Georgia CTAE

Health Science (2021) - Grades 6, 7, 8

Adopted 2021

Healthcare Diagnostics and Support Services (25.033)

MS-HS-HDSS-1. Demonstrate employability skills required by business and industry. MS-HS-HDSS-1

1. Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities. MS-HS-HDSS-1.1
2. Demonstrate creativity by asking challenging questions and applying innovative procedures and methods. MS-HS-HDSS-1.2
3. Exhibit critical thinking and problem-solving skills to locate, analyze and apply information in career planning and employment situations. MS-HS-HDSS-1.3
4. Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. MS-HS-HDSS-1.4
5. Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply team work skills. MS-HS-HDSS-1.5
6. Present a professional image through appearance, behavior and language. MS-HS-HDSS-1.6

MS-HS-HDSS-2. Demonstrate the correct work-safety practices and infection control precautions required to ensure a safe work environment in a healthcare setting. MS-HS-HDSS-2

1. Identify the proper body mechanics for a safe healthcare work environment. MS-HS-HDSS-2.1
2. Compare and contrast virus, bacteria, and fungi found in a healthcare work setting. MS-HS-HDSS-2.2
3. List and organize standard precautions found in a healthcare work setting to protect patients and healthcare workers. MS-HS-HDSS-2.3
4. Develop and organize the chain of infection and modes of transmission in a healthcare setting. MS-HS-HDSS-2.4

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5. Apply concepts to demonstrate the following skills related to safety and infection control MS-HS-HDSS-2.5
    a. Demonstrate proper patient transfer: wheelchair to chair/chair to chair/Demonstrate hand washing/Demonstrate proper donning and removal of PPEs MS-HS-HDSS-2.5.A
    b. Infection control: Compare and contrast between a virus, bacteria, and fungi/Identify the modes of transportation MS-HS-HDSS-2.5.B
    c. The standard precautions: Demonstrate correct use of PPEs/Demonstrate the correct process for donning and doffing gloves/Blood-bourne pathogens training MS-HS-HDSS-2.5.C
    d. Correct body mechanics: Demonstrate proper pushing technique/Demonstrate proper pulling technique/Demonstrate proper lifting technique. MS-HS-HDSS-2.5.D

MS-HS-HDSS-3. **Summarize the career aspects and applied anatomy associated with the field of Clinical Lab Diagnostics.** MS-HS-HDSS-3

1. Explore careers in the clinical lab industry. MS-HS-HDSS-3.1
2. Classify and list medical terminology associated with clinical lab settings. MS-HS-HDSS-3.2
3. Compare and contrast Blood-borne pathogens. MS-HS-HDSS-3.3
4. Show a cause/effect to help in the prevention of medical errors. MS-HS-HDSS-3.4
5. Make observations about each government agency and their regulations for healthcare. MS-HS-HDSS-3.5
6. Apply concepts to demonstrate the following skills related to clinical lab diagnostics: MS-HS-HDSS-3.6
    a. Read and interpret a MSDS, MS-HS-HDSS-3.6.A
    b. Analyze a collection of data, MS-HS-HDSS-3.6.B
    c. Interpret government standards (OSHA, EPA, FDA). MS-HS-HDSS-3.6.C

MS-HS-HDSS-4. **Demonstrate skills and understanding of applied anatomy associated with the field of Phlebotomy.** MS-HS-HDSS-4

1. Compare and contrast vein and artery. MS-HS-HDSS-4.1
2. Identify three primary sites for drawing blood. MS-HS-HDSS-4.2
3. Identify and explain essential medical terminology associated with phlebotomy. MS-HS-HDSS-4.3

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4. Apply concepts to demonstrate the following skills related to Phlebotomy MS-HS-HDSS-4.4
    a. Apply a tourniquet MS-HS-HDSS-4.4.A
    b. Palpate an artery/vein MS-HS-HDSS-4.4.B
    c. Prepare site for venipuncture d. Label blood specimen. MS-HS-HDSS-4.4.C

MS-HS-HDSS-5. Describe the career aspects and applied anatomy associated with the field of Non-Invasive Diagnostic Technology (Diagnostic) MS-HS-HDSS-5

1. Apply knowledge of respiratory system, cardiac system and skeletal system anatomy to the field of radiology, cardiology and pulmonary medicine. MS-HS-HDSS-5.1
2. Explore the careers/education of a respiratory therapist, EKG technician, and/or radiological technologist. MS-HS-HDSS-5.2
3. Medical terminology associated with noninvasive diagnostic technology. MS-HS-HDSS-5.3

MS-HS-HDSS-6. Summarize the careers in the field of Support Services and understand their role in the field of healthcare. MS-HS-HDSS-6

1. Explore the following careers related to Support Services: MS-HS-HDSS-6.1
    a. Dietary Aide MS-HS-HDSS-6.1.A
    b. Environmental Services MS-HS-HDSS-6.1.B
    c. Central Supply/Materials Manager MS-HS-HDSS-6.1.C
    d. Patient Transporter. MS-HS-HDSS-6.1.D
2. Analyze different diets associated with disease processes. MS-HS-HDSS-6.2
3. Describe how environmental services will directly impact infection control/ safety practices. MS-HS-HDSS-6.3
4. Apply concepts to demonstrate the following skills related to Support Services: MS-HS-HDSS-6.4
    a. Identify different diets accurately: MS-HS-HDSS-6.4.A
        i. low sodium MS-HS-HDSS-6.4.A.I
        ii. diabetic MS-HS-HDSS-6.4.A.II
        iii. mechanical MS-HS-HDSS-6.4.A.III
        iv. soft MS-HS-HDSS-6.4.A.IV
    b. Demonstrate proper spill cleanup. MS-HS-HDSS-6.4.B

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HS-HDSS-7. Explore how related student organizations are integral parts of career and technology education courses through leadership

development, school and community service projects, entrepreneurship development, and competitive events. MS-HS-HDSS-7

1. Research the history of the state supported healthcare science CTSO (Career Technical Student Organization). MS-HS-HDSS-7.1
2. Discuss the mission, purpose, motto, colors, official dress and other distinguishing characteristic of the state supported healthcare science CTSO. MS-HS-HDSS-7.2
3. Explain how participation in the state supported healthcare science CTSO can promote lifelong responsibility for community service and professional growth and development. MS-HS-HDSS-7.3
4. Create a personal leadership plan to participate in programs, conferences, community service and competitive events on the local, region, state, and national level that align with the competencies, skills and knowledge of this course. MS-HS-HDSS-7.4

Healthcare IT and Biotechnology (25.034)

MS-HS-HITB-1. Demonstrate Employability skills required by business and industry. MS-HS-HITB-1

1. Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities. MS-HS-HITB-1.1
2. Demonstrate creativity by asking challenging questions and applying innovative procedures and methods. MS-HS-HITB-1.2
3. Exhibit critical thinking and problem-solving skills to locate, analyze and apply information in career planning and employment situations. MS-HS-HITB-1.3
4. Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. MS-HS-HITB-1.4
5. Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply teamwork skills. MS-HS-HITB-1.5
6. Present a professional image through appearance, behavior and language. MS-HS-HITB-1.6

MS-HS-HITB-2. Demonstrate the correct work safety practices and infection control precautions required to ensure a safe work environment in a healthcare setting. MS-HS-HITB-2

1. Identify the proper body mechanics for a safe healthcare work environment. MS-HS-HITB-2.1
2. Compare and contrast viruses, bacteria and fungi found in a healthcare work setting. MS-HS-HITB-2.2
3. List and organize standard precautions found in a healthcare work setting to protect patients and healthcare workers. MS-HS-HITB-2.3

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4. Develop and organize the chain of infection and modes of transmission in a healthcare work setting. MS-HS-HITB-2.4
5. Differentiate the biosafety levels observed in a healthcare work setting. MS-HS-HITB-2.5

MS-HS-HITB-3. Explain the strategies used in the field of Health Informatics/Health Information Technology to protect and ensure patient privacy. MS-HS-HITB-3

1. Make observations basic principles of patient confidentiality (HIPAA). MS-HS-HITB-3.1
2. Discuss how technology is used in patient documentation. MS-HS-HITB-3.2
3. Explore the field of telemedicine and uses throughout Georgia. MS-HS-HITB-3.3
4. Apply concepts to demonstrate the following skills related to Health Informatics/Health Information Technology. MS-HS-HITB-3.4

MS-HS-HITB-4. Explain and practice common Health Informatics/Health Information Management/Medical Office procedures. MS-HS-HITB-4

1. List and describe appropriate medical terminology used in the medical office setting. MS-HS-HITB-4.1
2. Demonstrate the correct sequence of obtaining a patient history and physical data. MS-HS-HITB-4.2
3. Explain how diagnostic coding is used for medical reimbursement. MS-HS-HITB-4.3
4. Apply concepts to demonstrate the following skills related to Medical Office: MS-HS-HITB-4.4

a. Effectively obtain a patient history, MS-HS-HITB-4.4.A
b. Measure and document patient height and weight, MS-HS-HITB-4.4.B
c. Match diagnostic codes with common diseases. MS-HS-HITB-4.4.C

MS-HS-HITB-5. Summarize the careers, apply skills, and understand anatomy concepts used in the field of Biotechnology Research and Development. MS-HS-HITB-5

1. Analyze the careers associated with the field of genetics, biomedical engineering, toxicology, microbiology, and forensics. MS-HS-HITB-5.1
2. Explore the structure of DNA and its relationship to cells, analyze the benefits of biomedical research, ethical and legal issues of biotechnology. MS-HS-HITB-5.2
3. Apply concepts to demonstrate the following skills related to Biotechnology Research and Development. MS-HS-HITB-5.3

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MS-HS-HITB-6. **Explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events.** MS-HS-HITB-6

1. Research the history of the state supported healthcare science CTSO (Career Technical Student Organization). MS-HS-HITB-6.1
2. Discuss the mission, purpose, motto, colors, official dress and other distinguishing characteristic of the state supported healthcare science CTSO. MS-HS-HITB-6.2
3. Explain how participation in the state supported healthcare science CTSO can promote lifelong responsibility for community service and professional growth and development. MS-HS-HITB-6.3
4. Create a personal leadership plan to participate in programs, conferences, community service and competitive events on the local, region, state, and national level that align with the competencies, skills and knowledge of this course. MS-HS-HITB-6.4

Therapeutic Services and Applied Anatomy (25.035)

MS-HS-TSAA-1. **Demonstrate employability skills required by business and industry.** MS-HS-TSAA-1

1. Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities. MS-HS-TSAA-1.1
2. Demonstrate creativity by asking challenging questions and applying innovative procedures and methods. MS-HS-TSAA-1.2
3. Exhibit critical thinking and problem-solving skills to locate, analyze and apply information in career planning and employment situations. MS-HS-TSAA-1.3
4. Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. MS-HS-TSAA-1.4
5. Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply team work skills. MS-HS-TSAA-1.5
6. Present a professional image through appearance, behavior and language. MS-HS-TSAA-1.6

MS-HS-TSAA-2. **Explain and practice common Safety and Infection Control procedures found in various locations and settings.** MS-HS-TSAA-2

1. Organize basic emergency procedures and protocols (fire, severe weather, etc.) for school, home and work settings. MS-HS-TSAA-2.1
2. Classify immunization schedules based on students' current age group and other key age groups. MS-HS-TSAA-2.2

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3. Apply concepts to demonstrate the following skills related to Safety and Infection Control. MS-HS-TSAA-2.3

MS-HS-TSAA-3. Categorize and infer characteristics of careers in Therapeutic Services. MS-HS-TSAA-3

1. Compare and contrast the roles, responsibilities, and job descriptions of registered nurses, licensed practical nurses, certified nursing assistants, professional nurses, along with the education and training requirements, salary ranges, job outlooks, and types of facilities nurses work in statewide. MS-HS-TSAA-3.1
2. Compare and contrast the roles, responsibilities, and job descriptions of dentists, dental hygienists, dental assistants, and dental technicians, along with the education and training requirements, salary ranges, job outlooks, and types of facilities dentists work in statewide. MS-HS-TSAA-3.2
3. Compare and contrast the roles, responsibilities, and job descriptions of surgeons, physical therapists, radiography, respiratory therapists, certified athletic trainers, audiologists, along with the education and training requirements, salary ranges, job outlooks, and types of facilities allied health professionals work in statewide. MS-HS-TSAA-3.3

MS-HS-TSAA-4. Investigate an overview of the anatomy and physiological functions of the human body using appropriate medical terminology. MS-HS-TSAA-4

1. Identify components of a human cell and basic components of homeostasis. MS-HS-TSAA-4.1
2. Compare and contrast mitosis and meiosis. MS-HS-TSAA-4.2
3. Identify the functional and structural organization of the human body. MS-HS-TSAA-4.3

MS-HS-TSAA-5. Distinguish and organize basic structures and function of the various body systems. MS-HS-TSAA-5

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1. Classify, summarize, and explain the basic structures and functions of the following body systems: MS-HS-TSAA-5.1
    a. Cardiovascular System (heart, artery, vein etc.) MS-HS-TSAA-5.1.A
    b. Digestive System (mouth, esophagus, stomach, small intestine, large intestine etc.) MS-HS-TSAA-5.1.B
    c. Skeletal System MS-HS-TSAA-5.1.C
    d. Muscular System MS-HS-TSAA-5.1.D
    e. Integumentary System (hair, skin, nails etc.) MS-HS-TSAA-5.1.E
    f. Respiratory System (nose, trachea, bronchi, lungs, diaphragm etc.) MS-HS-TSAA-5.1.F
    g. Nervous System (brain, spinal cord, nerves etc.) MS-HS-TSAA-5.1.G
2. Summarize and relate basic research results of common diseases and disorders often involved with the various systems. MS-HS-TSAA-5.2
3. Investigate basic research concepts regarding the impacts that common diseases and disorders have on the various systems. MS-HS-TSAA-5.3

MS-HS-TSAA-6. **Demonstrate the following skills required for patient evaluation in a healthcare setting.** MS-HS-TSAA-6

1. Assess and construct ideas around the results of measuring and recording heart rate after different everyday activities. MS-HS-TSAA-6.1
2. Calculate, classify, and summarize BMI (body mass index) MS-HS-TSAA-6.2
3. Assess and construct ideas around the results of measuring and recording body temperature after different everyday activities. MS-HS-TSAA-6.3
4. Research and determine appropriate respiratory rates by age group. Demonstrate the ability to assess respiratory rates. MS-HS-TSAA-6.4

MS-HS-TSAA-7. **Teamwork and Leadership - Explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events.** MS-HS-TSAA-7

1. Research the history of the state supported healthcare science CTSO (Career Technical Student Organization). MS-HS-TSAA-7.1
2. Discuss the mission, purpose, motto, colors, official dress and other distinguishing characteristic of the state supported healthcare science CTSO. MS-HS-TSAA-7.2

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3. Explain how participation in the state supported healthcare science CTSO can promote lifelong responsibility for community service and professional growth and development. MS-HS-TSAA-7.3
4. Create a personal leadership plan to participate in programs, conferences, community service and competitive events on the local, region, state, and national level that align with the competencies, skills and knowledge of this course. MS-HS-TSAA-7.4