 2.15.2.2

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Describe etiology, pathology, diagnosis, treatment, and prevention of common diseases and disorders, including, but not limited to the following: 3.1.B

	2 **Discuss research related to emerging diseases and disorders such as:** 3.2
	3 **Describe biomedical therapies as they relate to prevention, pathology, and treatment of disease.** 3.3
Bipolar disorder 3.1.B.1	1 **Bipolar disorder** 3.1.B.1
Cancer 3.1.B.2	2 **Cancer** 3.1.B.2
Cataracts 3.1.B.3	3 **Cataracts** 3.1.B.3
Concussion / Traumatic Brain Injury (TBI) 3.1.B.4	4 **Concussion / Traumatic Brain Injury (TBI)** 3.1.B.4
Diabetes 3.1.B.5	5 **Diabetes** 3.1.B.5
Dementia 3.1.B.6	6 **Dementia** 3.1.B.6
Gastric ulcer 3.1.B.7	7 **Gastric ulcer** 3.1.B.7
Hepatitis 3.1.B.8	8 **Hepatitis** 3.1.B.8
Sexually Transmitted Infection (STI) 3.1.B.9	9 **Sexually Transmitted Infection (STI)** 3.1.B.9
Urinary Tract Infection (UTI) 3.1.B.10	10 **Urinary Tract Infection (UTI)** 3.1.B.10
Autism 3.2.1	1 **Autism** 3.2.1
VRSA 3.2.2	2 **VRSA** 3.2.2
PTSD 3.2.3	3 **PTSD** 3.2.3
Listeria 3.2.4	4 **Listeria** 3.2.4
Seasonal flu 3.2.5	5 **Seasonal flu** 3.2.5
Gene editing 3.3.1	1 **Gene editing** 3.3.1
Ge	**ene testing** 3.3.2

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Gene therapy 3.3.3	**3 Gene therapy** 3.3.3
Immunizations 3.3.4	**4 Immunizations** 3.3.4
Immunotherapy 3.3.5	**5 Immunotherapy** 3.3.5
Stem cell research 3.3.6	**6 Stem cell research** 3.3.6
MEDICAL MATHEMATICS 4.0	**1 Demonstrate competency using basic math skills and mathematical conversions as they relate to healthcare.** 4.1
	2 Demonstrate the ability to analyze diagrams, charts, graphs, and tables to interpret healthcare results. 4.2
INFORMATION TECHNOLOGY IN HEALTHCARE: Apply information technology practices common across health professions. 5.0	**1 Key Principles, components, and practices of Health Information Systems** 5.1 1 Utilize components of an electronic health record (EHR) and/or electronic medical record (EMR). 5.1.1 1 Diagnostic tests 5.1.1.1 2 History and physical 5.1.1.2 3 Medications 5.1.1.3 4 Patient demographics 5.1.1.4 5 Progress notes 5.1.1.5 6 Treatment Plan 5.1.1.6 2 Evaluate types of health data collection tools. 5.1.2 1 Medical wearable devices 5.1.2.1 2 Patient monitoring equipment 5.1.2.2 3 Phone application 5.1.2.3 4 Telemedicine/telehealth 5.1.2.4 3 Adhere to information systems policies, procedures, and regulations as required by national, state, and local entities. 5.1.3