Georgia CTAE

Health Science (2021) - Grades 9, 10, 11, 12

Adopted 2021

Allied Health and Medicine (25.437)

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

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

HS-AHM-2. Research advanced technical skills in respiratory care. Respiratory Services (500 minutes) HS-AHM-2

1. Review scope of practice for respiratory services. HS-AHM-2.1
2. Identify normal and abnormal respiratory effort. HS-AHM-2.2
3. Correctly apply pulse oximeter for measurement of oxygen saturation, and recognize the difference between normal and abnormal readings. HS-AHM-2.3
4. Observe medical personnel assisting clients with respiratory management devices such as nasal cannula, simple oxygen mask, Venturi mask, non-rebreathe, nasopharyngeal airway (NPA), oropharyngeal airway (OPA), and tracheostomy. HS-AHM-2.4
5. Demonstrate proper technique and use of bag mask ventilation (AMBU) on a manikin. HS-AHM-2.5

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HS-AHM-3. **Analyze advanced technical skills within the imaging services field. Imaging Services** HS-AHM-3

1. Review scope of practice for imaging services. HS-AHM-3.1
2. Differentiate between the types and functions for diagnostic imaging techniques, including the following: Computer-Assisted Tomography (CAT), Magnetic Resonance Imaging (MRI), Positron Emissions Tomography (PET), ultrasound imaging, x-rays, arrhythmia monitoring; pulmonary monitoring; and obstetrical/neonatal monitoring. HS-AHM-3.2
3. Examine the types of medical information/records each diagnostic imaging technique generates including: Computer-Assisted Tomography (CAT), Magnetic Resonance Imaging (MRI), Positron Emissions Tomography (PET), ultrasound imaging, x-rays, arrhythmia monitoring; pulmonary monitoring; and obstetrical/neonatal monitoring. HS-AHM-3.3
4. Discuss the impact of new technology on diagnostic imaging techniques and treatments. HS-AHM-3.4

HS-AHM-4. **Research advanced technical skills in the surgical services field to include nutrition and fluid intake, elimination, and ostomy and wound care.** HS-AHM-4

1. Review scope of practice for surgical services. HS-AHM-4.1
2. Demonstrate measurement of fluid intake and output to include documentation. HS-AHM-4.2
3. Observe IV site for signs/symptoms of infiltration and report findings to the nurse. HS-AHM-4.3
4. Describe variations in wounds and methods for reporting. HS-AHM-4.4
5. Describe pain associated with wounds and technique for assessing, reporting, and managing pain. HS-AHM-4.5
6. Show donning and removing of surgical garments to include gown, mask, sterile gloves, and eyewear (if needed) HS-AHM-4.6
7. Exhibit techniques for application of sterile dressings, bandages, and binders to include documentation. HS-AHM-4.7
8. Demonstrate creating and maintaining of sterile field. HS-AHM-4.8
9. Identify various surgical instruments. HS-AHM-4.9
10. Demonstrate packaging of equipment for sterilization. HS-AHM-4.10

HS-AHM-5. **Perform advanced technical skills within rehabilitation services.** HS-AHM-5

1. Review scope of practice for rehabilitation services. HS-AHM-5.1
2. Describe types and management of clients with immobilization devices. HS-AHM-5.2
3. Set up clients correctly in special devices for promoting mobility and circulation. HS-AHM-5.3

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4. Demonstrate proper use of rehabilitation devices (transfer belt, cane, crutches, and walker) HS-AHM-5.4
5. Explain the care and use of prosthetic and orthotic devices. HS-AHM-5.5
6. Demonstrate techniques for applying hot and cold treatments to include documentation. HS-AHM-5.6

HS-AHM-6. Perform advanced technical skills within pharmaceuticals. HS-AHM-6

1. Review scope of practice for pharmacy services. HS-AHM-6.1
2. Describe the origin of various types of drugs, comparing and contrasting each source type. HS-AHM-6.2
3. Compare the mechanism of action of drugs. HS-AHM-6.3
4. Explain how drugs are grouped into therapeutic classes. HS-AHM-6.4
5. Compare and contrast the advantages and disadvantages of different routes of drug administration. HS-AHM-6.5
6. Describe the four major processes of pharmacokinetics. HS-AHM-6.6
7. Demonstrate the ability to convert units within and among the metric household and apothecaries systems. HS-AHM-6.7
8. Calculate basic medication dosages. HS-AHM-6.8

HS-AHM-7. Perform advanced technical skills within dietary services. HS-AHM-7

1. Review scope of practice for dietary services. HS-AHM-7.1
2. Develop a clinical nutrition plan on a selected diagnosis, including rationale of dietary modification. HS-AHM-7.2
3. Compare the six groups of essential nutrients, including functions and sources. HS-AHM-7.3
4. Create a sample daily menu using the five major food groups and recommendations. HS-AHM-7.4
5. Use the body mass index graph to determine an individual's BMI. HS-AHM-7.5
6. Calculate an individual's daily required caloric intake to maintain current weight. HS-AHM-7.6
7. Describe and explain the purposes of at least eight therapeutic diets. HS-AHM-7.7

HS-AHM-8. Research the field of Complementary and Alternative Medicine (CAM) to include, but not limited to, such practices as chiropractic care, acupuncture, reflexology, massage therapy, homeopathic medicine, aromatherapy, and stress reduction techniques. HS-AHM-8

1. Review scope of practice for CAM services. HS-AHM-8.1
2. Describe the type and purpose of CAM. HS-AHM-8.2

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3. Connect "real world" applications of CAM use and the integration into health care and health promotion. HS-AHM-8.3
4. Demonstrate the proper technique for performing lower arm massage and safety precautions taken during the procedure. HS-AHM-8.4

HS-AHM-9. Perform advanced technical skills within mental health services. Mental Health Services HS-AHM-9

1. Review scope of practice for mental health services HS-AHM-9.1
2. Differentiate the careers in the mental health services. HS-AHM-9.2
3. Distinguish the types of mental health illnesses. HS-AHM-9.3
4. Compare types of anxiety and mood disorders and discuss treatment. HS-AHM-9.4
5. Investigate how substance abuse pertains to mental illness. HS-AHM-9.5
6. Compare mental health services within the home care setting versus the clinical setting. HS-AHM-9.6

HS-AHM-10. Research public health services and epidemiology, utilizing http://www.cdc.gov/as the primary source. HS-AHM-10

1. Review scope of practice for public health and epidemiology services. HS-AHM-10.1
2. Identify and describe the core areas that comprise public health. HS-AHM-10.2
3. Explain the responsibilities of each core area in public health. HS-AHM-10.3
4. Discuss and analyze public health's ethical principles. HS-AHM-10.4
5. Explain how public health professionals tracked and identified the AIDS virus. HS-AHM-10.5
6. Discuss the importance of education in public health. HS-AHM-10.6
7. Describe the basic steps epidemiologists take when investigating an outbreak. HS-AHM-10.7
8. Define and give examples of emerging and re-emerging of infectious diseases. HS-AHM-10.8
9. Explain why infectious diseases are still one of the leading causes of death worldwide. HS-AHM-10.9
10. Analyze at least ten of the world's most common infectious diseases. HS-AHM-10.10
11. Examine available technology to combat infectious disease in developing countries. HS-AHM-10.11

AHM-11. Perform advanced technical skills within medical office services. HS-AHM-11

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1. Review scope of practice for medical office services. HS-AHM-11.1
2. Perform procedures related to administrative office skills, including: managing patient accounts, writing receipts, and balancing accounts, writing checks, scheduling appointments, answering phone calls, completing insurance claims, managing electronic health care records. HS-AHM-11.2
3. Perform procedures related to back office skills, including: Physical & History; Suture/Staple Removal; Assisting with Physical Exams; Hearing & Vision Screenings. HS-AHM-11.3

HS-AHM-12. Perform advanced technical skills within medical laboratory services using simulated equipment based on school, county, and facility protocol. HS-AHM-12

1. Review scope of practice for medical laboratory services. HS-AHM-12.1
2. Simulate the process of obtaining blood glucose samples correctly (per county policy), recording, and reporting findings to the nurse. HS-AHM-12.2
3. Simulate techniques for collecting urine and stool specimens including documentation. HS-AHM-12.3
4. Simulate proper procedure for capillary blood tests. HS-AHM-12.4
5. Identify and simulate basic techniques for venipuncture procedures. HS-AHM-12.5

HS-AHM-13. Perform advanced technical skills within cardiology services. HS-AHM-13

1. Review scope of practice for allied health careers in Cardiology Services. HS-AHM-13.1
2. Compare and contrast normal sinus, bradycardia, tachycardia, and asystole rhythms by evaluating manual or digital rhythm strips. HS-AHM-13.2
3. Set up the client and apply leads for EKG or cardiac monitoring correctly. HS-AHM-13.3
4. Contrast between EKG and Echocardiogram procedures and the diagnostic capacity of each. HS-AHM-13.4

HS-AHM-14. Perform advanced technical skills within emergency services.(2250 minutes) HS-AHM-14

1. Review scope of practice for emergency services. HS-AHM-14.1
2. Identify and demonstrate first aid procedures for the following: poisoning, bleeding wounds, shock, burns, heat/cold exposure, bone injuries, sudden illness (CVA cerebrovascular accident, heart attack, fainting, seizures, and diabetic reactions), specific injuries (ear, eye, head, spine, chest, abdominal, and genital). HS-AHM-14.2
3. Perform scene size-up and initial assessment. HS-AHM-14.3

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4. Perform rapid trauma and focused assessment. HS-AHM-14.4

HS-AHM-15. Perform advanced technical skills within dentistry services. HS-AHM-15

1. Review the scope of practice for dentistry services. HS-AHM-15.1
2. Identify and describe the structures and the anatomy of a tooth. HS-AHM-15.2
3. Identify and explain teeth using the universal/national numbering system and the federation Dentaire international system. HS-AHM-15.3
4. Chart conditions of the teeth. HS-AHM-15.4
5. Identify dental instruments and prepare dental trays. HS-AHM-15.5
6. Demonstrate brushing and flossing techniques. HS-AHM-15.6

Applications of Public Health (25.452)

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

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

HS-APH-2. Describe the context and scope of public health on improving health and quality of life in personal, community (including local, state, and federal health department), and the global population based on the ten essentials of public health. HS-APH-2

1. Identify patterns in the written text about the history, philosophy, and services provided by public health. HS-APH-2.1
2. Identify the 10 essential services of public health: HS-APH-2.2

a. Monitor health status to identify and solve community health problems HS-APH-2.2.A

b. Diagnose and investigate health problems and health hazards in the community HS-APH-2.2.B

c. Inform, educate, and empower people about health issues HS-APH-2.2.C

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d. Mobilize community partnerships and action to identify and solve health problems HS-APH-2.2.D

e. Develop policies and plans that support individual and community health efforts HS-APH-2.2.E

f. Enforce laws and regulations that protect health and ensure safety HS-APH-2.2.F

g. Link people to needed personal health services and assure the provision of health care when otherwise unavailable HS-APH-2.2.G

h. Assure competent public and personal health care workforce HS-APH-2.2.H

i. Evaluate effectiveness, accessibility, and quality of personal and population-based health services HS-APH-2.2.I

j. Research for new insights and innovative solutions to health problems. HS-APH-2.2.J

3. Define the core functions of public health and how they relate to the ten essential services of public health (assessment, policy development, and assurance). HS-APH-2.3

4. Explain the career pathways as they related to the essential services provided by public health. HS-APH-2.4

5. Define the ethical obligations required of a public health practitioner versus the community as a whole. HS-APH-2.5

6. Outline the phases of community mobilization as they relate to public health communication (planning, awareness, taking action, and monitoring and evaluating). HS-APH-2.6

7. Analyze the levels of collaboration (networking, cooperation, coordination and collaboration) required for effective communication of information about personal risk behaviors and primary prevention of common public health concerns. HS-APH-2.7

8. Define the broad spectrum of enforcement activities in areas of public health concern, including, but not limited to the protection of drinking water; enforcement of clean air standards; regulation of care provided in health care facilities and programs; re-inspection of workplaces following safety violations; review of new drug, biologic, and medical device applications; enforcement of laws governing the sale of alcohol and tobacco to minors; seat belt and child safety seat usage; and childhood immunizations. HS-APH-2.8

9. Explain how public health can utilize health information and health communications to improve the health of populations. HS-APH-2.9

10. Connect the relationship that economics has with the implementation of public health practices and strategies. HS-APH-2.10

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APH-3. Explain how epidemiology is the basic science of public health and describe how it is used to study, prevent, and control disease. HS-APH-3

1. Summarize the major objectives of epidemiologic methods. HS-APH-3.1
2. Discuss the classification of notifiable diseases and the basic steps of an epidemiological investigation. HS-APH-3.2
3. Describe the application of epidemiology in the study of chronic diseases. HS-APH-3.3
4. Differentiate between the uses of the following terms in defining disease: prevalence rates, incidence rates, death rates, disease distribution, and epidemic curves. HS-APH-3.4
5. Differentiate between the following epidemiologic studies: intervention studies, cohort studies, and case control studies. HS-APH-3.5
6. Analyze sources of potential errors in epidemiologic study. HS-APH-3.6
7. Discuss basic ethical and legal principles pertaining to the collection, maintenance and use and reporting of epidemiologic data. HS-APH-3.7
8. Apply basic knowledge of statistics to identify the p-value, statistical significance, and confidence intervals related to an epidemiologic study. HS-APH-3.8
9. Evaluate the role of data in public health and the strengths and limitations of epidemiologic reports. HS-APH-3.9
10. Analyze current studies in Georgia and the methodology being utilized in those studies. HS-APH-3.10

HS-APH-4. Differentiate the means of transmission as they relate to the biomedical basis of disease for infectious, chronic, and genetic diseases. HS-APH-4

1. Define common infectious agents associated with public health. HS-APH-4.1
2. Construct the chain of infection using the following concepts: pathogen, reservoir, place of exit, method of transmission, port of entry, and susceptible host. HS-APH-4.2
3. Develop a logical argument for the benefit of vaccination and compare these arguments to those related to fear of vaccination. HS-APH-4.3
4. Investigate the role vaccination has with the prevention of diseases such as rabies, smallpox, measles, and polio. HS-APH-4.4
5. Identify patterns of the emergence and resurgence of various infectious diseases HS-APH-4.5
6. Analyze the public health response to emerging infections. HS-APH-4.6
7. Identify common chronic diseases (e.g. cardiovascular diseases, cancer, diabetes, arthritis, and Alzheimer's disease). HS-APH-4.7
8. Analyze the role that public health professionals play with the reduction of risk and prevention of common chronic diseases. HS-APH-4.8
9. Define terminology associated with genetic diseases. HS-APH-4.9

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10. Investigate the relationship that patterns of inheritance have with the development of disease. HS-APH-4.10
11. Critique the potential ethical issues related to genetics and genomics with the prevention and training of genetically associated diseases. HS-APH-4.11

HS-APH-5. Identify how psychosocial factors affect health behavior. HS-APH-5

1. Explain the relationship of demographic factors on an individual's health status. HS-APH-5.1
2. Evaluate the effects of socioeconomic status (SES) on the health of population groups. HS-APH-5.2
3. Investigate current health behavior theories and the role in the development of health intervention and promotion programs. HS-APH-5.3
4. Investigate current health behavior theories and the role in the development of health intervention and promotion programs). HS-APH-5.4
5. Assess, interpret, and evaluate public health data using information technology. HS-APH-5.5
6. Analyze evidence-based practices applied to social and behavioral public health interventions. HS-APH-5.6
7. Research the concept of social determinants of public health. HS-APH-5.7

HS-APH-6. Discuss the significance that obesity, substance abuse (including tobacco usage), and mental health disorders have with relation to the development of illness. HS-APH-6

1. Identify and discuss the major diseases caused by smoking and the estimated number of annual deaths. HS-APH-6.1
2. Define the biomedical basis for smoking's harmful effects of the body. HS-APH-6.2
3. Critically analyze the relationships between advertising of tobacco products, historical trends in smoking, and regulatory restriction on smoking. HS-APH-6.3
4. Investigate the epidemiological research that supports the link between obesity and the development of disease. HS-APH-6.4
5. Define the diseases commonly associated with obesity. HS-APH-6.5
6. Summarize the role that healthy eating, physical activity, and healthy minds have with confronting the obesity epidemic. HS-APH-6.6
7. Define the most commonly diagnosed mental health illnesses. HS-APH-6.7
8. Connect the epidemiologic evidence linking mental health illnesses with substance abuse, injuries, and illnesses. HS-APH-6.8

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9. Differentiate between the treatment of mental health illness in childhood, adults, and older adults. HS-APH-6.9
10. Summarize the common causes and prevention of mental health illness. HS-APH-6.10
11. Assess the various methods of treatment for mental health illness. HS-APH-6.11
12. Research programs and initiative available through the State of Georgia Department of Public Health. HS-APH-6.12

HS-APH-7. Investigate the reasons child and maternal health is a high priority in public health. HS-APH-7

1. Cite several studies depicting improvement in child and maternal health through United States and world history. HS-APH-7.1
2. Analyze infant mortality rates (IMR) in different countries and among different races. HS-APH-7.2
3. Cite evidence supporting infant mortality as either a social or a health problem. HS-APH-7.3
4. Summarize programs developed to decrease the IMR including those targeting congenital malformations, preterm birth, and sudden infant death syndrome. HS-APH-7.4
5. Discuss family planning and prevention of adolescent pregnancy related to abstinence and comprehensive sex education in schools. HS-APH-7.5
6. Analyze the development of nutritional programs for women and children. HS-APH-7.6
7. Critique the effectiveness of immunization programs in the prevention of infectious diseases. HS-APH-7.7
8. Evaluate results of the ongoing National Children's Study. HS-APH-7.8
9. Investigate and analyze data regarding women and children's health and Independent Medical Researcher (IMR) in local community and state. HS-APH-7.9

HS-APH-8. Assess that injuries are not accidents, are a major public health issue, and dependent on people's behavior and environment. HS-APH-8

1. Research the laws and regulations designed to protect health and safety at the local, state, and federal public health level. HS-APH-8.1
2. Analyze the relationship of epidemiology and accident prevention considering the host, agent, and environment, primary, secondary, and tertiary prevention. HS-APH-8.2
3. Cite evidence of government and public campaigns effective in decreasing motor vehicle injuries. HS-APH-8.3
4. Investigate current issues of poisoning including fatalities related to prescription drugs. HS-APH-8.4

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5. Critique data collected and studies conducted on fire arm injuries and deaths in the United States. HS-APH-8.5
6. Analyze data related to leading causes of childhood accidents and prevention programs. HS-APH-8.6
7. Investigate current issues surrounding student athletes' safety including concussion and traumatic brain injury prevention (TBI) and sudden cardiac death. HS-APH-8.7
8. Investigate domestic violence including child abuse and domestic partner violence for risk factors and prevention programs. HS-APH-8.8
9. Define agencies responsible for enforcement of public health policy at the local, state, and federal level. HS-APH-8.9

HS-APH-9. Summarize the relationship between role of environmental and occupational health with the prevention of injury and illnesses. HS-APH-9

1. Identify and describe the role that the government has with the establishment of environmental health. HS-APH-9.1
2. Define the governmental agencies responsible for the various environmental public health concerns at the local, state, and federal level. HS-APH-9.2
3. Critically analyze the relationship between the use of pesticides and industrial chemicals in the environment and the impact on both humans and the ecological system. HS-APH-9.3
4. Investigate the scope of occupational injuries, illnesses, and fatalities since the 19th century. HS-APH-9.4
5. Identify the governmental agencies responsible for the development and enforcement of occupational safety and health regulations. HS-APH-9.5
6. Identify the governmental agencies responsible for conducting research related to occupational health injuries and illness prevention. HS-APH-9.6
7. Classify patterns in the regulatory process for both environmental and occupational standards. HS-APH-9.7
8. Critically analyze the process of risk-benefit analysis. HS-APH-9.8

HS-APH-10. Investigate the relationship between medical care and public health. HS-APH-10

1. Investigate the concept of medical care as a public health issue. HS-APH-10.1
2. Differentiate between patient diagnosis (individual medical care) versus community diagnosis (public health). HS-APH-10.2
3. Cite evidence supporting the responsibility of public health regarding specific areas of medical care including communicable diseases, emergency services, veterans, and prisoners. HS-APH-10.3

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4. Assess the conflict between public health and the medical profession including insurance, indigent care, and school children. HS-APH-10.4
5. Discuss and critique the major trends in government health insurance programs and laws including The Patient Protection and Affordable Care Act of 2010. HS-APH-10.5
6. Identify the criteria for evaluating health systems including issues of access, quality, and cost. HS-APH-10.6
7. Investigate the governmental licensing and regulation system of health care professionals. HS-APH-10.7
8. Describe the fundamental concepts and features of project implementation, including planning, assessment and evaluation and determine methods used to evaluate the effectiveness, accessibility and quality of personal and population-based health services. HS-APH-10.8
9. Investigate prominent ethical and legal issues in medical care. HS-APH-10.9

HS-APH-11. Describe the fundamental concepts and applications of health services research as they intersect public health practice with medical care, institutions of higher learning, and governmental agencies at the local, state, and federal level. HS-APH-11

1. Connect public health research with institutions of higher learning, and critique this role. HS-APH-11.1
2. Identify the institutions of higher learning and agencies at the local, state, and federal level that are responsible for initiating research, participating in research by others, reporting results, and implementing policy based on these results. HS-APH-11.2
3. Analyze the broad spectrum of public health research that spans from practical field-based efforts to foster change in public health practice, to more academic efforts to encourage new directions in scientific research. HS-APH-11.3
4. Define the scientific methods and terminology used in public health to conduct research, including, but not limited to: epidemiology, statistical analyses, behavioral health, environmental health, occupational health, global health, and public health policy. HS-APH-11.4
5. Design a grant application to synthesize the process of developing a public health research project. HS-APH-11.5
6. Analyze public health research publications for information establishing innovative solutions to public health problems. HS-APH-11.6
7. Summarize how public health research is critical for each of the nine other essential areas of public health. HS-APH-11.7
8. Critique the internal capacity of local, state, and federal agencies to mount timely epidemiological and health policy analyses and conduct health systems research. HS-APH-11.8

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9. Discuss the ethical issues in research. HS-APH-11.9

HS-APH-12. Research the health needs of the elderly population and how changing trends, medical costs, and existing programs can result in a positive health outcome. HS-APH-12

1. Analyze trends in the aging of the population. HS-APH-12.1
2. Identify and research general approaches to maximizing health in the elderly population. HS-APH-12.2
3. Evaluate and investigate the effectiveness of programs targeting the following identified health risks of the elderly populations: medications, osteoporosis, falls, vision and hearing impairment, oral health, and Alzheimer's and other dementias. HS-APH-12.3
4. Analyze medical costs of the elderly population and discuss current and future payment strategies. HS-APH-12.4

HS-APH-13. Describe the role that public health has with emergency preparedness planning. HS-APH-13

1. Define commonly used terminology associated with emergency preparedness planning. HS-APH-13.1
2. Investigate the relationship that public health organizations at the local, state, and federal level with the establishment of an Incident Command System during a disaster response. HS-APH-13.2
3. Identify the different types of disasters (man-made, natural, biological, and technological.) HS-APH-13.3
4. Investigate recent disasters and analyze the public health responses and how they may have prevented potential spread of disease. HS-APH-13.4
5. Summarize the role that the Federal Emergency Management Agency (FEMA) and the National Guard have for emergency response, preparedness, and planning purposes. HS-APH-13.5
6. Define the key principles of emergency planning and preparedness (e.g. sharing of information, resource management, warnings of evacuations, warnings must be consistent, coordination of search and rescue efforts, involvement of mass media, triage, casualty distribution, tracking of patients and survivors, establishment of care of patients, management of volunteers and donations, and unanticipated problems). HS-APH-13.6

Emergency Medical Technician (25.46)

LPSCS-EMT-1. Demonstrate employability skills required by business and industry. LPSCS-EMT-1

1. Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities. LPSCS-EMT-1.1
2. Demonstrate creativity by asking challenging questions and applying innovative procedures and methods. LPSCS-EMT-1.2

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3. Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations. LPSCS-EMT-1.3
4. Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. LPSCS-EMT-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. LPSCS-EMT-1.5
6. Present a professional image through appearance, behavior and language. LPSCS-EMT-1.6

LPSCS-EMT-2. Examines the Emergency Medical Services (EMS) system and the role of Emergency Medical Technicians within the system. Applies fundamental knowledge of the emergency medical services (EMS) system, safety/well-being of the emergency medical technician (EMT), medical/legal, and ethical issues to the provision of emergency care. LPSCS-EMT-2

1. Define emergency medical services (EMS) systems. LPSCS-EMT-2.1
2. Name the four levels of EMT training and licensure. LPSCS-EMT-2.2
3. Describe EMT licensure criteria; including how the Americans with Disabilities Act (ADA) applies to employment as an EMT. LPSCS-EMT-2.3
4. Discuss the historical background of the development of the EMS system. LPSCS-EMT-2.4
5. Describe the levels of EMT training in terms of skill sets needed for each of the following: EMR, EMT, AEMT, and paramedic. LPSCS-EMT-2.5
6. Recognize the possible presence of other first responders at a scene with EMR training, some knowledge of first aid, or merely good intentions, and their need for direction. LPSCS-EMT-2.6
7. Name the 14 components of the EMS system. LPSCS-EMT-2.7
8. Describe how medical direction of an EMS system works, and the EMT's role in the process. LPSCS-EMT-2.8
9. Define mobile integrated healthcare and community paramedicine. LPSCS-EMT-2.9
10. Discuss the purpose of the EMS continuous quality improvement (CQI) process. LPSCS-EMT-2.10
11. Characterize the EMS system's role in disease and injury prevention and public education in the community. LPSCS-EMT-2.11
12. Describe the roles and responsibilities of the EMT. LPSCS-EMT-2.12
13. Describe the attributes an EMT is expected to possess. LPSCS-EMT-2.13

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14. Understand the impact of the Health Insurance Portability and Accountability Act (HIPAA) on patient privacy. LPSCS-EMT-2.14

LPSCS-EMT-3. Evaluate the necessity of scene safety, emotional and physical well-being, and stress management of the Emergency Medical Services provider. Applies fundamental knowledge of the emergency medical services (EMS) system, safety/well-being of the emergency medical technician (EMT), medical/legal, and ethical issues to the provision of emergency care. The student will understand the importance of recognizing important hazards; coping with physical and mental stress; assisting patients and families with the emotional aspect of injuries, illness, and/or death; taking appropriate preventive actions to ensure personal safety; dealing with patients and coworkers with sensitivity; taking proper precautions when dealing with infectious diseases; and preventing on-the-job injuries. LPSCS-EMT-3

1. State the steps that contribute to wellness and their importance in managing stress. LPSCS-EMT-3.1
2. Define infectious disease and communicable disease. LPSCS-EMT-3.2
3. Describe the routes of disease transmission. LPSCS-EMT-3.3
4. Describe the routes of transmission and the steps to prevent and/or deal with an exposure to hepatitis, tuberculosis, and HIV/AIDS. LPSCS-EMT-3.4
5. Know the standard precautions used in treating patients to prevent infection. LPSCS-EMT-3.5
6. Describe the steps to take for personal protection from airborne and bloodborne pathogens. LPSCS-EMT-3.6
7. Explain proper handwashing techniques. LPSCS-EMT-3.7
8. List the ways immunity to infectious diseases is acquired. LPSCS-EMT-3.8
9. Explain post-exposure management of exposure to patient blood or body fluids, including completing a post-exposure report. LPSCS-EMT-3.9
10. Describe the steps necessary to determine scene safety and to prevent work-related injuries at the scene. LPSCS-EMT-3.10
11. Describe the different types of protective clothing worn to prevent injury. LPSCS-EMT-3.11
12. Explain the care of critically ill and injured patients. LPSCS-EMT-3.12
13. Describe issues concerning care of the dying patient, death, and the grieving process of family members. LPSCS-EMT-3.13
14. Know the physiologic, physical, and psychological responses to stress. LPSCS-EMT-3.14

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15. Describe posttraumatic stress disorder (PTSD) and steps that can be taken, including critical incident stress management, to decrease the likelihood that PTSD will develop. LPSCS-EMT-3.15
16. Identify the emotional aspects of emergency care. LPSCS-EMT-3.16
17. Recognize the stress inherent in many situations, such as mass-casualty scenes. LPSCS-EMT-3.17
18. Recognize the possibility of violent situations and the steps to take to deal with them. LPSCS-EMT-3.18
19. Describe how to handle behavioral emergencies. LPSCS-EMT-3.19
20. Discuss workplace issues such as cultural diversity, sexual harassment, and substance abuse. LPSCS-EMT-3.20
21. Demonstrate how to properly remove gloves. LPSCS-EMT-3.21
22. Demonstrate the steps necessary to manage a potential exposure situation. LPSCS-EMT-3.22

LPSCS-EMT-4. Applies fundamental knowledge of the emergency medical services (EMS) system, safety/wellbeing of the emergency medical technician (EMT), medical/legal, and ethical issues to the provision of emergency care. LPSCS-EMT-4

1. Define consent and how it relates to decision making. LPSCS-EMT-4.1
2. Compare expressed consent, implied consent, and involuntary consent. LPSCS-EMT-4.2
3. Discuss consent by minors for treatment or transport. LPSCS-EMT-4.3
4. Describe local EMS system protocols for using forcible restraint. LPSCS-EMT-4.4
5. Discuss the EMT's role and obligations if a patient refuses treatment or transport. LPSCS-EMT-4.5
6. Describe the relationship between patient communications, confidentiality, and the Health Insurance Portability and Accountability Act (HIPAA). LPSCS-EMT-4.6
7. Discuss the importance of do not resuscitate (DNR) orders and local protocols as they relate to the EMS environment. LPSCS-EMT-4.7
8. Describe the physical, presumptive, and definitive signs of death. LPSCS-EMT-4.8
9. Explain how to manage patients who are identified as organ donors. LPSCS-EMT-4.9
10. Recognize the importance of medical identification devices in treating the patient. LPSCS-EMT-4.10
11. Discuss the scope of practice and standards of care. LPSCS-EMT-4.11
12. Describe the EMT's legal duty to act. LPSCS-EMT-4.12

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13. Discuss the issues of negligence, abandonment, assault and battery, and kidnapping and their implications for the EMT. LPSCS-EMT-4.13
14. Explain the reporting requirements for special situations, including abuse, drug- or felonyrelated injuries, childbirth, and crime scenes. LPSCS-EMT-4.14
15. Define ethics and morality, and discuss their implications for the EMT. LPSCS-EMT-4.15
16. Describe the roles and responsibilities of the EMT in court. LPSCS-EMT-4.16

LPSCS-EMT-5. Applies fundamental knowledge of the emergency medical services (EMS) system, safety/wellbeing of the emergency medical technician (EMT), medical/legal, and ethical issues to the provision of emergency care. The student will have an understanding of therapeutic communication; means to communicate effectively with special populations such as children, geriatric patients, and hearing- and visually impaired patients; methods and procedures for effective communication; components of effective written reports, types of written reports, and ways to correct errors found within written reports; documentation of refusal of care; special reporting situations; use of medical terminology; communications systems and equipment; regulations and protocols governing radio communications; and communication with medical control and hospitals. LPSCS-EMT-5

1. Describe the factors and strategies to consider for therapeutic communication with patients. LPSCS-EMT-5.1
2. Discuss the techniques of effective verbal communication. LPSCS-EMT-5.2
3. Explain the skills that should be used to communicate with family members, bystanders, people from other agencies, and hospital personnel. LPSCS-EMT-5.3
4. Discuss special considerations in communicating with older people, children, patients who are hard of hearing, visually impaired patients, and non-English-speaking patients. LPSCS-EMT-5.4
5. Describe the use of written communications and documentation. LPSCS-EMT-5.5
6. State the purpose of a patient care report (PCR) and the information required to complete it. LPSCS-EMT-5.6
7. Explain the legal implications of the PCR. LPSCS-EMT-5.7
8. Describe how to document refusal of care, including the legal implications. LPSCS-EMT-5.8
9. Discuss state and/or local special reporting requirements, such as for gunshot wounds, dog bites, and abuse. LPSCS-EMT-5.9

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10. Describe the basic principles of the various types of communications equipment used in EMS. LPSCS-EMT-5.10
11. Describe the use of radio communications, including the proper methods of initiating and terminating a radio call. LPSCS-EMT-5.11
12. List the correct radio procedures in the following phases of a typical call: initial receipt of call, en route to call, on scene, arrival at hospital (or point of transfer), and return to service. LPSCS-EMT-5.12
13. List the proper sequence of information to communicate in radio delivery of a patient report. LPSCS-EMT-5.13
14. Demonstrate the techniques of successful cross-cultural communication. LPSCS-EMT-5.14
15. Demonstrate completion of a PCR. LPSCS-EMT-5.15
16. Demonstrate how to make a simulated, concise radio transmission with dispatch. LPSCS-EMT-5.16

LPSCS-EMT-6. Uses foundational anatomical and medical terms and abbreviations in written and oral communication with colleagues and other health care professionals able to use foundational and anatomical medical terms and abbreviations in written and oral communication with colleagues and health care professionals. They will understand the purpose of medical terminology, be able to identify its components, and be able to define an unknown medical term based on the dissection and understanding of its components. Students will also be able to identify error-prone medical abbreviations and acronyms. Common direction, movement, and position terms are also presented in this chapter. LPSCS-EMT-6

1. Explain the purpose of medical terminology. LPSCS-EMT-6.1
2. Identify the four components that comprise a medical term. LPSCS-EMT-6.2
3. Describe the following directional terms: anterior (ventral), posterior (dorsal), right, left, superior, inferior, proximal, distal, medial, lateral, superficial, and deep. LPSCS-EMT-6.3
4. Describe the prone, supine, Fowler, and semi-Fowler positions of the body. LPSCS-EMT-6.4
5. Break down the meaning of a medical term based on the components of the term. LPSCS-EMT-6.5
6. Interpret selected medical abbreviations, acronyms, and symbols. LPSCS-EMT-6.6
7. Identify error-prone medical abbreviations, acronyms, and symbols. LPSCS-EMT-6.7

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CS-EMT-7. Applies fundamental knowledge of the emergency medical services (EMS) system, safety/well-being of the emergency medical technician (EMT), medical/legal, and ethical issues to the provision of emergency

care. Applies fundamental knowledge of the anatomy and function of all human systems to the practice of EMS. Applies fundamental knowledge of the pathophysiology of respiration and perfusion to patient assessment and management. The student will be able to describe and apply, in context, the body planes, topographic anatomy, and anatomic position. Students will be able to identify basic anatomic structures and related functions and describe each body system, discussing the roles of the structures within these systems and the interaction of body systems in maintaining the life support chain. Students will be able to discuss possible consequences of illness and injury of these structures and systems on proper functioning of the body. LPSCS-EMT-7

1. Identify the body's topographic anatomy, including the anatomic position and the planes of the body. LPSCS-EMT-7.1
2. Identify the anatomy and physiology of the skeletal system. LPSCS-EMT-7.2
3. Describe the anatomy and physiology of the musculoskeletal system. LPSCS-EMT-7.3
4. Discuss the anatomy and physiology of the respiratory system. LPSCS-EMT-7.4
5. Discuss the anatomy and physiology of the circulatory system. LPSCS-EMT-7.5
6. Discuss the anatomy and physiology of the nervous system. LPSCS-EMT-7.6
7. Describe the anatomy and physiology of the integumentary system. LPSCS-EMT-7.7
8. Explain the anatomy and physiology of the digestive system. LPSCS-EMT-7.8
9. Describe the anatomy and the physiology of the lymphatic system. LPSCS-EMT-7.9
10. Discuss the anatomy and physiology of the endocrine system. LPSCS-EMT-7.10
11. Describe the anatomy and physiology of the urinary system. LPSCS-EMT-7.11
12. Discuss the anatomy and physiology of the genital system. LPSCS-EMT-7.12
13. Describe the life support chain, aerobic metabolism, and anaerobic metabolism. LPSCS-EMT-7.13
14. Define pathophysiology. LPSCS-EMT-7.14

LPSCS-EMT-8. Applies fundamental knowledge of the emergency medical services (EMS) system, safety/well-being of the emergency medical technician (EMT), and medical/legal and ethical issues to the provision of

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emergency care. Applies fundamental knowledge of life span development to patient assessment and management. The student will have a fundamental understanding of the physiological and psychosocial differences of each phase of human development. The students will be able to discuss adaptations and strategies that they might apply to better assess and manage patients. LPSCS-EMT-8

1. Know the terms used to designate the following stages of life: infants, toddlers, preschoolers, school-age children, adolescents (teenagers), early adults, middle adults, and older adults. LPSCS-EMT-8.1
2. Describe the major physical and psychosocial characteristics of an infant's life. LPSCS-EMT-8.2
3. Describe the major physical and psychosocial characteristics of a toddler's and preschooler's life. LPSCS-EMT-8.3
4. Describe the major physical and psychosocial characteristics of a school-age child's life. LPSCS-EMT-8.4
5. Describe the major physical and psychosocial characteristics of an adolescent's life. LPSCS-EMT-8.5
6. Describe the major physical and psychosocial characteristics of an early adult's life. LPSCS-EMT-8.6
7. Describe the major physical and psychosocial characteristics of a middle adult's life. LPSCS-EMT-8.7
8. Describe the major physical and psychosocial characteristics of an older adult's life. LPSCS-EMT-8.8

LPSCS-EMT-9. **Knowledge of operational roles and responsibilities to ensure safe patient, public, and personnel safety. The student will understand the body mechanics of patient movement, principles of safe reaching and pulling, urgent and non-urgent moves, how to move patients as a team, types of patient packaging and moving equipment, how to protect from injury when moving patients, and the use of medical restraints.** LPSCS-EMT-9

1. Explain the need and use of the most common patient-moving equipment, the stretcher and backboard. LPSCS-EMT-9.1
2. Explain the technical skills and general considerations that are required of EMTs during patient packaging and patient handling. LPSCS-EMT-9.2
3. Define the term body mechanics. LPSCS-EMT-9.3
4. Discuss how following proper patient lifting and moving techniques can help prevent workrelated injuries. LPSCS-EMT-9.4
5. Identify how to avoid common mistakes when lifting and carrying a patient. LPSCS-EMT-9.5
6. Explain the power grip and sheet or blanket methods for lifting a patient. LPSCS-EMT-9.6

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7. Explain the general considerations required of EMTs to safely move patients without causing the patient further harm and while protecting themselves from injury. LPSCS-EMT-9.7
8. Explain how to carry patients safely on stairs, including the selection of appropriate equipment to aid in the process. LPSCS-EMT-9.8
9. Describe specific situations in which an urgent move or rapid extrication may be necessary to move a patient; include how each one is performed. LPSCS-EMT-9.9
10. Describe specific situations in which a non-urgent move may be necessary to move a patient; include how each one is performed. LPSCS-EMT-9.10
11. Explain the special considerations and guidelines related to moving and transporting geriatric patients. LPSCS-EMT-9.11
12. Define the term bariatrics. LPSCS-EMT-9.12
13. Discuss the guidelines for lifting and moving bariatric patients. LPSCS-EMT-9.13
14. Explain the need and use for additional patient-moving equipment (specialized); include examples. LPSCS-EMT-9.14
15. Know the importance of decontaminating equipment in the prevention of disease transmission. LPSCS-EMT-9.15
16. Describe proper positioning of the following conditions: Unresponsive patients without suspected spine injury Patients with chest pain, discomfort, or difficulty breathing Patients with suspected spine injury
Pregnant patients with hypotension
Patients who are nauseated or vomiting LPSCS-EMT-9.16
17. Discuss situations that may require the use of medical restraints on a patient. LPSCS-EMT-9.17
18. Explain guidelines and safety considerations for the use of medical restraints. LPSCS-EMT-9.18
19. Perform a power lift to lift a patient. LPSCS-EMT-9.19
20. Demonstrate a power grip. LPSCS-EMT-9.20
21. Demonstrate the body mechanics and principles required for safe reaching and pulling, including the technique used for performing log rolls. LPSCS-EMT-9.21
22. Perform the diamond carry to move a patient. LPSCS-EMT-9.22
23. Perform the one-handed carry to move a patient. LPSCS-EMT-9.23
24. Perform a patient carry using a stair chair to move a patient down the stairs. LPSCS-EMT-9.24
25. Perform a patient carry to move a patient down the stairs on a backboard. LPSCS-EMT-9.25

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26. Demonstrate how to load a stretcher into an ambulance. LPSCS-EMT-9.26
27. Demonstrate how to perform an emergency or urgent move. LPSCS-EMT-9.27
28. Perform the rapid extrication technique to move a patient from a vehicle. LPSCS-EMT-9.28
29. Perform the direct ground lift to lift a patient. LPSCS-EMT-9.29
30. Perform the extremity lift to move a patient. LPSCS-EMT-9.30
31. Perform the direct carry to move a patient. LPSCS-EMT-9.31
32. Demonstrate how to use the draw sheet method to transfer a patient onto a stretcher. LPSCS-EMT-9.32
33. Use a scoop stretcher to move a patient. LPSCS-EMT-9.33

LPSCS-EMT-10. Applies scene information and patient assessment findings (scene size-up, primary and secondary assessment, patient history, and reassessment) to guide emergency management. The student will understand the scope and sequence of patient assessment for medical and trauma patients and all the phases and components of patient assessment. Please note that this chapter is divided into five sections: scene size-up, primary assessment, history taking, secondary assessment, and reassessment. These divisions will help facilitate the instructor's approach for teaching this skill as a whole concept. LPSCS-EMT-10

1. Identify the components of the patient assessment process. LPSCS-EMT-10.1
2. Explain how the different causes and presentations of emergencies will affect how EMTs perform each step of the patient assessment process. LPSCS-EMT-10.2
3. Discuss some of the possible environmental, chemical, and biologic hazards that may be present at an emergency scene, ways to recognize them, and precautions to protect personal safety. LPSCS-EMT-10.3
4. Discuss the steps EMTs should take to survey a scene for signs of violence and to protect themselves and bystanders from real or potential danger. LPSCS-EMT-10.4
5. Describe how to determine the mechanism of injury (MOI) or nature of illness (NOI) at an emergency and the importance of differentiating trauma patients from medical patients. LPSCS-EMT-10.5
6. List the minimum standard precautions that should be followed and personal protective equipment (PPE) that should be worn at an emergency scene, including examples of when additional precautions would be appropriate. LPSCS-EMT-10.6

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7. Explain why it is important for EMTs to identify the total number of patients at an emergency scene and how this evaluation relates to determining the need for additional or specialized resources, implementation of the incident command system (ICS), and triage. LPSCS-EMT-10.7
8. Describe the principal goals of the primary assessment process, including how to identify and treat life threats and determine if immediate transport is required. LPSCS-EMT-10.8
9. Explain the process of forming a general impression of a patient as part of primary assessment and the reasons why this step is critical to patient management. LPSCS-EMT-10.9
10. Explain the importance of assessing a patient's level of consciousness (LOC) to determine altered mental status, and include examples of different methods used to assess alertness, responsiveness, and orientation. LPSCS-EMT-10.10
11. Describe the assessment of airway status in patients who are both responsive and unresponsive, including examples of possible signs and causes of airway obstruction in each case as well as the appropriate EMT response. LPSCS-EMT-10.11
12. Describe the assessment of a patient's breathing status, including the key information EMTs must obtain during this process and the care required for patients who have both adequate and inadequate breathing. LPSCS-EMT-10.12
13. List the signs of respiratory distress and respiratory failure. LPSCS-EMT-10.13
14. Describe the assessment of a patient's circulatory status, including the different methods for obtaining a pulse and appropriate management depending on the patient's status. LPSCS-EMT-10.14
15. Explain the variations required to obtain a pulse in infant and child patients compared with adult patients. LPSCS-EMT-10.15
16. Describe the assessment of a patient's skin color, temperature, and condition, including examples of both normal and abnormal findings and the information this provides related to the patient's status. LPSCS-EMT-10.16
17. Discuss the process of assessing for and methods for controlling external bleeding. LPSCS-EMT-10.17
18. Discuss the steps used to identify and subsequently treat life-threatening conditions that endanger a patient during an emergency. LPSCS-EMT-10.18
19. List the steps EMTs should follow during the primary assessment of a trauma patient, including examples of abnormal signs and appropriate related actions. LPSCS-EMT-10.19

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20. Explain the process for determining the priority of patient care and transport at an emergency scene and include examples of conditions that necessitate immediate transport. LPSCS-EMT-10.20
21. Discuss the importance of protecting a trauma patient's spine and identifying fractured extremities during patient packaging for transport. LPSCS-EMT-10.21
22. Discuss the process of taking a focused history, its key components, and its relationship to the primary assessment process. LPSCS-EMT-10.22
23. Describe examples of different techniques EMTs may use to obtain information from patients during the history-taking process. LPSCS-EMT-10.23
24. Discuss different challenges EMTs may face when taking a patient history on sensitive topics and strategies they may use to facilitate each situation. LPSCS-EMT-10.24
25. Describe the purpose of a secondary assessment and a physical exam; include how to determine which aspects of the physical exam to use, and the steps. LPSCS-EMT-10.25
26. Explain situations in which patients may receive a focused assessment, including examples by body system of what each focused assessment should include based on a patient's chief complaint. LPSCS-EMT-10.26
27. List normal blood pressure ranges for adults, children, and infants. LPSCS-EMT-10.27
28. Explain the importance of performing a reassessment of the patient and the steps in this process. LPSCS-EMT-10.28
29. Demonstrate how to use the AVPU scale to test for patient responsiveness. LPSCS-EMT-10.29
30. Demonstrate how to evaluate a patient's orientation and document his or her status correctly. LPSCS-EMT-10.30
31. Demonstrate the techniques for assessing a patient's airway and correctly obtaining information related to respiratory rate, rhythm, quality/character of breathing, and depth of breathing. LPSCS-EMT-10.31
32. Demonstrate how to assess a radial pulse in a responsive patient and an unresponsive patient. LPSCS-EMT-10.32
33. Demonstrate how to assess a carotid pulse in an unresponsive patient. LPSCS-EMT-10.33
34. Demonstrate how to palpate a brachial pulse in a child who is younger than 1 year (or a manikin). LPSCS-EMT-10.34
35. Demonstrate how to obtain a pulse rate in a patient. LPSCS-EMT-10.35

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36. Demonstrate how to assess capillary refill in an adult or child older than 6 years. LPSCS-EMT-10.36
37. Demonstrate how to assess capillary refill in an infant or child younger than 6 years; include variations that would be required when assessing a newborn. LPSCS-EMT-10.37
38. Demonstrate how to perform a rapid exam during primary assessment of a patient. LPSCS-EMT-10.38
39. Demonstrate how to perform a secondary assessment. LPSCS-EMT-10.39
40. Demonstrate how to measure blood pressure by auscultation. LPSCS-EMT-10.40
41. Demonstrate how to measure blood pressure by palpation. LPSCS-EMT-10.41
42. Demonstrate how to test pupil reaction in response to light in a patient and how to document his or her status correctly. LPSCS-EMT-10.42
43. Demonstrate the assessment of neurovascular status. LPSCS-EMT-10.43
44. Demonstrate the use of a pulse oximetry device to evaluate the effectiveness of oxygenation in the patient. LPSCS-EMT-10.44
45. Demonstrate the use of electronic devices to assist in determining the patient's blood pressure in the field. LPSCS-EMT-10.45
46. Demonstrate how to assess a patient's blood glucose level. LPSCS-EMT-10.46

LPSCS-EMT-11. Applies knowledge of general anatomy and physiology to patient assessment and management in order to assure a patent airway, adequate mechanical ventilation, and respiration for patients of all ages. The students will understand the need for proper airway management, including recognizing and measuring adequate and inadequate breathing, maintaining an open airway, and providing artificial ventilation. Students will be able to demonstrate basic competency in applying these concepts to appropriate care through the use of airway adjuncts, suction equipment, oxygen equipment and delivery systems, pulse oximetry, continuous positive airway pressure (CPAP), and resuscitation devices. LPSCS-EMT-11

1. Describe the major structures of the respiratory system. LPSCS-EMT-11.1
2. Discuss the physiology of breathing. LPSCS-EMT-11.2
3. Give the signs of adequate breathing. LPSCS-EMT-11.3
4. Give the signs of inadequate breathing. LPSCS-EMT-11.4
5. Describe the assessment and care of a patient with apnea. LPSCS-EMT-11.5

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6. Explain how to assess for adequate and inadequate respiration, including the use of pulse oximetry. LPSCS-EMT-11.6
7. Explain how to assess for a patent airway. LPSCS-EMT-11.7
8. Describe how to perform the head tilt–chin lift maneuver. LPSCS-EMT-11.8
9. Describe how to perform the jaw-thrust maneuver. LPSCS-EMT-11.9
10. Explain the importance and techniques of suctioning. LPSCS-EMT-11.10
11. Explain how to measure and insert an oropharyngeal (oral) airway. LPSCS-EMT-11.11
12. Describe how to measure and insert a nasopharyngeal (nasal) airway. LPSCS-EMT-11.12
13. Explain the use of the recovery position to maintain a clear airway. LPSCS-EMT-11.13
14. Describe the importance of giving supplemental oxygen to patients who are hypoxic. LPSCS-EMT-11.14
15. Discuss the basics of how oxygen is stored and the various hazards associated with its use. LPSCS-EMT-11.15
16. Explain the use of a non-rebreathing mask and the oxygen flow requirements for its use. LPSCS-EMT-11.16
17. Describe the indications for using a nasal cannula rather than a non-rebreathing face mask. LPSCS-EMT-11.17
18. Describe the indications for use of a humidifier during supplemental oxygen therapy. LPSCS-EMT-11.18
19. Describe how to perform mouth-to-mouth or mouth-to-mask ventilation. LPSCS-EMT-11.19
20. Describe the use of a one- or two-person bag-valve mask (BVM), and a manually triggered ventilation (MTV) device. LPSCS-EMT-11.20
21. Describe the signs associated with adequate and inadequate artificial ventilation. LPSCS-EMT-11.21
22. Describe the use of continuous positive airway pressure (CPAP). LPSCS-EMT-11.22
23. Explain how to recognize and care for a foreign body airway obstruction. LPSCS-EMT-11.23
24. Demonstrate use of pulse oximetry. LPSCS-EMT-11.24
25. Demonstrate how to position the unconscious patient. LPSCS-EMT-11.25
26. Demonstrate how to perform the head tilt–chin lift maneuver. LPSCS-EMT-11.26

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27. Demonstrate how to perform the jaw-thrust maneuver. LPSCS-EMT-11.27
28. Demonstrate how to operate a suction unit. LPSCS-EMT-11.28
29. Demonstrate how to suction a patient's airway. LPSCS-EMT-11.29
30. Demonstrate the insertion of an oral airway. LPSCS-EMT-11.30
31. Demonstrate the insertion of an oral airway with a 90-degree rotation. LPSCS-EMT-11.31
32. Demonstrate the insertion of a nasal airway. LPSCS-EMT-11.32
33. Demonstrate how to place a patient in the recovery position. LPSCS-EMT-11.33
34. Demonstrate how to place an oxygen cylinder into service. LPSCS-EMT-11.34
35. Demonstrate the use of a partial rebreathing mask in providing supplemental oxygen therapy to patients. LPSCS-EMT-11.35
36. Demonstrate the use of a Venturi mask in providing supplemental oxygen therapy to patients. LPSCS-EMT-11.36
37. Demonstrate the use of a humidifier in providing supplemental oxygen therapy to patients. LPSCS-EMT-11.37
38. Demonstrate mouth-to-mask ventilation. LPSCS-EMT-11.38
39. Demonstrate how to assist a patient with ventilations using the BVM. LPSCS-EMT-11.39
40. Demonstrate the use of a manually triggered ventilation device to assist in delivering artificial ventilation to the patient. LPSCS-EMT-11.40
41. Demonstrate the use of an automatic transport ventilator to assist in delivering artificial ventilation to the patient. LPSCS-EMT-11.41
42. Demonstrate the use of CPAP. LPSCS-EMT-11.42

LPSCS-EMT-12. Applies fundamental knowledge of the medications that the EMT may assist/administer to a patient during an emergency. The student will understand the significance and characteristics of general pharmacology and will be able to identify, describe, and demonstrate the steps for assisting/administering medications carried by the EMT. LPSCS-EMT-12

1. Define the terms pharmacodynamics, intended effects, indications, side effects, unintended effects, and untoward effects. LPSCS-EMT-12.1
2. Explain medication contraindications; include an example. LPSCS-EMT-12.2
3. Explain the differences between a generic medication name and a trade medication name; provide an example of each. LPSCS-EMT-12.3

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4. Differentiate enteral and parenteral routes of medication administration. LPSCS-EMT-12.4
5. Describe rectal, oral, intravenous, intraosseous, subcutaneous, intramuscular, inhalation, sublingual, and transcutaneous routes of medication administration; include the rates of absorption. LPSCS-EMT-12.5
6. Explain the solid, liquid, and gas forms of medication and routes of administration; provide examples of each. LPSCS-EMT-12.6
7. List the "six rights" of medication administration; include how each one relates to EMS. LPSCS-EMT-12.7
8. Explain the difference between direct orders (online) and standing orders (off-line) and the role of medical control. LPSCS-EMT-12.8
9. Discuss the medication administration circumstances involving peer-assisted medication, patient-assisted medication, and EMT-administered medication. LPSCS-EMT-12.9
10. Know the generic and trade names, actions, indications, contraindications, routes of administration, side effects, interactions, and doses of 10 medications that may be administered by an EMT in an emergency as dictated by state protocols and local medical direction. LPSCS-EMT-12.10
11. Describe the medication administration considerations related to special populations, including pediatric, geriatric, and pregnant patients. LPSCS-EMT-12.11
12. State the steps to should follow when dispensing medications to a patient using an auto-injector. LPSCS-EMT-12.12
13. Explain why determining what prescription and over-the-counter medications a patient is taking is a critical aspect of patient assessment during an emergency. LPSCS-EMT-12.13
14. State the steps to take if a medication error occurs. LPSCS-EMT-12.14
15. Apply the six rights of medication administration. LPSCS-EMT-12.15
16. Demonstrate how to administer oral medication to a patient. LPSCS-EMT-12.16
17. Demonstrate how to administer aspirin to a patient with chest pain. LPSCS-EMT-12.17
18. Demonstrate how to administer oral glucose to a patient with hypoglycemia. LPSCS-EMT-12.18
19. Demonstrate how to assist a patient with the sublingual administration of a medication. LPSCS-EMT-12.19
20. Demonstrate how to administer a medication by auto-injector. LPSCS-EMT-12.20

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21. Demonstrate how to administer an intranasal medication. LPSCS-EMT-12.21

LPSCS-EMT-13. Applies a fundamental knowledge of the causes, pathophysiology, and management of shock, respiratory failure or arrest, cardiac failure or arrest, and post-resuscitation management. Applies fundamental knowledge of the pathophysiology of respiration and perfusion to patient assessment and management. The student will have an understanding of the different types and causes of shock, the process of perfusion, the signs and symptoms associated with shock, application of the assessment process with the shock patient, and the general and specific emergency medical care provided to patients experiencing shock. LPSCS-EMT-13

1. Describe the pathophysiology of shock (hypo perfusion). LPSCS-EMT-13.1
2. Identify the causes of shock. LPSCS-EMT-13.2
3. Differentiate among the various types of shock. LPSCS-EMT-13.3
4. Describe the signs and symptoms of shock including compensated and decompensated. LPSCS-EMT-13.4
5. Discuss key components of patient assessment for shock. LPSCS-EMT-13.5
6. Describe the steps to follow in the emergency care of the patient with various types of shock. LPSCS-EMT-13.6
7. Demonstrate how to control shock. LPSCS-EMT-13.7
8. Demonstrate how to complete an EMS patient care report for a patient with shock. LPSCS-EMT-13.8

LPSCS-EMT-14. Applies a fundamental knowledge of the causes, pathophysiology, and management of shock, respiratory failure or arrest, cardiac failure or arrest, and post-resuscitation management. The student will have reviewed the basic life support (BLS) procedures for adults, infants, and children. Please note that BLS knowledge is a prerequisite for the course and that this chapter should serve as a review. LPSCS-EMT-14

1. Explain the elements of basic life support (BLS), how it differs from advanced life support (ALS), and why BLS must be applied rapidly. LPSCS-EMT-14.1
2. Explain the goals of cardiopulmonary resuscitation (CPR) and when it should be performed on a patient. LPSCS-EMT-14.2
3. Explain the components of CPR, the five links in the American Heart Association (AHA) chain of survival, and how each one relates to maximizing the survival of a patient. LPSCS-EMT-14.3

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4. Discuss guidelines for circumstances that require the use of an automated external defibrillator (AED) on both adult and pediatric patients experiencing cardiac arrest. LPSCS-EMT-14.4
5. Explain three special situations related to the use of an AED. LPSCS-EMT-14.5
6. Describe the proper way to position an adult patient to receive BLS care. LPSCS-EMT-14.6
7. Describe the purpose of external chest compressions. LPSCS-EMT-14.7
8. Describe the two techniques EMTs may use to open an adult patient's airway and the circumstances that would determine when each technique would be used. LPSCS-EMT-14.8
9. Describe the recovery position and circumstances that would warrant its use, as well as situations in which it would be contraindicated. LPSCS-EMT-14.9
10. Describe the process of providing artificial ventilations to an adult patient, ways to avoid gastric distention, and modifications required for a patient with a stoma. LPSCS-EMT-14.10
11. Explain the steps in providing single-rescuer adult CPR. LPSCS-EMT-14.11
12. Explain the steps in providing two-rescuer adult CPR, including the method for switching positions during the process. LPSCS-EMT-14.12
13. Describe the different mechanical devices that are available to assist emergency care providers in delivering improved circulatory efforts during CPR. LPSCS-EMT-14.13
14. Describe the different possible causes of cardiopulmonary arrest in children. LPSCS-EMT-14.14
15. Explain the four steps of pediatric BLS procedures and how they differ from BLS procedures used in an adult patient. LPSCS-EMT-14.15
16. Describe the ethical issues related to patient resuscitation, including examples of when not to start CPR on a patient. LPSCS-EMT-14.16
17. Explain the various factors involved in the decision to stop CPR once it has been started on a patient. LPSCS-EMT-14.17
18. Explain common causes of foreign body airway obstruction in both children and adults and how to distinguish mild or partial airway obstruction from complete airway obstruction. LPSCS-EMT-14.18
19. Describe the different methods for removing a foreign body airway obstruction in an infant, child, and adult, including the procedure for a patient with an obstruction who becomes unresponsive. LPSCS-EMT-14.19

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20. Discuss how to provide grief support for a patient's family members and loved ones after resuscitation has ended. LPSCS-EMT-14.20
21. Discuss the importance of frequent CPR training for EMTs, as well as public education programs that teach compression-only CPR. LPSCS-EMT-14.21
22. Demonstrate how to position an unresponsive adult for CPR. LPSCS-EMT-14.22
23. Demonstrate how to check for a pulse at the carotid artery in an unresponsive child or adult. LPSCS-EMT-14.23
24. Demonstrate how to perform external chest compressions on an adult. LPSCS-EMT-14.24
25. Demonstrate how to perform a head tilt–chin lift maneuver on an adult. LPSCS-EMT-14.25
26. Demonstrate how to perform a jaw-thrust maneuver on an adult. LPSCS-EMT-14.26
27. Demonstrate how to place a patient in the recovery position. LPSCS-EMT-14.27
28. Demonstrate how to perform rescue breathing in an adult. LPSCS-EMT-14.28
29. Demonstrate how to perform one-rescuer adult CPR. LPSCS-EMT-14.29
30. Demonstrate how to perform two-rescuer adult CPR. LPSCS-EMT-14.30
31. Demonstrate the use of mechanical devices that assist emergency responders in delivering improved circulatory efforts during CPR. LPSCS-EMT-14.31
32. Demonstrate how to check for a pulse at the brachial artery in an unresponsive infant. LPSCS-EMT-14.32
33. Demonstrate how to perform external chest compressions on an infant. LPSCS-EMT-14.33
34. Demonstrate how to perform CPR in a child who is between 1 year of age and the onset of puberty. LPSCS-EMT-14.34
35. Demonstrate how to perform a head tilt–chin lift maneuver on a pediatric patient. LPSCS-EMT-14.35
36. Demonstrate how to perform a jaw-thrust maneuver on a pediatric patient. LPSCS-EMT-14.36
37. Demonstrate how to perform rescue breathing on a child. LPSCS-EMT-14.37
38. Demonstrate how to perform rescue breathing on an infant. LPSCS-EMT-14.38

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39. Demonstrate how to remove a foreign body airway obstruction in a responsive adult patient using abdominal thrusts (Heimlich maneuver). LPSCS-EMT-14.39

. Demonstrate how to remove a foreign body airway obstruction in a responsive pregnant or obese patient using chest thrusts. LPSCS-EMT-14.40.

41. Demonstrate how to remove a foreign body airway obstruction in a responsive child older than 1 year using abdominal thrusts (Heimlich maneuver). LPSCS-EMT-14.41

42. Demonstrate how to remove a foreign body airway obstruction in an unresponsive child. LPSCS-EMT-14.42

43. Demonstrate how to remove a foreign body airway obstruction in an infant. LPSCS-EMT-14.43

LPSCS-EMT-15. **Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient. The student will understand the need for proper assessment techniques when called to patients with a chief complaint of a medical nature.** LPSCS-EMT-15

1. Differentiate between medical emergencies and trauma emergencies, remembering that some patients may have both. LPSCS-EMT-15.1
2. Name the various categories of common medical emergencies and give examples. LPSCS-EMT-15.2
3. Describe the evaluation of the nature of illness (NOI). LPSCS-EMT-15.3
4. Discuss the assessment of a patient with a medical emergency. LPSCS-EMT-15.4
5. Explain the importance of transport time and destination selection for a medical patient. LPSCS-EMT-15.5
6. Define infectious disease and communicable disease. LPSCS-EMT-15.6
7. Discuss diseases of special concern and their routes of transmission, including influenza, herpes simplex, HIV/AIDS, hepatitis, meningitis, tuberculosis, whooping cough, MRSA, MERSCoV, and Ebola. LPSCS-EMT-15.7

LPSCS-EMT-16. **Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient. The student will understand the significance and characteristics of respiratory emergencies in infant, child, and adult populations. Students should be able to demonstrate a fundamental comprehension on the following topics: respiratory anatomy and physiology, pathophysiology, signs and symptoms of various respiratory etiologies (eg, asthma, COPD, pneumonia), and the**

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assessment and management necessary to provide basic care in the prehospital setting. LPSCS-EMT-16

1. List the structures and functions of the upper and lower airways, lungs, and accessory structures of the respiratory system. LPSCS-EMT-16.1
2. Explain the physiology of respiration; include the signs of normal breathing. LPSCS-EMT-16.2
3. Discuss the pathophysiology of respiration, including examples of the common signs and symptoms a patient with inadequate breathing may present with in an emergency situation. LPSCS-EMT-16.3
4. Explain the special patient assessment and care considerations that are required for geriatric patients who are experiencing respiratory distress. LPSCS-EMT-16.4
5. Describe different respiratory conditions that cause dyspnea, including their causes, assessment findings and symptoms, complications, and specific prehospital management and transport decisions. LPSCS-EMT-16.5
6. List the characteristics of infectious diseases that are frequently associated with dyspnea. LPSCS-EMT-16.6
7. Discuss some pandemic considerations related to the spread of influenza type A and strategies EMTs should employ to protect themselves from infection during a possible crisis situation. LPSCS-EMT-16.7
8. Explain the special patient assessment and care considerations that are required for pediatric patients who are experiencing respiratory distress. LPSCS-EMT-16.8
9. Describe the assessment of a patient who is in respiratory distress and the relationship of the assessment findings to patient management and transport decisions. LPSCS-EMT-16.9
10. Describe the primary emergency medical care of a person who is in respiratory distress. LPSCS-EMT-16.10
11. List five different types of adventitious breath sounds, their signs and symptoms, and the disease process associated with each one. LPSCS-EMT-16.11
12. State the generic name, medication forms, dose, administration, indications, actions, and contraindications for medications that are administered via metered-dose inhalers (MDIs) and small-volume nebulizers. LPSCS-EMT-16.12
13. Demonstrate the process of history taking to obtain more information related to a patient's chief complaint based on a case scenario. LPSCS-EMT-16.13

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14. Demonstrate how to use the OPQRST assessment to obtain more specific information about a patient's breathing problem. LPSCS-EMT-16.14
15. Demonstrate how to use the PASTE assessment to obtain more specific information about a patient's breathing problem. LPSCS-EMT-16.15
16. Demonstrate how to assist a patient with the administration of a metered-dose inhaler. LPSCS-EMT-16.16
17. Demonstrate how to assist a patient with the administration of a small-volume nebulizer. LPSCS-EMT-16.17

LPSCS-EMT-17. Applies fundamental knowledge of the pathophysiology of respiration and perfusion to patient assessment and management. The student will understand the significance and characteristics of the anatomy and physiology of the cardiovascular system; cardiovascular emergencies; the pathophysiology of respiration and perfusion; signs and symptoms of the most common cardiac conditions; the indications, contraindications, and use of automated external defibrillators (AEDs); and the general care of a patient experiencing a cardiac emergency. The student should also be able to apply this fundamental knowledge to patient assessment and management during inclassroom scenarios. LPSCS-EMT-17

1. Discuss the basic anatomy and physiology of the cardiovascular system. LPSCS-EMT-17.1
2. Discuss the pathophysiology of the cardiovascular system. LPSCS-EMT-17.2
3. Describe the anatomy, physiology, pathophysiology, assessment, and management of thromboembolism. LPSCS-EMT-17.3
4. Describe the anatomy, physiology, pathophysiology, assessment, and management of angina pectoris. LPSCS-EMT-17.4
5. Describe the anatomy, physiology, pathophysiology, assessment, and management of myocardial infarction. LPSCS-EMT-17.5
6. Describe the anatomy, signs and symptoms, and management of hypertensive emergencies. LPSCS-EMT-17.6
7. Describe the anatomy, physiology, pathophysiology, assessment, and management of aortic aneurysm/dissection. LPSCS-EMT-17.7
8. Explain patient assessment procedures for cardiovascular problems. LPSCS-EMT-17.8
9. Explain the relationship between airway management and the patient with cardiac compromise. LPSCS-EMT-17.9
10. Give the indications and contraindications for the use of aspirin and nitroglycerin. LPSCS-EMT-17.10

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11. Recognize that many patients will have had cardiac surgery and may have implanted pacemakers or defibrillators. LPSCS-EMT-17.11
12. Define cardiac arrest. LPSCS-EMT-17.12
13. Compare the difference between the fully automated and the semi-automated defibrillator. LPSCS-EMT-17.13
14. Describe the different types of AEDs. LPSCS-EMT-17.14
15. Explain the use of remote adhesive defibrillator pads. LPSCS-EMT-17.15
16. Recognize that not all patients in cardiac arrest require an electric shock. LPSCS-EMT-17.16
17. List the indications and contraindications for use of an automated external defibrillator (AED). LPSCS-EMT-17.17
18. Discuss the reasons for early defibrillation. LPSCS-EMT-17.18
19. Explain the circumstances that may result in inappropriate shocks from an AED. LPSCS-EMT-17.19
20. Explain the reason not to touch the patient, such as by delivering CPR, while the AED is analyzing the heart rhythm and delivering shocks. LPSCS-EMT-17.20
21. Describe AED maintenance procedures. LPSCS-EMT-17.21
22. Explain the relationship of age to energy delivery. LPSCS-EMT-17.22
23. Explain the role played by medical direction in the use of AEDs. LPSCS-EMT-17.23
24. Discuss the importance of practice and continuing education with the AED. LPSCS-EMT-17.24
25. Explain the need for a case review of each incident in which an AED is used. LPSCS-EMT-17.25
26. List quality improvement goals relating to AEDs. LPSCS-EMT-17.26
27. Discuss the procedures to follow for standard operation of the various types of AEDs. LPSCS-EMT-17.27
28. Describe the emergency medical care for the patient with cardiac arrest. LPSCS-EMT-17.28
29. Describe the components of care following AED shocks. LPSCS-EMT-17.29
30. Explain criteria for transport of the patient for advanced life support (ALS) following CPR and defibrillation. LPSCS-EMT-17.30
31. Discuss the importance of coordinating with ALS personnel. LPSCS-EMT-17.31
32. Demonstrate the steps to take in the assessment of a patient with chest pain or discomfort. LPSCS-EMT-17.32

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33. Demonstrate how to provide emergency medical care for a patient with chest pain or discomfort. LPSCS-EMT-17.33
34. Demonstrate the administration of nitroglycerin. LPSCS-EMT-17.34
35. Demonstrate how to attach a cardiac monitor to obtain an ECG. LPSCS-EMT-17.35
36. Demonstrate how to perform maintenance of an AED. LPSCS-EMT-17.36
37. Demonstrate how to perform CPR. LPSCS-EMT-17.37
38. Demonstrate the use of an AED. LPSCS-EMT-17.38

LPSCS-EMT-18. **Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient. The student will understand the significance and characteristics of the following: anatomy and physiology of the nervous system, common disease processes (strokes, seizures, headaches, and altered mental status), assessment and basic care management involving patients with neurologic emergencies (including performing tests for speech, facial movement, and arm movement), and assistance of the ALS provider in managing these neurologic emergencies.** LPSCS-EMT-18

1. Describe the anatomy and physiology and functions of the brain and spinal cord. LPSCS-EMT-18.1
2. Discuss the different types of headaches, the possible causes of each, and how to distinguish a harmless headache from a potentially life-threatening condition. LPSCS-EMT-18.2
3. Explain the various ways blood flow to the brain may be interrupted and cause a cerebrovascular accident. LPSCS-EMT-18.3
4. Discuss the causes, similarities, and differences of an ischemic stroke, hemorrhagic stroke, and transient ischemic attack. LPSCS-EMT-18.4
5. List the general signs and symptoms of stroke and how those symptoms manifest if the left hemisphere of the brain is affected and if the right hemisphere of the brain is affected. LPSCS-EMT-18.5
6. List three conditions with symptoms that mimic stroke and the assessment techniques EMTs may use to identify them. LPSCS-EMT-18.6
7. Define a generalized seizure, partial seizure, and status epilepticus; include how they differ from each other and their effects on patients. LPSCS-EMT-18.7
8. Describe how the different stages of a seizure are characterized. LPSCS-EMT-18.8

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9. Discuss the importance for EMTs to recognize when a seizure is occurring or whether one has already occurred in a patient. LPSCS-EMT-18.9
10. Explain the postictal state and the specific patient care interventions that may be necessary. LPSCS-EMT-18.10
11. Define altered mental status; include possible causes and the patient assessment considerations that apply to each. LPSCS-EMT-18.11
12. Discuss scene safety considerations when responding to a patient with a neurologic emergency. LPSCS-EMT-18.12
13. Explain the special considerations required for pediatric patients who exhibit altered mental status. LPSCS-EMT-18.13
14. Explain the primary assessment of a patient who is experiencing a neurologic emergency and the necessary interventions that may be required to address all life threats. LPSCS-EMT-18.14
15. Describe the process of history taking for a patient who is experiencing a neurologic emergency and how this process varies depending on the nature of the patient's illness. LPSCS-EMT-18.15
16. Explain the secondary assessment of a patient who is experiencing a neurologic emergency. LPSCS-EMT-18.16
17. Explain how to use stroke assessment tools to rapidly identify a stroke patient; include two commonly used tools. LPSCS-EMT-18.17
18. Explain the concept of a stroke alert and the important timeframe for the most successful treatment outcome for a patient who is suspected of having a stroke. LPSCS-EMT-18.18
19. List the key information EMTs must obtain and document for a stroke patient during assessment and reassessment. LPSCS-EMT-18.19
20. Explain the care, treatment, and transport of patients who are experiencing headaches, stroke, seizure, and altered mental status. LPSCS-EMT-18.20
21. Explain the special considerations required for geriatric patients who are experiencing a neurologic emergency. LPSCS-EMT-18.21
22. Demonstrate how to use a stroke assessment tool such as the Cincinnati Prehospital Stroke Scale, 3-Item Stroke Severity Scale (LAG), or FAST mnemonic to test a patient for aphasia, facial weakness, and motor weakness. LPSCS-EMT-18.22

LPSCS-EMT-19. Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient. The student will understand the anatomy and physiology of the gastrointestinal, genitourinary, and renal systems. Students should be able to assess and manage various patient populations with numerous related gastrointestinal/ genitourinary complaints,

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which include, but are not limited, to direct or referred abdominal pain, hypoglycemia, hyperglycemia, shock related to acute (medical versus trauma) or chronic gastrointestinal disorders, hemorrhage, peritonitis, and complications related to the renal system (renal dialysis). LPSCS-EMT-19

1. Describe the basic anatomy and physiology of the gastrointestinal, genital, and urinary systems. LPSCS-EMT-19.1
2. Define the term acute abdomen. LPSCS-EMT-19.2
3. Describe pathologic conditions of the gastrointestinal, genital, and urinary systems. LPSCS-EMT-19.3
4. Explain the concept of referred pain. LPSCS-EMT-19.4
5. Recognize that abdominal pain can arise from other body systems. LPSCS-EMT-19.5
6. Identify the signs and symptoms, and common causes, of an acute abdomen. LPSCS-EMT-19.6
7. Explain the procedures to follow in the assessment and management of acute and chronic gastrointestinal hemorrhage, peritonitis, and ulcerative diseases. LPSCS-EMT-19.7
8. List the most common abdominal emergencies, with the most common locations of direct and referred pain. LPSCS-EMT-19.8
9. Explain the procedures to follow for patient assessment of gastrointestinal and urologic emergencies. LPSCS-EMT-19.9
10. Describe the procedures to follow in managing the patient with shock associated with abdominal emergencies. LPSCS-EMT-19.10
11. Describe the emergency medical care of the patient with gastrointestinal or urologic emergencies. LPSCS-EMT-19.11
12. Explain the principles of kidney dialysis. LPSCS-EMT-19.12
13. Demonstrate the assessment of a patient's abdomen. LPSCS-EMT-19.13

LPSCS-EMT-20. Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient. The student will understand the significance and characteristics of diabetes, sickle cell disease, clotting disorders, and the complications associated with each. Students should be able to demonstrate knowledge of the characteristics of type 1 and type 2 diabetes. They should be able to list the appropriate steps for assessment and prehospital treatment of diabetic emergencies. Students should also be able to discuss hematologic emergencies, and describe sickle cell disease, hemophilia, thrombophilia, and deep vein thrombosis. LPSCS-EMT-20

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1. Describe the anatomy and physiology of the endocrine system and its main function in the body. LPSCS-EMT-20.1

2. Discuss the role of glucose as a major source of energy for the body and its relationship to insulin. LPSCS-EMT-20.2
3. Define the terms diabetes mellitus, hyperglycemia, and hypoglycemia. LPSCS-EMT-20.3
4. Describe the differences and similarities between hyperglycemic and hypoglycemic diabetic emergencies, including their onset, signs and symptoms, and management considerations. LPSCS-EMT-20.4
5. Distinguish between the individual types of diabetes and how their onset and presentation are different. LPSCS-EMT-20.5
6. Describe the interventions for providing emergency medical care to both a conscious and unconscious patient with an altered mental status and a history of diabetes who is having symptomatic hyperglycemia. LPSCS-EMT-20.6
7. Describe the interventions for providing emergency medical care to both a conscious and unconscious patient with an altered mental status and a history of diabetes who is having symptomatic hypoglycemia. LPSCS-EMT-20.7
8. Explain the process for assessing and managing the airway of a patient with an altered mental status, including ways to differentiate a hyperglycemic patient from a hypoglycemic patient. LPSCS-EMT-20.8
9. Explain some age-related considerations when managing a pediatric patient who is experiencing symptomatic hypoglycemia. LPSCS-EMT-20.9
10. Discuss the steps the EMT should follow when conducting a primary and secondary assessment of a patient with an altered mental status who is a suspected of having diabetes. LPSCS-EMT-20.10
11. Explain when it is appropriate to obtain medical direction when providing emergency medical care to a patient with diabetes. LPSCS-EMT-20.11
12. Explain some age-related considerations when managing an older patient who has undiagnosed diabetes. LPSCS-EMT-20.12
13. Provide the forms, dose, administration, indications, and contraindications for giving oral glucose to a patient with a decreased level of consciousness who has a history of diabetes. LPSCS-EMT-20.13
14. Discuss the composition and functions of blood. LPSCS-EMT-20.14
15. Describe the pathophysiology of sickle cell disease, complications, and management of sickle cell disease. LPSCS-EMT-20.15
16. Describe two types of blood clotting disorders, and the risk factors, characteristics, and management of each. LPSCS-EMT-20.16

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17. Demonstrate the assessment and care of a patient with hypoglycemia and a decreased level of consciousness. LPSCS-EMT-20.17
18. Demonstrate how to administer oral glucose paste to a patient who is experiencing a low glucose level. LPSCS-EMT-20.18

LPSCS-EMT-21. Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient. Recognition and management of shock and difficulty breathing related to anaphylactic reactions. The student will understand the anatomy, physiology, and pathophysiology of hypersensitivity disorders and anaphylactic reactions. Additionally, students will have the knowledge and skills to recognize and manage hypersensitivity disorders and anaphylactic reactions. LPSCS-EMT-21

1. Define the terms allergic reaction and anaphylaxis. LPSCS-EMT-21.1
2. Explain the difference between a local and a systemic response to allergens. LPSCS-EMT-21.2
3. List the five categories of stimuli that could cause an allergic reaction or an extreme allergic reaction. LPSCS-EMT-21.3
4. Differentiate the primary assessment for a patient with a systemic allergic or anaphylactic reaction and a local reaction. LPSCS-EMT-21.4
5. Explain the importance of managing the ABCs of a patient who is having an allergic reaction. LPSCS-EMT-21.5
6. Discuss the steps in the primary assessment that are specific to a patient who is having an allergic reaction. LPSCS-EMT-21.6
7. Explain the factors involved when making a transport decision for a patient having an allergic reaction. LPSCS-EMT-21.7
8. Review the process for providing emergency medical care to a patient who is experiencing an allergic reaction. LPSCS-EMT-21.8
9. Explain the rationale, including communication and documentation considerations, when determining whether to administer epinephrine to a patient who is having an allergic reaction. LPSCS-EMT-21.9
10. Describe some age-related contraindications to using epinephrine to treat an allergic reaction in a geriatric patient. LPSCS-EMT-21.10
11. Demonstrate how to remove the stinger from a honeybee sting and proper patient management following its removal. LPSCS-EMT-21.11
12. Demonstrate how to use an EpiPen auto-injector. LPSCS-EMT-21.12

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CS-EMT-22. Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill

patient. The student will be familiar with the classes of compounds involved in substance abuse and poisonings; the routes by which poisons enter the body; and the signs, symptoms, assessment, and treatment for various poisoning emergencies. LPSCS-EMT-22

1. Define toxicology, poison, toxin, and overdose. LPSCS-EMT-22.1
2. Identify the common signs and symptoms of poisoning or toxic exposure. LPSCS-EMT-22.2
3. Describe how poisons and toxins can enter the body. LPSCS-EMT-22.3
4. Describe the assessment and treatment of a patient with a suspected poisoning or toxic exposure. LPSCS-EMT-22.4
5. Describe the assessment and treatment of the patient with a suspected overdose. LPSCS-EMT-22.5
6. Discuss scene safety considerations for working at a scene with a potentially hazardous material or violent patient. LPSCS-EMT-22.6
7. Understand the role of airway management in the patient suffering from poisoning or overdose. LPSCS-EMT-22.7
8. Explain the use of activated charcoal, including indications, contraindications, and the need to obtain approval from medical control before administration. LPSCS-EMT-22.8
9. Identify the main types of toxins and poisons and their effects, including alcohol, opiates and opioids, sedative-hypnotic drugs, inhalants, hydrogen sulfide, sympathomimetics, synthetic cathinones, marijuana, hallucinogens, anticholinergic agents, and cholinergic agents. LPSCS-EMT-22.9
10. Discuss how to manage a patient who has overdosed on an opioid or opiate and who has gone into cardiac or respiratory arrest. LPSCS-EMT-22.10
11. Describe the assessment and treatment for the patient with suspected food poisoning. LPSCS-EMT-22.11
12. Describe the assessment and treatment for the patient with suspected plant poisoning. LPSCS-EMT-22.12
13. Demonstrate how to assess and treat a patient with a suspected poisoning. LPSCS-EMT-22.13
14. Demonstrate how to assess and treat a patient with a suspected overdose. LPSCS-EMT-22.14
15. Demonstrate how to administer activated charcoal. LPSCS-EMT-22.15

LPSCS-EMT-23. Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient. The student will be able to recognize behaviors that pose a

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risk to the EMT, patient, or others and the basic principles of the mental health system. LPSCS-EMT-23

1. Discuss the myths and realities concerning psychiatric emergencies. LPSCS-EMT-23.1
2. Discuss general factors that can cause alteration in a patient's behavior. LPSCS-EMT-23.2
3. Define a behavioral crisis. LPSCS-EMT-23.3
4. Recognize the magnitude of mental health problems in society. LPSCS-EMT-23.4
5. Know the main principles of how the mental health care system functions. LPSCS-EMT-23.5
6. Know the two basic categories of diagnosis that a mental health professional will use. LPSCS-EMT-23.6
7. Explain special considerations for assessing and managing a behavioral crisis or psychiatric emergency. LPSCS-EMT-23.7
8. Define acute psychosis. LPSCS-EMT-23.8
9. Define schizophrenia. LPSCS-EMT-23.9
10. Explain the care for a psychotic patient. LPSCS-EMT-23.10
11. Define excited delirium and agitated delirium. LPSCS-EMT-23.11
12. Explain the care for a patient with excited delirium. LPSCS-EMT-23.12
13. Describe methods used to restrain patients. LPSCS-EMT-23.13
14. Know the main principles of care for the agitated, violent, or uncooperative patient. LPSCS-EMT-23.14
15. Explain how to recognize the behavior of a patient at risk of suicide, including the management of such a patient. LPSCS-EMT-23.15
16. Recognize issues specific to posttraumatic stress disorder (PTSD) and the returning combat veteran. LPSCS-EMT-23.16
17. Discuss the medical and legal aspects of managing a psychiatric emergency. LPSCS-EMT-23.17
18. Demonstrate the techniques used to mechanically restrain a patient. LPSCS-EMT-23.18

LPSCS-EMT-24. **Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient. The student will understand the anatomy and physiology, including the developmental changes during puberty and menopause, of the female reproductive system and identify and describe assessment and treatment for gynecologic emergencies. Special considerations and precautions that an EMT must observe when arriving at the scene of a suspected case of sexual assault or rape are also discussed.** LPSCS-EMT-24

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1. Describe the anatomy and physiology of the female reproductive system; include the developmental changes that occur during puberty and menopause. LPSCS-EMT-24.1
2. Discuss the special, age-related patient management considerations EMTs should provide for both younger and older female patients who are experiencing gynecologic emergencies. LPSCS-EMT-24.2
3. List three common examples of gynecologic emergencies; include the causes, risk factors, assessment findings, and patient management considerations. LPSCS-EMT-24.3
4. Explain how an EMT would recognize conditions associated with hemorrhage during pregnancy. LPSCS-EMT-24.4
5. Discuss the assessment and management of a patient who is experiencing a gynecologic emergency; include a discussion of specific assessment findings. LPSCS-EMT-24.5
6. Explain the general management of a gynecologic emergency in relation to patient privacy and communication. LPSCS-EMT-24.6
7. Give examples of the personal protective equipment EMTs should use when treating patients with gynecologic emergencies. LPSCS-EMT-24.7
8. Discuss the special considerations and precautions EMTs must observe when arriving at the scene of a suspected case of sexual assault or rape. LPSCS-EMT-24.8
9. Discuss the assessment and management of a patient who has been sexually assaulted or raped; include the additional steps EMTs must take on behalf of the patient. LPSCS-EMT-24.9

LPSCS-EMT-25. Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient. The student will have an understanding of the basic concepts of energy and its effect on the human body; the general injury patterns associated with different types of impacts, falls, and penetrating trauma; and the basic application of laws of physics on the assessment of trauma patients. Students will begin to demonstrate critical thinking in making predictions of injuries and adjusting index of suspicion based on the analysis of evidence gathered in scene size-up simulations. Students will also understand some common injury patterns to major body systems. LPSCS-EMT-25

1. Define the terms mechanism of injury (MOI), blunt trauma, and penetrating trauma. LPSCS-EMT-25.1
2. Explain the relationship of the MOI to potential energy, kinetic energy, and work. LPSCS-EMT-25.2
3. Provide examples of the MOI that would cause blunt and penetrating trauma to occur. LPSCS-EMT-25.3

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4. Describe the five types of motor vehicle crashes, the injury patterns associated with each one, and how each relates to the index of suspicion of life-threatening injuries. LPSCS-EMT-25.4
5. Discuss the three specific factors to consider during assessment of a patient who has been injured in a fall, plus additional considerations for pediatric and geriatric patients. LPSCS-EMT-25.5
6. Discuss the effects of high-, medium-, and low-velocity penetrating trauma on the body and how an understanding of each type helps EMTs form an index of suspicion about unseen lifethreatening injuries. LPSCS-EMT-25.6
7. Discuss primary, secondary, tertiary, and miscellaneous blast injuries and the anticipated damage each one will cause to the body. LPSCS-EMT-25.7
8. Describe multisystem trauma and the special considerations that are required for patients who fit this category. LPSCS-EMT-25.8
9. Explain the major components of trauma patient assessment; include considerations related to whether the method of injury was significant or nonsignificant. LPSCS-EMT-25.9
10. Discuss the special assessment considerations related to a trauma patient who has injuries in each of the following areas: head, neck and throat, chest, and abdomen. LPSCS-EMT-25.10
11. Explain a general overview of multisystem trauma patient management. LPSCS-EMT-25.11
12. Explain trauma patient management in relation to scene time and transport selection. LPSCS-EMT-25.12
13. List the Association of Air Medical Services criteria for the appropriate use of emergency air medical services. LPSCS-EMT-25.13
14. List the American College of Surgeons' Committee on Trauma classification of trauma centers. LPSCS-EMT-25.14
15. Explain the American College of Surgeon's Committee on Trauma and the Centers for Disease Control and Prevention field triage decision scheme as it relates to making an appropriate destination selection for a trauma patient. LPSCS-EMT-25.15

LPSCS-EMT-26. **Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient. The student will understand the structure and function of the circulatory system, the significance and characteristics of bleeding, the importance of personal protective equipment when treating a bleeding patient, the characteristics of external and internal bleeding, how to conduct a patient assessment, and methodologies for controlling bleeding.** LPSCS-EMT-26

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1. Describe the general structure of the circulatory system and the function of its different parts, including the heart, arteries, veins, and capillaries. LPSCS-EMT-26.1
2. Explain the significance of bleeding caused by blunt force trauma, including the importance of perfusion. LPSCS-EMT-26.2
3. Discuss hypovolemic shock as a result of bleeding, including the signs of shock. LPSCS-EMT-26.3
4. Explain the importance of following standard precautions when treating a patient with external bleeding. LPSCS-EMT-26.4
5. Describe the characteristics of external bleeding, including the identification of the following types of bleeding: arterial, venous, and capillary. LPSCS-EMT-26.5
6. Explain how to determine the nature of the illness (NOI) for internal bleeding, including identifying possible traumatic and non-traumatic sources. LPSCS-EMT-26.6
7. Identify the signs and symptoms of internal bleeding. LPSCS-EMT-26.7
8. Discuss internal bleeding in terms of the different mechanisms of injury (MOI) and their associated internal bleeding sources. LPSCS-EMT-26.8
9. Explain how to conduct a primary assessment, including identification of life threats beyond bleeding, ensuring a patent airway, and making a transport decision. LPSCS-EMT-26.9
10. Explain how to assess a patient with external or internal bleeding, including physical examination, vital signs, and use of monitoring devices. LPSCS-EMT-26.10
11. Explain the emergency medical care of the patient with external bleeding. LPSCS-EMT-26.11
12. Explain the emergency medical care of the patient with internal bleeding. LPSCS-EMT-26.12
13. Demonstrate the emergency medical care of the patient with external bleeding using direct pressure. LPSCS-EMT-26.13
14. Demonstrate the emergency medical care of the patient with external bleeding using a commercial tourniquet. LPSCS-EMT-26.14
15. Demonstrate the emergency medical care of the patient with epistaxis, or nosebleed. LPSCS-EMT-26.15
16. Demonstrate the emergency medical care of the patient who shows signs and symptoms of internal bleeding. LPSCS-EMT-26.16

LPSCS-EMT-27. Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient. The student will have an understanding of types of open and closed soft-tissue injuries; how to care for soft-tissue

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injuries, including the use of dressings and bandages; and the assessment and care of different types of burns, including thermal, chemical, and electrical burns. LPSCS-EMT-27

1. Describe the anatomy of the skin; include the layers of the skin. LPSCS-EMT-27.1
2. Know the functions of the skin. LPSCS-EMT-27.2
3. Name the three types of soft-tissue injuries. LPSCS-EMT-27.3
4. Describe the types of closed soft-tissue injuries. LPSCS-EMT-27.4
5. Describe the types of open soft-tissue injuries. LPSCS-EMT-27.5
6. Explain patient assessment of closed and open injuries. LPSCS-EMT-27.6
7. Explain patient assessment of closed and open injuries in relation to airway management. LPSCS-EMT-27.7
8. Explain the emergency medical care for closed and open injuries. LPSCS-EMT-27.8
9. Explain the emergency medical care for a patient with an open wound to the abdomen. LPSCS-EMT-27.9
10. Explain the emergency medical care for an impaled object. LPSCS-EMT-27.10
11. Explain the emergency medical care for neck injuries. LPSCS-EMT-27.11
12. Describe the steps of the emergency treatment of small animal bites, human bites, and rabies. LPSCS-EMT-27.12
13. Explain how the seriousness of a burn is related to its depth and extent. LPSCS-EMT-27.13
14. Define superficial, partial-thickness, and full-thickness burns; include the characteristics of each burn. LPSCS-EMT-27.14
15. Explain the primary assessment of a burn patient. LPSCS-EMT-27.15
16. Explain the emergency medical care for burn injuries. LPSCS-EMT-27.16
17. Describe the emergency management of chemical, electrical, thermal, inhalation, and radiation burns. LPSCS-EMT-27.17
18. Know the functions of sterile dressings and bandages. LPSCS-EMT-27.18
19. Demonstrate the emergency medical care of closed soft-tissue injuries. LPSCS-EMT-27.19
20. Demonstrate the emergency medical care of a patient with an open chest wound. LPSCS-EMT-27.20
21. Demonstrate how to control bleeding from an open soft-tissue injury. LPSCS-EMT-27.21

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22. Demonstrate the emergency medical care of a patient with an open abdominal wound. LPSCS-EMT-27.22
23. Demonstrate how to stabilize an impaled object. LPSCS-EMT-27.23
24. Demonstrate how to care for a burn. LPSCS-EMT-27.24
25. Demonstrate the emergency medical care of a patient with a chemical, electrical, thermal, inhalation, or radiation burn. LPSCS-EMT-27.25

LPSCS-EMT-28. Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient. The student will understand how to manage traumarelated issues with the face and neck. The student will learn how to recognize life threats associated with these injuries and the correlation with head and spinal trauma. The curriculum includes detailed anatomy and physiology of the head, neck, and eye, and discusses injuries including trauma to the mouth, penetrating neck trauma, laryngotracheal injuries, and facial fractures. The chapter also includes information on dental injuries and blast injuries to the eye. LPSCS-EMT-28

1. Describe the anatomy and physiology of the head, face, and neck; include major structures and specific important landmarks of which EMTs must be aware. LPSCS-EMT-28.1
2. Describe the factors that may cause obstruction of the upper airway following a facial injury. LPSCS-EMT-28.2
3. Discuss the different types of facial injuries and patient care considerations related to each one. LPSCS-EMT-28.3
4. Explain the emergency care of a patient who has sustained face and neck injuries; include assessment of the patient, review of signs and symptoms, and management of care. LPSCS-EMT-28.4
5. Explain the emergency care of a patient with soft-tissue wounds of the face and neck. LPSCS-EMT-28.5
6. Explain the emergency care of a patient with an eye injury based on the following scenarios: foreign object, impaled object, burns, lacerations, blunt trauma, closed head injuries, and blast injuries. LPSCS-EMT-28.6
7. Describe the three different causes of a burn injury to the eye and patient management considerations related to each one. LPSCS-EMT-28.7
8. Explain the emergency care of a patient with injuries of the nose. LPSCS-EMT-28.8
9. Explain the emergency care of a patient with injuries of the ear; include lacerations and foreign body insertions. LPSCS-EMT-28.9
10. Explain the physical findings and emergency care of a patient with a facial fracture. LPSCS-EMT-28.10

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11. Explain the emergency care of a patient with dental and cheek injuries; include how to deal with an avulsed tooth. LPSCS-EMT-28.11
12. Explain the emergency care of a patient with an upper airway injury caused by blunt trauma. LPSCS-EMT-28.12
13. Explain the emergency care of a patient with a penetrating injury to the neck; include how to control regular and life-threatening bleeding. LPSCS-EMT-28.13
14. Demonstrate the removal of a foreign object from under a patient's upper eyelid. LPSCS-EMT-28.14
15. Demonstrate the stabilization of a foreign object that has been impaled in a patient's eye. LPSCS-EMT-28.15
16. Demonstrate irrigation of a patient's eye using a nasal cannula, bottle, or basin. LPSCS-EMT-28.16
17. Demonstrate the care of a patient who has a penetrating eye injury. LPSCS-EMT-28.17
18. Demonstrate how to control bleeding from a neck injury. LPSCS-EMT-28.18

LPSCS-EMT-29. **Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient. The student will learn how to recognize life threats associated with these injuries as well as the need for immediate spinal stabilization and, potentially, airway and breathing support. The curriculum includes detailed anatomy and physiology of the nervous system and the pathophysiology, assessment, and management of traumatic brain and spinal cord injuries. This chapter provides detail about traumatic brain injury (TBI), including initial mechanism of injury, and primary (direct) versus secondary (indirect) injury. Transport considerations are discussed with a focus on potential deterioration. This chapter is skills intensive with detail on bandaging; traumatic airway control; manual in-line stabilization; placement of a cervical collar; immobilization of the patient lying, sitting, or standing; and helmet removal.** LPSCS-EMT-29

1. Describe the anatomy and physiology of the nervous system, including its divisions into the central nervous system (CNS) and peripheral nervous system (PNS), and the structures and functions of each. LPSCS-EMT-29.1
2. Explain the functions of both the somatic and autonomic nervous systems. LPSCS-EMT-29.2
3. List the major bones of the skull and spinal column and their related structures; include their functions as they relate to the nervous system. LPSCS-EMT-29.3

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4. Explain the different types of head injuries, their potential mechanism of injury (MOI), and general signs and symptoms of a head injury that the EMT should consider when performing a patient assessment. LPSCS-EMT-29.4
5. Define traumatic brain injury (TBI). LPSCS-EMT-29.5
6. Explain the difference between a primary (direct) injury and a secondary (indirect) injury; include examples of possible MOIs that may cause each one. LPSCS-EMT-29.6
7. Describe the different types of brain injuries and their corresponding signs and symptoms, including increased intracranial pressure (ICP), concussion, contusion, and injuries caused by medical conditions. LPSCS-EMT-29.7
8. Describe the different types of injuries that may damage the cervical, thoracic, or lumbar spine; include examples of possible MOIs that may cause each one. LPSCS-EMT-29.8
9. Explain the steps in the patient assessment process for a person who has a suspected head or spine injury, including specific variations that may be required as related to the type of injury. LPSCS-EMT-29.9
10. List the mechanisms of injury that cause a high index of suspicion for the possibility of a head or spinal injury. LPSCS-EMT-29.10
11. Explain emergency medical care of a patient with a head injury; include the three general principles designed to protect and maintain the critical functions of the CNS and ways to determine if the patient has a traumatic brain injury. LPSCS-EMT-29.11
12. Explain emergency medical care of a patient with a spinal injury; include the implications of not properly caring for patients with injuries of this nature, the steps for performing manual in-line stabilization, implications for sizing and using a cervical spine immobilization device, and key symptoms that contraindicate in-line stabilization. LPSCS-EMT-29.12
13. Explain the process of preparing patients who have suspected head or spinal injuries for transport; include the use and functions of a long backboard, short backboard, and other short spinal extrication devices to immobilize the patient's cervical and thoracic spine. LPSCS-EMT-29.13
14. Explain the different circumstances in which a helmet should be left on or taken off a patient with a possible head or spinal injury. LPSCS-EMT-29.14
15. List the steps EMTs must follow to remove a helmet, including the alternate method for removing a football helmet. LPSCS-EMT-29.15
16. Discuss age-related variations that are required when providing emergency care to a pediatric patient who has a suspected head or spine injury. LPSCS-EMT-29.16

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17. Demonstrate how to perform a jaw-thrust maneuver on a patient with a suspected spinal injury. LPSCS-EMT-29.17
18. Demonstrate how to perform manual in-line stabilization on a patient with a suspected spinal injury. LPSCS-EMT-29.18
19. Demonstrate how to apply a cervical collar to a patient with a suspected spinal injury. LPSCS-EMT-29.19
20. Demonstrate how to secure a patient with a suspected spinal injury to a long backboard. LPSCS-EMT-29.20
21. Demonstrate how to secure a patient with a suspected spinal injury using a vacuum mattress. LPSCS-EMT-29.21
22. Demonstrate how to secure a patient with a suspected spinal injury who was found in a sitting position. LPSCS-EMT-29.22
23. Demonstrate how to remove a helmet from a patient with a suspected head or spinal injury. LPSCS-EMT-29.23
24. Demonstrate the alternate method for removal of a football helmet from a patient with a suspected head or spinal injury. LPSCS-EMT-29.24

LPSCS-EMT-30. Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient. The student will understand how to manage a patient with chest trauma. Students will learn how to recognize life threats associated with these injuries and how to provide immediate intervention. The curriculum includes a detailed description of the anatomy and physiology of the chest and underlying organs as well as the pathophysiology, complications, assessment, and management of chest injury. Age-related issues are discussed specific to pediatric and geriatric chest trauma. This chapter also provides information on incidence (morbidity and mortality) and a detailed discussion of blunt versus penetrating or open trauma. Specific injuries discussed include sucking chest wound, pneumothorax, tension pneumothorax, hemothorax, flail chest, and pericardial tamponade. LPSCS-EMT-30

1. Explain the mechanics of ventilation in relation to chest injuries. LPSCS-EMT-30.1
2. Describe the differences between an open and closed chest injury. LPSCS-EMT-30.2
3. Recognize the signs of chest injury. LPSCS-EMT-30.3
4. Describe the management of a patient with a suspected chest injury, including pneumothorax, hemothorax, cardiac tamponade, rib fractures, and flail chest, pulmonary contusion, traumatic asphyxia, blunt myocardial injury, commotio cordis, and laceration of the great vessels. LPSCS-EMT-30.4

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5. Recognize the complications that can accompany chest injuries. LPSCS-EMT-30.5
6. Explain the complications of a patient with an open pneumothorax (sucking chest wound). LPSCS-EMT-30.6
7. Differentiate between a pneumothorax (open, simple, and tension) and hemothorax. LPSCS-EMT-30.7
8. Describe the complications of cardiac tamponade. LPSCS-EMT-30.8
9. Describe the complications of rib fractures. LPSCS-EMT-30.9
10. Describe the complications of a patient with a flail chest. LPSCS-EMT-30.10
11. Describe the steps to take in the assessment of a patient with a suspected chest injury. LPSCS-EMT-30.11
12. Demonstrate the management of a patient with a sucking chest wound. LPSCS-EMT-30.12

LPSCS-EMT-31. **Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient. The student will learn how to recognize life threats associated with these injuries and the need for immediate intervention. The curriculum includes detailed anatomy and physiology of the abdominal and genitourinary systems as well as the pathophysiology, complications, assessment, and management of abdominal and genitourinary injuries. The assessment section is very comprehensive and follows the primary and secondary model. Specific injuries discussed include blunt versus penetrating mechanisms, evisceration, impaled object, injuries to external genitalia, vaginal bleeding secondary to trauma, and sexual assault. Emergency care skills include management of blunt abdominal injury, penetrating abdominal injury, and abdominal evisceration.** LPSCS-EMT-31

1. Describe the anatomy and physiology of the abdomen; include an explanation of abdominal quadrants and boundaries and the difference between hollow and solid organs. LPSCS-EMT-31.1
2. Describe some special considerations related to the care of pediatric patients and geriatric patients who have experienced abdominal trauma. LPSCS-EMT-31.2
3. Define closed abdominal injuries; provide examples of the mechanisms of injury (MOI) likely to cause this type of trauma, and common signs and symptoms exhibited by patients who have experienced this type of injury. LPSCS-EMT-31.3

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4. Define open abdominal injuries; include the three common velocity levels that distinguish these injuries, provide examples of the MOI that would cause each, and common signs and symptoms exhibited by patients who have experienced this type of injury. LPSCS-EMT-31.4
5. Describe the different ways hollow and solid organs of the abdomen can be injured, and include the common signs and symptoms exhibited by patients depending on the organ(s) involved. LPSCS-EMT-31.5
6. Explain assessment of a patient who has experienced an abdominal injury; include common indicators that help determine the MOI and whether it is a significant or insignificant MOI. LPSCS-EMT-31.6
7. Explain the emergency medical care of a patient who has sustained a closed abdominal injury, including blunt trauma caused by a seatbelt or air bag. LPSCS-EMT-31.7
8. Explain the emergency medical care of a patient who has sustained an open abdominal injury, including penetrating injuries and abdominal evisceration. LPSCS-EMT-31.8
9. Describe the anatomy and physiology of the female and male genitourinary systems; include the differences between hollow and solid organs. LPSCS-EMT-31.9
10. Discuss the types of traumatic injuries sustained by the male and female genitourinary system, including the kidneys, urinary bladder, and internal and external genitalia. LPSCS-EMT-31.10
11. Explain assessment of a patient who has experienced a genitourinary injury; include special considerations related to patient privacy and determining the MOI. LPSCS-EMT-31.11
12. Explain the emergency medical care of a patient who has sustained a genitourinary injury to the kidneys, bladder, external male genitalia, female genitalia, and rectum. LPSCS-EMT-31.12
13. Explain special considerations related to a patient who has experienced a genitourinary injury caused by a sexual assault, including patient treatment, criminal implications, and evidence management. LPSCS-EMT-31.13
14. Demonstrate proper emergency medical care of a patient who has experienced a blunt abdominal injury. LPSCS-EMT-31.14
15. Demonstrate proper emergency medical care of a patient who has a penetrating abdominal injury with an impaled object. LPSCS-EMT-31.15
16. Demonstrate how to apply a dressing to an abdominal evisceration wound. LPSCS-EMT-31.16

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CS-EMT-32. Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely

injured patient. The student will understand the anatomy and physiology of the musculoskeletal system. They will have learned the proper assessment for a suspected and obvious injury. They will have learned general and specific types of musculoskeletal injuries including fractures, sprains, and dislocations, with associated signs, symptoms, and emergency treatment including the use of splints, PASG, and traction splints. LPSCS-EMT-32

1. Describe the anatomy and physiology of the musculoskeletal system. LPSCS-EMT-32.1
2. Name the four mechanisms of injury. LPSCS-EMT-32.2
3. Describe the different types of musculoskeletal injuries, including fractures, dislocations, amputations, sprains, and strains. LPSCS-EMT-32.3
4. Recognize the characteristics of specific types of musculoskeletal injuries. LPSCS-EMT-32.4
5. Differentiate between open and closed fractures. LPSCS-EMT-32.5
6. Explain how to assess the severity of an injury. LPSCS-EMT-32.6
7. Describe the emergency medical care of the patient with an orthopedic injury. LPSCS-EMT-32.7
8. Describe the emergency medical care of the patient with a swollen, painful, deformed extremity (fracture). LPSCS-EMT-32.8
9. Discuss the need for, general rules of, and possible complications of splinting. LPSCS-EMT-32.9
10. Explain the reasons for splinting fractures, dislocations, and sprains at the scene versus transporting the patient immediately. LPSCS-EMT-32.10
11. Describe the emergency medical care of the patient with an amputation. LPSCS-EMT-32.11
12. Demonstrate the care of musculoskeletal injuries. LPSCS-EMT-32.12
13. Demonstrate how to apply a rigid splint. LPSCS-EMT-32.13
14. Demonstrate how to apply a zippered air splint. LPSCS-EMT-32.14
15. Demonstrate how to apply an unzippered air splint. LPSCS-EMT-32.15
16. Demonstrate how to apply a vacuum splint. LPSCS-EMT-32.16
17. Demonstrate how to apply a Hare traction splint. LPSCS-EMT-32.17
18. Demonstrate how to apply a Sager traction splint. LPSCS-EMT-32.18
19. Demonstrate how to splint the clavicle, the scapula, the shoulder, the humerus, the elbow, and the forearm. LPSCS-EMT-32.19
20. Demonstrate how to splint the hand and wrist. LPSCS-EMT-32.20

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21. Demonstrate how to care for a patient with an amputation. LPSCS-EMT-32.21

LPSCS-EMT-33. Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient. The student will understand the physiology of environmental injuries. They will have learned the proper assessment and management of general and specific types of environmental emergencies including hypothermia, local cold injuries such as frostbite, and heat exposure illnesses such as heat stroke. They will learn the associated signs and symptoms and emergency treatment of drowning; diving emergencies; high-altitude sickness; lightning strikes; and bites and envenomations from spiders, hymenoptera (e.g., bees, yellow jackets, wasps, and ants), snakes, scorpions, ticks, and marine life. LPSCS-EMT-33

1. Identify the four factors that affect how a person deals with exposure to a cold or hot environment. LPSCS-EMT-33.1
2. Describe the five ways heat loss occurs in the body, and how the rate and amount of heat loss or gain can be modified in an emergency situation. LPSCS-EMT-33.2
3. Describe the four general stages of hypothermia. LPSCS-EMT-33.3
4. Describe local cold injuries and their underlying causes. LPSCS-EMT-33.4
5. Describe the process of providing emergency care to a patient who has sustained a cold injury, including assessment of the patient, review of signs and symptoms, and management of care. LPSCS-EMT-33.5
6. Explain the importance of following local protocols when rewarming a patient who is experiencing moderate or severe hypothermia. LPSCS-EMT-33.6
7. Describe the three emergencies that are caused by heat exposure, including the risk factors, signs, and symptoms. LPSCS-EMT-33.7
8. Describe the process of providing emergency care to a patient who is experiencing a heat emergency, including assessment of the patient, review of signs and symptoms, and management of care. LPSCS-EMT-33.8
9. Define drowning, including its incidence, risk factors, and prevention. LPSCS-EMT-33.9
10. List the basic rules of performing a water and ice rescue. LPSCS-EMT-33.10
11. Explain why EMTs should have a prearranged rescue plan based on the environment in which they work. LPSCS-EMT-33.11

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12. List five conditions that may result in a spinal injury following a submersion incident and the steps for stabilizing a patient with a suspected spinal injury in the water. LPSCS-EMT-33.12
13. Discuss recovery techniques and resuscitation efforts EMTs may need to follow when managing a patient who has been involved in a submersion incident. LPSCS-EMT-33.13
14. Describe the three types of diving emergencies, how they may occur, and their signs and symptoms. LPSCS-EMT-33.14
15. Describe the process of providing emergency care to a patient who has been involved in a drowning or diving emergency, including assessment of the patient, review of signs and symptoms, and management of care. LPSCS-EMT-33.15
16. Discuss the types of dysbarism injuries, including their incidence, risk factors, signs and symptoms, and emergency medical treatment. LPSCS-EMT-33.16
17. Discuss lightning injuries, including their incidence, risk factors, signs and symptoms, and emergency medical treatment. LPSCS-EMT-33.17
18. Describe the process of providing emergency care to patients who have been bitten by each of the following venomous spiders: Black widow spider
Brown recluse spider LPSCS-EMT-33.18
19. Describe the process of providing emergency care to a patient who has sustained a bite or sting from each of the following insects and arachnids, including steps the EMT should follow if a patient develops a severe reaction to the sting or bite:
Hymenoptera (bees, wasps, yellow jackets, and ants)
Scorpions Ticks LPSCS-EMT-33.19
20. Describe the process of providing emergency care to a patient who has been bitten by each of the following types of snake and is showing signs of envenomation. LPSCS-EMT-33.20
21. Describe the process of providing emergency care to a patient who has been stung by a coelenterate or other marine animal. LPSCS-EMT-33.21
22. Demonstrate the emergency medical treatment of local cold injuries in the field. LPSCS-EMT-33.22
23. Demonstrate using a warm-water bath to rewarm the limb of a patient who has sustained a local cold injury. LPSCS-EMT-33.23
24. Demonstrate how to treat a patient with heat cramps. LPSCS-EMT-33.24
25. Demonstrate how to treat a patient with heat exhaustion. LPSCS-EMT-33.25

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26. Demonstrate how to treat a patient with heat stroke. LPSCS-EMT-33.26
27. Demonstrate how to stabilize a patient with a suspected spinal injury in the water. LPSCS-EMT-33.27
28. Demonstrate how to care for a patient who is suspected of having an air embolism or decompression sickness following a drowning or diving emergency. LPSCS-EMT-33.28
29. Demonstrate how to care for a patient who has been bitten by a pit viper and is showing signs of envenomation. LPSCS-EMT-33.29
30. Demonstrate how to care for a patient who has been bitten by a coral snake and is showing signs of envenomation. LPSCS-EMT-33.30
31. Demonstrate how to care for a patient who has sustained a coelenterate envenomation. LPSCS-EMT-33.31

LPSCS-EMT-34. Applies a fundamental knowledge of growth, development, and aging and assessment findings to provide basic emergency care and transportation for a patient with special needs. The student will understand the anatomy and physiology of the female reproductive system as it relates to pregnancy. They will learn the assessment and emergency treatment for childbirth including stages of labor, normal delivery, complications of pregnancy, and neonatal evaluations and resuscitation. LPSCS-EMT-34

1. Identify the anatomy and physiology of the female reproductive system. LPSCS-EMT-34.1
2. Explain the normal changes that occur in the body during pregnancy. LPSCS-EMT-34.2
3. Recognize complications of pregnancy including abuse, substance abuse, hypertensive disorders, bleeding, spontaneous abortion (miscarriage), and gestational diabetes. LPSCS-EMT-34.3
4. Discuss the need to consider two patients—the woman and the unborn fetus—when treating a pregnant trauma patient. LPSCS-EMT-34.4
5. Discuss special considerations involving pregnancy in different cultures and with teenage patients. LPSCS-EMT-34.5
6. Explain assessment of the pregnant patient. LPSCS-EMT-34.6
7. Explain the significance of meconium in the amniotic fluid. LPSCS-EMT-34.7
8. Differentiate among the three stages of labor. LPSCS-EMT-34.8
9. Describe the indications of an imminent delivery. LPSCS-EMT-34.9
10. Explain the steps involved in normal delivery management. LPSCS-EMT-34.10

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11. List the contents of an obstetrics kit. LPSCS-EMT-34.11
12. Explain the necessary care of the fetus as the head appears. LPSCS-EMT-34.12
13. Describe the procedure followed to clamp and cut the umbilical cord. LPSCS-EMT-34.13
14. Describe delivery of the placenta. LPSCS-EMT-34.14
15. Understand the steps to take in neonatal assessment and resuscitation. LPSCS-EMT-34.15
16. Recognize complicated delivery emergencies including breech presentations, limb presentations, umbilical cord prolapse, spina bifida, multiple gestation, premature newborns, post term pregnancy, fetal demise, and delivery without sterile supplies. LPSCS-EMT-34.16
17. Describe postpartum complications and how to treat them. LPSCS-EMT-34.17
18. Demonstrate the procedure to assist in a normal cephalic delivery. LPSCS-EMT-34.18
19. Demonstrate care procedures of the fetus as the head appears. LPSCS-EMT-34.19
20. Demonstrate the steps to follow in post-delivery care of the newborn. LPSCS-EMT-34.20
21. Demonstrate how to clamp and cut the umbilical cord. LPSCS-EMT-34.21
22. Demonstrate how to assist in delivery of the placenta. LPSCS-EMT-34.22
23. Demonstrate the post-delivery care of the woman. LPSCS-EMT-34.23
24. Demonstrate procedures to follow for complicated delivery emergencies including vaginal bleeding, breech presentation, limb presentation, and prolapsed umbilical cord. LPSCS-EMT-34.24

LPSCS-EMT-35. Applies a fundamental knowledge of the growth, development, and aging and assessment findings to provide basic emergency care and transportation for a patient with special needs. The student will understand the anatomy and physiology of the child as compared to the adult. They will learn the appropriate assessment and care for the types of illness and injury affecting children of all ages, injury patterns based on size, and special body system injuries. They will also learn the indicators of abuse and neglect, and the medical and legal responsibilities of an EMT. LPSCS-EMT-35

1. Explain some of the challenges inherent in providing emergency care to pediatric patients and why effective communication with both the patient and his or her family members is critical to a successful outcome. LPSCS-EMT-35.1

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2. Discuss the physical and cognitive developmental stages of an infant, including health risks, signs that may indicate illness, and patient assessment. LPSCS-EMT-35.2
3. Discuss the physical and cognitive developmental stages of a toddler, including health risks, signs that may indicate illness, and patient assessment. LPSCS-EMT-35.3
4. Discuss the physical and cognitive developmental stages of a preschool-age child, including health risks, signs that may indicate illness, and patient assessment. LPSCS-EMT-35.4
5. Discuss the physical and cognitive developmental stages of a school-age child, including health risks, signs that may indicate illness, and patient assessment. LPSCS-EMT-35.5
6. Discuss the physical and cognitive developmental stages of an adolescent, including health risks, signs that may indicate illness, and privacy issues. LPSCS-EMT-35.6
7. Describe differences in the anatomy and physiology of the pediatric patient compared to the adult patient and their implications for EMTs, with a focus on the following body systems: respiratory, circulatory, nervous, gastrointestinal, musculoskeletal, and integumentary. LPSCS-EMT-35.7
8. Describe the differences in the pathophysiology of the pediatric patient compared to the adult patient and their implications for EMTs, with a focus on the following body systems: respiratory, circulatory, nervous, gastrointestinal, musculoskeletal, and integumentary. LPSCS-EMT-35.8
9. Explain the steps in the primary assessment of a pediatric patient, including the elements of the pediatric assessment triangle (PAT), hands-on ABCs, transport decision considerations, and privacy issues. LPSCS-EMT-35.9
10. Explain the steps in the secondary assessment of a pediatric patient, including what EMTs should look for related to different body areas and the method of injury. LPSCS-EMT-35.10
11. Describe the emergency care of a pediatric patient in respiratory distress, including the different causes of pediatric respiratory emergencies, the signs and symptoms of increased work of breathing, and the difference between respiratory distress and respiratory failure. LPSCS-EMT-35.11
12. List the possible causes of an upper and a lower airway obstruction in a pediatric patient and the steps in the management of foreign body airway obstruction. LPSCS-EMT-35.12
13. Describe asthma; its possible causes, signs and symptoms; and steps in the management of a pediatric patient who is experiencing an asthma attack. LPSCS-EMT-35.13

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14. Explain how to determine the correct size of an airway adjunct intended for a pediatric patient during an emergency. LPSCS-EMT-35.14
15. List the different oxygen delivery devices that are available for providing oxygen to a pediatric patient, including the indications for the use of each and precautions EMTs must take to ensure the patient's safety. LPSCS-EMT-35.15
16. Describe the emergency care of a pediatric patient who is in shock (hypoperfusion), including common causes, signs, and symptoms. LPSCS-EMT-35.16
17. Describe the emergency care of a pediatric patient with an altered mental status, including common causes, signs, and symptoms. LPSCS-EMT-35.17
18. Describe the emergency care of a pediatric patient who has experienced a seizure, including the different types of seizures, common causes, signs, and symptoms. LPSCS-EMT-35.18
19. Describe the emergency care of a pediatric patient with meningitis, including common causes, signs, symptoms, and special precautions. LPSCS-EMT-35.19
20. Describe the emergency care of a pediatric patient who is experiencing a gastrointestinal emergency, including common causes, signs, and symptoms. LPSCS-EMT-35.20
21. Describe the emergency care of a pediatric patient who has been poisoned, including common sources of poison, signs and symptoms. LPSCS-EMT-35.21
22. Describe the emergency care of a pediatric patient who is dehydrated, including how to gauge the severity of dehydration based on key signs and symptoms. LPSCS-EMT-35.22
23. Describe the emergency care of a pediatric patient who is experiencing a fever emergency, including common causes. LPSCS-EMT-35.23
24. Describe the emergency care of a pediatric patient who has experienced a drowning emergency, including common causes, signs, and symptoms. LPSCS-EMT-35.24
25. Discuss the common causes of pediatric trauma emergencies; include how to differentiate between injury patterns in adults, infants, and children. LPSCS-EMT-35.25
26. Discuss the significance of burns in pediatric patients, their most common causes, and general guidelines EMTs should follow when assessing patients who have sustained burns. LPSCS-EMT-35.26
27. Explain the four triage categories used in the JumpSTART system for pediatric patients during disaster management. LPSCS-EMT-35.27

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28. Describe child abuse and neglect and its possible indicators, including the medical and legal responsibilities of EMTs when caring for a pediatric patient who is a possible victim of child abuse. LPSCS-EMT-35.28
29. Discuss sudden infant death syndrome (SIDS), including its risk factors, patient assessment, and special management considerations related to the death of an infant patient. LPSCS-EMT-35.29
30. Discuss the responsibilities of EMTs when communicating with a family or loved ones following the death of a child. LPSCS-EMT-35.30
31. Discuss some positive ways EMTs may cope with the death of a pediatric patient and why managing posttraumatic stress is important for all health care professionals. LPSCS-EMT-35.31
32. Demonstrate how to position the airway in a pediatric patient. LPSCS-EMT-35.32
33. Demonstrate how to palpate the pulse and estimate the capillary refill time in a pediatric patient. LPSCS-EMT-35.33
34. Demonstrate how to use a length-based resuscitation tape to size equipment appropriately for a pediatric patient. LPSCS-EMT-35.34
35. Demonstrate how to insert an oropharyngeal airway in a pediatric patient. LPSCS-EMT-35.35
36. Demonstrate how to insert a nasopharyngeal airway in a pediatric patient. LPSCS-EMT-35.36
37. Demonstrate how to administer blow-by oxygen to a pediatric patient. LPSCS-EMT-35.37
38. Demonstrate how to apply a nasal cannula to a pediatric patient. LPSCS-EMT-35.38
39. Demonstrate how to apply a non-rebreathing mask to a pediatric patient. LPSCS-EMT-35.39
40. Demonstrate how to assist ventilation of an infant or child using a bag-valve mask (BVM). LPSCS-EMT-35.40
41. Demonstrate how to perform one-person BVM ventilation on a pediatric patient. LPSCS-EMT-35.41
42. Demonstrate how to perform two-person BVM ventilation on a pediatric patient. LPSCS-EMT-35.42
43. Demonstrate how to immobilize a pediatric patient who has been involved in a trauma emergency. LPSCS-EMT-35.43
44. Demonstrate how to immobilize a pediatric patient in a car seat who has been involved in a trauma emergency. LPSCS-EMT-35.44

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LPSCS-EMT-36. Applies a fundamental knowledge of growth, development, and aging and assessment findings to provide basic emergency care and transportation for a patient with special needs. The student will understand the physiologic and psychological changes that occur with the aging process. The student will also learn and understand the types of illness and injuries common to the geriatric population. They will understand the GEMS triangle, use of advance directives, and signs and symptoms of elder abuse. LPSCS-EMT-36

1. Define the term "geriatrics." 36.2 Recognize some of the special aspects of the lives of older people. LPSCS-EMT-36.1
3. Discuss generational considerations when communicating with a geriatric patient. LPSCS-EMT-36.3
4. Describe the common complaints and the leading causes of death in older people. LPSCS-EMT-36.4
5. Discuss the physiologic changes associated with the aging process and the age-related assessment and treatment modifications that result. LPSCS-EMT-36.5
6. Explain the GEMS diamond and its role in the assessment and care of the geriatric patient. LPSCS-EMT-36.6
7. Explain special considerations when performing the patient assessment process on a geriatric patient with a medical condition. LPSCS-EMT-36.7
8. Define polypharmacy and the toxicity issues that can result. LPSCS-EMT-36.8
9. Discuss the effect of aging on psychiatric emergencies. LPSCS-EMT-36.9
10. Explain special considerations when performing the patient assessment process on a geriatric patient with a traumatic injury. LPSCS-EMT-36.10
11. Discuss the effects of aging on environmental emergencies. LPSCS-EMT-36.11
12. Explain special considerations when responding to calls to nursing and skilled care facilities. LPSCS-EMT-36.12
13. Define an advance directive and explain its use with older patients. LPSCS-EMT-36.13
14. Describe the prevalence of elder abuse and neglect; include why the extent of elder abuse is not well known. LPSCS-EMT-36.14
15. Explain the assessment and care of a geriatric patient who has potentially been abused or neglected. LPSCS-EMT-36.15
16. Recognize acts of commission or omission by a caregiver that result in harm, potential harm, or threat of harm to a geriatric patient. LPSCS-EMT-36.16

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LPSCS-EMT-37. Applies a fundamental knowledge of growth, development, and aging and assessment findings to provide basic emergency care and transportation for a patient with special needs. The students will understand the special needs of patients with developmental, sensory, and physical disabilities. LPSCS-EMT-37

1. Give examples of patients with special challenges EMTs may encounter during a medical emergency. LPSCS-EMT-37.1
2. Explain the special patient care considerations required when providing emergency medical care to patients with intellectual disabilities, including patients with autism spectrum disorder (ASD), Down syndrome, or prior brain injuries. LPSCS-EMT-37.2
3. Describe the different types of visual impairments and the special patient care considerations required when providing emergency medical care for visually impaired patients, depending on the level of their disability. LPSCS-EMT-37.3
4. Describe the various types of hearing impairments and the special patient care considerations required when providing emergency medical care for hard-of-hearing patients, including tips on effective communication. LPSCS-EMT-37.4
5. Describe the various types of hearing aids worn by patients; include strategies to troubleshoot a hearing aid that is not working. LPSCS-EMT-37.5
6. Explain the special patient care considerations required when providing emergency medical care to patients who have cerebral palsy, spina bifida, or paralysis. LPSCS-EMT-37.6
7. Define obesity. LPSCS-EMT-37.7
8. Explain the special patient care considerations required when providing emergency medical care to bariatric patients; include the best way to move bariatric patients. LPSCS-EMT-37.8
9. Explain the special patient care considerations required when providing emergency medical care to patients who rely on a form of medical technological assistance, including the following: Tracheostomy tube
Mechanical ventilator
Apnea monitor
Internal cardiac pacemaker
Left ventricular assist device (LVAD)
External defibrillator vest
Central venous catheter
Gastrostomy tube
Ventricular peritoneal shunt
Vagus nerve stimulator
Colostomy bag, ileostomy bag, or urostomy bag LPSCS-EMT-37.9
10. Describe home care, the types of patients it serves, and the services it encompasses. LPSCS-EMT-37.10
11. Contrast hospice and palliative care with curative care. LPSCS-EMT-37.11

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12. Explain the responsibilities of EMTs when responding to calls for terminally ill patients who have DNR orders. LPSCS-EMT-37.12
13. Discuss the issues of poverty and homelessness in the United States, their negative effects on a person's health, and the role of the EMTs as patient advocates. LPSCS-EMT-37.13
14. Demonstrate different strategies to communicate effectively with a patient who has a hearing impairment. LPSCS-EMT-37.14

LPSCS-EMT-38. Knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety. LPSCS-EMT-38

1. List the nine phases of an ambulance call; include examples of key tasks EMTs perform during each phase. LPSCS-EMT-38.1
2. Name the medical equipment carried on an ambulance; include examples of supplies that are included in each main category of the ambulance equipment checklist. LPSCS-EMT-38.2
3. Name the safety and operations equipment carried on an ambulance; include examples of how each item might be used by EMTs in an emergency. LPSCS-EMT-38.3
4. Discuss the importance of performing regular vehicle inspections; include the specific parts of an ambulance that should be inspected daily. LPSCS-EMT-38.4
5. List the minimum dispatch information required by EMS to respond to an emergency call. LPSCS-EMT-38.5
6. Describe some high-risk situations and hazards during both pretransport and transport that may affect the safety of the ambulance and its passengers. LPSCS-EMT-38.6
7. Discuss the specific considerations that are required to ensure scene safety; include personal safety, patient safety, and traffic control. LPSCS-EMT-38.7
8. Describe the key elements that must be included in the written patient report upon patient delivery to the hospital. LPSCS-EMT-38.8
9. Summarize the tasks EMTs must complete in the postrun phase. LPSCS-EMT-38.9
10. Define the terms cleaning, disinfection, high-level disinfection, and sterilization. LPSCS-EMT-38.10
11. Discuss the guidelines for safely and defensively driving an ambulance. LPSCS-EMT-38.11
12. Identify key steps EMTs should take to improve safety while en route to the scene, the hospital, and the station. LPSCS-EMT-38.12
13. List the three factors that dictate the use of lights and siren to the scene and to the hospital; include the risk-versus-benefit analysis regarding their use. LPSCS-EMT-38.13

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14. Describe the specific, limited privileges that are provided to emergency vehicle drivers by most state laws and regulations. LPSCS-EMT-38.14
15. Explain the additional risks and special considerations posed by the use of police escorts, and the hazards and special considerations posed by crossing intersections. LPSCS-EMT-38.15
16. Describe the capabilities, protocols, and methods for accessing air ambulances. LPSCS-EMT-38.16
17. Describe key scene safety considerations when preparing for a helicopter medivac, including establishing a landing zone, securing loose objects, mitigating onsite hazards, and approaching the aircraft LPSCS-EMT-38.17
18. Demonstrate how to perform a daily inspection of an ambulance. LPSCS-EMT-38.18
19. Demonstrate how to present a verbal report that would be given to receiving personnel at the hospital upon patient transfer. LPSCS-EMT-38.19
20. Demonstrate how to write a written report that includes all pertinent patient information following patient transfer to the hospital. LPSCS-EMT-38.20
21. Demonstrate how to clean and disinfect the ambulance and equipment during the postrun phase. LPSCS-EMT-38.21

LPSCS-EMT-39. Knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety. LPSCS-EMT-39

1. Explain the responsibilities of an EMT in patient rescue and vehicle extrication. LPSCS-EMT-39.1
2. Discuss how to ensure safety at the scene of a rescue incident, including scene size-up and the selection of the proper personal protective equipment and additional necessary gear. LPSCS-EMT-39.2
3. Describe examples of vehicle safety components that may be hazardous to both EMTs and patients following a collision and how to mitigate their dangers. LPSCS-EMT-39.3
4. Define the terms extrication and entrapment. LPSCS-EMT-39.4
5. Describe the ten phases of vehicle extrication and the role of the EMT during each one. LPSCS-EMT-39.5
6. Discuss the various factors related to ensuring situational safety at the site of a vehicle extrication, including controlling traffic flow, performing a 360-degree assessment, stabilizing the vehicle, dealing with unique hazards, and evaluating the need for additional resources. LPSCS-EMT-39.6

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7. Describe the special precautions the EMT should follow to protect the patient during a vehicle extrication. LPSCS-EMT-39.7
8. Explain the different factors that must be considered before attempting to gain access to the patient during an incident that requires extrication. LPSCS-EMT-39.8
9. Discuss patient care considerations related to assisting with rapid extrication, providing emergency care to a trapped patient, and removing and transferring a patient. LPSCS-EMT-39.9
10. Explain the difference between simple access and complex access in vehicle extrication. LPSCS-EMT-39.10
11. Describe examples of situations that would require special technical rescue teams and the EMT's role in these situations. LPSCS-EMT-39.11

LPSCS-EMT-40. Knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety. LPSCS-EMT-40

1. Describe the purpose of the National Incident Management System (NIMS) and its major components. LPSCS-EMT-40.1
2. Describe the purpose of the incident command system (ICS) and its organizational structure. LPSCS-EMT-40.2
3. Explain the role of EMS response within the ICS. LPSCS-EMT-40.3
4. Describe how the ICS assists EMS in ensuring both personal safety and the safety of bystanders, health care professionals, and patients during an emergency. LPSCS-EMT-40.4
5. Describe the role of the EMT in establishing command under the ICS. LPSCS-EMT-40.5
6. Describe the purpose of the medical branch of the ICS and its organizational structure. LPSCS-EMT-40.6
7. Describe the specific conditions that would define a situation as a mass-casualty incident (MCI); include examples. LPSCS-EMT-40.7
8. Describe what occurs during primary and secondary triage, how the four triage categories are assigned to patients on the scene, and how destination decisions regarding triaged patients are made. LPSCS-EMT-40.8
9. Explain how to perform the START and JumpSTART triage methods. LPSCS-EMT-40.9
10. Contrast a disaster with a mass-casualty incident. LPSCS-EMT-40.10
11. Describe the role of EMTs during a disaster operation. LPSCS-EMT-40.11
12. Recognize the entry-level training or experience requirements identified by the HAZWOPER regulation for EMTs to respond to a HazMat incident. LPSCS-EMT-40.12

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13. Define hazardous material; include the classification system used by the NFPA. LPSCS-EMT-40.13
14. Discuss the specific reference materials that EMTs use to recognize a HazMat incident. LPSCS-EMT-40.14
15. Explain the role of EMTs during a HazMat incident both before and after the HazMat team arrives; include the precautions required to ensure the safety of civilians and responders. LPSCS-EMT-40.15
16. Describe how the three control zones are established at a HazMat incident and discuss the characteristics of each zone, and the responders who work within each one. LPSCS-EMT-40.16
17. Describe the four levels of personal protective equipment (PPE) required at a HazMat incident to protect responders from injury by or contamination from a particular substance. LPSCS-EMT-40.17
18. Explain patient care at a HazMat incident; include the special requirements that are necessary for those patients who require immediate treatment and transport prior to full decontamination. LPSCS-EMT-40.18
19. Demonstrate how to perform triage based on a fictional scenario that involves a mass-casualty incident. LPSCS-EMT-40.19
20. Using a reference, correctly identify DOT labels, placards, and markings that are used to designate hazardous materials. LPSCS-EMT-40.20
21. Demonstrate the ability to use a variety of reference materials to identify a hazardous material. LPSCS-EMT-40.21

LPSCS-EMT-41. Knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety. LPSCS-EMT-41

1. Define international terrorism and domestic terrorism; include examples of incidents that have been caused by each one. LPSCS-EMT-41.1
2. Name four different types of goals that commonly motivate terrorist groups to carry out terrorist attacks. LPSCS-EMT-41.2
3. Define weapon of mass destruction (WMD) and weapon of mass casualty (WMC); include examples of weapons considered WMDs. LPSCS-EMT-41.3
4. Explain how the Department of Homeland Security (DHS) National Terrorism Advisory System (NTAS) relates to the actions and precautions EMTs must take while performing their daily activities. LPSCS-EMT-41.4
5. Name the key observations EMTs must make on every call to determine the potential of a terrorist attack. LPSCS-EMT-41.5

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6. Explain the critical response actions related to establishing and reassessing scene safety, personnel protection, notification procedures, and establishing command EMTs must perform at a suspected terrorist event. LPSCS-EMT-41.6
7. Discuss the history of chemical agents, their four main classifications, routes of exposure, effects on the patient, and patient care. LPSCS-EMT-41.7
8. List three categories of biologic agents, their routes of exposure, effects on the patient, and patient care. LPSCS-EMT-41.8
9. Explain the role of EMS in relation to syndromic surveillance and points of distribution (PODS) during a biologic event. LPSCS-EMT-41.9
10. Discuss the history of nuclear/radiologic devices, sources of radiologic materials and dispersal devices, medical management of patients, and protective measures EMTs must take during a nuclear/radiologic incident. LPSCS-EMT-41.10
11. Describe the mechanisms of injury caused by incendiary and explosive devices; include the types and severity of wounds. LPSCS-EMT-41.11
12. Demonstrate the steps EMTs can take to establish and reassess scene safety based on a scenario of a terrorist event. LPSCS-EMT-41.12
13. Demonstrate the steps EMTs can take for the management of a patient exposed to a chemical agent. LPSCS-EMT-41.13
14. Demonstrate the use of the Duo Dote Auto-Injector and/or the Antidote Treatment Nerve Agent Auto-Injector. LPSCS-EMT-41.14

LPSCS-EMT-42. The student will understand the significance and characteristics of a team approach to health care and the impact of this approach on positive patient outcomes. Students will also be able to list and describe the steps an EMT should follow to assist with ALS skills, including placement of advanced airways and vascular access. LPSCS-EMT-42

1. Define continuum of care. LPSCS-EMT-42.1
2. List the five essential elements of a group. LPSCS-EMT-42.2
3. Explain the advantages of a team over a group; include the advantages of regularly training and practicing together. LPSCS-EMT-42.3
4. List the five essential elements of a team. LPSCS-EMT-42.4
5. Explain how crew resource management (CRM) can be useful in the prehospital environment. LPSCS-EMT-42.5
6. List the five critical elements necessary to ensure effective transfer of patient care from one provider to another. LPSCS-EMT-42.6

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7. List the five steps a receiving health care provider should perform when taking a patient care report (PCR). LPSCS-EMT-42.7
8. Describe the four-step process of assisting with advanced life support (ALS) skills. LPSCS-EMT-42.8
9. Discuss the importance of preoxygenation when performing endotracheal (ET) intubation. LPSCS-EMT-42.9
10. Describe the six steps of the BE MAGIC intubation procedure. LPSCS-EMT-42.10
11. Describe the signs that indicate a complication with an intubated patient. LPSCS-EMT-42.11
12. Explain the importance of ensuring patient comfort during a vascular access procedure. LPSCS-EMT-42.12
13. Describe the steps EMTs can take to troubleshoot interpersonal conflicts. LPSCS-EMT-42.13

LPSCS-EMT-43. Prepare for the NREMT Evaluation. LPSCS-EMT-43

1. Display appropriate sensitivity for patients during assessment and management in various scenarios. LPSCS-EMT-43.1
2. Demonstrate the knowledge of patient assessment and management in various scenarios. LPSCS-EMT-43.2
3. Demonstrate performing an assessment to identify life threats, identify injuries requiring immobilization and conditions requiring treatment within the scope of practice of the EMT; including foreign substance in the eyes and nerve agent poisoning. LPSCS-EMT-43.3
4. Demonstrate the communication necessary to obtain and clearly transmit information with an awareness of cultural differences. LPSCS-EMT-43.4
5. Demonstrate performing safely and effectively all airway and breathing psychomotor skills within the National EMS Scope of Practice model and state scope of practice at the EMT level including basic airway maneuvers (including head-tilt, chin-lift; jaw thrust; modified chin lift; foreign body airway obstruction (FBAO) relief manual); oropharyngeal airway; Sellick's maneuver; positive pressure ventilation devices, such as bag valve mask (BVM); suction of the upper airway; and supplemental oxygen therapy (including nasal cannula and non-rebreather mask). LPSCS-EMT-43.5
6. Demonstrate performing safely and effectively all assessment psychomotor skills within the National EMS Scope of Practice model and state scope of practice at the EMT level, including manually taking blood pressure checks. LPSCS-EMT-43.6

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7. Demonstrate performing safely and effectively all pharmacologic interventions psychomotor skills within the National EMS Scope of Practice model and state scope of practice at the EMT level including the following: unit-dose auto-injectors (lifesaving medications intended for self or peer rescue in hazardous materials situation and nerve agent antidote kit). LPSCS-EMT-43.7
8. Demonstrate performing safely and effectively all medical/cardiac care psychomotor skills within the National EMS Scope of Practice Model and state scope of practice at the EMT level including the following: manual CPR; AED; and the assisted normal delivery of a newborn. LPSCS-EMT-43.8
9. Demonstrate performing safely and effectively all trauma care psychomotor skills within the National EMS scope of practice model and state scope of Practice at the EMT level including the following: manual stabilization (c-spine injuries and extremity fractures); bleeding control; emergency moves; and eye irrigation. LPSCS-EMT-43.9
10. Demonstrate professional behavior including, but not limited to integrity, empathy, selfmotivation, appearance/personal hygiene, self-confidence, communications, time management, teamwork/diplomacy, respect, patient advocacy, and careful delivery of service. LPSCS-EMT-43.10
11. Demonstrate the initiation of simple interventions based on assessment findings intended to mitigate the emergency and provide limited symptom relief while providing access to definitive care. LPSCS-EMT-43.11
12. Demonstrate recording assessment findings and interventions. LPSCS-EMT-43.12
13. Demonstrate performing a patient assessment and providing pre-hospital emergency care for the following patient complaints: abdominal pain, abuse/neglect, altered mental status/decreased level of consciousness, apnea, back pain, behavioral emergency, bleeding, cardiac arrest chest pain, cyanosis, dyspnea, eye pain, GI bleeding, hypotension, multiple trauma, pain, paralysis, poisoning, shock, and stridor/drooling. LPSCS-EMT-43.13
14. Demonstrate management of the scene until care is transferred to an EMS team member licensed at a higher level. LPSCS-EMT-43.14
15. Demonstrate how to ensure the safety of the rescuer and others during an emergency. LPSCS-EMT-43.15

LPSCS-EMT-44. **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.** LPSCS-EMT-44

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1. Research the history of the state supported healthcare science CTSO (Career Technical Student Organization). LPSCS-EMT-44.1
2. Discuss the mission, purpose, motto, colors, official dress and other distinguishing characteristic of the state supported healthcare science CTSO. LPSCS-EMT-44.2
3. Explain how participation in the state supported healthcare science CTSO can promote lifelong responsibility for community service and professional growth and development. LPSCS-EMT-44.3
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. LPSCS-EMT-44.4

Essentials of Dental Science (25.488)

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

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

HS-EDS-2. Research careers and opportunities in the dental field and how dentistry has evolved over the years. HS-EDS-2

1. Identify a variety of careers in the area of dentistry and explain the education and credentialing requirements for each area. HS-EDS-2.1
2. Explore the various employment opportunities and career growth potential in dentistry. HS-EDS-2.2
3. Differentiate the credentialing, licensing, roles, functions, and responsibilities of the team members within the field of dentistry. HS-EDS-2.3
4. Research the functions of the professional organizations in the field of dentistry. HS-EDS-2.4

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5. Research the history of dental science and how the dental field has evolved. HS-EDS-2.5

HS-EDS-3. Investigate the laws, regulations, and ethical considerations in the dental fields. HS-EDS-3

1. Describe ethical considerations and obligations in the dental team-patient relationship. HS-EDS-3.1
2. Explain standard of care as it relates to the field of dentistry. HS-EDS-3.2
3. Investigate the role of professional dental field organizations in the area of ethics and jurisprudence. HS-EDS-3.3
4. Research the significant laws that relate to the field of dentistry including dental laboratories. HS-EDS-3.4
5. Apply ethical and legal standards to the occupational area. HS-EDS-3.5
6. Adhere to patient confidentiality and the HIPAA guidelines. HS-EDS-3.6
7. Discuss state laws governing the practice of dentistry. HS-EDS-3.7
8. Demonstrate compliance with federal, state, and local regulations regarding safety practices. HS-EDS-3.8
9. Explain patient's rights and responsibilities. HS-EDS-3.9

HS-EDS-4. Classify pathogenic and non-pathogenic microorganisms, the various modes of transmission, and procedures to prevent transmission in the dental setting. HS-EDS-4

1. Differentiate between pathogenic and non-pathogenic microorganisms and describe the different classification of microorganisms. HS-EDS-4.1
2. Research blood and airborne pathogens and the various modes of transmission. HS-EDS-4.2
3. Describe and identify the structure of each classification of microorganisms. HS-EDS-4.3
4. Identify procedures utilized to prevent and or minimize the transmission of disease in the dental setting. HS-EDS-4.4
5. Explain procedures utilized to prevent cross contamination. HS-EDS-4.5

HS-EDS-5. Adhere to appropriate infection control guidelines and regulations and demonstrate infection control procedures including the use of PPE (Personal Protective Equipment). HS-EDS-5

1. Differentiate between antiseptics, disinfectants, and sterilization. HS-EDS-5.1
2. Apply methods of sanitizing, disinfecting, and sterilization. HS-EDS-5.2
3. Review safety data sheets prior to preparing antiseptic, disinfectant, and germicidal agents. HS-EDS-5.3

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4. Clean, disinfect, and sterilize in accordance with standard precautions. HS-EDS-5.4
5. Research the CDC (Communicable Disease Center), NADL (National Association of Dental Laboratories), USPH (United States Public Health), and OSHA guidelines for infection control in the dental setting. HS-EDS-5.5
6. Investigate the role of OSHA in enforcing the infection control guidelines. HS-EDS-5.6
7. Demonstrate infection control procedures established by OSHA and the CDC for patient management:
universal and standard precautions
hand washing
proper use of PPE proper disposal using a sharps container HS-EDS-5.7
8. Describe employee training required to meet the OSHA standard for hazardous chemicals. HS-EDS-5.8
9. Identify bio-hazardous waste, how to dispose of such waste, and OSHA guidelines for labeling and disposing bio-hazardous wastes. HS-EDS-5.9
10. Utilize the HMIS (Hazardous Materials Identification System) and safety data sheets. HS-EDS-5.10
11. Adhere to procedures utilized in the management of bio-hazardous materials, HS-EDS-5.11
12. Process and sterilize instruments to specifications of the dental setting and in accordance to OSHA and ADA regulations. HS-EDS-5.12
13. Demonstrate utilization of the ultrasonic cleaner and identify those items that may be processed in the ultrasonic cleaner. HS-EDS-5.13
14. Label and package instruments for sterilization using paper, cloth, plastic, and nylon tubing and maintain equipment asepsis. HS-EDS-5.14
15. Prepare barriers in treatment room to maintain aseptic technique. HS-EDS-5.15
16. Identify physical equipment and mechanical devices provided to safeguard employees. HS-EDS-5.16

HS-EDS-6. Respond to life threatening and non-life threatening medical and dental emergencies and perform appropriate first aid according to level of training. HS-EDS-6

1. Describe signs, symptoms, and management of potentially life threatening and non- life threatening injuries. HS-EDS-6.1
2. Perform first aid skills in accordance with certification requirements through the appropriate certifying agency. HS-EDS-6.2
3. Demonstrate the use of personal protective devices and the use of standard precautions for disease prevention during CPR. HS-EDS-6.3
4. Open obstructed airway of an unconscious infant, child, and adult (simulation). HS-EDS-6.4

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5. Perform CPR on infant, child, and adult (simulation) in accordance to certification requirements for Healthcare Providers through the American Heart Association (AHA). HS-EDS-6.5
6. Demonstrate rescue breathing (simulation). HS-EDS-6.6
7. Identify when CPR may be discontinued once initiated. HS-EDS-6.7
8. Demonstrate the effective use of an automatic external defibrillator (AED) utilizing an AED trainer. HS-EDS-6.8
9. Identify the causes, signs, and treatments of medical and dental emergencies. HS-EDS-6.9

HS-EDS-7. Demonstrate appropriate procedures for taking vital signs, recording vital signs, and recognizing abnormalities in findings. HS-EDS-7

1. Assist the patient in completing the patient history. HS-EDS-7.1
2. Review and obtain the medical and dental history. HS-EDS-7.2
3. Explain factors that may affect temperature, pulse, respiration, and blood pressure. HS-EDS-7.3
4. Identify anatomical locations used to measure temperature, pulse, respiration, and blood pressure. HS-EDS-7.4
5. Demonstrate the ability to accurately take a patient's vital signs using aseptic techniques. HS-EDS-7.5
6. Analyze and identify normal vital signs. HS-EDS-7.6
7. Record and report vital signs manually and electronically. HS-EDS-7.7
8. Identify patients with special needs. HS-EDS-7.8
9. Demonstrate appropriate procedures for oral cancer screenings. HS-EDS-7.9

HS-EDS-8. Maintain equipment and instruments used in dental procedures. HS-EDS-8

1. Identify various types and functions of dental operatory and laboratory equipment. HS-EDS-8.1
2. Identify instruments and describe their functions for general dental procedures. HS-EDS-8.2
3. Maintain dental operatory equipment and instruments and dental hand pieces. HS-EDS-8.3

HS-EDS-9. Utilize medical terminology as it relates to the oral cavity and dental procedures. HS-EDS-9

1. Identify and define prefixes, suffixes, and roots of commonly used dental terms. HS-EDS-9.1
2. Identify and define basic terminology as it relates to the oral cavity. HS-EDS-9.2

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3. Demonstrate proficient knowledge of terminology to describe dental procedures. HS-EDS-9.3

HS-EDS-10. Research the qualities of a leader and the skills needed to function as a team member and team leader. HS-EDS-10

1. Investigate the qualities of a leader and how those qualities are needed in the dental field. HS-EDS-10.1
2. Describe Career and Technical Student Organizations, their importance in leadership development and identify benefits of belonging to HOSA. HS-EDS-10.2
3. Analyze different types of teams including the dental team, identify team members and discuss their roles and responsibilities. HS-EDS-10.3

Essentials of Healthcare (25.44)

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

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

HS-EHS-2. Classify the basic structural and functional organization of the human body and identify body planes, cavities, regions, directional terms, tissues, organs and parts of the cell. HS-EHS-2

1. Define anatomy, physiology, homeostasis, metabolism and cellular respiration. HS-EHS-2.1
2. Identify body planes, cavities, abdominal regions and directional terms. (These will be utilized later in the various anatomy systems). HS-EHS-2.2
3. Describe and demonstrate anatomical position utilizing directional terms. HS-EHS-2.3
4. Classify the basic structural and functional organization of the human body beginning at the cellular level to also include tissues, organs and systems. HS-EHS-2.4

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5. Identify the structural components of a cell, and describe the function san relationship of each component. HS-EHS-2.5
6. Explain the process of mitosis and meiosis. HS-EHS-2.6
7. Identify the major types of tissue, and provide examples of each type. HS-EHS-2.7
8. Demonstrate recognition of subjective and objective observations. Document signs and symptoms in the simulated electronic medical record. HS-EHS-2.8

HS-EHS-3. Analyze the anatomy, physiology and basic pathophysiology of the integumentary system, and evaluate and monitor body temperature. HS-EHS-3

1. Analyze the basic structures and functions of the integumentary system. HS-EHS-3.1
2. Identify and explain medical terms related to the integumentary system, and utilize appropriately when documenting in a simulated electronic medical record. HS-EHS-3.2
3. Research common diseases, disorders and emerging diseases of the integumentary system including the pathophysiology, prevention, diagnosis and treatment that might be utilized in each. HS-EHS-3.3
4. Make observations of the skin to include: color, temperature to touch, scarring, bruising, abrasions, lacerations, or other abnormalities. HS-EHS-3.4
5. Discuss the role of the integumentary system in homeostasis regarding body temperature. HS-EHS-3.5
6. Demonstrate measuring and recording of temperature, and identify abnormal results. HS-EHS-3.6

HS-EHS-4. Investigate the anatomy, physiology, and basic pathophysiology of the cardiovascular system, and evaluate and monitor blood pressure and pulse. HS-EHS-4

1. Analyze the basic structures and functions of the cardiovascular system. HS-EHS-4.1
2. Identify and explain medical terms related to the cardiovascular system, and utilize when documenting in electronic medical record. HS-EHS-4.2
3. Research common diseases, disorders, and emerging diseases of the cardiovascular system including the pathophysiology, prevention, diagnosis and treatment (including biomedical therapies) that might be utilized in each. HS-EHS-4.3
4. Describe the components of blood, and the functions of each. Research when blood components are prescribed for a patient and why. HS-EHS-4.4

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5. Identify and describe the functions of the chambers, valves and associated vessels of the heart. HS-EHS-4.5
6. Distinguish differences in anatomy and pathology of blood vessels to include arteries, arterioles, capillaries, venuels, and veins. HS-EHS-4.6
7. Identify and trace the flow of blood through the heart, and provide distinction between the pulmonary and systemic circulation. HS-EHS-4.7
8. Name the parts of the conduction system of the heart, and trace the impulses during initiation and conduction. HS-EHS-4.8
9. Demonstrate measuring and recording blood pressure and pulse, and identify abnormal results. HS-EHS-4.9

HS-EHS-5. Examine the anatomy, physiology and basic pathophysiology of the respiratory system, and evaluate and monitor respirations. HS-EHS-5

1. Analyze the basic structures and functions of the respiratory system. HS-EHS-5.1
2. Identify and explain medical terms related to the respiratory system, and utilize when documenting in electronic medical record. HS-EHS-5.2
3. Research common diseases, disorders, and emerging diseases of the respiratory system including the pathophysiology, prevention, diagnosis and treatment (including biomedical therapies) that might be utilized in each. HS-EHS-5.3
4. Differentiate between the upper and lower respiratory tract while tracing the pathway of air into and out of the respiratory system. HS-EHS-5.4
5. Explain the physiology of breathing, to include the process of gas exchange. HS-EHS-5.5
6. Analyze the interdependence of the cardiovascular and respiratory systems as they relate to gas exchange, circulation, and the support of vital organs of the human body. HS-EHS-5.6
7. Demonstrate measuring and recording respirations, and identify abnormal results. HS-EHS-5.7

HS-EHS-6. Evaluate the anatomy, physiology, and basic pathophysiology of the muscular and skeletal systems, and perform technical skills related to the systems. HS-EHS-6

1. Analyze the basic structures and functions of the muscular system. HS-EHS-6.1
2. Analyze the basic structures and functions of the skeletal system, including locating and identifying the bones of the skeletal system and hemopoiesis. HS-EHS-6.2
3. Explain the relationship between the muscular and skeletal systems, and identify their interdependence as they relate to body structure, movement and posture. HS-EHS-6.3

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4. Identify and explain medical terms related to the muscular and skeletal systems, and utilize when documenting in the electronic medical record. HS-EHS-6.4
5. Research common diseases, disorders, and emerging disorders of the muscular and skeletal systems including pathophysiology, prevention, diagnosis and treatment that might be utilized. HS-EHS-6.5
6. Differentiate between the axial and appendicular skeletons. HS-EHS-6.6
7. Describe the development of the skeletal system. HS-EHS-6.7
8. Locate and identify the types of joints in the skeletal system. HS-EHS-6.8
9. Locate and identify the types of muscles in the muscular system. HS-EHS-6.9
10. Perform range of motion (ROM) for joints such as the shoulder, wrist and ankle. HS-EHS-6.10
11. Differentiate between active and passive range of motion. HS-EHS-6.11
12. Demonstrate proper techniques for ambulation with assistive devices (crutches, cane, walker); and identify limitations and abnormalities. HS-EHS-6.12

HS-EHS-7. Analyze the anatomy, physiology, and basic pathophysiology of the urinary system, and apply knowledge in performance of technical skills related to the system. HS-EHS-7

1. Analyze the basic structures and functions of the urinary system. HS-EHS-7.1
2. Identify and explain the medical terms related to the urinary system, and utilize when documenting in the electronic medical record. HS-EHS-7.2
3. Describe the structure and function of the nephron, and explain the processes of secretion, filtration and reabsorption including where the processes occur. HS-EHS-7.3
4. Compare and contrast the urinary system of the female with the urinary system of a male. HS-EHS-7.4
5. Research common diseases, disorders, and emerging diseases of the urinary system including pathophysiology, prevention, diagnosis and treatment that might be utilized. HS-EHS-7.5
6. Demonstrate measuring intake and output, and identify abnormal results (collection of specimen) and document in an electronic medical record. HS-EHS-7.6

HS-EHS-8. Analyze the anatomy, physiology, and basic pathophysiology of the reproductive system, and perform technical skills related to the system. HS-EHS-8

1. Analyze the basic structures and functions of the reproductive system. HS-EHS-8.1

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2. Identify and explain medical terms related to the reproductive system, and utilize when documenting in the electronic medical record. HS-EHS-8.2
3. Research common diseases, disorders, and emerging diseases of the reproductive system including pathophysiology, prevention, diagnosis and treatment that might be utilized. HS-EHS-8.3
4. Compare and contrast the reproductive system of the female with the reproductive system of the male. HS-EHS-8.4
5. Explain the relationship of the endocrine system to the function of the reproductive system. HS-EHS-8.5
6. Demonstrate appropriate technical skills related to the reproductive system for selected pathway. HS-EHS-8.6

HS-EHS-9. Examine the anatomy, physiology, and basic pathophysiology of the nervous system and special senses, and perform technical skills related to these systems. HS-EHS-9

1. Analyze the basic structures and functions of the nervous system. HS-EHS-9.1
2. Analyze the basic structures and functions of the special sense organs (eye, ear, nose, tongue). HS-EHS-9.2
3. Identify and explain medical terms related to the nervous system and special senses, and utilize when documenting in the electronic medical record. HS-EHS-9.3
4. Identify the components for each type of neuron, and describe the function of each. HS-EHS-9.4
5. Identify and label the cranial nerves, and explain the function of each nerve. HS-EHS-9.5
6. Compare and contrast the sympathetic nervous system with the parasympathetic nervous system. HS-EHS-9.6
7. Identify and label the lobes of the brain, and explain the functions associated with each lobe HS-EHS-9.7
8. Trace sound waves through the ear. HS-EHS-9.8
9. Explain the physiology of vision. HS-EHS-9.9
10. Research common diseases, disorders, and emerging diseases of the nervous system and special senses including pathophysiology, prevention, diagnosis and treatment that might be utilized. HS-EHS-9.10
11. Demonstrate technique for administering vision and hearing testing, and identify abnormal results. HS-EHS-9.11
12. Demonstrate technique for cranial nerve evaluation (reflexes), and identify abnormal responses. HS-EHS-9.12
13. Differentiate between pediatric and adult reflexes. HS-EHS-9.13

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HS-EHS-10. Evaluate the anatomy, physiology, and basic pathophysiology of the endocrine system, and perform technical skills related to the system. HS-EHS-10

1. Analyze the basic structures and functions of the endocrine system. HS-EHS-10.1
2. Identify the hormones secreted by each organ of the endocrine system, and describe the role of each hormone HS-EHS-10.2
3. Identify and explain medical terms related to the endocrine system, and utilize when documenting in the electronic medical record. HS-EHS-10.3
4. Explain the role of the endocrine system in maintaining homeostasis. HS-EHS-10.4
5. Describe the role of the hypothalamus in linking the endocrine system and nervous system. HS-EHS-10.5
6. Research common diseases, disorders, and emerging diseases of the endocrine system including pathophysiology, prevention, diagnosis and treatment that might be utilized. HS-EHS-10.6
7. Demonstrate the roles and responsibilities of patient education related to endocrine system (i.e. Diabetic patient education) HS-EHS-10.7
8. Demonstrate technique for utilizing simulated equipment and medical devices related to the endocrine system (Ex. Simulated blood glucose monitor). HS-EHS-10.8

HS-EHS-11. Investigate the anatomy, physiology, and basic pathophysiology of the digestive system, and perform technical skills related to the system. HS-EHS-11

1. Analyze the basic structures and functions of the digestive system. HS-EHS-11.1
2. Identify and explain medical terms related to the digestive system, and utilize when documenting in the electronic medical record. HS-EHS-11.2
3. Compare and contrast chemical and mechanical digestion. HS-EHS-11.3
4. Trace the path of food throughout the digestive pathway. HS-EHS-11.4
5. Identify the gastric secretions and describe the function of each. HS-EHS-11.5
6. Explain the process of absorption. HS-EHS-11.6
7. Research common diseases, disorders, and emerging diseases of the digestive system including pathophysiology, prevention, diagnosis and treatment that might be utilized. HS-EHS-11.7
8. Demonstrate measuring height, weight, and Body Mass Index (BMI), and document in electronic medical record. HS-EHS-11.8

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EHS-12. Analyze the anatomy,physiology, and pathophysiology of the lymphatic system, and perform technical skills related to the system. HS-EHS-12

1. Analyze the basic structures and functions of the lymphatic system. HS-EHS-12.1
2. Identify and explain medical terms related to the lymphatic system, and utilize when documenting in the simulated electronic medical record. HS-EHS-12.2
3. Research common diseases, disorders, and emerging diseases of the lymphatic system including pathophysiology, prevention, diagnosis and treatment that might be utilized HS-EHS-12.3
4. Compare and contrast types of immunity and identify the relationship of the WBC and the lymphatic system. HS-EHS-12.4
5. Explain the relationship between the lymphatic system and the circulatory system. HS-EHS-12.5
6. Trace the flow of lymphatic fluid through the human body. HS-EHS-12.6
7. Demonstrate technical skills related to the lymphatic system of selected pathway. HS-EHS-12.7

Fundamentals of Exercise Physiology (25.454)

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

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

HS-FEP-2. Fundamentals of Human Movement Science Identify and compare the structures and functions of the major anatomical systems of the human body. HS-FEP-2

1. Identify and compare the structure and function of the muscular system, the skeletal system, the nervous system, the cardiorespiratory system, and the endocrine system. HS-FEP-2.1

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FEP-3. Exercise Physiology Identify the functions of exercise physiology within the systems of the body. HS-FEP-3

1. Identify the basic structure and function of exercise physiology within the: nervous system (e.g., motor units, action potential), muscular system (e.g., sliding filament theory, muscle action spectrum), skeletal system (e.g., arthrokinematics), endocrine system (e.g., feedback mechanisms, responses to exercise), cardiorespiratory system (e.g., cardiovascular physiology and cardiorespiratory physiology), bioenergetics (e.g., energy systems, anaerobic vs. aerobic metabolism). HS-FEP-3.1
2. Explain and differentiate between the principles of human movement science. HS-FEP-3.2
3. Describe the functional biomechanics of human movement (e.g., levers, force, torque, planes of motion, joint motion). HS-FEP-3.3

HS-FEP-4. Human Kinesiology Explain and compare the principles of human kinesiology. HS-FEP-4

1. Define the concepts of biomechanics. HS-FEP-4.1
2. Recognize and use basic biomechanical terminology (e.g., anatomical locations, planes of motion, axes and joint motion. HS-FEP-4.2
3. Identify and explain the concepts associated with scapular motion. HS-FEP-4.3
4. Identify and explain how muscle actions and outside forces relate to human movement (e.g., isotonic, isometric and isokinetic motions). HS-FEP-4.4
5. Identify the concepts associated with the functional anatomy of muscles, including the following: Muscular Force, Length-Tension Relationships, Force-Velocity Curve, Force couple relationships, Reciprocal Inhibition, Synergistic Dominance, Kinetic Chain HS-FEP-4.5
6. Explain the concepts of motor learning and motor control: Identify the concept of motor behavior, Describe motor control, motor learning and motor development and explain theirimportance in exercise training, Define and compare the concepts associated with motor control (e.g., muscle synergies, proprioception, and sensorimotor integration), Define and compare motor-learning concepts (internal and external feedback). HS-FEP-4.6

HS-FEP-5. Assessments Associated with Personal Fitness Training Explain and perform the assessments associated with personal fitness training. HS-FEP-5

1. Explain the regulations and guidelines related to the scope of practice for fitness assessment and personal training. HS-FEP-5.1

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2. Perform a fitness assessment using current guidelines: Demonstrate the ability to interpret and record information using the current guidelines for PAR-Q, medical history, medical risk factors (e.g., medications, surgeries, chronic disease, metabolic syndrome), and lifestyle questionnaire (e.g., sleeping habits, occupation, hobbies, stress level), Demonstrate the ability to perform subjective assessments for special populations such as seniors, youths, prenatal and postnatal individuals HS-FEP-5.2
3. Demonstrate performing, interpreting, and recording for the following: objective assessments related to the field of personal training, postural assessments of the lumbo-pelvic-hip complex and the upper and lower extremities, movement assessments including an Overhead Squat Test, Single-Leg Squat Test, Pushing Test, and Pulling Test. HS-FEP-5.3
4. Demonstrate performing and interpreting the following: vital sign examinations including respiration rate, blood pressure, pulse rate, and temperature, body composition assessments, strength assessments (e.g., maximal submaximal), performance assessments (e.g., stability, balance, power, speed, agility) HS-FEP-5.4
5. Describe a cardiorespiratory assessment and assess the findings including: maximum heart rate, heart rate training zones, sub VO2 max test (e.g., step test, Rockport Walk test, heart rate monitoring systems, metabolic testing). HS-FEP-5.5

HS-FEP-6. Exercise Technique and Training Instruction Explain the concepts associated with exercise techniques and training instruction. HS-FEP-6

1. Define and assess the components of exercise execution following the Kinetic Chain Checkpoints (e.g., starting position, ending position). HS-FEP-6.1
2. Demonstrate and describe the usages for integrated flexibility techniques including Active, Dynamic, Static, and SMR (Self myofascial release): Define flexibility, Explain the components of the Human Movement System (HMS), Explain the components of Neuromuscular Efficiency and mechanoreceptors, Explain the scientific rationale associated with flexibility training, Illustrate the three components of the flexibility continuum and describe their importance, Demonstrate the proper techniques for performing the following: HS-FEP-6.2
    a. Stretches associated with myofascial release HS-FEP-6.2.A
    b. Static stretching HS-FEP-6.2.B
    c. Active isolated HS-FEP-6.2.C
    d. Dynamic, Demonstrate knowledge of safety measures for flexibility training. HS-FEP-6.2.D

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3. Demonstrate and describe the fundamentals of cardiorespiratory fitness training (e.g., base, anaerobic threshold, submaximal): Describe the phases (e.g. warm up cardiorespiratory, and cool down), Develop a cardiorespiratory program using the FITTE guidelines and explain the importance of each component – (FITTE - frequency, intensity, time, type, and enjoyment), Demonstrate the training methods, Compare and contrast the two types cardiorespiratory training methods (Stage training and Circuit training), Describe postural considerations involved in cardiorespiratory training. HS-FEP-6.3
4. Demonstrate and describe the components of integrated training (e.g., stabilization, strength, and power), including the following: core training, balance training, reactive (plyometric) training, speed, agility, and quickness training, resistance training. HS-FEP-6.4
5. Describe select Exercise Modification (pro-/regression), including the following: neurological continuum (e.g., modality selection, extremity symmetry), mechanical/movement patterns, bioenergetics. HS-FEP-6.5
6. Demonstrate the ability to follow and implement safe training methods, including: Demonstrating spotting techniques, Explaining environmental considerations, Comparing exercise risk vs. benefit (e.g., behind the neck pulls/presses, dips, upright rows), Monitoring exercise intensity, Identifying medical signs and symptoms that require training modifications, Describing overtraining and the effects on the body. HS-FEP-6.6
7. Perform effective Kinesthetic, Auditor, and Visual Cueing Techniques to direct the client. HS-FEP-6.7

HS-FEP-7. Program Design Apply the following principles of program design. HS-FEP-7

1. Explain the principle of specificity (SAID), including mechanical specificity, neuromuscular specificity, and metabolic specificity. HS-FEP-7.1
2. Define the principle of overload and variation. HS-FEP-7.2
3. Illustrate the components of periodization in the OPT (optimum performance training) model (e.g., linear, undulating). HS-FEP-7.3
4. Describe the components of stabilization within the OPT model (e.g., stabilization endurance training). HS-FEP-7.4
5. Illustrate the aspects of strength within the OPT model (e.g., strength endurance training, hypertrophy, maximal strength). HS-FEP-7.5
6. Describe the concept of power within the OPT model. HS-FEP-7.6
7. Distinguish between the stages of general adaptation syndrome relating to physical training, including alarm reaction, resistance development, and exhaustion. HS-FEP-7.7

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8. Investigate the acute variables of training when designing an exercise program using each of the following: exercise selection, sets, repetitions, training intensity, tempo, rest interval, exercise order, training volume, training duration, training frequency, reputation tempo. HS-FEP-7.8
9. Define, compare and use the components of the integrated training continuum to design an exercise program including each of the following components within a series of exercise routines within the framework of the OPT model: warm up, core training, balance training, reactive training, SAQ (speed, agility, and quickness) training, resistance training, cardiorespiratory training, cool down. HS-FEP-7.9
10. Demonstrate and compare the styles of resistance training systems: single set, multiple set, super set, pyramid set, circuit training, peripheral heart action metabolic density training, split routines, horizontal loading, vertical loading. HS-FEP-7.10
11. Demonstrate using the principles of FITTE to create a client-specific cardiorespiratory program. HS-FEP-7.11
12. Demonstrate utilizing physiological considerations and exercise guidelines for the following special populations: diabetes, hypertension, arthritis, coronary heart disease, cancer, PAD (peripheral artery disease), obesity, lung disease (e.g., asthma, COPD), osteoporosis, fibromyalgia, youth, seniors, prenatal and postnatal. HS-FEP-7.12
13. Define the following program modifications based on training setting and identify the proper use of each modification: small group personal training, boot camps, 30-minute sessions, high altitude acclimatization, temperature acclimatization. HS-FEP-7.13
14. Define and describe the safe and effective use of selected exercise training modalities within the OPT model. (e.g., free weights, tubing, and kettlebells): strength training machines, free weights, cable machines, elastic resistance, medicine balls, kettlebells, body weight, suspension body weight, stability balls, bosu ball, vibration training. HS-FEP-7.14
15. Research the Physical Activity Guidelines for Americans. HS-FEP-7.15
16. Design a client-specific program based upon assessment results. HS-FEP-7.16

HS-FEP-8. Considerations in Nutrition Research the concepts related to nutrition and wellness. HS-FEP-8

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1. Evaluate basic nutritional concepts: Research why the body needs carbohydrates, proteins, and fats and evaluate their role in digestion, absorption, and elimination, Investigate the role of water in the regular diet and hydration needs within exercise, Explain the dietary requirements for vitamins and minerals and how it relates to general health and performance enhancement, Explain what a calorie is and how it relates to diet and, general health, weight gain/loss, and performance enhancement, Describe the current Dietary Guidelines for Americans (e.g., myPlate), Explain meal timing and frequency (e.g., pre/post/during workout). HS-FEP-8.1
2. Research the risks and benefits of nutritional supplements and ergogenic aids: Explain the effects of nutritional supplements on general health (e.g., multi-vitamin, calcium supplement), Evaluate how nutritional supplements and ergogenic aids can alter body composition (e.g., fat loss, mass gain), Describe the effects of performance enhancement aids on the body (e.g., anabolic steroids, caffeine, and creatine). HS-FEP-8.2
3. Describe weight management concepts: Compare the effects of different types of diets on the body related to healthy menu composition and crash/fad/myth diets, Describe the law of thermodynamics related to diet, Explain metabolic rates (e.g., basal, resting), Explain how endocrine abnormalities can affect metabolism and dietary needs, Describe how nutritional guidelines can be used to create a plan for body composition alteration. HS-FEP-8.3
4. Outline the protocols for special dietary considerations: Outline the components for a balanced vegetarian meal plan, Explain the dietary modifications necessary for someone who is lactose intolerant, Compare dietary considerations and protocols for people with chronic diseases HS-FEP-8.4
5. Examine the nutritional guidelines for enhancing athletic performance (e.g., anaerobic, aerobic). HS-FEP-8.5

HS-FEP-9. Client Relations and Behavioral Coaching Research the concepts related to client relations and behavioral coaching. HS-FEP-9

1. Demonstrate the components of effective communication: Describe the use of verbal and nonverbal communication and demonstrate effective use of each, Compare and contrast open-ended and closed-ended questions and explain when and how each should be used, Describe techniques for effective listening (e.g., paraphrasing, active listening), Explain how to build client/personal trainer rapport through use of supportive techniques (e.g., showing empathy, validating). HS-FEP-9.1
2. Facilitate client goal setting strategies and procedures: Explain the stages of the Change Model, Demonstrate the ability to facilitate the client in developing effective SMART, (Specific Measurable Attainable Realistic Timely) goals as he or she works toward physical fitness and a healthy lifestyle. HS-FEP-9.2

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3. Demonstrate implementing lifestyle and behavioral coaching strategies: Demonstrate how to motivate a client's behavior and actions (e.g., cognitive, affective, and physiological) to improve exercise adherence and to maintain a healthy and physically active lifestyle, Explain how to assist a client in developing coping strategies (stress management, time management, interpersonal influences,& external influences). HS-FEP-9.3

HS-FEP-10. Professional Development, Practice, and Responsibility Research the concepts and requirements associated with professional development, practice and responsibility. HS-FEP-10

1. Describe and demonstrate the ability to uphold the NASM-BOC Code of Professional Conduct: Describe ways to maintain competencies through continuing education, explain ways to adhere to safe and ethical training practices (e.g., OSHA), Outline the components of proper facility maintenance (e.g., equipment, safety, layout, and disinfection), Understand protocols with respect for special considerations for training diverse clientele (e.g., age, gender, cultural background, and ability), Clearly define the role and professional limitations of a personal trainer (e.g., referral to registered dietitians, allied health care professionals), Explain the importance of adhering to the following standards of professionalism and ethical business practices: HS-FEP-10.1
   a. liability insurance HS-FEP-10.1.A
   b. record keeping HS-FEP-10.1.B
   c. medical clearance HS-FEP-10.1.C
   d. physical appearance and attire HS-FEP-10.1.D
   e. timeliness HS-FEP-10.1.E
   f. sexual harassment awareness HS-FEP-10.1.F
   g. client confidentiality (e.g., HIPAA) HS-FEP-10.1.G
2. Demonstrate the ability to follow proper procedures in an emergency situation, including: Renewing CPR and First Aid certifications, Developing an effective emergency action plan for various fitness settings (e.g. HS-FEP-10.2
3. Demonstrate implementing personal and professional goal setting strategies and procedures related to the career of personal training. HS-FEP-10.3

Healthcare Support Services (25.444)

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

1. Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities. HS-HSS-1.1
2. Demonstrate creativity by asking challenging questions and applying innovative procedures and methods. HS-HSS-1.2

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3. Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations. HS-HSS-1.3
4. Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. HS-HSS-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. HS-HSS-1.5
6. Present a professional image through appearance, behavior and language. HS-HSS-1.6

HS-HSS-2. Apply the safety concepts needed to maintain a secure work environment & to prevent accidents by using safety precautions and/or practices. HS-HSS-2

1. Assess workplace conditions with regard to safety and health. HS-HSS-2.1
2. Incorporate and practice safety standards as set forth by OSHA and other regulatory bodies in regards to equipment specific to job, i.e., wheelchairs, stretchers, oxygen tanks, IV pumps, specialized patient equipment, dietary equipment, and environmental equipment. HS-HSS-2.2
3. Identify the hazards and apply safety principles to maintain a safe working environment. HS-HSS-2.3
4. Identify, select, inspect, and use personal protective equipment in relation to workplace safety/infection control. HS-HSS-2.4
5. Demonstrate employing a safety hierarchy and communication system within the workplace/jobsite. HS-HSS-2.5
6. Demonstrate employing emergency procedures to provide aid in workplace accidents. HS-HSS-2.6
7. Create a disaster and/or emergency response plan, using response techniques. HS-HSS-2.7
8. Demonstrate and incorporate proper use of ergonomics and correct body mechanics. HS-HSS-2.8

HS-HSS-3. Analyze the roles/services performed in healthcare delivery systems to ensure the delivery of quality health care. HS-HSS-3

1. Demonstrate proficiency in ancillary departments/facilities (mental health, radiology, and lab, etc.). HS-HSS-3.1
2. Demonstrate following institutional policies and procedures when providing services. HS-HSS-3.2
3. Analyze the organizational structure of the facility. HS-HSS-3.3

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HS-HSS-4. Apply the concepts of communication and appropriate customer service skills. HS-HSS-4

1. Demonstrate proper communication with the patient/resident/family members, team members, and supervisors. HS-HSS-4.1
2. Demonstrate reporting critical client information to appropriate team members in a timely and professional manner. HS-HSS-4.2
3. Demonstrate exhibiting sensitivity to cultural differences, include the use of appropriate language aids. HS-HSS-4.3
4. Demonstrate proper communication in unsafe environmental conditions and unusual occurrences and incidents. HS-HSS-4.4
5. Apply effective techniques for managing conflict and responding in a proactive manner. HS-HSS-4.5

HS-HSS-5. Apply legal and ethical responsibilities of the health care profession. Develop a personal code of ethics and adhere to professional standards/code of conduct. HS-HSS-5

1. Demonstrate maintaining confidentiality and privacy to adhere to HIPAA regulations. HS-HSS-5.1
2. Review a professional code of ethics and acknowledge a personal code of ethics. HS-HSS-5.2
3. Explain the national professional standards to unlicensed assistive personnel and state standards for licensed personnel. HS-HSS-5.3
4. Demonstrate adhering to the Joint Commission Standards of Care. HS-HSS-5.4
5. Demonstrate exhibiting behavior that maintains residents'/patients' rights. HS-HSS-5.5
6. Demonstrate reviewing Scope of Practice. HS-HSS-5.6

HS-HSS-6. Research and perform the guidelines required for proficiency as a dietary aide. HS-HSS-6

1. Demonstrate preparing coffee, tea, and other liquids for patients. HS-HSS-6.1
2. Demonstrate maintaining cleanliness of equipment to include trays, dishes, and carts. HS-HSS-6.2
3. Demonstrate ensuring that the correct diet is served to the patient by Physician order. HS-HSS-6.3
4. Demonstrate following safe/sanitary food handling, cooking and storage standards. HS-HSS-6.4
5. Demonstrate using portion control while on serving line. HS-HSS-6.5
6. Demonstrate adhering to facility and departmental policy and procedures. HS-HSS-6.6

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7. Demonstrating complying with State/Federal regulations on food safety and sanitation. HS-HSS-6.7
8. Demonstrate serving diets accurately. Adapt existing menus and recipes for special needs residents/patients (i.e., low sodium, diabetic, mechanical, and soft). HS-HSS-6.8
9. Demonstrate maintaining a clean work environment during and after production in all areas, and wearing a hair net while in the kitchen. HS-HSS-6.9
10. Review the Quality Improvement Program. HS-HSS-6.10

HS-HSS-7. Review and perform the guidelines required for proficiency as an environmental service worker. HS-HSS-7

1. Demonstrate cleaning resident/patient rooms, restrooms, furniture, and equipment according to facility protocol with emphasis placed on minimal of inconvenience to patient/resident. HS-HSS-7.1
2. Demonstrate emptying garbage containers and keeping containers clean and odor free. HS-HSS-7.2
3. Demonstrate cleaning walls, light fixture, privacy curtains, and vents in rooms, bathrooms and hallway, including dusting and wet mopping hallways. HS-HSS-7.3
4. Demonstrate following facility policies and procedures regarding Standard Precautions and Infection Control, utilizing PPE (personal protective equipment) when appropriate. HS-HSS-7.4
5. Demonstrate preventing slips and falls by using wet floor signs as required, and by assisting in cleaning spills upon requests. HS-HSS-7.5
6. Demonstrate vacuuming carpets and rugs, as well as entrances and exits. HS-HSS-7.6
7. Demonstrate keeping paper towels, toilet paper, soap, and hand soap restocked, as needed. HS-HSS-7.7
8. Demonstrate maintaining and cleaning equipment, including cart, wet floor signs, caddy, and buckets. Use equipment appropriately to prevent excessive wear and tear. HS-HSS-7.8
9. Demonstrate not leaving a housekeeping cart unattended. HS-HSS-7.9
10. Demonstrate following established facility procedures in all cleaning and disinfecting duties. HS-HSS-7.10
11. Display professional demeanor in responding to telephone requests for assistance or notification of a problem to the immediate supervisor. HS-HSS-7.11

HS-HSS-8. Review and perform the guidelines required for proficiency as a central supply/materials manager. HS-HSS-8

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1. Direct the total procurement of all needed supplies, equipment and hospital services respective of the scope of the Central Supply Clerk and the hospital's purchasing agent. HS-HSS-8.1
2. Determine the quantity of hospital materials and supplies required by all the operating departments of the hospital. HS-HSS-8.2
3. Coordinate the Central Supply Department with other departments, which it serves. HS-HSS-8.3
4. Provide for vendor evaluations, vendor ratings, and vendor relationships. HS-HSS-8.4
5. Actively pursue constant improvements through better purchasing techniques (contracts-quantity, etc.). HS-HSS-8.5
6. Develop and operate an efficient and effective inventory management strategy to decrease inventory on hand and keep at a sufficient level. HS-HSS-8.6
7. Demonstrate maintaining departmental standards for FTE. HS-HSS-8.7
8. Develop and maintain a system for the establishment of inventory levels, good materials, turnover, and low inventory dollar investment. HS-HSS-8.8
9. Provide, store, and dispense materials and supplies for all operating departments. HS-HSS-8.9
10. Provide efficient receiving services of items from vendors and common carriers. HS-HSS-8.10
11. Determine the quantity received through physical count, and the completion of all necessary paperwork. HS-HSS-8.11
12. Perform all activities involved in moving materials from their point of receipt or storage to point of use. HS-HSS-8.12
13. Provide for the issuance of materials and maintenance of records necessary to indicate transfer of accounts and overall control of stores cost. HS-HSS-8.13
14. Provide for the patient charge items consistent with revenue control policies and procedures. Implement and monitor a lost revenue recovery system. HS-HSS-8.14
15. Effectively control overall operation of the Central Supply Department. HS-HSS-8.15
16. Demonstrate meeting all regulatory guidelines for State inspection and the Joint Commission. HS-HSS-8.16

HS-HSS-9. Research and perform the guidelines required for proficiency as a patient transporter per facility protocols (facilities may only allow the Patient transporter to transport via wheelchair or stretcher, not transferring into these devices). HS-HSS-9

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1. Demonstrate employing correct body mechanics. HS-HSS-9.1

2. Demonstrate assisting (if allowed per facility) with proper procedures for positioning, turning, and transferring for transport under appropriate supervision, following facility protocol, and scope of practice. HS-HSS-9.2
3. Demonstrate the correct and safe use of transfer devices including: mechanical lifts, slide boards, walkers, wheel chairs, etc. under appropriate supervision, following facility protocol and scope of practice. HS-HSS-9.3
4. Ensure safe transport of patients into, throughout, and on discharge from the facility. HS-HSS-9.4
5. Demonstrate connecting and displaying the concepts of providing comfort, support, and encouragement while being sensitive to cultural needs and individual differences. HS-HSS-9.5
6. Demonstrate transporting equipment and supplies by picking-up requisitioned orders, delivering them to assigned treatment areas and patient care areas. HS-HSS-9.6
7. Demonstrate transporting laboratory specimens by picking up specimens and delivering them to the specified laboratory. HS-HSS-9.7
8. Transport deceased patients by following protocols and delivering them to the mortuary. HS-HSS-9.8
9. Maintain safe, secure, and healthy work environment by following standards and procedures. HS-HSS-9.9
10. Comply with federal and state legal regulations and Joint Commission on Accreditation of Healthcare Organizations (JCAHO) requirements. HS-HSS-9.10

Medical Assisting (25.438)

HS-MA-2. Explore the credentials, options, and scope of practice of a Medical Assistant in various healthcare facilities. HS-MA-2

1. Identify and describe current employment options in the medical assisting profession, including the required education, training, salary, and employment outlook for each option. HS-MA-2.1
2. Distinguish between the different credentials, licensing and certifications that are required for employment in this field. HS-MA-2.2
3. Describe the various roles required in the scope of practice for the medical assistant. HS-MA-2.3
4. Differentiate between different healthcare systems and the role of the medical assistant. HS-MA-2.4
5. Compare and contrast the roles that are performed in the front and back-office areas. HS-MA-2.5
6. Demonstrate an understanding of commonly used medical terminology that is used in the scope of practice. HS-MA-2.6

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MA-3. Demonstrate an understanding of appropriate professional, ethical and legal behavior. HS-MA-3

1. Demonstrate techniques for maintaining confidentiality and patient privacy (protected health information) as outlined in HIPAA (Health Insurance Portability and Accountability Act) regulations. HS-MA-3.1
2. Acknowledge a personal code of ethics. HS-MA-3.2
3. Explain the state ethical standards and the Hippocratic Oath. HS-MA-3.3
4. Compare and contrast various legal considerations such as living wills, DNR, DNI, etc. HS-MA-3.4
5. Identify the power of attorney (POA) for patients with altered mental status and update appropriately (including DNR, DNI, and/or code status). HS-MA-3.5
6. Assist in identifying potential educational needs of the patient and the caregiver. HS-MA-3.6
7. Describe proper healthcare etiquette used in hospice environments, including the use of palliative treatment. HS-MA-3.7

HS-MA-4. Maintain quality control measures within the medical/lab facility to prevent medical errors and provide appropriate patient care. HS-MA-4

1. Compare quality assurance and quality control. HS-MA-4.1
2. Identify and describe the national regulatory agencies for quality assurance and healthcare, including JC (Joint Commission), CLIA (Clinical Laboratory Improvement Act), CAP (College of American Pathologists), NAACLS (National Accrediting Agency for Clinical Laboratory Sciences), and CLSI (Clinical and Laboratory Standards Institute). HS-MA-4.2
3. Describe quality assurance program components and quality control related to medical lab. HS-MA-4.3
4. Demonstrate the usage of information management components, including bar code systems and documentation in the electronic health records. HS-MA-4.4
5. Demonstrate adhering to regulations regarding confidentiality and appropriate record release. HS-MA-4.5

HS-MA-5. Abide by regulations governing workplace safety, infection control, operational standards, and facility protocol. HS-MA-5

1. Demonstrate adhering to regulations regarding workplace safety [e.g., Occupational Safety and Health Administration (OSHA) and National Institute for Occupational Safety and Health (NIOSH)]. HS-MA-5.1
2. Demonstrate abiding by regulations regarding operational standards (e.g., Joint Commission on Accreditation of Healthcare Organizations (JCAHO), Clinical and Laboratory Standards Institute (CLSI). HS-MA-5.2
3. Demonstrate following exposure control plans in the event of occupational exposure. HS-MA-5.3

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5. Demonstrate exhibiting appropriate infection control standards and safety equipment, to include biohazards set forth by OSHA and the Communicable Disease Center (CDC). HS-MA-5.5
    a. Practice standard precautions, utilizing appropriate PPE (personal protective equipment). HS-MA-5.5.A
    b. Demonstrate proper isolation precautions and techniques. HS-MA-5.5.B
    c. Perform donning of sterile gloves and changing a sterile dressing utilizing appropriate sterile technique. HS-MA-5.5.C
    d. Describe risk and prevention of cross contamination. HS-MA-5.5.D
    e. Demonstrate sanitizing, disinfecting, and sterilizing techniques. HS-MA-5.5.E
    f. Demonstrate effective hand sanitization procedures. HS-MA-5.5.F
    g. Demonstrate proper use of sharps containers. HS-MA-5.5.G
6. Implement infection control procedures to break the chain of infection; transmission via direct and indirect contact, droplets, airborne, and hospital acquired infections. HS-MA-5.6
7. Demonstrate first aid and Basic Life Support techniques and initiate when necessary. HS-MA-5.7
8. Observe standards of operation and workplace safety regulations for. HS-MA-5.8
    a. Needle stick safety and precaution act. HS-MA-5.8.A
    b. blood borne pathogen. HS-MA-5.8.B
    c. safety practices of HIV (Human Immune Deficiency Virus), Hepatitis B & C. HS-MA-5.8.C
9. Demonstrate reacting to emergency situations following agency procedures and facility protocol. HS-MA-5.9

HS-MA-6. Utilize appropriate laboratory and medical terminology, medical lab equipment, and metric system conversions. HS-MA-6

1. Demonstrate the appropriate use of clinical lab nomenclature to include medical terminology related to clinical lab testing and requisitions. HS-MA-6.1
2. Demonstrate basic manual and digital use and maintenance of the following instruments, including microscope, centrifuge, EKG, and spirometry. HS-MA-6.2
3. Demonstrate using appropriate units of measurement. HS-MA-6.3
4. Perform math calculations for metric system conversions with temperature, height, weight, simple dilutions, total magnification, and dosage calculations. HS-MA-6.4

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HS-MA-7. Perform basic administrative skills within medical office services. HS-MA-7

1. Perform procedures related to administrative office skills, including managing patient accounts, writing receipts, writing checks, and balancing accounts. HS-MA-7.1
2. Perform skills that demonstrate completing insurance claims, including diagnostic coding for reimbursement. HS-MA-7.2
3. Demonstrate appropriate skills in scheduling appointments, answering phone calls, managing electronic health care records and completing prior authorizations. HS-MA-7.3
4. Demonstrate submitting simulated prescriptions via phone, fax, and electronically. HS-MA-7.4

HS-MA-8. Perform basic clinical skills within medical office services. HS-MA-8

1. Demonstrate the procedures for conducting a patient history interview and preparing the patient for an exam. HS-MA-8.1
2. Perform basic tasks when assisting with a physical exam including setting up an exam room and measuring weight, height and vital signs of adult, children, and infants. HS-MA-8.2
3. Demonstrate how to position and drape a patient in each of the common examination positions. HS-MA-8.3
4. Identify, arrange, and prepare instruments and supplies used in a general physical examination. HS-MA-8.4
5. Demonstrate correct procedures for ADA patients (extremely obese, cancer patients, geriatric patients, etc.). HS-MA-8.5
6. Educate patients on devices commonly prescribed by physicians (inhaler, crutches, glucometer, etc. depending on the setting). HS-MA-8.6
7. Demonstrate the correct procedures for administering an injection, including identifying & preparing the injection site, methods of insertion & administration, disposal of the sharps, and follow up with patient reaction. HS-MA-8.7
8. Demonstrate the correct procedure for suture and staple removal. HS-MA-8.8
9. Describe the special surgical procedures performed in an office setting, including outpatient surgeries, biopsies, etc. HS-MA-8.9
10. Identify the instruments used in minor surgery and describe their functions. HS-MA-8.10
11. Compare and contrast the procedures for medical and surgical asepsis in minor surgery. HS-MA-8.11
12. Describe the types of local anesthetics for minor surgery and the CMA's role in their administration. HS-MA-8.12
13. Explain the procedures for screening and diagnosing vision and hearing problems. HS-MA-8.13

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14. Compare and contrast various treatments for vision and hearing disorders. HS-MA-8.14
15. Explain how patients can be educated about preventive ear and eye care. HS-MA-8.15
16. Demonstrate how to modify exams for patients with known hearing/vision problems. HS-MA-8.16

HS-MA-9. Follow steps and guidelines necessary to prepare patients for blood collection procedures based on school, county, and facility protocol. HS-MA-9

1. Review scope of practice for a medical assistant in a medical laboratory. HS-MA-9.1
2. Review requisition, confirm test requirements (e.g., fasting and medication) and status, and identify patient special considerations such as: diet restrictions
latex sensitivity
timed/status. HS-MA-9.2
3. Perform proper patient identification procedures, verification, and discrepancy rectification to ensure accuracy. HS-MA-9.3
4. Conduct initial patient observation utilizing appropriate communication techniques, including explanation of procedure to the patient. HS-MA-9.4
5. Ensure consent is given by patient, either implied or informed. HS-MA-9.5
6. Simulate or perform the process of obtaining blood glucose samples correctly (per county policy) recording and reporting findings to the nurse/ EMR. HS-MA-9.6
7. Simulate or perform proper procedure for capillary blood tests. HS-MA-9.7
8. Identify and simulate or perform basic techniques for venipuncture procedures. HS-MA-9.8
9. Identify equipment used for basic venipuncture and the function of each. HS-MA-9.9
10. Identify and explain the three major preferred sites for venipuncture in the antecubital fossa and distinguish the "H" and "M" shaped patterns. HS-MA-9.10
11. Demonstrate patient safety throughout the collection process. HS-MA-9.11
12. Recognize and react appropriately for common complications for primary collection. HS-MA-9.12
13. Perform proper order of draw when drawing multiple samples. HS-MA-9.13
14. Identify proper tube based on tube additive for common blood tests. HS-MA-9.14

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HS-MA-10. Perform advanced technical skills within medical laboratory collections using appropriate equipment based on school, county, and facility protocol. HS-MA-10

1. Review scope of practice for medical assistants in Clinical Laboratory Services. HS-MA-10.1
2. Demonstrate verification of safety of equipment, including sterility, expiration date, and manufacturer defects. HS-MA-10.2
3. Demonstrate proper labeling for all specimens. HS-MA-10.3
4. Perform quality control and maintain logs as required for CLIA-waived procedures (Clinical Laboratory Improvement Amendments). HS-MA-10.4
5. Discuss proper specimen preparation and procedures for storing and/or transporting specimens. HS-MA-10.5
6. State proper procedure to give patient directions for non-blood, patient collected specimens. HS-MA-10.6
7. Utilize techniques to avoid pre-analytical errors when collecting specimens. HS-MA-10.7
8. Demonstrate proper chain of custody procedure when obtaining specimens for law enforcement and court mandated labs (Example-paternity testing, etc.) HS-MA-10.8
9. Utilize technology to input and retrieve patient data. HS-MA-10.9
10. Report normal and critical results to providers following facility protocol. HS-MA-10.10

HS-MA-11. Maintain appropriate reports and patient data, inventory and supplies, and billing procedures for laboratory tests. HS-MA-11

1. Demonstrate utilizing electronic health records for the reporting and documentation of patient collection data and lab results. HS-MA-11.1
2. Identify and explain the components of a complete and final report. HS-MA-11.2
3. Demonstrate maintaining inventory levels, orders, and restocking of supplies. HS-MA-11.3

HS-MA-12. Demonstrate how to properly place leads and operate a 12-lead EKG (electrocardiogram) unit. The standards related to EKG may be simulated in a lab, however if attempting to be eligible for an EKG assessment exam in a recognized credential, clinical application and other requirements may be necessary. HS-MA-12

1. Review scope of practice for medical assistants in Cardiology Services. HS-MA-12.1
2. Compare and contrast normal sinus, bradycardia, tachycardia, and asystole rhythms by evaluating manual or digital rhythm strips. HS-MA-12.2

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3. Explain basic EKG interpretations, such as STEMI, v-fib, etc. HS-MA-12.3
4. Contrast between EKG and Echocardiogram procedures and the diagnostic capacity of each. HS-MA-12.4
5. Demonstrate collecting and documenting patient history, cardiac medication, and information needed for EKG testing. HS-MA-12.5
6. Demonstrate correctly positioning a patient for testing and applying EKG leads in the correct position on the patient. HS-MA-12.6
7. Demonstrate informing patients about the purpose of procedure and directions for testing, including EKG (Electrocardiogram) monitoring, Holter monitoring, Stress testing, and Telemetry monitoring. HS-MA-12.7
8. Differentiate between the care needed for infant, pediatric, adult patients and those with special considerations (e.g., right sided heart, posterior chest, amputations, prosthetics, etc.). HS-MA-12.8

HS-MA-13. Demonstrate advanced technical skills in respiratory care. HS-MA-13

1. Review scope of practice for medical assistants in Respiratory Services. HS-MA-13.1
2. Identify normal and abnormal respiratory effort. HS-MA-13.2
3. Demonstrate correct placement of cannula and mask for oxygen therapy. HS-MA-13.3
4. Demonstrate set up and use of portable oxygen cylinder. HS-MA-13.4
5. Correctly apply pulse oximeter for measurement of oxygen saturation and recognize the difference between normal and abnormal readings. HS-MA-13.5
6. Observe medical personnel assisting clients with prescribed, self-administered respiratory management devices, including metered dose inhalers and nebulizers adhering to scope of practice and facility protocol. HS-MA-13.6
7. Demonstrate techniques to assist patient with incentive spirometers, coughing, and deep-breathing exercises. HS-MA-13.7
8. Examine pulse sites for accuracy of pulse oximeter (ex: toe, ear lobe, etc.). HS-MA-13.8

HS-MA-14. Demonstrate advanced technical skills in wound care within their scope of practice. HS-MA-14

1. Review scope of practice for medical assistants in Wound Care Services. HS-MA-14.1
2. Describe variations in wounds and methods for reporting. HS-MA-14.2
3. Describe pain associated with wounds and techniques for assessing, reporting, and managing pain. HS-MA-14.3

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4. Utilizing simulation, demonstrate techniques for:
wound care, including reporting observations.
application of sterile dressings, bandages, and binders.
applying hot and cold treatments. HS-MA-14.4
5. Adhere to proper disposal of biohazardous materials as required by OSHA, utilizing sharps containers and biohazard red bags. HS-MA-14.5
6. Demonstrate use of personal protective equipment. HS-MA-14.6
7. Document dressing changes, hot and cold treatments, and observations in the simulated electronic medical record. HS-MA-14.7

HS-MA-15. Demonstrate advanced technical skills in nutrition and fluid intake, elimination, and ostomy care. HS-MA-15

1. Review scope of practice for medical assistants in Urinary Services. HS-MA-15.1
2. Demonstrate measurement of fluid intake and output including documentation. HS-MA-15.2
3. Perform techniques for collecting urine and stool specimens, including documentation. HS-MA-15.3
4. Perform simulated ostomy care procedures and identify reportable signs/symptoms. HS-MA-15.4
5. Demonstrate proper sterile and disinfectant routines in collection and storage processes. HS-MA-15.5

HS-MA-16. 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. HS-MA-16

1. Research the history of the state supported healthcare science CTSO (Career Technical Student Organization). HS-MA-16.1
2. Discuss the mission, purpose, motto, colors, official dress, and other distinguishing characteristics of the state supported healthcare science CTSO. HS-MA-16.2
3. Explain how participation in the state supported healthcare science CTSO can promote lifelong responsibility for community service and professional growth and development. HS-MA-16.3
4. Create a personal leadership plan to participate in programs, conferences, community service and competitive events on the local, state, and national level that align with the competencies, skills, and knowledge of this course. HS-MA-16.4

Non-Invasive Diagnostic Te

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

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

HS-NDT-2. Demonstrate a professional demeanor at all times, both in the classroom and within the healthcare facilities. HS-NDT-2

1. Demonstrate dependability as it relates to being present, on time, and ready to participate. HS-NDT-2.1
2. Show compassion as it relates to being sensitive to the needs of patients and co-workers. HS-NDT-2.2
3. Exhibit flexibility as it relates to their willingness to adapt to changes, accept added responsibility, and be a team player. HS-NDT-2.3
4. Perform honesty as it relates to willingness to admit mistakes, to get help when unsure of a procedure, and to act in the interest of client safety. HS-NDT-2.4
5. Demonstrate integrity as it relates to client privacy and client confidentiality. HS-NDT-2.5
6. Exhibit proper personal appearance to include appropriate dress code, good personal hygiene, and professional demeanor. HS-NDT-2.6
7. Display the importance of good organizational skills and time management skills including completion of assignments. HS-NDT-2.7

HS-NDT-3. Investigate professional ethics and legal responsibilities relating to non-invasive testing in the area of radiology, cardiology and pulmonary. HS-NDT-3

1. Maintain confidentiality and privacy to include HIPAA regulations. HS-NDT-3.1
2. Explain medico legal concepts as it relates to different non-invasive careers. HS-NDT-3.2
3. Demonstrate adhering to and understanding the personal and professional code of ethics. HS-NDT-3.3

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4. Investigate the national professional standards related to Radiology Technologists, EKG Technicians, and Respiratory Therapists, including careers available in each field. HS-NDT-3.4
5. Evaluate how culture and diversity affects the delivery of care. HS-NDT-3.5
6. Examine scope of practice, torts, malpractice, negligence, invasion of privacy, privileged communication, confidentiality and informed consent as it relates to career in non-invasive diagnostic testing. HS-NDT-3.6
7. Discuss and understand the patient's rights to Informed Consent, Advance Directives, Do Not Resuscitate (DNR) orders), and a Living Will. HS-NDT-3.7

HS-NDT-4. Differentiate the services provided in diagnostic imaging. HS-NDT-4

1. Differentiate between the types of diagnostic imaging and the types of medical information each generates, including but not limited to Computer Assisted Tomography (CAT), Magnetic Resonance Imaging (MRI), Positron emissions Tomography (PET), Ultrasound Imaging, Mammography and X-Rays. HS-NDT-4.1
2. Differentiate how the types of diagnostic imaging might be utilized for diagnosis, treatment, and monitoring of a medical condition. HS-NDT-4.2

HS-NDT-5. Demonstrate proper safety principles relating to Radiology, EKG and Respiratory Technicians. HS-NDT-5

1. Demonstrate adhering to radiation protection for patient and personnel, including basic methods of protection: time, distance and shielding. HS-NDT-5.1
2. Distinguish between the protective devices (engineering controls) and procedures (work practice controls) available to provide proper patient care, including when and how to use the devices. HS-NDT-5.2
3. Demonstrate utilizing radiation-safety principles and guidelines, including ALARA (as low as (is) reasonably achievable) principles and PMD (Personal Monitoring Devices). HS-NDT-5.3
4. Research the importance of governing agencies and roles, including FDA (Food and Drug Administration, OSHA (Occupational Safety and Health Administration), MQSA (Mammography Quality Standards Act), ACR (American College of Radiology), and the NRC (Nuclear Radiation Commission). HS-NDT-5.4
5. Apply proper body mechanics for the safety of the healthcare worker and patients when performing simulated procedures. HS-NDT-5.5
6. Apply the appropriate infection control standards while performing procedures in radiology, cardiology or pulmonary services. HS-NDT-5.6

HS-NDT-6. Demonstrate an understanding of image acquisition and evaluation. HS-NDT-6

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1. Differentiate between film screen processing and digital imaging processing. HS-NDT-6.1

2. Explain the importance of image identification in diagnostic imaging and understand the legal considerations (patient data, examination data) if not performed properly. HS-NDT-6.2
3. Identify image quality related to film brightness/density, contrast/gray scale, motion, artifacts, fog, required anatomy, and positioning accuracy. HS-NDT-6.3
4. Investigate the PACS (picture archiving and communication system) system related to diagnostic imaging. HS-NDT-6.4
5. Recognize currently-utilized diagnostic imaging equipment. HS-NDT-6.5

HS-NDT-7. Electrocardiogram (EKG) Demonstrate how to properly place leads and operate a 12-lead EKG (electrocardiogram) unit. HS-NDT-7

1. Demonstrate collecting and documenting patient history, cardiac medication, and information needed for EKG testing. HS-NDT-7.1
2. Demonstrate setting up and verifying the leads recorded on an EKG. HS-NDT-7.2
3. Demonstrate verifying EKG machine paper speed (e.g., 25mm, 50mm) and EKG machine sensitivity (e.g., h, 1, 2). HS-NDT-7.3
4. Inspect the waveforms of a cardiac cycle for symmetry, direction, and amplitude (e.g., P waves, QRS complexes, ST segments, and T waves). HS-NDT-7.4
5. Demonstrate troubleshooting a 12-lead EKG unit. HS-NDT-7.5
6. Demonstrate mounting a completed EKG for a patient's chart and properly uploading a completed EKG to a patient's electronic medical record. HS-NDT-7.6
7. Demonstrate how to maintain EKG equipment and the work environment. HS-NDT-7.7
8. Demonstrate correctly positioning a patient for testing and applying EKG leads in the correct position on the patient. HS-NDT-7.8
9. Apply electrodes on patient and understand how to respond to signs and symptoms of cardiopulmonary compromise. HS-NDT-7.9
10. Demonstrate performing patient vital signs (heart rate, respirations, temperature, blood pressure) and utilizing a pulse oximeter) to monitor patient during procedures. HS-NDT-7.10
11. Demonstrate informing patients about the purpose of procedure and directions for testing, including EKG (Electrocardiogram) monitoring, Holter monitoring, Stress testing, and Telemetry monitoring. HS-NDT-7.11
12. Differentiate between the care needed for infant, pediatric, adult patients and those with special considerations (e.g., right sided heart, posterior chest, amputations). HS-NDT-7.12

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HS-NDT-8. **Demonstrate and explain how EKG grid paper is used, and plot EKG axis.** HS-NDT-8

1. Calculate a patient's heart rate from the EKG tracing (e.g., 6-second method, R to R, sequencing). HS-NDT-8.1
2. Measure a patient's heart rhythm from the EKG tracing. HS-NDT-8.2
3. Measure a patient's heart conduction from the EKG tracing (e.g., PR-interval, QRS duration and QT-interval). HS-NDT-8.3

HS-NDT-9. **Recognize normal and abnormal patterns in all EKG leads and understand proper procedures that medical professionals utilize in responding to and reporting results.** HS-NDT-9

1. Identify and resolve artifacts from the EKG tracing (e.g., wandering baseline, somatic, and electrical). HS-NDT-9.1
2. Identify and determine how a medical professional evaluates sinus rhythm and major classifications of arrhythmias from the EKG tracing (sinus, atrial, ventricular, junctional, and heart blocks). HS-NDT-9.2
3. Describe and demonstrate response to potentially life-threatening arrhythmias. HS-NDT-9.3
4. Recognize pacemaker spikes on an EKG tracing. HS-NDT-9.4
5. Identify the major variances to waveforms related to ischemia, injury, or infarction. HS-NDT-9.5

HS-NDT-10. **Apply patient assessment techniques to differentiate the need for non-invasive pulmonary diagnostic testing.** HS-NDT-10

1. Identify and describe basic cardiopulmonary anatomy and medical terminology for the cardiopulmonary system. HS-NDT-10.1
2. Demonstrate utilizing assessment skills to check vital signs, height and weight, initial impressions of patient, and record patient history. HS-NDT-10.2
3. Apply examinations techniques, including visual examination head to extremities (chest appearance, clubbing, cyanosis, pedal edema, capillary refill, and skin temperature), auscultation of lung and heart sounds, palpitation, and percussion. HS-NDT-10.3
4. Differentiate between normal and abnormal breath sounds. HS-NDT-10.4
5. Recognize various breathing patterns and respiratory effort. HS-NDT-10.5
6. Demonstrate utilizing pulse oximetry as a tool for assessing patient basic oxygen needs and differentiate between normal and abnormal readings. HS-NDT-10.6

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7. Observe a medical professional utilizing chest radiography to recognize normal and abnormal chest findings and apply a systematic approach to reading the chest radiography as an important diagnostic tool. HS-NDT-10.7

HS-NDT-11. Differentiate between the types and the need for pulmonary non-invasive diagnostic testing. (Simulation in the lab or observations in a clinical setting) 11.1 Describe the basic types of pulmonary non-invasive diagnostic testing (chest X-ray, peak flow meters, basic pulmonary function test (spirometry). HS-NDT-11

2. Identify and describe the lung volumes and capacities of the averaged size adult. HS-NDT-11.2
3. Differentiate between the use of peak flow meters and basic pulmonary function testing (simple spirometry). HS-NDT-11.3
4. Observe a medical professional teaching proper peak flow technique, performing a peak flow test, and appropriately interpreting information. HS-NDT-11.4
5. Properly calibrate and set up spirometer and discuss the limitations of basic spirometry and the need for more advance pulmonary function testing. Observe as a medical professional interprets basic spirometer results. HS-NDT-11.5
6. Apply principles of infection control to prevent cross contamination of patients when using simple pulmonary function testing. HS-NDT-11.6
7. Differentiate between restrictive and obstructive pulmonary disease based on the expected pulmonary functions results. HS-NDT-11.7
8. Discuss contraindications to pulmonary diagnostic testing. HS-NDT-11.8

HS-NDT-12. Research careers and certification available in careers that utilize non-invasive diagnostic techniques in fields of radiology, cardiology and pulmonary. HS-NDT-12

1. Research career opportunities in fields that utilize non-invasive diagnostic techniques in radiology/imaging, cardiology and pulmonary. HS-NDT-12.1
2. Investigate certifications and further education available for proficiency in using noninvasive diagnostic testing. HS-NDT-12.2
3. Analyze the trends and advantages in the hiring multi-skilled medical workers. HS-NDT-12.3

HS-NDT-13. Complete a CPR Basic Life Support and first aid course. HS-NDT-13

1. Successfully complete Basic Life Support CPR course by a recognized agency, such as the American Heart Association or American Red Cross. HS-NDT-13.1
2. Successfully complete a First Aid course by a recognized agency, such as the American Heart Association or American Red Cross. HS-NDT-13.2

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Patient Care Fundamentals (25.436)

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

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

HS-PCF-2. Examine the needs of the elderly and how those needs can impact their care and well-being. HS-PCF-2

1. Discuss the philosophy of restorative care when meeting needs. HS-PCF-2.1
2. Examine principals of human growth and development for the elderly and apply knowledge. HS-PCF-2.2
3. Examine the physical, social, and emotional changes that occur in the elderly and chronically ill. HS-PCF-2.3
4. Respect and advocate for the resident/patient/client's rights. HS-PCF-2.4
5. Uncover and examine the special needs of residents/patients/clients with disabilities, including physical limitations, mental and emotional conditions, as well as dementias. HS-PCF-2.5

HS-PCF-3. Apply the employability skills required for proficiency working in the Patient Care field. HS-PCF-3

1. Assess self accurately, set personal goals, monitor progress, and exhibit self-control. HS-PCF-3.1
2. Differentiate work ethic skills such as adaptability, dependability, and responsibility and such social behaviors as tolerance, honesty, empathy, and courtesy and cite evidence of them in the school and workplace. HS-PCF-3.2
3. Analyze an effective response to the needs of people of different ages, genders, cultures, socioeconomic backgrounds, attitudes, and abilities and perform correctly. HS-PCF-3.3

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4. Formulate an appropriate response to the needs of customers/clients and manage conflict. HS-PCF-3.4
5. Construct the organizational structure for a healthcare business including the individual roles and responsibilities of employees and their relationships to one another. HS-PCF-3.5
6. Construct a personal career development plan, investigate how educational achievement will affect one's goals, and predict how choices affect family patterns and one's lifestyle show career progression (ex. CNA to LPN to RN). HS-PCF-3.6
7. Critique personal skills for seeking and securing employment and summarize strategies for gaining employment opportunities. HS-PCF-3.7
8. Examine state requirements for licensure and discuss the purpose of continuing education. HS-PCF-3.8
9. Identify potential workplace stressors and formulate responses for management of stress. HS-PCF-3.9

HS-PCF-4. Maintain resident/patient's rights and practice resident/patient/client's privacy, according to Omnibus Budget Reconciliation Act (OBRA) and Health Insurance Portability and Accountability Act (HIPAA) guidelines. HS-PCF-4

1. Examine nurse aide practice in order to protect privacy and confidentiality. HS-PCF-4.1
2. Apprise clients of their right to personal choices to accommodate their needs. HS-PCF-4.2
3. Research the role of an Ombudsman to give assistance in resolving grievances and disputes. HS-PCF-4.3
4. Provide needed assistance getting to and participating in resident/patient/client and family groups and activities. HS-PCF-4.4
5. Adhere to facility policies and procedures regarding the security of personal possessions of the residents/patients/clients. HS-PCF-4.5
6. Examine care methods for freedom from abuse, mistreatment, and neglect and report any instances of such treatment to appropriate staff/instructor. HS-PCF-4.6
7. Investigate the need for restraints in accordance with current professional standards and uncover alternative options. HS-PCF-4.7

HS-PCF-5. Communicate effectively with residents/patients/clients' healthcare team members and resident/patient/client family or visitors using appropriate customer service skills. HS-PCF-5

1. Utilize the correct medical terminology and acronyms according to regulating agencies for effective communication in written documentation. HS-PCF-5.1

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2. Demonstrate correct use of appropriate communication devices. HS-PCF-5.2
3. Examine resident/patient/client procedures and conditions appropriately, using one's senses to make pertinent observations and record and report objectively. HS-PCF-5.3
4. Assess residents/patients/clients that have various sensory impairments to determine effective methods of communication. HS-PCF-5.4
5. Select formal and informal, written, and oral, communication skills when planning and providing care. HS-PCF-5.5
6. Formulate and show courteous and compassionate care for the resident/patient/client and their family and friends. HS-PCF-5.6
7. Examine methods for communicating with residents with cognitive impairments. HS-PCF-5.7

HS-PCF-6. Demonstrate appropriate behaviors meeting mental health and social service needs of resident/patient/client. HS-PCF-6

1. Investigate the components of proper mental health and evaluate the inter-relatedness of physical and mental health. HS-PCF-6.1
2. Differentiate the signs and symptoms of various cognitive impairment including dementia, Alzheimer's Disease, delirium, and delusions that should be documented and reported. HS-PCF-6.2
3. Assess the correct nursing assistant plan of action in providing care for resident/patients/clients with cognitive impairments. HS-PCF-6.3

HS-PCF-7. Analyze the organizational structure of the nursing facility and adhere to policies and procedures. HS-PCF-7

1. Differentiate between long-term care and other healthcare agencies. HS-PCF-7.1
2. Examine the administrative structure for healthcare agencies. HS-PCF-7.2
3. Compare and contrast the relationship between various governmental and private agencies that define the guidelines for resident/patient/client quality care. HS-PCF-7.3
4. Adhere to approved institutional policies and procedures when providing care. HS-PCF-7.4

HS-PCF-8. Adhere to the scope of practice for patient care assistant and demonstrate appropriate actions while respecting a patient's right to privacy and proper treatment. HS-PCF-8

1. Demonstrate responsible nursing assistant actions supporting resident/patient/client rights. HS-PCF-8.1
2. Assess the provision of resident/patient/client privacy as needed and provide accordingly. HS-PCF-8.2

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3. Practice confidentiality according to the Health Insurance Portability and Accountability Act (HIPAA) and Omnibus Budget Reconciliation Act (OBRA) guidelines. HS-PCF-8.3
4. Differentiate elder abuse, misappropriation of property, and resident/patient/client neglect. HS-PCF-8.4
5. Compare and contrast practices that would promote legal responsibility and the consequences of failing to fulfill legal responsibilities. HS-PCF-8.5
6. Formulate a plan of care for a dying resident/patients/client and family members. HS-PCF-8.6
7. Examine the training requirements and scope of practice for the nursing assistant. HS-PCF-8.7

HS-PCF-9. Adhere to regulations and practice appropriate safety measures in providing resident/patient/client care. HS-PCF-9

1. Differentiate the nursing assistant's role in various disaster situations in the healthcare setting. HS-PCF-9.1
2. Examine ways to promote safety and handle non-medical emergencies in the healthcare setting. HS-PCF-9.2
3. Assess the safety of the resident/patient/client's environment and cite evidence of safe nursing assistant care. HS-PCF-9.3
4. Assess the use of correct body mechanics. HS-PCF-9.4
5. Formulate and follow emergency procedures for fire and other types of disasters. HS-PCF-9.5
6. Demonstrate how to recognize and respond to medical emergencies including the Heimlich maneuver for clearing foreign body airway obstructions for both conscious and unconscious victims. HS-PCF-9.6
7. Demonstrate procedures for positioning and transferring and turning residents/ patients/clients and assess proper technique. HS-PCF-9.7
8. Discuss with the client the location and function of staff/emergency contact devices (call light, restroom emergency button) and position within easy reach for the resident/patient/client. HS-PCF-9.8
9. Select the correct restraints/safety devices according to facility standards and demonstrate proper use. HS-PCF-9.9
10. Successfully complete Basic Life Support CPR course by a recognized agency such as American Heart Association or American Red Cross. HS-PCF-9.10

HS-PCF-10. Describe and demonstrate infection control practices. HS-PCF-10

1. Cite evidence of medical aseptic hand washing techniques and demonstrate. HS-PCF-10.1
2. Apprise and implement the use of standard precautions when providing care. HS-PCF-10.2

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3. Apprise and use isolation precautions correctly when providing care. HS-PCF-10.3
4. Apprise and use Personal Protective Equipment PPE) correctly. HS-PCF-10.4
5. Demonstrate sterile technique. HS-PCF-10.5

HS-PCF-11. Examine the role and responsibility of individual members of the healthcare team; and interact effectively and sensitively with all team members in promoting the delivery and quality of healthcare. HS-PCF-11

1. Judge the effectiveness of one's role as a team member in a patient care facility and provide quality care. HS-PCF-11.1
2. Compare and contrast the roles of the other members of the patient care team. HS-PCF-11.2

HS-PCF-12. Utilize information on the resident/patient/client care plan to assist with Activities of Daily Living (ADL) skills while promoting the resident's/patient's/client's independence. In addition, beginning and ending procedures should be properly sequenced and performed with all resident/patient/client care. HS-PCF-12

1. Model the proper technique to administer a bed bath while citing evidence of patient/client privacy and dignity. HS-PCF-12.1
2. Assess and assure the resident/patient/client of personal hygiene while providing patient/client privacy. HS-PCF-12.2
3. Apply concepts of good skin care evidences by observation, reporting and recording. HS-PCF-12.3
4. Assess the resident/patient/client by providing oral hygiene, denture care, and eyeglasses care. HS-PCF-12.4
5. Create a model that reveals how to perform a therapeutic backrub. HS-PCF-12.5
6. Compare and contrast shaving techniques between male and female residents and patients; and investigate the safety hazards of an electric vs. a non-electric razor contraindications of its use. HS-PCF-12.6
7. Investigate and model the proper uses of adaptive devices for dressing and grooming. HS-PCF-12.7
8. Construct special diets and hydrations necessary to meet the nutritional needs of the residents/patients, and the clients. HS-PCF-12.8
9. Investigate and compare the proper techniques used for feeding the resident/patient/clients. HS-PCF-12.9
10. Formulate a plan of care for the resident/patient/client evidenced by establishing a routine elimination pattern. HS-PCF-12.10

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HS-PCF-13. Perform basic patient care skills within the scope of practice for a nursing assistant while maintaining resident/patient/client rights, including beginning and ending procedures (i.e. washing hands, gathering equipment, identifying client, providing privacy, etc.). HS-PCF-13

1. Assess and document vital signs including blood pressure using manual and electronic equipment. HS-PCF-13.1
2. Assess height and weight accurately. HS-PCF-13.2
3. Model respect and management for residents'/patients'/clients' environment. HS-PCF-13.3
4. Cite evidence that differentiates abnormal changes in body function of all body systems while keeping the supervisor apprised to the changes. HS-PCF-13.4
5. Formulate ways to implement and maintain fluid balance of residents/patients/clients, by differentiating between dehydration and edema. HS-PCF-13.5
6. Assess and revise as needed various types of urinary catheters while citing evidence of effectiveness. HS-PCF-13.6
7. Utilizing standard precautions, submit specimens per facility policy and procedure. HS-PCF-13.7
8. Construct and implement facility guidelines which detail how to care for residents/patients/clients with various drainage tubes. HS-PCF-13.8
9. Simulate and then critique the required steps necessary to construct the care of the resident/patient/client when death and/or post-mortem care is imminent. HS-PCF-13.9
10. Investigate options to enhance pulmonary functions for resident's/patient's/client's receiving oxygen therapy. HS-PCF-13.10

HS-PCF-14. Assess, demonstrate, and integrate principals of restorative care for the nursing assistant to include maintaining a resident's rights. HS-PCF-14

1. Differentiate the role of the nursing assistant for restorative care needs. HS-PCF-14.1
2. Assess and select methods to promote a resident's/patient's/client's independence. HS-PCF-14.2
3. Organize and demonstrate proper use of assistive devices and equipment when assisting a resident/patient/client in transferring and ambulation skills, to include the correct use of a gait/ambulate belt. HS-PCF-14.3
4. Examine the resident/patient/client and performs range of motion exercises. HS-PCF-14.4
5. Demonstrate correct bowel and bladder training and cite evidence concerning its effectiveness. HS-PCF-14.5

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6. Examine and demonstrate the correct techniques to prevent pressure sores and contractures. HS-PCF-14.6

HS-PCF-15. Cite evidence of the proper role of the nursing assistant in a home health environment. HS-PCF-15

1. Differentiate the nursing assistant's role in home care as compared to an acute and longterm care environment. HS-PCF-15.1
2. Apply concepts to make modifications or adaptations for procedures in a home-care environment. HS-PCF-15.2
3. Investigate methods to promote safety and infection control in the home care environment. HS-PCF-15.3

Pharmacy Operations and Fundamentals (25.453)

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

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

HS-POF-2. Trace the different types of pharmacies, identify the team members needed, and define terminology used in a pharmaceutical setting. HS-POF-2

1. Differentiate the types of pharmacy practices found in community and hospital settings. HS-POF-2.1
2. Discover pre-employment educational requirements, current employment options, and formulate a career path necessary for one option. HS-POF-2.2
3. Distinguish members of the pharmacy team; differentiate between roles and responsibilities of team members, and designate all members in appropriate positions on the organizational chart. HS-POF-2.3
4. Exhibit the appropriate use of pharmacology nomenclature to include terminology related to drug effects. HS-POF-2.4

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5. Demonstrate knowledge and skills in these areas of science relevant to the pharmacy technician role, including anatomy/physiology, pharmacology and basic pharmaceutical chemistry. HS-POF-2.5
6. Explain the differentiation between the following concepts: pharmacokinetics and pharmacodynamics, drug and medication, customer and patient, efficacy and safety. HS-POF-2.6
7. Identify natural sources of drugs and discuss how drugs are chemically produced or altered in laboratories. HS-POF-2.7

HS-POF-3. Support and explain the need for safety and proper infection control in the pharmacy and demonstrate precautions to prevent medication errors. HS-POF-3

1. Establish secured areas within the pharmacy and the personnel permitted in those areas. HS-POF-3.1
2. Apply appropriate infection control techniques set forth by OSHA guidelines. HS-POF-3.2
3. Perform Basic Life Support procedures. HS-POF-3.3
4. Demonstrate proper aseptic techniques. HS-POF-3.4
5. Demonstrate the Pharmacy Assistant's role in contamination control and emergency situations. HS-POF-3.5
6. Connect drug abuse, addiction, and treatment modalities. HS-POF-3.6
7. Demonstrate techniques for handling and disposing of hazardous agents. HS-POF-3.7
8. Identify opportunities for medication errors and explain the effect of medical errors on patient health and safety. HS-POF-3.8

HS-POF-4. Summarize the history of government actions within the pharmaceutical industry including pharmacy law, practice, regulations, and standards. HS-POF-4

1. Identify and deliberate legal aspects of administering medications of State and Federal Regulatory Agencies and Acts affecting pharmacy practice, including but not limited to the Controlled Substances Act (CSA), the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and the Drug Enforcement Administration (DEA). HS-POF-4.1
2. Review the duties of the Georgia State Board of Pharmacy. HS-POF-4.2
3. Conceptualize and discuss the components of the Georgia Pharmacy Practice Act that apply to regulate dispensing of drugs. HS-POF-4.3
4. Categorize the five schedules of controlled substances. HS-POF-4.4
5. Recall the important details of the Health Insurance Portability and Accountability Act regulations. HS-POF-4.5
6. Maintain confidentiality of all client/patient information. HS-POF-4.6

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7. Examine the importance of protecting patient privacy in the pharmacy. HS-POF-4.7

HS-POF-5. Utilize medical and pharmaceutical terms, abbreviations, symbols, and classifications. HS-POF-5

1. Combine the elements to determine medical and pharmaceutical nomenclature. HS-POF-5.1
2. Identify and define organ system terminology. HS-POF-5.2
3. Define and describe different types of diseases and disorders connected with each organ system. HS-POF-5.3
4. Identify and define abbreviations/symbols associated with drug administration. HS-POF-5.4
5. Identify the different classifications of drugs and explain the unique properties. HS-POF-5.5
6. Categorize common drugs by their therapeutic classifications and specify the mechanism of action (MOA), adverse reactions, and other special considerations. HS-POF-5.6
7. Translate generic and brand names for common medications. HS-POF-5.7

HS-POF-6. Interpret parts of a prescription and identify dosage forms, delivery systems and the routes of drug administration. HS-POF-6

1. Locate pharmacy reference sources for: translating a brand name to a generic name; available drug packaging; dosage forms; correct spelling or definition of a medical term/drug; drug costs; locating the National Drug Code number for a drug; correct schedule and/or drug classification. HS-POF-6.1
2. Differentiate between over-the-counter and legend or prescription drugs. HS-POF-6.2
3. State the parts of a National Drug Code. HS-POF-6.3
4. Explicate the uses of drugs as therapeutic, pharmacodynamics, diagnostic, prophylactic, and destructive agents. HS-POF-6.4
5. Differentiate between therapeutic effects, side effects, an allergic response, and toxic effects and emphasize why the healthcare provider should identify each before administering any medication. HS-POF-6.5
6. Compare major dosage forms and delivery systems and itemize advantages and disadvantages associated with these terms. HS-POF-6.6
7. List the major routes of administration and the advantages and disadvantages associated with each dose form. HS-POF-6.7
8. Identify and describe the factors that can influence the route of administration. HS-POF-6.8
9. Discuss correct techniques for administration of oral, topical, and parenteral dose forms. HS-POF-6.9

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10. Locate the specific routes of administration (on manikin when necessary) and explain the advantages and disadvantages of each. HS-POF-6.10
11. Define the terms local use and systemic use, differentiate between systemic and local drug absorption, and explain how these uses are considered when a prescriber selects a drug for a particular patient. HS-POF-6.11

HS-POF-7. Formulate, calculate, and demonstrate proper drug doses to prepare medicine for dispensing for patient use. HS-POF-7

1. Identify and explain when math skills may be needed by pharmacy professionals. HS-POF-7.1
2. Describe four systems of measurement commonly used in pharmacy and convert units from one system to another. HS-POF-7.2
3. Demonstrate calculations, conversions, and proper articulation of fractions, decimals, and percentages in healthcare operations. HS-POF-7.3
4. Demonstrate conversions between Roman and Arabic numerals; US Standard time and military time (24 hour clock); Celsius and Fahrenheit. HS-POF-7.4
5. Calculate percentage of error and evaluate measurements using percentage of error. HS-POF-7.5
6. Identify ratios that express: a drug's therapeutic index, a solution's strength, and a solution's rate. HS-POF-7.6
7. Demonstrate computations with proportions including solving for an unknown term in a proportion and converting measurements units using proportions. HS-POF-7.7
8. Compute correct dosages from doctor orders. HS-POF-7.8
9. Demonstrate the number of tablets/capsules/or volume of liquid necessary to deliver a prescribed dose. HS-POF-7.9
10. Reconstitute oral liquids for dispensing into amber bottles. HS-POF-7.10
11. Calculate parental drug dosages and flow rates when given a supply dosage and a drug order using ratio and proportion equations. HS-POF-7.11
12. Calculate the correct pediatric dosage based on weight recommendation using proportion and the Body Surface Area (BSA) method from the nomogram. HS-POF-7.12

HS-POF-8. Compare and contrast the differences when dealing with pediatric and geriatric pharmacology including administration, dosage, compliance and complications. HS-POF-8

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1. Define the basic principles for administering medications for geriatric and pediatric patients. HS-POF-8.1

2. Specify the effects of nutrition and age-related diseases on therapeutic drug responses. HS-POF-8.2
3. Explain why the elderly may have problems with drug compliance and polypharmacy and discuss possible solutions. HS-POF-8.3
4. Investigate special drug considerations involved in administering medications to pediatric patients including the fetal period during pregnancy, the drug exposure during nursing, and the drug interactions/toxicity. HS-POF-8.4

HS-POF-9. Perform necessary skills needed to prepare medication for patient use including: prescription processing, packaging, labeling, and dispensing. HS-POF-9

1. Identify and discuss all elements necessary for a complete and legal prescription or medication order. HS-POF-9.1
2. Identify and explain the "6 Rights" for processing a prescribed prescription or medication order. HS-POF-9.2
3. Interpret and transcribe prescription and medication orders. HS-POF-9.3
4. Demonstrate process for obtaining patient/customer information such as: use of other medications, such as vitamins or nutrients allergies or adverse reactions. HS-POF-9.4
5. Medical conditions or disabilities reimbursement procedure address, telephone number, date of birth, and other relevant patient/customer information. HS-POF-9.5
6. Demonstrate process for obtaining patient/customer information from prescriber or other healthcare professions regarding the patient's diagnosis or desired therapeutic outcome physical disability medication use, Allergies adverse reactions medical history other relevant patient information. HS-POF-9.6
7. Update patient/customer profile to reflect any changes in medical history, such as increase or decrease in drug dosage, drug interactions, or allergies. HS-POF-9.7
8. Assess prescriptions and medication orders for authenticity and completeness. HS-POF-9.8
9. Calculate and enter prescription or medication order information into the system. HS-POF-9.9
10. Measure, Count, and Calculate medications for dispensing. HS-POF-9.10
11. Demonstrate different types of drug packaging (single dose, multiple dose, aerosols/sprays, etc.) and placement in dispensing systems (automated and unit dose). HS-POF-9.11
12. Identify the required elements of a prescription label and choose the correct auxiliary label. HS-POF-9.12

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13. Demonstrate appropriate verification procedures of the completed measurements, preparation, and/or packaging of medications. HS-POF-9.13
14. Demonstrate delivery of medication to patient-care unit, nursing station stock, crash carts, and document distribution of prescription medication and controlled substances. HS-POF-9.14
15. Discuss specific Georgia Pharmacy Laws regarding receiving or placing calls to a physician authorizing prescriptions and/or prescription refills in the community and hospital setting and discuss the role of the Pharmacy assistant. HS-POF-9.15

HS-POF-10. Calculate and demonstrate through simulation proper IV set up and simulated administration. HS-POF-10

1. Identify and simulate the correct protocol for administration of I.V. fluids and medications. HS-POF-10.1
2. Convert milliliters per hour to a flow rate expressed in drops per minute. HS-POF-10.2
3. Calculate IV fluid rates, total infusion amounts, and IV fluid intake for 24 hours. HS-POF-10.3
4. Demonstrate appropriate technique for regulating an IV fluid rate manually and per pump programming. HS-POF-10.4
5. Simulate proper technique for flushing a heparin lock. HS-POF-10.5

HS-POF-11. Calculate and demonstrate proper compounding techniques and measurements through simulation. HS-POF-11

1. Research extemporaneous compounding and describe common situations in which compounding is necessary. HS-POF-11.1
2. Evaluate the equipment used for weighing, measuring and compounding of pharmaceuticals. HS-POF-11.2
3. Demonstrate proper techniques for weighing pharmaceutical ingredients and measuring liquid volumes. HS-POF-11.3
4. Prepare solutions, suspensions, ointments, creams, powders, suppositories, and capsules and demonstrate the methods used for compounding and blending of pharmaceutical ingredients. HS-POF-11.4

HS-POF-12. Demonstrate appropriate documentation, reports, billing procedures, and other office skills that may be utilized in a pharmacy. HS-POF-12

1. Demonstrate the use of both manual and computer-based information systems to perform job-related activities including generate prescription labels, update supply codes, and produce reports. HS-POF-12.1
2. Coordinate written, electronic, and oral communications throughout the pharmacy practice setting. HS-POF-12.2

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3. Identify and describe types of prescription program sponsors including Medicaid, Medicare, HMO, and PPO. HS-POF-12.3
4. Explain third-party billing procedures and transactions including co-pays, deductibles, rejected claims, and prior authorizations. HS-POF-12.4
5. Demonstrate the process of sales transactions. HS-POF-12.5
6. Collect productivity information as directed by the pharmacist. HS-POF-12.6
7. Demonstrate basic office skills including filing chronologically, maintaining accurate logs, and composing letters and memos. HS-POF-12.7
8. Define necessary disciplinary actions that may be utilized by the employer. HS-POF-12.8

HS-POF-13. Demonstrate necessary education of patients/caregivers to promote health and wellness and to prevent problems including patient non-compliance, drug interactions, and abuse and addiction. HS-POF-13

1. Analyze society's focus on health and wellness vs. treatment of disease signs and symptoms and the impact on the provision of pharmacy care. HS-POF-13.1
2. Explain adverse interactions that may occur through combining vitamins, minerals, nutrients, over-the-counter (OTC) drugs, and prescription drugs. HS-POF-13.2
3. Hypothesize why patients/customers may not communicate to the pharmacist about poly-pharmacy or non-prescription medications that they are taking and the possible ramifications of their lack of communication. HS-POF-13.3
4. Identify why a patient/client may be non-compliant with his/her medication regime. HS-POF-13.4
5. Educate the client/patient regarding potential abuse and addiction of certain therapeutic classes of medications. HS-POF-13.5
6. Provide supplemental drug/nutrient/product education information to patient/advocate/family. HS-POF-13.6

Sports Medicine (25.446)

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

1. Communicate effectively through writing, speaking, listening, reading and interpersonal abilities. HS-SM-1.1
2. Demonstrate creativity by asking challenging questions and applying innovative procedures and methods. HS-SM-1.2
3. Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations. HS-SM-1.3

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4. Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. HS-SM-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. HS-SM-1.5
6. Present a professional image through appearance, behavior and language. HS-SM-1.6

HS-SM-2. Analyze anatomic positions, directional terms, movements, and postures as related to the appendicular skeleton. HS-SM-2

1. Identify the terminology used to describe body part locations, reference positions, anatomical directions, and planes of motion, with their respective axis of rotation in relation to human movement. HS-SM-2.1
2. Describe the various types and characteristics of bones and joints in the human body. HS-SM-2.2
3. Define and demonstrate the joint movement of the skeletal system. HS-SM-2.3

HS-SM-3. Utilize correct terminology, abbreviations, symbols and practices to appropriately communicate oral and written information within the physical medicine setting. HS-SM-3

1. Interpret common terminology, abbreviations, symbols, and acronyms related to physical medicine. HS-SM-3.1
2. Explain the importance of reporting and recording information within the physical medicine team. HS-SM-3.2
3. Define and demonstrate the Subjective, Objective, Assessment and Plan (SOAP) that is standard note writing in patient documentation. HS-SM-3.3
4. Perform record keeping and administrative duties specific to careers within Physical Medicine and Rehabilitation. HS-SM-3.4
5. Demonstrate the ability to obtain and document client history, observation, palpation, and specific tests (HOPS). HS-SM-3.5
6. Demonstrate a variety of methods for recording patient information and special considerations for electronic information and records. HS-SM-3.6
7. Analyze the legal responsibilities regarding privacy for patient information (HIPAA regulations). HS-SM-3.7
8. Organize thoughts and information to develop clear and accurate reports both verbal and written. HS-SM-3.8

HS-SM-4. Demonstrate injury classifications and evaluations. HS-SM-4

1. Differentiate between evaluate and diagnose HS-SM-4.1
2. Distinguish between a sign and a symptom. HS-SM-4.2

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3. Identify and demonstrate appropriate anatomical structures to palpate during an injury evaluation. HS-SM-4.3
4. Administer active and passive ROM tests using standard goniometric techniques. HS-SM-4.4
5. Explain the use of proper manual muscle testing techniques. HS-SM-4.5
6. Examine the use of Orthopedic Special tests and the role in injury assessment. HS-SM-4.6
7. Compare and contrast injuries based upon the onset and duration of symptoms. HS-SM-4.7
8. Clarify the various degrees of open and closed tissue injuries. HS-SM-4.8
9. Classify and explain the various injuries to the bone and joint articulations. HS-SM-4.9
10. Categorize nerve injuries according to mechanism, severity, signs and symptoms. HS-SM-4.10
11. Identify signs and symptoms of skin infections and other dermatological conditions, and outline the proper treatment procedures for these conditions. HS-SM-4.11

HS-SM-5. Analyze and describe the basic principles and concepts of healing. HS-SM-5

1. Define the terminology associated with wound healing. HS-SM-5.1
2. Distinguish between primary and secondary healing. HS-SM-5.2
3. Classify and explain the three phases of acute injury healing. HS-SM-5.3
4. Identify the chronology of wound and common growth factors in healing. HS-SM-5.4
5. Describe the healing characteristics of specific tissues. HS-SM-5.5
6. Discuss factors that affect healing. HS-SM-5.6

HS-SM-6. Demonstrate the steps of Basic Life Support (BLS) with Automated External Defibrillator (AED) Assess and manage patients with bleeding, bony injuries, soft tissue as well as musculoskeletal injuries. HS-SM-6

1. Demonstrate CPR, First Aid, and the AED utilizing current standards. HS-SM-6.1
2. Successfully complete CPR, AED, and First Aid training according to American Heart Association or American Red Cross, or other nationally recognized certifying agency. HS-SM-6.2
3. Identify soft tissue injuries. HS-SM-6.3
4. Demonstrate first aid techniques for managing soft tissue injuries associated within the field of Physical Medicine. HS-SM-6.4
5. Demonstrate first aid techniques for managing boney tissue injuries associated within the field of Physical Medicine. HS-SM-6.5

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6. Assess a victim requiring first aid, identification of the signs and symptoms, and how to locate the victim's injuries. HS-SM-6.6
7. Adapt resources at the scene of injury for the provision of first aid techniques as necessary. HS-SM-6.7
8. Demonstrate performing basic triage techniques for emergency situations involving multiple victims. HS-SM-6.8
9. Assess the treatment needed for environmental injuries including cold and heat related injuries. HS-SM-6.9
10. Access common medical conditions and disorders, and the potential treatment that might be needed. HS-SM-6.10
11. Create an effective emergency action plan. HS-SM-6.11

HS-SM-7. Identify and describe pathogens commonly encountered in physical medicine and demonstrate appropriate infection control principles. HS-SM-7

1. Demonstrate, through practice, aseptic techniques in the physical medicine setting, including use of hand washing and hand sanitizer. HS-SM-7.1
2. Compare the different levels of septic control and uses in physical medicine. HS-SM-7.2
3. Demonstrate utilizing appropriate PPE whenever there is a risk for contact with bodily fluids. HS-SM-7.3
4. Demonstrate properly disposing of hazardous waste and utilizing standard precautions, as described in the rules and regulations set forth by the Occupational Safety and Health Administration (OSHA). HS-SM-7.4

HS-SM-8. Analyze the anatomy, muscular structure, vascular structure, Range of Motion (ROM), Manual Muscle Tests (MMT) and special tests, as well as prevention and treatment, of the upper extremity. HS-SM-8

1. Identify and locate the bones associated with the joints of the upper extremity on either a human skeleton or subject HS-SM-8.1
2. Identify and locate the major muscles of the uper extremity on either a human skeleton or subject. HS-SM-8.2
3. Demonstrate muscle actions associated with the joints of the upper extremity. HS-SM-8.3
4. Identify the primary blood vessels and nerves that innervate the joints of the upper extremity. HS-SM-8.4
5. Administer Passive Range of Motion (PROM) and Active Range of Motion (AROM) of the joints of the upper extremity. HS-SM-8.5
6. Describe how to perform and assess MMTs specific to the joints of the upper extremity. HS-SM-8.6
7. Identify specific types of injuries that occur to the joints of the upper extremity. HS-SM-8.7

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8. Define the proper evaluation procedures and Orthopedic Special Tests specific to injuries associated with the joints of the upper extremity. (Drop Arm, Apley's Scratch etc.) HS-SM-8.8
9. Identify and demonstrate proper preventative techniques associated with the joints of the upper extremity. HS-SM-8.9
10. Utilize proper treatment techniques specific to the joints of the upper extremity. HS-SM-8.10
11. Participate in mock examinations and practical simulations. HS-SM-8.11

HS-SM-9. Analyze the anatomy, muscular structure, vascular structure, Range of Motion (ROM), Manual Muscle Tests (MMT) and special tests, as well as prevention and treatment, of the lower extremity. HS-SM-9

1. Identify and locate the bones associated with the joints of the lower extremity on either a human skeleton or subject. HS-SM-9.1
2. Identify and locate the major muscles of the lower extremity on either a human skeleton or subject. HS-SM-9.2
3. Demonstrate muscle actions associated with the joints of the lower extremity. HS-SM-9.3
4. Identify the primary blood vessels and nerves that innervate the joints of the lower extremity. HS-SM-9.4
5. Administer Passive Range of Motion (PROM) and Active Range of Motion (AROM) tests to the joints of the lower extremity. HS-SM-9.5
6. Describe how to perform and assess MMTs specific to the joints of the lower extremity. HS-SM-9.6
7. Identify specific types of injuries that occur to the joints of the lower extremity. HS-SM-9.7
9. Identify and demonstrate proper preventative techniques associated with the joints of the lower extremity. HS-SM-9.9
10. Demonstrate utilizing proper treatment techniques specific to the joints of the lower extremity. HS-SM-9.10
11. Participate in mock examinations and practical simulations. HS-SM-9.11

HS-SM-10. Analyze the anatomy, muscular structure, vascular structure, and describe the mechanisms signs and symptoms and potential complications associated with head and facial injuries. HS-SM-10

1. Identify and locate the bones associated with the head and face on either a human skeleton or subject. HS-SM-10.1
2. Identify and locate the major muscles of the head and face on either a human skeleton or subject. HS-SM-10.2
3. Demonstrate performing an examination of the cranial nerves. HS-SM-10.3

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4. Identify and describe specific type of injuries that occur to the head and face. HS-SM-10.4
5. Administer Passive Range of Motion (PROM) and Active Range of Motion (AROM) tests to the joints of the lower extremity. HS-SM-10.5
6. Discuss the potential consequences and delayed symptoms of head and facial trauma. HS-SM-10.6
7. Demonstrate utilizing proper treatment specific to head and facial injuries. HS-SM-10.7
8. Describe how to perform an on-site examination of potential head or facial injuries, including special tests for cognition, balance and coordination to include the criteria for medical referral. HS-SM-10.8
9. Research the proper evaluation procedures and Orthopedic Special Tests specific to injuries associated with the joints of the lower extremity. (Lachman's, Anterior Drawer, etc.) HS-SM-10.9
10. Identify and demonstrate proper preventative techniques associated with the joints. HS-SM-10.10
11. Utilize proper treatment techniques specific to the joints of the lower extremity. HS-SM-10.11
12. Participate in mock examinations and practical simulations. HS-SM-10.12

HS-SM-11. Analyze the anatomy, muscular structure, vascular structure, ROM, MMT and special tests, as well as prevention and treatment, of the spine. HS-SM-11

1. Identify and locate the bones associated with the spine on either a human skeleton or subject. HS-SM-11.1
2. Identify and locate the major muscle of the spine on either a human skeleton or subject. HS-SM-11.2
3. Demonstrate muscle actions associated with the spine. HS-SM-11.3
4. Demonstrate performing a functional assessment of myotomes, dermatomes, reflexes and vascularity. HS-SM-11.4
5. Investigate the causes of neuropathy relative to spinal pathology. HS-SM-11.5
6. Explain how to perform Passive Range of Motion (PROM) and Active Range of Motion (AROM) tests of the spine. HS-SM-11.6
7. Describe Manual Muscle Testing (MMT) specific to the spine. HS-SM-11.7
8. Describe how to perform an on-site of potential head or facial injuries, including special tests for cognition, balance and coordination to include the criteria for medical referral. HS-SM-11.8

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SM-12. Analyze the anatomy, muscular structure, vascular structure, ROM, and special tests, as well as prevention and treatment, of the thoracic and

abdominal regions. HS-SM-12

1. Identify and locate the bones associated with the thoracic region on either a human skeleton or subject. HS-SM-12.1
2. Locate major muscles of the thoracic and abdominal regions on either a human skeleton or subject HS-SM-12.2
3. Classify all the major organs of the thoracic and abdominal regions. HS-SM-12.3
4. Identify specific type of injuries that occur associated with the thoracic and abdominal regions. HS-SM-12.4
5. Identify the signs and symptoms from direct or indirect trauma to the thoracic or abdominal area. HS-SM-12.5
6. Describe proper treatment specific to chest and abdominal injuries. HS-SM-12.6
7. Explain how to perform an on-site examination of potential chest and abdominal injuries, indicating criteria for medical referral. HS-SM-12.7

HS-SM-13. Evaluate the importance of nutrition in physical medicine. HS-SM-13

1. Identify the six classes of nutrients and describe the functions of each. HS-SM-13.1
2. Demonstrate the ability to create a balanced meal plan utilizing the current Dietary Guidelines for Americans (e.g.,myPlate) HS-SM-13.2
3. Identify and explain the role of nutritional supplements and ergogenic aids and potential dangers of incorrect usage. HS-SM-13.3
4. Define the term calorie and explain the role in weight maintenance, weight loss, and weight gain. HS-SM-13.4
5. Distinguish between the signs, symptoms, and treatments of various eating disorders. HS-SM-13.5
6. Analyze the importance of water and describe the signs of dehydration. HS-SM-13.6
7. Compare and contrast different methods of fluid replacement for the physically active person. HS-SM-13.7
8. Describe the components of pre-and post-event meals. HS-SM-13.8

HS-SM-14. Demonstrate the process for basic assessment (i.e. vital signs, height, weight, etc.), monitoring, and reporting/recording patient/client's health status. HS-SM-14

1. Demonstrate the ability to measure temperature, pulse, respirations, blood pressure, height and weight and identify normal and abnormal values. HS-SM-14.1
2. Demonstrate the ability to create a balanced meal plan utilizing the current Dietary Guidelines for Americans (e.g.,myPlate) HS-SM-14.2

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3. Apply mathematical concepts and perform mathematical calculations appropriate to clinical expectations and/or work-based learning site. HS-SM-14.3

HS-SM-15. Analyze and describe the basic principles and concepts of rehabilitation. HS-SM-15

1. Describe muscle fiber types and the proper use of each during activity. HS-SM-15.1
2. Distinguish between anaerobic and aerobic exercise. HS-SM-15.2
3. Identify and demonstrate types of isotonic, isometric, and isokinetic exercises. HS-SM-15.3
4. Assess the difference between concentric and eccentric muscle contractions. HS-SM-15.4
5. Distinguish between open and closed kinetic chain activity. HS-SM-15.5
6. List the Proprioceptive Neuromuscular Facilitation (PNF) techniques commonly used in rehabilitation. HS-SM-15.6
7. Identify the basic guidelines, components, objectives and phases of rehabilitation. HS-SM-15.7
8. Evaluate and outline a patient's progress in rehabilitation and return-to-competition criteria. HS-SM-15.8
9. Outline and demonstrate a therapeutic exercise program for a specific injury. HS-SM-15.9

HS-SM-16. Analyze and describe the principles of pharmacology. HS-SM-16

1. Identify the role that the following types of medications have on the body, including the following: anti-pyretic, anti-inflammatory, analgesic, anti-fungal, gastrointestinal, antibiotics, asthma medication, other over-the-counter (OTC) medications. HS-SM-16.1
2. Explain the legality of using prescription and over the counter medications with minors. HS-SM-16.2
3. Identify specific prescription medications commonly used after sustaining an injury. HS-SM-16.3

HS-SM-17. Analyze and describe the appropriate use of therapeutic modalities. HS-SM-17

1. Identify the types and describe the physiological effects and considerations in the use of the following: cold and hot therapies, ultrasound therapy, electrotherapy, manual and mechanical modalities therapy, light modalities HS-SM-17.1

Surgical Technician I (25

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

1. Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities. HS-STI-1.1

2. Demonstrate creativity by asking challenging questions and applying innovative procedures and methods. HS-STI-1.2
3. Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations. HS-STI-1.3
4. Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. HS-STI-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. HS-STI-1.5
6. Present a professional image through appearance, behavior and language. HS-STI-1.6

HS-STI-2. Explore options in the Surgical Industry, including inpatient and outpatient surgery settings and the organizational structure. HS-STI-2

1. Research current employment options in the surgical technician profession, and the education and training required. HS-STI-2.1
2. Distinguish between state and federal licensure laws. HS-STI-2.2
3. Differentiate between roles, department and responsibilities of team members, and place all members in appropriate positions on the organizational chart. HS-STI-2.3
4. Research the jobs that must be done in a surgery setting and who traditionally performs those job duties. HS-STI-2.4

HS-STI-3. Abide by regulations governing workplace safety, infection control, operational standards, patient confidentiality, and facility protocol. HS-STI-3

1. Demonstrate adhering to regulations regarding workplace safety (e.g., OSHA, NIOSH) for fire, gas, and electrical hazards specific to the operating room. HS-STI-3.1
2. Demonstrate abiding by regulations regarding operational standards (e.g., JACHO, CDC). HS-STI-3.2
3. Demonstrate accessing SDS (Safety Data Sheets) when chemicals are being used. HS-STI-3.3
4. Demonstrate following exposure control plans in the event of occupational exposure. HS-STI-3.4
5. Show appropriate use of personal protective equipment and effective hand sanitation procedures. HS-STI-3.5
6. Demonstrate following policy for handling and disposing of biohazardous waste. HS-STI-3.6

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7. Demonstrate reacting to emergency situations following agency procedures and facility protocol. HS-STI-3.7
8. Demonstrate the knowledge and skills to provide a safe Perioperative environment. HS-STI-3.8

HS-STI-4. Utilize appropriate surgical and medical terminology. HS-STI-4

1. Demonstrate the use of standard medical and pharmaceutical abbreviations and symbols. HS-STI-4.1
2. Evaluate basic anatomy and physiology and pathophysiology terminology relating to general surgical procedure terminology. HS-STI-4.2

HS-STI-5. Apply principals of asepsis and infection control in the perioperative and operative settings. HS-STI-5

1. Identify infectious disease process, including acquisition, response, and defense mechanisms. HS-STI-5.1
2. Demonstrate classifying common pathogenic microorganisms. HS-STI-5.2
3. Demonstrate simulated basic wound care. HS-STI-5.3
4. Describe stages of wound healing and possible complications. HS-STI-5.4
5. Demonstrate sanitation, disinfection and sterilization in the lab. HS-STI-5.5
6. Demonstrate a thorough knowledge of aseptic technique and principles. HS-STI-5.6
7. Evaluate the importance of workflow in and out of the operating rooms and the entire surgical suite. HS-STI-5.7

HS-STI-6. Identify the need to respond to changes in medical status of surgical patients. HS-STI-6

1. Identify normal vital sign ranges for pediatric and adult patients. HS-STI-6.1
2. Recognize vital sign variations and report to nurse. HS-STI-6.2
3. Demonstrate first aid and Basic Life Support techniques and initiate when necessary. HS-STI-6.3
4. Identify the need to monitor, assess and provide for the needs of the patient and the surgical team perioperatively and intraoperatively. HS-STI-6.4

Surgical Technician II (25.448)

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

1. Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities. HS-STII-1.1

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2. Demonstrate creativity with multiple approaches to ask challenging questions resulting in innovative procedures, methods, and products. HS-STII-1.2
3. Exhibit critical thinking and problem solving skills to locate, analyze, and apply information in career planning and employment situations. HS-STII-1.3
4. Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. HS-STII-1.4
5. Apply the appropriate skill sets to be productive in a changing, technological, and diverse workplace to be able to work independently, interpret data, and apply team work skills. HS-STII-1.5
6. Present a professional image through appearance, behavior, and language. HS-STII-1.6

HS-STII-2. Utilize fundamental surgical technician knowledge to perform as a member of an operating room team including scope of practice, legal and ethical regulations, HIPPA, and safety and infection control. HS-STII-2

1. Demonstrate general knowledge of the operating room (OR). HS-STII-2.1
2. Demonstrate proper procedures for donning surgical scrub, gown and gloves. HS-STII-2.2
3. Demonstrate performing patient prep procedures, including physical care and psychological preparation. HS-STII-2.3
4. Apply medical law, ethics, and HIPPA regulations. HS-STII-2.4
5. Identify and describe strategies to decrease legal liability. HS-STII-2.5
6. Differentiate scope of practice for members of the OR team. HS-STII-2.6
7. Demonstrate response to various surgical complication and disasters in accordance with facility protocols. HS-STII-2.7

HS-STII-3. Utilizing simulation, apply basic surgical technician skills in the operating room. HS-STII-3

1. Identify surgical procedures using correct terminology. HS-STII-3.1
2. Describe safe practice techniques in regards to perioperative routines, patient transportation, and positioning. HS-STII-3.2
3. Demonstrate proper patient and skin preparation for common surgical procedures. HS-STII-3.3
4. Show proper draping for common surgical procedures. HS-STII-3.4
5. Identify and describe surgical instruments and equipment. HS-STII-3.5
6. Demonstrate proper operative exposure and illumination for common surgical procedures. HS-STII-3.6
7. Classify basic types and locations of surgical incisions. HS-STII-3.7

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8. Discuss radiological, EKG, and lab data utilized by medical personnel relating to the surgical procedures HS-STII-3.8
9. Illustrate proper handling and labeling of specimens. HS-STII-3.9
10. Demonstrate simulated preparation of suture and implant materials. HS-STII-3.10
11. Discuss techniques for hemostasis. HS-STII-3.11
12. Analyze the roles of the surgical team, and what occurs in grafting and transplant cases HS-STII-3.12
13. Demonstrate simulated proper count, post-operative, and clean-up routines. HS-STII-3.13

HS-STII-4. Instruments and Sterilization Perform common simulated tasks related to the role of surgical technician in the operating room. HS-STII-4

1. Identify common surgical instruments by correct name. HS-STII-4.1
2. Demonstrate proper handling and use of common surgical instruments, proper arrangement of surgical instruments, and proper method of instrument decontamination and sterilization. HS-STII-4.2

HS-STII-5. Correlate the elements, action, and use of medications and anesthetic agents used by medical personnel during the perioperative experience. HS-STII-5

1. Differentiate drug groups by class and action. HS-STII-5.1
2. Perform basic metric conversions. HS-STII-5.2
3. Discuss administration, preparation, and handling of drugs by appropriate medical personnel in the operating room. HS-STII-5.3

HS-STII-6. Analyze the role of the circulator and how the surgery tech can assist with circulator duties. HS-STII-6

1. Distinguish between the job duties of sterile surgery personnel and non-sterile circulating personnel. HS-STII-6.1
2. Assist (simulated in lab) the primary circulator to meet the needs of the patient and the surgical team in the perioperative experience. HS-STII-6.2
3. Simulate in the lab a demonstration of a circulator's duties that a surgical technician might be asked to perform based on facility protocol. HS-STII-6.3

Patient Care Technician (25.449)

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

1. Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities. HS-PCT-1.1
2. Demonstrate creativity by asking challenging questions and applying innovative procedures and methods. HS-PCT-1.2

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3. Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations. HS-PCT-1.3
4. Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. HS-PCT-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. HS-PCT-1.5
6. Present a professional image through appearance, behavior and language. HS-PCT-1.6

HS-PCT-2. Demonstrate professional demeanor at all times, both in the classroom and within the healthcare facilities. HS-PCT-2

1. Understand and demonstrate dependability relating to being present, on time, and ready to participate. HS-PCT-2.1
2. Understand and demonstrate compassion relating to being sensitive to the needs of patients and co-workers. HS-PCT-2.2
3. Understand and demonstrate flexibility relating to willingness to adapt to changes, accept added responsibility, and be a team player. HS-PCT-2.3
4. Understand and demonstrate honesty relating to willingness to admit mistakes, to get help when unsure of a procedure, and to act in the interest of client safety. HS-PCT-2.4
5. Understand and demonstrate integrity relating to client privacy and client confidentiality. HS-PCT-2.5
6. Understand and demonstrate the importance of personal appearance to include appropriate dress code, good personal hygiene, and professional demeanor. HS-PCT-2.6
7. Understand and demonstrate the importance of good organizational skills. HS-PCT-2.7
8. Understand and demonstrate excellent time management skills, including completion of assignments. HS-PCT-2.8

HS-PCT-3. Demonstrate an understanding of professional ethics and legal responsibilities. HS-PCT-3

1. Demonstrate techniques for maintaining confidentiality and privacy to include Health Insurance Portability and Accountability Act (HIPAA) regulations. HS-PCT-3.1
2. Explain medico legal concepts. HS-PCT-3.2
3. Acknowledge a personal code of ethics. HS-PCT-3.3

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4. Explain the national professional standards including the American Nurses' Association National Code of Ethics, state ethical standards, the Hippocratic Oath, state standards related to unlicensed assistive personnel and state standards for licensed personnel. HS-PCT-3.4

HS-PCT-4. Demonstrate data collection as it relates to the goals, objectives, and implementation of the treatment plan according to their scope of practice. HS-PCT-4

1. Observe, record, and report client behavior. HS-PCT-4.1
2. Assist treatment team in observing, reporting, and recording client healthcare needs, strengths, and problems. HS-PCT-4.2
3. Demonstrate following policies and protocols of the facility. HS-PCT-4.3
4. Demonstrate all necessary interventions of the patient treatment plan relating to the scope of practice. HS-PCT-4.4
5. Examine and demonstrate the importance of client collaboration and acceptance in identifying and implementing appropriate interventions in the treatment plan. HS-PCT-4.5
6. Assist in identifying potential educational needs of the patient and the caregiver. HS-PCT-4.6

HS-PCT-5. Apply infection control guidelines including techniques for maintaining isolation. HS-PCT-5

1. Practice standard precautions, utilizing appropriate PPE (personal protective equipment). HS-PCT-5.1
2. Demonstrate proper isolation precautions and techniques. HS-PCT-5.2
3. Perform donning of sterile gloves and changing a sterile dressing utilizing appropriate sterile technique. HS-PCT-5.3
4. Describe risk and prevention of cross contamination. HS-PCT-5.4
5. Demonstrate sanitizing, disinfecting, and sterilizing techniques. HS-PCT-5.5

HS-PCT-6. Examine the trends, financing, and principles of healthcare economics including the importance of safety practices. HS-PCT-6

1. Explain the cause and effect of risk management. HS-PCT-6.1
2. Apply the principles of body mechanics in moving, lifting, and transferring clients to reduce risks of injury to clients or healthcare workers. HS-PCT-6.2
3. Research how safety processes and procedures impact healthcare costs related to different career pathways. HS-PCT-6.3
4. Assess and report incidents that can occur in healthcare facilities and the proper reporting procedures. HS-PCT-6.4

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5. Research the impact of healthcare choices made by consumers on the economy relating to personal consumption and increased healthcare dollars. HS-PCT-6.5

HS-PCT-7. Demonstrate advanced technical skills in respiratory care. HS-PCT-7

1. Identify normal and abnormal respiratory effort. HS-PCT-7.1
2. Demonstrate correct placement of cannula and mask for oxygen therapy. HS-PCT-7.2
3. Demonstrate set up and use of portable oxygen cylinder. HS-PCT-7.3
4. Correctly apply pulse oximeter for measurement of oxygen saturation and recognize the difference between normal and abnormal readings. HS-PCT-7.4
5. Observe medical personnel assisting clients with prescribed, self-administered respiratory management devices, including metered dose inhalers and nebulizers adhering to scope of practice and facility protocol. HS-PCT-7.5
6. Demonstrate techniques to assist patient with incentive spirometers, coughing, and deep-breathing exercises. HS-PCT-7.6

HS-PCT-8. Demonstrate advanced technical skills in wound care within their scope of practice. HS-PCT-8

1. Describe variations in wounds and methods for reporting. HS-PCT-8.1
2. Describe pain associated with wounds and techniques for assessing, reporting, and managing pain. HS-PCT-8.2
3. Utilizing simulation, demonstrate techniques for:
wound care, including reporting observations. HS-PCT-8.3
6. Adhere to proper disposal of bio hazardous materials as required by OSHA, utilizing sharps containers and biohazard red bags. HS-PCT-8.6
7. Demonstrate use of personal protective equipment. HS-PCT-8.7
8. Document dressing changes, hot and cold treatments, and observations in the simulated electronic medical record. HS-PCT-8.8

HS-PCT-9. Demonstrate advanced technical skills in nutrition and fluid intake, elimination, and ostomy care. HS-PCT-9

1. Demonstrate measurement of fluid intake and output including documentation. HS-PCT-9.1
2. Observe medical personnel management of patients receiving tube feedings and understand facility protocol and scope of practice related to this skill. HS-PCT-9.2
3. Observe IV site for signs/symptoms of infiltration and report findings to the nurse. HS-PCT-9.3
4. Demonstrate in the lab, techniques for urinary catheterization and required documentation. HS-PCT-9.4

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5. Demonstrate in the lab, the techniques for urinary catheter removal. HS-PCT-9.5
6. Perform techniques for collecting urine and stool specimens, including documentation. HS-PCT-9.6
7. Perform simulated ostomy care procedures and identify reportable signs/symptoms. HS-PCT-9.7

HS-PCT-10. Perform advanced technical skills in medical laboratory and phlebotomy through simulation. HS-PCT-10

1. Demonstrate patient safety throughout the collection process. HS-PCT-10.1
2. Exhibit proper procedure for patient identification and confirmation of proper preparation for tests ordered. HS-PCT-10.2
3. Demonstrate proper procedure for capillary blood tests, based on patient age and condition. HS-PCT-10.3
4. Identify and demonstrate techniques for venipuncture procedures. HS-PCT-10.4
5. Recognize and react appropriately for common complications for primary collection. HS-PCT-10.5
6. Perform proper order of draw when drawing multiple samples. HS-PCT-10.6
7. Identify proper tube based on tube additive for common blood tests. HS-PCT-10.7
8. Identify equipment used for basic venipuncture and the function of each. HS-PCT-10.8
9. Demonstrate verification of safety of equipment, including sterility, expiration date, and manufacturer defects. HS-PCT-10.9
10. Demonstrate the proper procedure for preparation of peripheral blood smears and blood cultures. HS-PCT-10.10
11. Demonstrate collection of blood samples to test for inborn errors of metabolism. HS-PCT-10.11
12. Describe venipuncture process for blood donations. HS-PCT-10.12
13. Perform calculations to determine volume requirements to avoid iatrogenic anemia. HS-PCT-10.13
14. Demonstrate proper labeling for all specimens. HS-PCT-10.14
15. Perform quality control and maintain logs as required for (Clinical Laboratory Improvement Amendments) CLIA-waived procedures. HS-PCT-10.15
16. Discuss proper specimen preparation and procedures for storing and/or transporting specimens. HS-PCT-10.16

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17. State proper procedure to give patient directions for non-blood, patient collected specimens. HS-PCT-10.17
18. Utilize techniques to avoid pre-analytical errors when collecting specimens. HS-PCT-10.18
19. Demonstrate proper chain of custody procedure when obtaining specimens for law enforcement. HS-PCT-10.19
20. Utilize technology to input and retrieve patient data. HS-PCT-10.20
21. Report normal and critical results to providers following facility protocol. HS-PCT-10.21

HS-PCT-11. Perform advanced technical skills in cardiovascular care. HS-PCT-11

1. Set up client and apply leads for (Electrocardiogram) EKG or cardiac monitoring correctly for 3-lead, 5-lead, and 12-lead EKGs. HS-PCT-11.1
2. Demonstrate three methods to calculate heart rate from the EKG tracing: 6-second method, R to R (Rate to Rate), sequencing. HS-PCT-11.2
3. Identify and resolve artifacts from the EKG tracing, including wandering baseline, somatic, and electrical. HS-PCT-11.3
4. Demonstrate proper upload of EKG to patient record. HS-PCT-11.4
5. Identify and explain waves, complexes, rate, and intervals of normal versus abnormal EKG. HS-PCT-11.5
6. Evaluate EKG waveforms for symmetry, direction, and amplitude – P waves, QRS complexes (Q-waves, R-waves, S-waves), ST segments (S-waves, T-waves), T waves. HS-PCT-11.6
7. Compare and contrast normal sinus, bradycardia, tachycardia, and asytole rhythms by evaluating manual or digital rhythm strips. HS-PCT-11.7
8. Identify and explain the major variances to waveforms related to ischemia, injury, or infarction. HS-PCT-11.8
9. Demonstrate the proper response to life-threatening dysrhythmias. HS-PCT-11.9
10. Demonstrate the proper method to verify EKG machine speed and sensitivity. HS-PCT-11.10
11. Identify and explain pacemaker spikes on the EKG tracing. HS-PCT-11.11

Emergency Medical Responder (25.45)

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

1. Communicate effectively through writing, speaking, listening, reading and interpersonal abilities. HS-EMR-1.1
2. Demonstrate creativity by asking challenging questions and applying innovative procedures and methods. HS-EMR-1.2

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3. Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations. HS-EMR-1.3
4. Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. HS-EMR-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. HS-EMR-1.5
6. Present a professional image through appearance, behavior and language. HS-EMR-1.6

HS-EMR-2. Examine the Emergency Medical Services (EMS) system and the role of Emergency Medical Responders within the system. HS-EMR-2

1. Examine the EMS system and the roles, responsibilities, and professionalism of EMS personnel. HS-EMR-2.1
2. Display appropriate professional interactions with other EMS personnel. HS-EMR-2.2
3. Demonstrate evaluating scope of practice for Emergency Medical Responders (EMR). HS-EMR-2.3
4. Explain quality improvement. HS-EMR-2.4
5. Identify and explain the impact of research on EMR care. HS-EMR-2.5

HS-EMR-3. Evaluate the necessity of scene safety, emotional and physical well-being, and stress management of the Emergency Medical Services provider. HS-EMR-3

1. Demonstrate the application of standard safety precautions. HS-EMR-3.1
2. Demonstrate the appropriate use of personal protective equipment (PPE). HS-EMR-3.2
3. Identify and describe stress-management techniques (particular associated with death and dying). HS-EMR-3.3
4. Discuss the prevention of response-related injuries. HS-EMR-3.4
5. Demonstrate appropriate lifting and moving techniques. HS-EMR-3.5

HS-EMR-4. Follow appropriate protocol and regulations to document findings and data regarding patients. HS-EMR-4

1. Demonstrate following protocol to collect data. HS-EMR-4.1
2. Demonstrate performing a recording of a patient findings. HS-EMR-4.2
3. Demonstrate the process of calling for additional resources. HS-EMR-4.3
4. Evaluate the process for the transfer of patient care. HS-EMR-4.4
5. Demonstrate teamwork and interagency cooperation. HS-EMR-4.5

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6. Demonstrate principles of communicating with patients in a manner that achieves a positive relationship. HS-EMR-4.6
7. Demonstrate utilizing age-appropriate interviewing techniques when working with patients and bystanders at the scene regarding blood borne pathogen and safety practices of HIV (Human Immunodeficiency Virus), Hepatitis B & C. HS-EMR-4.7

HS-EMR-5. Analyze the legal and ethical issues of Emergency Medical Services providers including Emergency Medical Responders and all levels of Emergency Medical Technicians, and the medical and legal issues at the scene of an emergency, while awaiting a higher level of care. HS-EMR-5

1. Analyze legal/ethical issues that may impact the EMR including the following: consent and refusal of care; confidentiality; advanced directives; tort and criminal actions; evidence preservation; statutory responsibilities; mandatory reporting; ethical principles and moral obligations; end-of-life issues. HS-EMR-5.1

HS-EMR-6. Demonstrate the anatomy and function of the upper airway, heart, vessels, blood, lungs, skin, muscles, and bones as the foundation of emergency care. Illustrate the different systems of the body and how they relate to patient care. HS-EMR-6

1. Summarize the importance of the Emergency Medical Services provider's knowledge of the body's anatomy and physiology in relation to providing competent care and accurate communication to other health care providers. HS-EMR-6.1
2. Demonstrate providing competent patient care and accurate communication to other health care providers using knowledge of anatomy and physiology. HS-EMR-6.2

HS-EMR-7. Utilize appropriate medical and anatomical terminology. HS-EMR-7

1. Recognize simple medical prefixes, suffixes, and combining words pertaining to Emergency Medical Responders. HS-EMR-7.1

HS-EMR-8. Respond to life threats using knowledge of shock and respiratory compromise. HS-EMR-8

1. Demonstrate analyzing respiratory compromise. HS-EMR-8.1
2. Demonstrate evaluating and treating a patient with impaired airway, respiration, or ventilation. HS-EMR-8.2
3. Demonstrate recognizing the signs and symptoms of shock. HS-EMR-8.3

HS-EMR-9. Recognize local public health resources and the role EMS personnel play in public health emergencies. HS-EMR-9

1. Recognize and distinguish how EMS serves as a public health system. A) Examine how EMS provides critical public health functions; B) Research and describe how EMS collaborates with other public health agencies. HS-EMR-9.1

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2. Compare and contrast the roles of EMS in public health. A) Interpret and classify health prevention and promotion strategies. i. Cite primary prevention- preventing disease development through the use of vaccination and education practices. ii. Cite secondary prevention—preventing the complications and/or progression of disease. iii. Cite the importance and education for health screenings. B) Research and summarize the role of EMS providers as first-line caregivers for disease surveillance, and providing patient care report information on epidemics of disease HS-EMR-9.2
3. Formulate the EMS personnel's role in injury prevention, providing training for safety equipment, and conducting educational trainings for car-seat safety, seat belt use, and helmet use, driving under the influence, falls and fires. HS-EMR-9.3

HS-EMR-10. Demonstrate the medications that EMR may self-administer to a peer in an emergency. HS-EMR-10

1. Identify and demonstrate using the names, effects, indications, routes of administration, and dosages for the medications administered within the scope of practice of the Emergency Medical Responder (EMR). HS-EMR-10.1

HS-EMR-11. Demonstrate fundamental depth and foundational breadth of anatomy and physiology to assure a patient airway, adequate mechanical ventilation, and respiration while awaiting EMS response for patients of all ages. HS-EMR-11

1. Demonstrate utilizing scene information and patient assessment findings to identify and manage immediate life threats and injuries within the scope of practice of the EMR. HS-EMR-11.1
2. Demonstrate promoting the need for crew members to evaluate scene safety prior to approach. HS-EMR-11.2
3. Demonstrate scene management, including the following: impact of the environment on patient care; addressing hazards; violence; and the need for additional or specialized resources and standard precautions. HS-EMR-11.3
4. Demonstrate performing the primary assessment for all patient situations including the following: general impression; level of consciousness; ABCs; identifying life threats; and assessment of vital functions. HS-EMR-11.4
5. Demonstrate displaying sensitivity toward patients when performing a primary assessment. HS-EMR-11.5
6. Identify and demonstrate the appropriate treatment/procedures needed to preserve life. HS-EMR-11.6
7. Analyze the method for determining the chief complaint and determining the mechanism of injury/nature of illness. HS-EMR-11.7

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8. Identify and describe signs and symptoms for various chief complaints. HS-EMR-11.8
9. Demonstrate history-taking techniques, including the following: determining the chief complaint, determining the mechanism of injury/nature of illness; and assessing for associated signs and symptoms. HS-EMR-11.9
10. Demonstrate displaying sensitivity toward patients during history taking by using affective responding. HS-EMR-11.10
11. Demonstrate performing a rapid full body scan, a focused assessment of pain, and an assessment of vital signs. HS-EMR-11.11
12. Demonstrate determining when to reassess patients. HS-EMR-11.12

HS-EMR-12. Identify and manage immediate life threats and injuries using scene information and simple patient assessment findings, within the scope of practice of the EMR. HS-EMR-12

1. Demonstrate utilizing scene information and patient assessment findings to identify and manage immediate life threats and injuries within the scope of practice of the EMR. HS-EMR-12.1
2. Promote the need for crew members to evaluate scene safety prior to approach. HS-EMR-12.2
3. Demonstrate scene management, including the following: impact of the environment on patient care; addressing hazards; violence; and the need for additional or specialized resources and standard precautions. HS-EMR-12.3

HS-EMR-13. Describe the primary assessment for all patient situations including the following: general impression; level of consciousness; ABCs; identifying life threats; and assessing vital functions. HS-EMR-13

1. Demonstrate performing the primary assessment for various patient situations including the following: general impression; level of consciousness; ABCs; identifying life threats; and assessing vital functions. HS-EMR-13.1
2. Demonstrate displaying sensitivity toward patients when performing a primary assessment. HS-EMR-13.2
3. Describe and demonstrate the appropriate treatment/procedures needed to preserve life. HS-EMR-13.3

HS-EMR-14. Demonstrate utilizing subjective and objective observations and age-appropriate interview techniques to identify and manage immediate life threats and injuries within the scope of practice of the EMR. HS-EMR-14

1. Demonstrate displaying appropriate sensitivity for age-related differences in the assessment and care of patients. HS-EMR-14.1

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2. Perform the following history taking techniques: method for determining the chief complaint; method for determining the mechanism of injury/nature of illness; assessing associated signs and symptoms for various chief complaints. HS-EMR-14.2
3. Demonstrate displaying sensitivity toward patients during history taking. HS-EMR-14.3

HS-EMR-15. Demonstrate performing various assessment techniques to identify and manage immediate life threats and injuries within the scope of practice of the EMR. HS-EMR-15

1. Demonstrate performing the following: rapid full body scan; focused assessment of pain; assessment of vital signs. HS-EMR-15.1
2. Describe how and when to reassess patients. HS-EMR-15.2

HS-EMR-16. Recognize and manage life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response. HS-EMR-16

1. Demonstrate the assessment and management of a medical complaint. HS-EMR-16.1
2. Identify and describe the anatomy, signs, symptoms, and management of the following conditions: decreased level of responsiveness; seizure; and stroke. HS-EMR-16.2
3. Recognize the anatomy, signs, symptoms, and management of shock associated with abdominal emergencies including gastrointestinal bleeding. HS-EMR-16.3
4. Evaluate and manage shock and difficulty breathing related to anaphylactic reactions. HS-EMR-16.4
5. Analyze the signs and symptoms of a patient who may have an infectious disease. HS-EMR-16.5
6. Anticipate the need for decontamination of equipment after treating a patient. HS-EMR-16.6
7. Recognize that diabetic emergencies can cause altered mental status. HS-EMR-16.7
8. Identify and describe behaviors that pose a risk to the EMR, patient or others. HS-EMR-16.8
9. Identify and describe the anatomy involved and the signs, symptoms and management for chest pain and cardiac arrest. HS-EMR-16.9
10. Identify and describe how and when to contact a poison control center. HS-EMR-16.10
11. Recognize and manage patients with possible carbon monoxide poisoning and nerve agent poisoning. HS-EMR-16.11

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12. Identify and describe the anatomy, signs, symptoms and management of respiratory emergencies, including those that affect the upper airway and lower airway. HS-EMR-16.12
13. Demonstrate analyzing blood pressure assessment in hemodialysis patients. HS-EMR-16.13
14. Recognize and manage shock associated with vaginal bleeding. HS-EMR-16.14
15. Recognize and manage a nose bleed. HS-EMR-16.15
16. Demonstrate the assessment and management of the following types of medical complaints: neurological; abdominal/gastrointestinal; immunologic; infectious diseases; endocrine disorders; psychiatric; cardiovascular; toxicological; respiratory; genitourinary; gynecological; and diseases of the eyes, ears, nose and throat. HS-EMR-16.16

HS-EMR-17. Use assessment information to recognize shock, respiratory failure or arrest, and cardiac arrest based on assessment findings and manage the emergency while awaiting additional emergency response. HS-EMR-17

1. Establish certification in CPR consistent with the AHA Healthcare Provider level (refer to the current American Heart Association guidelines). HS-EMR-17.1

HS-EMR-18. Recognize and manage life threats based on assessment findings for an acutely injured patient while awaiting additional emergency medical response. HS-EMR-18

1. Demonstrate the management of bleeding. HS-EMR-18.1
2. Recognize and manage the following types of chest trauma: blunt versus penetrating mechanisms; open chest wound; and impaled object. HS-EMR-18.2
3. Evaluate and manage the following types of abdominal and genitourinary trauma: blunt versus penetrating mechanisms; evisceration; and impaled object. HS-EMR-18.3
4. Identify and manage the following types of orthopedic trauma: open fractures; closed fractures; dislocations; and amputations. HS-EMR-18.4
5. Assess and provide management for the following types of soft tissue trauma: wounds; burns (electrical, chemical, thermal); and chemicals in the eye and on the skin. HS-EMR-18.5
6. Recognize and manage life threats as they relate to head, facial, neck and spinal trauma. HS-EMR-18.6
7. Identify and manage spinal trauma. HS-EMR-18.7
8. Evaluate and manage the following: the pregnant patient; pediatric patient; and geriatric patient. HS-EMR-18.8

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9. Recognize and manage the following: submersion incidents and temperature-related illness. HS-EMR-18.9
10. Identify and manage multi-system trauma. HS-EMR-18.10
11. Assess and provide management for the following types of injuries in all patients (including pregnant, pediatric, and geriatric): bleeding; chest trauma; abdominal and genitourinary trauma; orthopedic trauma; soft tissue trauma; head, facial, neck and spine trauma; environmental emergencies; and multi-system trauma. HS-EMR-18.11

HS-EMR-19. Recognize and manage life threats based on assessment findings for a pregnant patient while awaiting additional emergency response. HS-EMR-19

1. Display appropriate sensitivity for pregnant patients while awaiting response. HS-EMR-19.1
2. Recognize and manage the normal delivery of a newborn. HS-EMR-19.2
3. Evaluate and manage a pregnant patient with vaginal bleeding. HS-EMR-19.3

HS-EMR-20. Recognize and manage life threats based on simple assessment findings for a neonatal patient while awaiting additional emergency response. HS-EMR-20

1. Demonstrate proper newborn care and neonatal resuscitation. HS-EMR-20.1

HS-EMR-21. Identify, assess, and treat infants and children with medical, traumatic, and environmental emergencies and recognize and mange life threats based on assessment findings for a pediatric patient while awaiting additional emergency response. HS-EMR-21

1. Discuss age-related assessment techniques and findings, and treatment modifications for pediatric specific major diseases and/or emergencies, including upper airway obstruction; lower airway reactive disease; respiratory distress/failure/arrest; shock; seizure; and stroke. HS-EMR-21.1
2. Demonstrate age-related findings, and age-related assessment and treatment modifications for pediatric specific major diseases and/or emergencies. HS-EMR-21.2

HS-EMR-22. Recognize and manage life threats based on assessment findings for a geriatric patient while awaiting additional emergency response. HS-EMR-22

1. Identify the impact of age-related changes on assessment and care of a geriatric patient. HS-EMR-22.1
2. Recognize and report abuse and neglect. HS-EMR-22.2

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HS-EMR-23. **Identify and describe the operational roles and responsibilities of the EMS to ensure patient, public, and EMS personnel safety.** HS-EMR-23

1. Analyze the operational roles and responsibilities used to ensure safe patient, public, and personnel safety. HS-EMR-23.1
2. Identify the risks and responsibilities of emergency response. HS-EMR-23.2

HS-EMR-24. **Establish and work within the Incident Management System.** HS-EMR-24

1. Certify in ICS-100/200: Introduction to ICS, or equivalent and FEMA IS-700/800: NIMS. HS-EMR-24.1

HS-EMR-25. **Perform necessary procedures during a multiple-casualty incident when a multiple-casualty incident plan is activated within EMR scope of practice.** HS-EMR-25

1. Demonstrate appropriate triage techniques. HS-EMR-25.1
2. Analyze resource management and how other resources can be utilized. HS-EMR-25.2

HS-EMR-26. **Perform duties of EMR within scope of practice safely in and around a landing zone during air medical operations and transport.** HS-EMR-26

1. Analyze safe air medical operations. HS-EMR-26.1
2. Identify the criteria for utilizing air medical response. HS-EMR-26.2

HS-EMR-27. **Analyze techniques used by appropriate personnel to ensure EMS personnel and patient safety during extrication operations.** HS-EMR-27

1. Analyze safe vehicle extrication. HS-EMR-27.1
2. Evaluate the use of hand tools utilized during vehicle extrication. HS-EMR-27.2

HS-EMR-28. **Evaluate clinical management of the patient exposed to hazardous materials.** HS-EMR-28

1. Describe the risks and responsibilities of operating in a cold zone at a hazardous material or other special incident. HS-EMR-28.1
2. Describe the risks and responsibilities of operating on the scene of a natural or man-made disaster. HS-EMR-28.2
3. Entry-Level Students Need to Be Certified in Hazardous Waste Operations and Emergency Response (HAZWOPER) standard, 29 CFR 1910.120 (q)(6)(i)-First Responder Awareness Level. HS-EMR-28.3

HS-EMR-29. **Evaluate and observe clinical management of the patients exposed to a terrorist event or involved in a disaster.** HS-EMR-29

1. Analyze risks and responsibilities of operating on the scene of a natural or man-made disaster. HS-EMR-29.1

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2. Evaluate the need for additional resources. HS-EMR-29.2

HS-EMR-30. Prepare for the NREMT EMR Evaluation HS-EMR-30

1. Display appropriate sensitivity for patients during assessment and management in various scenarios. HS-EMR-30.1
2. Demonstrate the knowledge of patient assessment and management in various scenarios. HS-EMR-30.2
3. Demonstrate performing an assessment to identify life threats, identify injuries requiring immobilization and conditions requiring treatment within the scope of practice of the EMR; including foreign substance in the eyes and nerve agent poisoning. HS-EMR-30.3
4. Demonstrate the communication necessary to obtain and clearly transmit information with an awareness of cultural differences. HS-EMR-30.4
5. Demonstrate performing safely and effectively all airway and breathing psychomotor skills within the National EMS Scope of Practice model and state scope of practice at the EMR level including basic airway maneuvers (including head-tilt, chin-lift; jaw thrust; modified chin lift; foreign body airway obstruction (FBAO) relief manual); oropharyngeal airway; Sellick's maneuver; positive pressure ventilation devices, such as bag valve mask (BVM); suction of the upper airway; and supplemental oxygen therapy (including nasal cannula and non-rebreather mask). HS-EMR-30.5
6. Demonstrate performing safely and effectively all assessment psychomotor skills within the National EMS Scope of Practice model and state scope of practice at the EMR level, including manually taking blood pressure checks. HS-EMR-30.6
7. Demonstrate performing safely and effectively all pharmacologic interventions psychomotor skills within the National EMS Scope of Practice model and state scope of practice at the EMR level including the following: unit-dose auto-injectors (lifesaving medications intended for self or peer rescue in hazardous materials situation and nerve agent antidote kit). HS-EMR-30.7
8. Demonstrate performing safely and effectively all medical/cardiac care psychomotor skills within the National EMS Scope of Practice Model and state scope of practice at the EMR level including the following: manual CPR; AED; and the assisted normal delivery of a newborn. HS-EMR-30.8
9. Demonstrate performing safely and effectively all trauma care psychomotor skills within the National EMS scope of practice model and state scope of Practice at the EMR level including the following: manual stabilization (c-spine injuries and extremity fractures); bleeding control; emergency moves; and eye irrigation. HS-EMR-30.9

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10. Demonstrate professional behavior including, but not limited to integrity, empathy, self-motivation, appearance/personal hygiene, self-confidence, communications, time management, teamwork/diplomacy, respect, patient advocacy, and careful delivery of service. HS-EMR-30.10
11. Demonstrate the initiation of simple interventions based on assessment findings intended to mitigate the emergency and provide limited symptom relief while providing access to definitive care. HS-EMR-30.11
12. Demonstrate recording assessment findings and interventions. HS-EMR-30.12
13. Demonstrate performing a patient assessment and providing pre-hospital emergency care for the following patient complaints: abdominal pain, abuse/neglect, altered mental status/decreased level of consciousness, apnea, back pain, behavioral emergency, bleeding, cardiac arrest chest pain, cyanosis, dyspnea, eye pain, GI bleeding, hypotension, multiple trauma, pain, paralysis, poisoning, shock, and stridor/drooling. HS-EMR-30.13
14. Demonstrate management of the scene until care is transferred to an EMS team member licensed at a higher level. HS-EMR-30.14
15. Demonstrate how to ensure the safety of the rescuer and others during an emergency. HS-EMR-30.15

Dental Science II (25.489)

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

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

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DSII-2. Classify the basic structural and functional organization of the human body and identify body planes, cavities, regions, directional terms, tissues, organs and parts of the cell. HS-DSII-2

1. Define, list, and explain the body systems, planes, and directions, and cavities of the body, and describe the structure and function of the cell. HS-DSII-2.1
2. Explain the functions, divisions, parts, and structures of the body system. HS-DSII-2.2
3. Explain and identify the effects of each body system relating to the oral cavity. HS-DSII-2.3

HS-DSII-3. Analyze the anatomy, physiology and basic pathophysiology of the head and neck. HS-DSII-3

1. Describe the function of the soft tissue structures and soft palate structures. HS-DSII-3.1
2. Differentiate between hard palate and soft palate structures. HS-DSII-3.2
3. Identify and explain the structures and functions of the oral cavity. HS-DSII-3.3
4. Describe the function, location, and ducts of the major salivary glands. HS-DSII-3.4
5. Identify and explain the structures and functions of the cranial bones and the anatomical characteristics. HS-DSII-3.5
6. Identify and describe the bones of the face, including the mandible and the anatomical characteristics. HS-DSII-3.6
7. Identify the muscles of the head and neck and explain the functions. HS-DSII-3.7
8. Identify and describe the functions of the major muscles of mastication, facial expression, floor of the mouth, extrinsic muscles of the tongue, and major posterior muscles of the mouth. HS-DSII-3.8
9. Identify and describe the nerves and blood vessels of the head and neck. HS-DSII-3.9
10. Describe the body planes, directions, major cavities, and structural units of the head and neck. HS-DSII-3.10

HS-DSII-4. Investigate the development of oral embryology and tooth morphology. HS-DSII-4

1. Identify and describe the morphology of the human dentition (enamel, dentin, cementum, and pulp). HS-DSII-4.1
2. Distinguish between primary and permanent teeth and describe the eruptiosequence of each tooth. HS-DSII-4.2
3. Describe the histology of the human dentition. HS-DSII-4.3
4. Explain the development of embryology of the human dentition (ectoderm, endoderm, and mesoderm). HS-DSII-4.4
5. Explain the structure and development of the face. HS-DSII-4.5
6. Identify and describe the parts and tissues of the tooth. HS-DSII-4.6

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7. Explain the morphology of teeth and points of reference for communication. HS-DSII-4.7
8. Discuss anomalies that affect tooth and tooth formation and the entire dentition. HS-DSII-4.8
9. Identify and describe the major anatomic landmarks of the oral cavity and head. HS-DSII-4.9
10. Describe the structure and functions of the temporomandibular joint. HS-DSII-4.10

HS-DSII-5. Perform appropriate dental charting utilizing recognized symbols, abbreviations, charts, and classifications and maintain confidentiality when handling patient records adhering to the Health Insurance Portability and Accountability Act (HIPAA) guidelines. HS-DSII-5

1. Demonstrate utilizing the universal notation system. HS-DSII-5.1
2. Identify and explain the symbols commonly used in charting oral conditions. HS-DSII-5.2
3. Evaluate charts that use symbols to represent conditions present in the oral cavity. HS-DSII-5.3
4. Demonstrate adhering to the systems used for charting permanent and deciduous dentitions. HS-DSII-5.4
5. Classify common abbreviations used to identify simple, compound, and complex cavities. HS-DSII-5.5
6. Define the G.V. Black six classifications of cavity preparations. HS-DSII-5.6
7. Perform dental charting and record assessments of existing oral conditions and conditions diagnosed by the dentist. HS-DSII-5.7
8. Demonstrate maintaining confidentiality when handling patient dental records and following the HIPAA guidelines. HS-DSII-5.8

HS-DSII-6. Utilize office management skills necessary to maintain a dental office. HS-DSII-6

1. Identify and explain the dental office staff requirements and responsibilities. HS-DSII-6.1
2. Define and use terminology related to dental practice management. HS-DSII-6.2
3. Demonstrate maintaining an appointment book (scheduling and confirming appointments), patient records, and recall system. HS-DSII-6.3
4. Identify and explain computerized and manual systems for patient management. HS-DSII-6.4
5. Demonstrate maintaining supplies for the dental office. HS-DSII-6.5

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6. Inform patient of pre-medication requirements for various procedures. HS-DSII-6.6
7. Demonstrate completing dental insurance forms. HS-DSII-6.7
8. Discuss and explain patient dental coverage plans and the importance of identifying eligibility. HS-DSII-6.8
9. Describe the American Dental Association Nomenclature codes used for insurance billing purposes. HS-DSII-6.9
10. Demonstrate using CD-R codes to identify performed dental procedures. HS-DSII-6.10
11. Describe the design of a dental office and purpose of each area. HS-DSII-6.11

HS-DSII-7. Perform chair side assisting skills within scope of practice. HS-DSII-7

1. Demonstrate assembling armamentarium for an initial oral examination, returning examination, and general practice procedures. HS-DSII-7.1
2. Demonstrate seating the dental patient in preparation for treatment or examination. HS-DSII-7.2
3. Demonstrate dismissing the dental patient after treatment or examination. HS-DSII-7.3
4. Discuss the methods of instrument transfer (including grasps, positions, and transfer of instruments). HS-DSII-7.4
5. Demonstrate transferring of instruments utilizing four-handed dentistry. HS-DSII-7.5
6. Explain the hazards and safety precautions involved when transferring instruments. HS-DSII-7.6
7. Demonstrate oral evacuation techniques with a high-volume evacuation (HVE) and a saliva ejector. HS-DSII-7.7
8. Demonstrate the maintenance and delivery of dental hand pieces. HS-DSII-7.8

Health Informatics/Health Information Technology (25.495)

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

1. Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities. HS-EHIT-1.1
2. Demonstrate creativity with multiple approaches to ask challenging questions resulting in innovative procedures, methods, and products. HS-EHIT-1.2
3. Exhibit critical thinking and problem solving skills to locate, analyze, and apply information in career planning and employment situations. HS-EHIT-1.3

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4. Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. HS-EHIT-1.4
5. Apply the appropriate skill sets to be productive in a changing, technological, and diverse workplace to be able to work independently, interpret data, and apply team work skills. HS-EHIT-1.5
6. Present a professional image through appearance, behavior, and language. HS-EHIT-1.6

HS-EHIT-2. Evaluate the overall state of healthcare in the United States and the role technology and information technology plays. HS-EHIT-2

1. Describe the dynamics of the present state of healthcare in the United States. HS-EHIT-2.1
2. Research the history of healthcare in the United States from various viewpoints, including morbidity (infectious and chronic disease), care (low teach, high tech, and personalized), payer (fee for service, employer, government), incentives (procedure based, outcome based), care model (poorly coordinated and episodic, patient centric), and Health IT adoption. HS-EHIT-2.2
3. Explain the discrepancy between the healthcare expenditure (GDP) and outcome, including U.S. healthcare rankings by the World Health Organization . HS-EHIT-2.3
4. Describe the inefficiencies, duplication of procedures, and sources of errors or mistakes, including the number of injuries and deaths per year. HS-EHIT-2.4
5. Describe the role of information technology in healthcare. HS-EHIT-2.5
6. Explain the constructive and corrective role that IT can play in healthcare. HS-EHIT-2.6
7. Investigate and cite specific examples of the expanding role and use of IT in healthcare over the past decade. HS-EHIT-2.7
8. Compare and contrast the increasing uses of IT impacting healthcare for patients, facilities, and medical personnel. HS-EHIT-2.8

HS-EHIT-3. Evaluate career opportunities in Health IT, and the education and training required. HS-EHIT-3

1. Investigate the career opportunities associated with the widespread implementation of Health IT within United States healthcare settings. HS-EHIT-3.1
2. Evaluate the education and training needed to pursue a career in Health IT and other technology- based careers in healthcare. HS-EHIT-3.2
3. Review careers related to various areas of discipline within Health IT, including: physician, clinical, payer, hospital, government, pharmacies, etc. HS-EHIT-3.3

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4. Research and conduct a presentation on career options available in Health IT, including expanding career opportunities and future career growth. HS-EHIT-3.4
5. Explore technology-proficient skills needed and the training required for Health IT industry personnel. HS-EHIT-3.5

HS-EHIT-4. Research the ARRA (American Recovery and Reinvestment Act), the HITECH Act (Health Information Technology Act), and other current legislation and the impact on healthcare. HS-EHIT-4

1. Investigate the ARRA and the HITECH act and the impact on the current healthcare system. HS-EHIT-4.1
2. Evaluate the objectives and requirements of ARRA and the HITECH Acts. HS-EHIT-4.2
3. Evaluate the influence of privacy and security requirements, including the societal impact. HS-EHIT-4.3
4. Investigate creative ways to address the social views and economic impact of the healthcare regulations. HS-EHIT-4.4

HS-EHIT-5. Assess the benefits and challenges of Electronic Health Records (EHR) implementation and the interoperability and coordination of care. HS-EHIT-5

1. Explain the definition of EHR and the importance as a component of HITECH. HS-EHIT-5.1
2. Describe the benefits of widespread EHR implementation. HS-EHIT-5.2
3. Evaluate interoperability and the coordination of care. HS-EHIT-5.3
4. Explain the differences between an Electronic Health Record (her) and an Electronic Medical Record (EMR). HS-EHIT-5.4
5. Describe the challenges associated with EHR implementation. HS-EHIT-5.5
6. Explain the positive impact of EHR on the quality and cost containment elements of the U.S. healthcare system. HS-EHIT-5.6
7. Review the technology make-up of the EHR system, including accessibility, maintenance, and future growth for EHR. HS-EHIT-5.7

HS-EHIT-6. Discuss key factors, developments, and influences on the evolution of Health IT beginning with the 1950s. HS-EHIT-6

1. Research the evolutionary history of the United States Health IT system. HS-EHIT-6.1
2. Explain the transition from a purely financial/administrative focus to today's EHR patient focus. HS-EHIT-6.2
3. Describe the evolutionary change agent. HS-EHIT-6.3
4. Evaluate the gradual introduction of financial, administrative, clinical, departmental, and hospital-wide systems. HS-EHIT-6.4

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5. Identify the major Health IT landmarks during the evolutionary process. HS-EHIT-6.5
6. Assess the role of the intermediate systems, such as CMR, CPR, and EMR by describing the similarities and differences. HS-EHIT-6.6

HS-EHIT-7. Examine the guidelines and rules that govern the implementation and usage of Electronic Health Records. HS-EHIT-7

1. Explain the guidelines and rules governing the implementation of EHR. HS-EHIT-7.1
2. Describe the role of the Office of the National Coordinator (ONC). HS-EHIT-7.2
3. Explain the concept of Meaningful Use, including the goals and associated requirements. HS-EHIT-7.3
4. Describe the requirements for meeting the Meaningful Use and the applicable conditions for each stage. HS-EHIT-7.4
5. Investigate the creation of EHR, including the reason for creation and the intended use. HS-EHIT-7.5
6. Present the technology used and required to create and maintain HER, including local medical facility use to patient access. HS-EHIT-7.6

HS-EHIT-8. Evaluate the organizational structure of healthcare and the continuum of care relating to medical records and pay structure for services. HS-EHIT-8

1. Describe the continuum of care, including primary care and associated services, secondary care and associated services, and tertiary care. HS-EHIT-8.1
2. Describe the differences between types of hospitals. HS-EHIT-8.2
3. Explain the role of alternative care facilities. HS-EHIT-8.3
4. Evaluate the pay structure for healthcare. HS-EHIT-8.4
5. Explain how patient medical records are kept throughout the continuum of care. HS-EHIT-8.5

HS-EHIT-9. Demonstrate the usage of terminologies and classification in healthcare. HS-EHIT-9

1. Discuss the important terminologies and concepts in healthcare including: Current Procedural Terminology (CPT codes), International Classification of Disease (ICD codes), Diagnostic Related Group code (DRG codes), Health Level 7 (HL-7) communication standards, SNOMED CT (Systematized Nomenclature of Medicine Clinical Terms) HS-EHIT-HS-EHIT-9.1
2. Explain the differences between terminologies and classifications in healthcare. HS-EHIT-HS-EHIT-9.2

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3. Utilize commonly used acronyms and terminologies in Health IT. HS-EHIT-9.3

HS-EHIT-10. Examine and explain IT services in hospitals and the major functional categories. HS-EHIT-10

1. Differentiate between hospital-based IT and provider-office IT systems. HS-EHIT-10.1
2. Explain the basic hospital IT infrastructure. HS-EHIT-10.2
3. Describe a hospital IT organization and leadership. HS-EHIT-10.3
4. Explain the variety of IT services in a hospital. HS-EHIT-10.4
5. Investigate the major functional categories of Health IT in hospitals and the related administrative, financial, and clinical applications. HS-EHIT-10.5

HS-EHIT-11. Research the use of mobile technology and other medical devices in healthcare (mhealth) and the benefits to patients and healthcare providers. HS-EHIT-11

1. Examine how the use of mhealth can result in lower healthcare costs. HS-EHIT-11.1
2. Explore various methods of remote monitoring, including cardiac and diabetic conditions. HS-EHIT-11.2
3. Investigate how mobile technology is utilized by pharmacies to promote patient compliance and examine the impact of E-prescribing. HS-EHIT-11.3
4. Examine the usage of mobile apps to encourage healthy lifestyles and preventative care. HS-EHIT-11.4
5. Research the current trends in mhealth and the different practices in healthcare. HS-EHIT-11.5

HS-EHIT-12. Explore the benefits and applications of telemedicine and telehealth. HS-EHIT-12

1. Research the expanding usage of telehealth and telemedicine. HS-EHIT-12.1
2. Differentiate between telemedicine and telehealth, including the services provided. HS-EHIT-12.2
3. Investigate the benefits of telehealth to various audiences. HS-EHIT-12.3
4. Examine the clinical applications, including telemedicine consultation and examination. HS-EHIT-12.4
5. Evaluate how telemedicine can be utilized in school-based clinics. HS-EHIT-12.5

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Health Information Management/Medical Office (25.497)

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

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

HS-HIMMO-2. Evaluate the organization of healthcare delivery in the United States. HS-HIMMO-2

1. Differentiate information system policies and procedures required by national health information initiatives on the health care delivery system. HS-HIMMO-2.1
2. Distinguish current laws, accreditation, licensure, and certification standards related to health information initiatives from the national, state, local, and facility levels. HS-HIMMO-2.2
3. Recognize policies and procedures to comply with the changing regulations among various payments systems for healthcare services, such as Medicare, Medicaid, and managed care, etc. HS-HIMMO-2.3
4. Differentiate the roles of various providers and disciplines throughout the continuum of healthcare and respond to information needs in today's healthcare organization. HS-HIMMO-2.4

HS-HIMMO-3. Investigate the role of the health information management (HIM) in healthcare facilities. HS-HIMMO-3

1. Recognize the components of HIM. HS-HIMMO-3.1
2. Analyze the key HIM professional associations including history, purpose, structure and operation. HS-HIMMO-3.2
4. Demonstrate an understanding of the importance of a professional code of ethics, and the meaning of HIM Code of Ethics. HS-HIMMO-3.4
5. Examine a basic overview of health information management and the purpose for maintaining a health record. HS-HIMMO-3.5

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6. Discuss policies and procedures for access and disclosure of a PHR (personal health record). HS-HIMMO-3.6

HS-HIMMO-4. Utilize appropriate medical terminology necessary for working in a medical office or other healthcare facilities. HS-HIMMO-4

1. Analyze how words are structured, including roots, prefixes and suffixes. HS-HIMMO-4.1
2. Identify and utilize medical terms including surgical procedures, pharmacology, common disease, common pathology, insurance processing, and health information systems. HS-HIMMO-4.2
3. Compare EHR (electronic health record), EMR (electronic medical record), and PHR (personal health record). HS-HIMMO-4.3

HS-HIMMO-5. Perform advanced technical skills within medical office services and HIM utilizing appropriate technology. HS-HIMMO-5

1. Review scope of practice for medical office services and HIM. HS-HIMMO-5.1
2. Perform procedures related to administrative office skills, using appropriate technology including: management of patient accounts: writing receipts and balancing accounts, writing checks, scheduling appointments, answering phone calls, completing insurance claims to include diagnostic coding for reimbursement, management of electronic health care records HS-HIMMO-5.2
3. Perform procedures related to back office skills, including: History and Physical - (List procedures that are typically performed before a general physical examination, Demonstrate the procedure for conducting a patient history interview, Demonstrate techniques used in the measurement of weight, height and vital signs of adult, children and infants), Assisting with physical examinations - (Summarize the Medical Office Assistant role in preparing the examination room, Describe the importance of such factors as temperature, lighting, and ventilation in setting up the examination room, Outline the steps necessary to prepare the patient for an examination, Identify, arrange, and prepare instruments and supplies used in a general physical examination, Demonstrate how to position and drape a patient in each of the common examination positions, Evaluate how to eliminate hazards to physical safety in the examination room). HS-HIMMO-5.3
4. Maintain supplies and equipment necessary for the medical facility: Order supplies and equipment when needed, Maintain an inventory of supplies and equipment, Ensure routine maintenance and appropriate operation of supplies and equipment. HS-HIMMO-5.4

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5. Maintain safety and infection control procedures as required by OSHA and CDC regulations: Adhere to mandated safety and infection control regulations, Prepare for possible office emergencies and practice appropriate response to emergencies including procedures for emergency lockdown or evacuation, Utilize appropriate infection control procedures and PPE (personal protective equipment). HS-HIMMO-5.5

HS-HIMMO-6. Analyze the components of Healthcare Data Management. HS-HIMMO-6

1. Utilize and maintain health data (such as data elements, data sets, and data bases). HS-HIMMO-6.1
2. Analyze computer concepts (such as hardware components, operating systems, languages, software packages). HS-HIMMO-6.2

HS-HIMMO-7. Evaluate health data structure, content and standards. HS-HIMMO-7

1. Explain the structure and use of health information. HS-HIMMO-7.1
2. Utilize technology, including hardware and software to ensure data collection, storage, analysis, and reporting of information. HS-HIMMO-7.2
3. Maintain health data (such as data elements, data set, databases and forms, design, and development). HS-HIMMO-7.3
4. Establish that documentation in the health record supports the diagnosis and reflects the patient's progress, clinical finding, and discharge status. HS-HIMMO-7.4
5. Assess the timeliness, completeness, accuracy, and appropriateness of electronic data and data sources for patient care management, billing reports, registries, and/or databases. HS-HIMMO-7.5
6. Discuss data storage, retrieval, document archival and imaging systems. HS-HIMMO-7.6

HS-HIMMO-8. Investigate the usage and monitoring of data storage and retrieval. HS-HIMMO-8

1. Utilize appropriate electronic or imaging technology for data/record storage. HS-HIMMO-8.1
2. Produce reports and query to facilitate information retrieval. HS-HIMMO-8.2
3. Administer confidentiality and security measures to protect electronic health information. HS-HIMMO-8.3
4. Understand how to protect data integrity and validity using software and hardware technology. HS-HIMMO-8.4
5. Understand application of systems and policies to health information systems and functions and healthcare data concepts. HS-HIMMO-8.5

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6. Examine document archival, retrieval and imaging systems. HS-HIMMO-8.6
7. Discuss maintenance and monitoring of data storage systems. HS-HIMMO-8.7

HS-HIMMO-9. Evaluate the principles of liability as it relates to the management of care. HS-HIMMO-9

1. Discuss how federal regulations contribute to the management of care in the United States health care system. HS-HIMMO-9.1
2. Discuss how state and local standards are used in defining quality and performance standards in health care. HS-HIMMO-9.2
3. Describe physician-patient relationship, hospital-patient relationship and hospital-physician relationship. HS-HIMMO-9.3
4. Define medical malpractice and negligence. HS-HIMMO-9.4
5. Describe each of the following intentional torts: defamation, invasion of privacy, and medical abandonment. HS-HIMMO-9.5

HS-HIMMO-10. Identify patient record requirements and access to health information. HS-HIMMO-10

1. Identify and explain how sources of law influence the content of the medical record. HS-HIMMO-10.1
2. List the common elements of a valid release of information form. HS-HIMMO-10.2
3. Explain who is granted authority to release health information. HS-HIMMO-10.3
4. Compare and contrast the "rights of access" of patient and third parties to patient-specific health information. HS-HIMMO-10.4
5. Explain the role that institutional review boards play in the access by researchers to health information regarding human subjects. HS-HIMMO-10.5
6. Evaluate the reasons and mechanisms for reporting public health threats. HS-HIMMO-10.6

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HS-HIMMO-11. Adhere to laws governing confidentiality and informed consent. HS-HIMMO-11

1. Explain the interrelationship between confidentiality and privacy. HS-HIMMO-11.1
2. Identify and discuss the three sources of law on which the right of privacy is based. HS-HIMMO-11.2
3. Define HIPAA and describe its impact on electronic health records. HS-HIMMO-11.3
4. Assess the obligations placed on health-care providers by the Patient Self-Determination Act. HS-HIMMO-11.4

HS-HIMMO-12. Evaluate risk management and quality assurance. HS-HIMMO-12

1. Compare and contrast risk management with quality assurance. HS-HIMMO-12.1
2. Identify the reporting requirements of the Heath Care Quality Improvement Act. HS-HIMMO-12.2

HS-HIMMO-13. Assess the implementation of electronic health records and the need for security and risk prevention. HS-HIMMO-13

1. Identify reasons supporting the transformation from paper healthcare records to an electronic health record. HS-HIMMO-13.1
2. Compare and contrast the three broad categories of law and regulation governing the creation and storage of an electronic health record. HS-HIMMO-13.2
3. List the types of lawsuits that may arise from a breach of confidentiality of an electronic health record. HS-HIMMO-13.3
4. Compare and contrast physical security, personnel security, and risk prevention techniques. HS-HIMMO-13.4
5. Evaluate risk prevention techniques associated with an electronic patient record system. HS-HIMMO-13.5

HS-HIMMO-14. Apply, evaluate and validate clinical classification systems. HS-HIMMO-14

1. Apply principles and conventions of coding systems (such as ICD-9-CM, ICD-10, DSM-IV). HS-HIMMO-14.1
2. Evaluate Coding Compliance Strategies, Auditing and Reporting (CCI plans). HS-HIMMO-14.2
3. Validate coding accuracy using clinical information found in the health record. HS-HIMMO-14.3
4. Assess and resolve discrepancies between coded data and supporting documentation. HS-HIMMO-14.4

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HS-HIMMO-15. Analyze various reimbursement methodologies. HS-HIMMO-15

1. Categorize group diagnostic and procedural codes into reimbursement classification systems (DRG, MS DRG) group with an encoder. HS-HIMMO-15.1
2. Support accurate billing through coding, charge master, claims management, and bill reconciliation processes. HS-HIMMO-15.2
3. Apply policies and procedures for the use of clinical data required in reimbursement and prospective payment system (PPS) in healthcare delivery. HS-HIMMO-15.3
4. Demonstrate how to compile patient data and perform data quality reviews to validate coded assignment and compliance with reporting requirements, such as outpatient prospective payment systems. HS-HIMMO-15.4

HS-HIMMO-16. Apply principles of procedure codes utilizing current regulations and guidelines. HS-HIMMO-16

1. Apply principles and applications of procedure codes using CPT/HCPCS and DSM-IV. HS-HIMMO-16.1
2. Determine accuracy of diagnostic procedural groups, such as APC, OPPS. HS-HIMMO-16.2
3. Demonstrate utilizing current regulations and established guidelines in code assignment. HS-HIMMO-16.3
4. Validate coding accuracy using clinical information found in the health record. HS-HIMMO-16.4
5. Evaluate discrepancies between coded data and supporting documentation. HS-HIMMO-16.5

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Introduction to Healthcare Science (25.521)

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

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

HS-IHS-2. Demonstrate standard safety practices for all classroom, laboratory, and field experiences. Understand the existing and potential hazards to clients, co-workers, and self, and prevent injury or illness through safe work practices by following current health and safety policies and procedures. HS-IHS-2

1. Identify safety hazards and reduce risk associated with them. HS-IHS-2.1
2. Comply with safety signs, symbols and labels. HS-IHS-2.2
3. Analyze the role and the responsibilities of the healthcare provider (student) in the classroom, laboratory, and various workplace settings in an emergency situation. HS-IHS-2.3
4. Apply basic Emergency procedures and protocol in basic emergency situations and events. HS-IHS-2.4
5. Explain the following agencies' role in healthcare practice: OSHA, CDCP, CLIA, FDA, and ISO. HS-IHS-2.5
6. Apply principles of body mechanics. HS-IHS-2.6
7. Utilize personal protective equipment (PPE) and apply personal safety procedures based on OSHA (Occupational Health and Safety Administration and the Centers for Disease Control and Prevention (CDCP). HS-IHS-2.7

HS-IHS-3. Describe how various healthcare roles fit into the office/department, the organization and the overall health care environment. Identify how key systems affect services performed and quality of care. HS-IHS-3

1. Analyze the healthcare delivery system (public, private, government, and non-profit). HS-IHS-3.1

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2. Evaluate the factors influencing healthcare delivery systems. HS-IHS-3.2
3. Describe the responsibilities of consumers within the healthcare system and how to engage patients and families in their own healthcare. HS-IHS-3.3
4. Explain the impact of emerging issues such as technology, epidemiology, bioethics, and socio economics on healthcare delivery systems. HS-IHS-3.4
5. Discuss common methods of payment for healthcare. HS-IHS-3.5

HS-IHS-4. Develop a Career Plan. HS-IHS-4

1. Compare careers within the health science career pathways: therapeutic, diagnostic, health informatics, environmental support, and biotechnology research and development. HS-IHS-4.1
2. Discuss levels of education, credentialing requirements, and employment trends in healthcare. HS-IHS-4.2
3. Analyze personal career goals and develop a career plan. HS-IHS-4.3
4. Analyze the roles and responsibilities of individual members as part of the health care team, including their ability to promote the delivery of quality health care. HS-IHS-4.4
5. Discuss complementary health practices and career opportunities. HS-IHS-4.5
6. Recognize methods for building positive team relationships and communication. HS-IHS-4.6
7. Analyze attributes and attitudes of an effective leader. HS-IHS-4.7
8. Apply effective techniques for managing team conflict. HS-IHS-4.8
9. Identify and develop entrepreneurial opportunities in healthcare. HS-IHS-4.9

HS-IHS-5. Evaluate the impact of diversity and ethics on healthcare delivery. HS-IHS-5

1. Evaluate how diversity affects healthcare delivery. HS-IHS-5.1
2. Compare and contrast personal and workplace ethics. HS-IHS-5.2
3. Recognize ethical issues and their implications related to healthcare. HS-IHS-5.3
4. Examine ethical dilemmas that may occur in healthcare. HS-IHS-5.4
5. Demonstrate respectful and empathetic treatment of ALL patients/clients (patient/customer service). HS-IHS-5.5

HS-IHS-6. Demonstrate an understanding of the legal responsibilities, limitations, and implications of actions within the healthcare delivery setting. Evaluate the importance of duties according to regulations, policies, laws, and legislated rights of clients. HS-IHS-6

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1. Analyze the basic legal responsibilities of healthcare workers in regards to torts, malpractice, and negligence, invasion of privacy, privileged communication, patient/client confidentiality, and informed consent. HS-IHS-6.1
2. Discuss patients' rights and responsibilities. HS-IHS-6.2
3. Explain standards for Health Insurance Portability and Accountability Act (HIPPA). HS-IHS-6.3
5. Evaluate the importance of institutional policies and procedures. HS-IHS-6.5

HS-IHS-7. Identify and demonstrate the various methods of providing and obtaining information from patients, family members, other agencies, and other members of the healthcare team. HS-IHS-7

1. Interpret verbal and nonverbal communication. HS-IHS-7.1
2. Recognize barriers to communication. HS-IHS-7.2
3. Report subjective and objective information. HS-IHS-7.3
4. Recognize the elements of communication using a sender-receiver model. HS-IHS-7.4
5. Apply speaking and active listening skills. HS-IHS-7.5
6. Recognize elements of written and electronic communication (spelling, grammar, and formatting). HS-IHS-7.6
7. Use roots, prefixes, and suffixes to communication information. HS-IHS-7.7
8. Utilize current and acceptable medical abbreviations and terminology with the electronic medical record and in other forms of medical communication. HS-IHS-7.8
9. Recognize legal and ethical implications of electronic communications. HS-IHS-7.9

HS-IHS-8. Practice preventive health behaviors personally and professionally. HS-IHS-8

1. Apply behaviors that promote health and wellness. HS-IHS-8.1
2. Describe strategies to maintain a healthy lifestyle. HS-IHS-8.2
3. Create a stress management plan. HS-IHS-8.3

HS-IHS-9. Analyze different types of microorganisms and their defining characteristics to reduce the risk of infection or illness. Demonstrate physicochemical methods and the use of PPE in preventing and controlling the spread of microbial growth. HS-IHS-9

1. Define and describe the need for asepsis and infection prevention in the classroom, laboratory, and in the healthcare environment. HS-IHS-9.1

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2. Compare and demonstrate various physical (hand washing and PPE) and chemical methods (cleaning, disinfection, and sterilization) used to control or prevent microbial growth. HS-IHS-9.2
3. Examine the evaluation and spread of antibiotic resistant pathogens. HS-IHS-9.3
4. Analyze ways microorganisms are spread using the chain of infection model. HS-IHS-9.4
5. Utilize personal protective equipment (PPE) and apply personal safety procedures based on OSHA (Occupational Health and Safety Administration and the Centers for Disease Control and Prevention (CDCP). HS-IHS-9.5
6. Describe methods of controlling the spread and growth of microorganisms. HS-IHS-9.6
7. Discuss Hospital Acquired Infection (HAI), the HAI standards and reporting of HAI. HS-IHS-9.7
8. Discuss immunizations and the schedule for vaccinations. HS-IHS-9.8

HS-IHS-10. Demonstrate CPR, First Aid, and the AED utilizing current standards. HS-IHS-10

HS-IHS-10-1. Analyze differences in pulse and respiratory rates in adult, child, and infant. HS-IHS-10-1

HS-IHS-10-2. Discuss the function of the respiratory and circulatory systems and what happens with these systems during cardiac arrest and then during cardiopulmonary resuscitation. HS-IHS-10-2

3. Demonstrate how to locate pulse points and how to check pulse and respiratory rates. HS-IHS-10.3
4. Successfully complete CPR, AED, and First Aid training according to American Heart Association or American Red Cross, or other nationally recognized certifying agency. HS-IHS-10.4

HS-IHS-11. Describe the stages of development from birth to adulthood (i.e. neonatal period, infancy, childhood, adolescence and puberty, adulthood, and geriatrics). HS-IHS-11

1. Compare and contrast life stages as it relates to growth and developmental needs. HS-IHS-11.1
2. Examine the common theories of growth and development (Erickson, Maslow). HS-IHS-11.2
3. Discuss the social, physical, mental, and spiritual needs throughout the different life stages. HS-IHS-11.3
4. Discuss age-appropriate healthcare needs. HS-IHS-11.4

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IHS-12. Utilize information technology applications required within all career specialties. Demonstrate use as appropriate to healthcare

applications. HS-IHS-12

1. Identify methods and types of data collected in healthcare. HS-IHS-12.1
2. Use health record data collection tools (such as input screens, document templates). HS-IHS-12.2
3. Differentiate between types and content of health records (patient, pharmacy, and laboratory). HS-IHS-12.3
4. Ensure that documentation in the health record reflects timeliness, completeness, and accuracy. HS-IHS-12.4
5. Adhere to information systems policies and procedures as required by national, state, local, and organizational levels. HS-IHS-12.5
6. Apply the fundamentals of privacy and confidentiality policies and procedures. HS-IHS-12.6
7. Identify legal and regulatory requirements related to the use of personal health information. HS-IHS-12.7
8. Identify and apply policies and procedures for access and disclosure of personal health information. HS-IHS-12.8
9. Describe the consequences of inappropriate use of health data in terms of disciplinary action. HS-IHS-12.9
10. Describe appropriate methods to correct inaccurate information/errors personally entered into an electronic medical record (EMR). HS-IHS-12.10
11. Apply basic computer concepts and terminology in order to use computers and other mobile devices. HS-IHS-12.11
13. Demonstrate basic computer operating skills. HS-IHS-12.13
14. Demonstrate use of basic file organization and information storage. HS-IHS-12.14
15. Use basic word processing, spreadsheet, and database applications. HS-IHS-12.15
16. Evaluate the validity of web-based resources. HS-IHS-12.16
17. Demonstrate use of appropriate email and social media. HS-IHS-12.17

HS-IHS-13. Apply mathematical computations related to healthcare procedures. HS-IHS-13

2. Analyze diagrams, charts, graphs, and tables to interpret healthcare results. HS-IHS-13.2
1. Utilize metric and household, conversions and measurements as related to healthcare procedures and treatments. HS-IHS-13.1
3. Record time using the 24-hour clock. HS-IHS-13.3

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IHS-14. 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. HS-IHS-14

1. Research the history of HOSA-Future Health Professionals. HS-IHS-14.1
2. Discuss the mission, purpose, motto, colors, official dress and other distinguishing characteristic of HOSA. HS-IHS-14.2
3. Explain how participation in HOSA can promote lifelong responsibility for community service and professional growth and development. HS-IHS-14.3
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. HS-IHS-14.4

Applications of Biotechnology (25.569)

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

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

HS-AB-2. Describe how characteristics of living organisms are integrated with advanced biotechnology techniques to lead to discovery or production. HS-AB-2

1. Describe how cell membrane structure may be manipulated to allow passage of macromolecules, including electroporation, micro projectile and ionic stress. HS-AB-2.1
2. Demonstrate how DNA structure and function may be exploited in genetic engineering to produce specific genetic constructs. HS-AB-2.2
3. Engineer nucleic acids through selecting, excising, ligating and cloning of plasmid or viral vectors for development of molecular delivery systems. HS-AB-2.3

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4. Simulate enzymatic replication of nucleic acids utilizing real-time or traditional PCR including primer design. HS-AB-2.4
5. Isolate and prepare DNA samples for sequencing. HS-AB-2.5
6. Manage and analyze DNA sequence data using bioinformatics tools (e.g. Genbank and BLAST). HS-AB-2.6
7. Relate principles of macromolecule structure, physical chemistry and composition to strategies for isolating, analyzing and characterizing protein and DNA. HS-AB-2.7
8. Perform methods of protein extraction and purification such as salt precipitation and dialysis, chromatography or antibody purification. HS-AB-2.8
9. Design and perform methods of protein measurement, quantification, and characterization such as: Western blot, polyacrylamide gel electrophoresis, ELISA, and UV/VIS spectrophotometry (e.g. as used in simulated testing and confirming of samples as hepatitis B and Lyme disease). HS-AB-2.9
10. Apply the principles of electricity and ionization to successfully migrate charged molecules in ionic buffering systems. HS-AB-2.10
11. Describe principles of phase separation in physical chemistry used in high performance liquid chromatography (HPLC) and gas chromatography (GC) for separating mixed analytes. HS-AB-2.11
12. Apply the basic concepts of cell growth and homeostatsis to systems for culturing cells. HS-AB-2.12
13. Describe the different cell types and culture methods (e.g., bacteria, yeast, animal and plant) as used in biotechnology. HS-AB-2.13
14. Review sterile culture technique and apply it to growing eukaryotic cells in culture (e.g., plant cell culture). HS-AB-2.14
15. Distinguish between the culture environments needed for single-celled organisms and cells from multicellular organisms. HS-AB-2.15

HS-AB-3. Demonstrate how advanced techniques in biotechnology contribute to our quality of life. HS-AB-3

1. Describe how biotechnology has contributed to the advancement of biology impacting human well-being, such as disease management through vaccines, food production, materials science and molecular identification. HS-AB-3.1
2. Apply biotechnological techniques to forensics including materials analysis, DNA fingerprinting and sample collection. HS-AB-3.2
3. Utilize biotechnology for healthcare applications. HS-AB-3.3
4. Utilize biotechnology for diagnostic applications (e.g. hepatitis, HIV, BRAC, rapid streptococcus). HS-AB-3.4
5. Explain the role of biotechnology in therapeutics (e.g., gene therapy, vaccines. antibody therapy, cell therapy). HS-AB-3.5

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6. Describe how bioinformatics can be used to predict disease and determine treatment. HS-AB-3.6
7. Investigate the principles of genetic mapping applied to healthcare or phylogenetics and evolution (e.g., Amplified fragment-length polymorphism (AFLP), SNPs, etc.). HS-AB-3.7
8. Describe the non-medical applications of biotechnology, including enzyme production, biofuel and biomaterials discovery and manufacturing. HS-AB-3.8

HS-AB-4. Utilize statistical analyses to evaluate molecular separations and manipulations. HS-AB-4

1. Discuss the importance of appropriate controls, standards, and statistical planning in laboratory applications and experimental design. HS-AB-4.1
2. Assess the quality of data including possible sources of bias in their investigations' hypotheses, observations, data analyses, and interpretations. HS-AB-4.2
3. Compare the standard deviation and the mean of efficacy testing data of two or more biotechnology products. HS-AB-4.3
4. Apply linear regression to [deleted] spectrophotometry calibration curve or ELISA standard curve. HS-AB-4.4
5. Represent data using Gaussian distributions (normal populations). HS-AB-4.5
6. Explain the reliability of data and construct confidence intervals for pH measurements and pipetting accuracy. HS-AB-4.6
7. Establish measurement parameters and accuracy determination for real-time PCR or chromatography (HPLC or GC) detection data interpretation. HS-AB-4.7
8. Apply significant figures to laboratory assessments and calculations to fall within established criteria. HS-AB-4.8

HS-AB-5. Incorporate required safety practices and procedures in performing tasks encountered in the laboratory setting. HS-AB-5

1. Apply laboratory safety techniques to electrophoresis, microbiological manipulations, and biological sample handling. HS-AB-5.1
2. Analyze case studies of lab accidents and biohazards in various settings (i.e., include dangers of gases, explosions, electrical shock, biohazards, infectious disease, and genetically modified organisms; also other topics as suggested by current events). HS-AB-5.2
3. Demonstrate ways to prevent or manage lab accidents and biohazards in various workplace settings. HS-AB-5.3

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4. Apply safe methods for transporting chemicals, grounding electrical equipment, sharps disposal, monitoring gas pressures (pressurized tanks), and using secondary containment systems for transport (safe shipping methods). HS-AB-5.4
5. Describe Biosafety Levels 1, 2, 3 and 4 (BSL1, BSL 2, BSL3 and BSL4) and the facility design associated with each level. HS-AB-5.5
6. Research laminar flow, and the purpose of biosafety cabinets relative to managing biological hazards. HS-AB-5.6

HS-AB-6. Assess current trends, ethical, legal, and regulatory issues related to the development of biotechnology products. HS-AB-6

1. Monitor scientific journals, Internet sources, mass media, and industry associations to identify current trends and policy issues in biotechnology. HS-AB-6.1
2. Distinguish between marketing material and experimentally validated information. HS-AB-6.2
3. Describe the concept of integrity and the ethical use of statistics, controls, and standards. HS-AB-6.3
4. Demonstrate bioethical/legal issues to various scenarios, including clinical trials, Institutional Review Boards (IRB) applications, privacy (HIPAA), choice of genetic traits, and use of genetic testing data. HS-AB-6.4
5. Describe intellectual property rights, technology transfer, and how biotechnology is funded. HS-AB-6.5
6. Explain the meaning of human dignity and informed consent in biotechnology and healthcare. HS-AB-6.6
7. Describe the role of federal regulatory agencies and the Code of Federal Regulations applicable to biotechnology (e.g., FDA [Food and Drug Administration], 21 CFR [Code of Federal Regulations], EPA [Environmental Protection Agency], NIH [National Institute of Health], USDA [United States Department of Agriculture], etc.) and the relationship to international regulatory systems (e.g., ICH, etc.). HS-AB-6.7
8. Explain the phases of clinical trials and requirements for obtaining FDA product approval. HS-AB-6.8
9. Define the purpose of quality assurance, quality control, method validation, documentation, current Good Manufacturing Practices and Good Laboratory Practices. HS-AB-6.9
10. Document and keep accurate records according to regulatory requirements. HS-AB-6.10

Essentials of Biotechnology (25.57)

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

1. Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities. HS-EB-1.1

2. Demonstrate creativity by asking challenging questions and applying innovative procedures and methods. HS-EB-1.2
3. Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations. HS-EB-1.3
4. Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. HS-EB-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. HS-EB-1.5
6. Present a professional image through appearance, behavior and language. HS-EB-1.6

HS-EB-2. Research required safety practices and procedures in the classroom and laboratory environment. HS-EB-2

1. Define health and safety regulations, including Occupational Health and Safety. HS-EB-2.1
2. Administration (OSHA), Environmental Protection Agency (EPA), and Right to Know under OSHA regulations CFR 1910.1450. HS-EB-2.2
3. Demonstrate procedures for documenting and reporting hazards and compliance. HS-EB-2.3
4. Demonstrate health and safety practices, including use of Material Safety Data Sheets (MSDS), appropriate personal protective equipment (PPE) for the situation, emergency equipment, storage of chemicals, reagents and compounds, and maintenance of equipment. HS-EB-2.4
5. Identify disaster preparedness procedures related to biotechnology related emergencies. HS-EB-2.5
6. Exhibit standard precautions including proper storage, handling and disposal of biohazardous materials and biotechnology related emergencies. HS-EB-2.6
7. Demonstrate following Standard Operating Procedures (SOP). HS-EB-2.7

HS-EB-3. Identify the basis for biotechnology products and how such products affect the quality of life. HS-EB-3

1. Describe the major scientific discoveries that lead to the development of recombinant DNA technology, including those in the fields of biology, chemistry, genetics, and microbiology, and explain how these advances in DNA technology are used today. HS-EB-3.1
2. Identify past and current discoveries and developments in fields, such as agriculture, diagnostics, medical devices, pharmaceuticals, and research and development. HS-EB-3.2

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3. Classify the steps in production and delivery of a product made using recombinant DNA technology. HS-EB-3.3
4. Discuss the implications of the genomics and proteomics on biotechnology and current healthcare. HS-EB-3.4

HS-EB-4. Analyze careers in research and development, human health and diagnostics, biomanufacturing, environmental applications, and agriculture that utilize biotechnology. HS-EB-4

1. Describe the educational requirements and responsibilities for various positions within the biotechnology industry. HS-EB-4.1
2. Compare and contrast careers within academic, government, and private sectors. HS-EB-4.2
3. Describe the role of Career Technical Student Organizations and their importance in leadership and career development. HS-EB-4.3

HS-EB-5. Demonstrate how concepts of physical science connect to biochemical applications and techniques. HS-EB-5

1. Calculate and prepare buffers, stock solutions, and reagents. HS-EB-5.1
2. Apply the concepts of homeostasis, normality, and molar relationships to biochemical reactions. HS-EB-5.2
3. Demonstrate reading and using graphs (using Microsoft Excel). HS-EB-5.3
4. Demonstrate understanding of the role of solution pH on protein function and structure. HS-EB-5.4
5. Analyze enzyme activity using assays for reactants and products. HS-EB-5.5
6. Demonstrate proficiency in the use of basic laboratory equipment, electronic and analytical balances, autoclave, micropipetting, pouring agarose/agar, etc. HS-EB-5.6
7. Apply electrophoresis, chromatography and microscopy techniques (including oil immersion) (spectrophotometry removed) to identify, separate and draw conclusions about biological molecules. HS-EB-5.7
8. Demonstrate using antibody specificity for antigens to test for the presence of protein (e.g., ELISA) (Western Blot and antibody staining removed as they are covered in the Applications course). HS-EB-5.8

HS-EB-6. Compare and contrast common organisms used in biotechnology and relate the manipulation of living organisms to product and procedure development. HS-EB-6

1. Demonstrate CPR, First Aid, and the AED utilizing current standards. HS-EB-6.1
2. Distinguish between prokaryotic cells, eukaryotic cells, and non-living entities, such as viruses. HS-EB-6.2

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3. Describe the characteristics and life cycles of model organisms used in biotechnology, including bacteria (e.g., E. coli and insulin), fungi (e.g., yeasts and Aspergillus), and animals (e.g., C. elegans, fruit flies, and rodents). HS-EB-6.3
4. Monitor how environmental factors affect the growth of cells and model organisms in the laboratory. HS-EB-6.4
5. Apply the basic concepts of cell growth to manipulate cultures under aseptic conditions in the laboratory and demonstrate proficiency in gram staining, streaking culture plates and Stock bacterial cultures. HS-EB-6.5
6. Identify bacteria using morphology and metabolic analysis. HS-EB-6.6
7. Perform transformations, including competency, selection, antibiotic resistance, and analysis of transformation efficiency. HS-EB-6.7

HS-EB-7. Analyze economic, social, ethical, and legal issues related to the use of biotechnology. HS-EB-7

1. Differentiate between moral, ethical, and legal biotechnology issues. HS-EB-7.1
2. Research ethical issues presented by evolving science, including genetically modified foods, cloning, bioterrorism, gene therapy, and stem cells. HS-EB-7.2
3. Compare and contrast attitudes about the use of biotechnology regionally, nationally, and internationally. HS-EB-7.3
4. Evaluate the regulatory policies impacting biotechnology research (e.g., use of animals in research and applications of recombinant DNA). HS-EB-7.4

Diagnostics Phlebotomy (25.574)

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

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

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HS-DP-2. Explore and describe current employment options in the clinical lab profession and the required education and training. HS-DP-2

1. Identify and describe current employment options in the clinical lab profession and the required education and training. HS-DP-2.1
2. Identify members of the clinical lab team; differentiate between roles, department and responsibilities of team members, and place all members in appropriate positions on the organizational chart. HS-DP-2.2

HS-DP-3. Utilize appropriate laboratory/medical terminology and venipuncture equipment. HS-DP-3

1. Demonstrate the appropriate use of clinical lab nomenclature to include medical terminology related to clinical lab testing and requisitions. HS-DP-3.1
2. Differentiate between physician requisition, sample collection, and accession process. HS-DP-3.2
3. Identify phlebotomy reference sources including tube collection order of draw; translating a brand name to order of draw for venipuncture; special use sample collection and identification number; correct spelling or definition of medical terms; methods of patient identification; and ETS (Evacuated Tube Systems). HS-DP-3.3
4. Classify and explain the types and purpose of evacuated tubes by color code, anticoagulants and additives, and special characteristics. HS-DP-3.4
5. Select and assemble appropriate venipuncture equipment for collection areas or mobile workstations, including ETS, syringes, winged-blood collection sets, needles, sharp containers, evacuated collection tubes, transfer devices, tourniquets, personal protective equipment (PPE), antiseptic swabs (according to protocol), gauze pads and bandages, slides, and marking pens. HS-DP-3.5

HS-DP-4. Abide by regulations governing workplace safety, infection control, operational standards, patient confidentiality, and facility protocol. HS-DP-4

1. Demonstrate adhering to regulations regarding workplace safety (e.g., Occupational Safety and Health Administrator (OSHA) and National Institute for Occupational Safety ad Health (NIOSH) HS-DP-4.1
2. Demonstrate abiding by regulations regarding operational standards (e.g., Joint Commission of Accreditation of Healthcare Organizations (JCAHO), Clinical and Laboratory Standards Institute (CLSI) HS-DP-4.2
3. Demonstrate patient privacy (protected health information) as outlined in HIPAA (Health Insurance Portability and Accountability Act) regulations. HS-DP-4.3
4. Demonstrate following exposure control plans in the event of occupational exposure. HS-DP-4.4

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5. Demonstrate exhibiting appropriate infection control standards and safety equipment, to include biohazards set forth by OSHA and the Communicable Disease Center (CDC). HS-DP-4.5
6. Implement infection control procedures to break the chain of infection; transmission via direct and indirect contact, droplets, airborne, and hospital acquired infections. HS-DP-4.6
7. Demonstrate first aid and Basic Life Support techniques and initiate when necessary. HS-DP-4.7
8. Observe standards of operation and workplace safety regulations for: needlestick safety and precaution act, blood borne pathogen, safety practices of HIV, Hepatitis B & C. HS-DP-4.8
9. Show the appropriate use of PPE and effective hand sanitization procedures. HS-DP-4.9
10. Demonstrate reacting to emergency situations following agency procedures and facility protocol. HS-DP-4.10

HS-DP-5. Maintain quality control measures within the medial facility to prevent medical errors and provide appropriate patient care. HS-DP-5

1. Identify and describe the national regulatory agencies for quality assurance and healthcare: JC (Joint Commission), CLIA (Clinical Laboratory Improvement Act), CAP (College of American Pathologists), NAACLS (National Accrediting Agency for Clinical Laboratory Sciences), and CLSI (Clinical and Laboratory Standards Institute) HS-DP-5.1
2. Describe quality assurance program components and quality control related to phlebotomy, including the following: patient record documentation, procedural manuals, collection manuals. HS-DP-5.2
3. Recognize quality control measurements, including risk management, and demonstrate methods of performance improvement. HS-DP-5.3
4. Perform outcome measurements, including the number of times patient samples had to be redrawn due to error through the collection of data to improve quality processes. HS-DP-5.4
5. Demonstrate the usage of information management components, including bar code systems and documentation in the electronic health records. HS-DP-5.5

HS-DP-6. Identify site specific anatomy related to venipuncture. HS-DP-6

1. Identify and explain the three major preferred sites for venipuncture in the antecubital fossa and distinguish the "H" and "M" shaped patterns. HS-DP-6.1
2. Locate other potential veins for venipuncture, when necessary HS-DP-6.2
. Utilize appropriate palpation techniques in vein location. HS-DP-6.3.

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DP-7. Follow steps and guidelines necessary to prepare patients for blood collection procedures. HS-DP-7

1. Apply appropriate safety standards for patient preparation. HS-DP-7.1
2. Review requisition, confirm test requirements (e.g., fasting and medication) and status, and identify patient special considerations such as diet restrictions, latex sensitivity, timed/status. HS-DP-7.2
3. Perform proper patient identification procedures, verification and discrepancy ratification to ensure accuracy. HS-DP-7.3
4. Conduct initial patient observation utilizing appropriate communication techniques, including explanation of procedure to the patient. HS-DP-7.4
5. Ensure consent is given by patient, either implied or informed. HS-DP-7.5
6. Assess site selection, based on knowledge of anatomy and physiology, for sample collection that is appropriate or patient age and condition, in order to minimize patient risk. HS-DP-7.6
7. Apply antiseptic agent utilizing proper aseptic techniques. HS-DP-7.7

HS-DP-8. Perform venipuncture and capillary blood collection, utilizing appropriate equipment and techniques. HS-DP-8

1. Demonstrate utilizing knowledge of anatomy and physiology, related to site selection. HS-DP-8.1
2. Demonstrate applying appropriate employee safety standards for collection techniques and patient safety HS-DP-8.2
3. Confirm appropriate ETS (evacuated tube system) and tube additives. HS-DP-8.3
4. Demonstrate assembling primary blood collection equipment, including quality verification (sterility and expiration date). HS-DP-8.4
5. Demonstrate proper application, tying, removal and standards for timing when utilizing a tourniquet. HS-DP-8.5
6. Demonstrate proper techniques, including order of draw, for venipuncture needle insertion and removal. HS-DP-8.6
7. Demonstrate performing the steps in a venipuncture procedure utilizing evacuated tube system, syringe, and winged collections set. HS-DP-8.7
8. Demonstrate ensuring inversion of evacuated tubes after collection, to maintain additive/specimen ratio. HS-DP-8.8
9. Demonstrate proper techniques, including order of draw, for capillary specimen collection, as required by patient age and condition. HS-DP-8.9
10. Demonstrate performing capillary (dermal) puncture steps in the correct order. HS-DP-8.10
11. Recognize common complications from primary collection (e.g., lack of blood flow, hematoma, petechiae, and nerve injury) HS-DP-8.11
12. Identify and describe problematic patient signs and symptoms throughout collection (e.g. Syncope, diaphoresis, nausea, seizure.) HS-DP-8.12

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HS-DP-9. Observe specialized laboratory tests that may involve specific techniques for patient preparation, timing of sample collection, other blood collection techniques, and sample handling. HS-DP-9

1. Demonstrate by simulation or observe the following: peripheral blood smear preparation; blood culture collections, including assisting other healthcare professionals; blood donation phlebotomy; blood sample collection for inborn errors of metabolism (e.g., PKU, galactosemia) HS-DP-9.1
2. Calculate volume requirements to avoid causing iatrogenic anemia. HS-DP-9.2
3. Accommodate the technical and communication challenges of blood collection for the pediatric and geriatric populations. HS-DP-9.3

HS-DP-10. Ensure compliance with facility procedures and protocol when documenting and reporting and when handling and transporting specimens. HS-DP-10

1. Confirm proper labeling procedures, including patient identification and time. HS-DP-10.1
2. Demonstrate performance and assessment of routine and special specimen handling. HS-DP-10.2
3. Demonstrate avoiding pre-analytical errors when collecting blood specimens (e.g., QNS- Quantity Not Sufficient and hemolysis). HS-DP-10.3
4. Ensure proper quality control for all procedures, including Clinical Laboratory Improvement Amendments (CLIA) - waived HS-DP-10.4
5. Demonstrate exhibiting proper patient communication when explaining non-blood, specimen collection procedures (e.g. , urinalysis and stool). HS-DP-10.5
6. Demonstrate utilizing proper safety protocol when handling patient-collected non-blood specimens. HS-DP-10.6
7. Demonstrate transporting specimens based on handling requirements (e.g., temperature, light, and time). HS-DP-10.7
8. Demonstrate ensuring the following proper guidelines for non-laboratory specimen transport (e.g., forensic studies and blood alcohol): custody guidelines, transportation requirements, communication coordination. HS-DP-10.8
9. Demonstrate preparing samples for transportation to a reference (outside) laboratory. HS-DP-10.9
10. Demonstrate evaluating procedures for effectively communicating critical values according to established protocol, related to point-of-care testing.(Not allowed for Phlebotomists in Georgia) HS-DP-10.10
11. Demonstrate evaluating the procedure for reporting critical values for point-of-care testing and distributing laboratory results to ordering providers. (Not allowed by Phlebotomists in Georgia) HS-DP-10.11

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12. Demonstrate proficiency in the following use of technology for processing specimen data- input/retrieval; specimen flow through the laboratory utilizing the information management system. HS-DP-10.12

Clinical Lab I (25.576)

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

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

HS-CLI-2. Explore options in the Clinical Lab Industry, including medical lab assistant and the organizational structure. HS-CLI-2

1. Identify current employment options in the clinical lab profession, and the necessary education and training required. HS-CLI-2.1
2. Differentiate between state and federal licensure laws. HS-CLI-2.2
3. Identify members of the clinical lab team; differentiate between roles, department and responsibilities of team members, and place all members in appropriate positions on the organizational chart. HS-CLI-2.3

HS-CLI-3. Abide by regulations governing workplace safety, infection control, operational standards, patient confidentiality, and facility protocol. HS-CLI-3

1. Demonstrate adhering to regulations regarding workplace safety (e.g., OSHA, NIOSH). HS-CLI-3.1
2. Demonstrate abiding by regulations regarding operational standards (e.g., JCAHO, CLSI). HS-CLI-3.2
3. Demonstrate an understanding of patient privacy (protected health information), as outlined in HIPAA (Health Insurance Portability and Accountability Act) regulations. HS-CLI-3.3
4. Demonstrate accessing SDS (safety data sheets) when chemicals are being used. HS-CLI-3.4

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5. Demonstrate following exposure control plans in the event of occupational exposure. HS-CLI-3.5
6. Demonstrate exhibiting appropriate infection control standards and safety equipment, to include biohazards set forth by OSHA and CDC. HS-CLI-3.6
7. Implement infection control procedures to break the chain of infection; transmission via direct and indirect contact, droplets, airborne, and hospital acquired infections. HS-CLI-3.7
8. Demonstrate initiating first aid and Basic Life Support techniques when necessary. HS-CLI-3.8
9. Demonstrate showing the appropriate use of PPE (personal protective equipment) and effective hand sanitization procedures. HS-CLI-3.9
10. Demonstrate reacting to emergency situations following agency procedures and facility protocol. HS-CLI-3.10

HS-CLI-4. Maintain quality control measures within the medical/lab facility to prevent medical errors and provide appropriate patient care. HS-CLI-4

1. Compare quality assurance and quality control. HS-CLI-4.1
2. Identify and describe the national regulatory agencies for quality assurance and healthcare, including JC (Joint Commission), CLIA (Clinical Laboratory Improvement Act), CAP (College of American Pathologists), NAACLS (National Accrediting Agency for Clinical Laboratory Sciences), and CLSI (Clinical and Laboratory Standards Institute). HS-CLI-4.2
3. Describe quality assurance program components and quality control related to medical lab. HS-CLI-4.3
4. Recognize quality control measurements, including risk management, and demonstrate methods of performance improvement. HS-CLI-4.4
5. Perform outcome measurements through the collection of data to improve quality processes. HS-CLI-4.5
6. Demonstrate the usage of information management components, including bar code systems and documentation in the electronic health records. HS-CLI-4.6
7. Design a basic sample analysis flow chart for routine lab testing. HS-CLI-4.7
8. Demonstrate adhering to regulations regarding confidentiality and appropriate record release. HS-CLI-4.8

HS-CLI-5. Utilize appropriate laboratory and medical terminology, medical lab equipment and apply the use of the metric system. HS-CLI-5

1. Demonstrate the appropriate use of clinical lab nomenclature to include medical terminology related to clinical lab testing and requisitions. HS-CLI-5.1

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2. Demonstrate the basic use and maintenance of the following instruments, including microscope, centrifuge, spectrophotometer, and balances. HS-CLI-5.2
3. Demonstrate using appropriate units of measurement. HS-CLI-5.3
4. Demonstrate measuring volume using appropriate glassware and pipettes. HS-CLI-5.4
5. Demonstrate accurate pipetting technique. HS-CLI-5.5
6. Perform math calculations for metric system conversions, temperature conversions, simple dilutions, total magnification, and Beer's Law. HS-CLI-5.6

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HS-CLI-6. Discuss and evaluate clinical techniques in the identification of microbes in a simulated classroom setting. HS-CLI-6

1. Demonstrate using aseptic technique in accordance with EPA (Environmental Protection Agency) GLPS (good laboratory practice standards). HS-CLI-6.1
2. Describe appropriate sterilization procedures. HS-CLI-6.2
3. Demonstrate executing routine sterile plating and streaking techniques. HS-CLI-6.3
4. Characterize and classify microorganisms. HS-CLI-6.4
5. Identify and describe morphological characteristics and the factors affecting the growth, survival, and death of microorganisms. HS-CLI-6.5
6. Demonstrate performing a Gram stain and differentiate between gram negative and gram positive. HS-CLI-6.6
7. Demonstrate performing isolation and incubation techniques. HS-CLI-6.7
8. Differentiate types of culture media and their appropriate use including: blood agar, SSA agar, chocolate agar, Thayer-Martin chocolate agar, eosin methylene blue (EMB), thioglycollate broth, and MacConkey agar. HS-CLI-6.8
9. Explain the purpose and process for basic antibiotic resistance. HS-CLI-6.9
10. Identify and describe isolates as pathogens or non-pathogens based on specimen sources. HS-CLI-6.10
11. Describe the proper collection and transportation of specimens for culture and proper handling and disposal of biohazardous materials. HS-CLI-6.11
12. Explain basic concepts of parasitology and mycology, along with symptoms. HS-CLI-6.12
13. Demonstrate utilizing terminology related to bacteriology, including bacteria, aerobic, pathogenic, and anaerobic. HS-CLI-6.13
14. Observe special tests; including Group A streptococci, rapid enzyme immunoassay test (or other antigen detection kits) from throat swabs, and collection of cultures for beta hemolysis screening. HS-CLI-6.14

HS-CLI-7. Discuss and evaluate basic clinical chemistry techniques in a simulated classroom lab setting. HS-CLI-7

1. Calculate normal and molar solutions and dilutions and explain serial dilutions, to determine concentrations of unknowns. HS-CLI-7.1
2. Determine pH and identify examples of different substances and how they relate to buffered systems. HS-CLI-7.2
3. Demonstrate testing specific gravity and interpreting results. HS-CLI-7.3
4. Evaluate pCO2 and pO2 concentration and balance as it relates to the human body. HS-CLI-7.4

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5. Explain basic concepts of titration and titration curves. HS-CLI-7.5
6. Identify routine chemical tests to include electrolyte, liver, and cardiac panels, and relate normal and abnormal values to disease states. HS-CLI-7.6
7. Explain the use of a spectrophotometer. HS-CLI-7.7
8. Perform Point of Care Testing (POCT) on waived tests, such as cholesterol and hemoglobin. HS-CLI-7.8
9. Demonstrate utilizing general terminology related to clinical chemistry, including liver function testing, carbohydrate metabolism testing, thyroid testing, kidney function testing, and electrolytes. HS-CLI-7.9
10. Collect and handle blood specimens for analysis taking precautions to prevent hemolysis and anticoagulant usage. HS-CLI-7.10
11. Handle, process, and preserve body fluids for chemical analysis. HS-CLI-7.11
12. Demonstrate performing maintenance on POCT analyzers. HS-CLI-7.12
13. Identify automated instrumentation, including the operation and principles of commonly used special analyzers. HS-CLI-7.13
14. Demonstrate performing POCT tests for glucose and know true glucose tests (glucose-specific). HS-CLI-7.14
15. Explain testing for blood urea nitrogen (BUN) and tests for creatinine. HS-CLI-7.15
16. Identify and explain the procedures for point-of-care testing. HS-CLI-7.16

HS-CLI-8. Ensure proper specimen collection and test management. HS-CLI-8

1. Demonstrate performing proper blood film preparation. HS-CLI-8.1
2. Demonstrate collecting and handling specimens while adhering to time and temperature requirements. HS-CLI-8.2
3. Demonstrate processing specimens for shipping. HS-CLI-8.3
4. Demonstrate instructing patient in the collection of specimens. HS-CLI-8.4

HS-CLI-9. Maintain appropriate reports and patient data, inventory and supplies, and billing procedures for laboratory tests. HS-CLI-9

1. Demonstrate utilizing electronic health records for the reporting and documentation of patient collection data and lab results. HS-CLI-9.1
2. Identify and explain the components of a complete and final report. HS-CLI-9.2
3. Demonstrate maintaining inventory levels, orders, and restocking of supplies. HS-CLI-9.3
4. Demonstrate utilizing electronic billing software. HS-CLI-9.4

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HS-CLI-10. Discuss proper communication techniques with medical personnel, patients, and families regarding laboratory testing and special requirements for lab tests. HS-CLI-10

1. Demonstrate communicating with physician offices and hospital patient units regarding special scheduling and special situations. HS-CLI-10.1
2. Demonstrate informing and explaining special test requirements to patients and/or family members. HS-CLI-10.2

Public Safety Communications (43.462)

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

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

HS-PSC-2. Analyze the role of the communication officer related to public safety. HS-PSC-2

1. Correctly identify the term "communications officer" as defined in O.C.G.A. 35-8-23. HS-PSC-2.1
2. Identify and explain the standards and qualifications required of communications officers by Georgia Peace Officer Standards and Training Council (P.O.S.T.). HS-PSC-2.2
3. Explain the requirements for communications officers to notify GA P.O.S.T. of disciplinary actions. HS-PSC-2.3
4. Identify and describe sanctions available to GA P.O.S.T. for action against a communications officer's registration or certification. HS-PSC-2.4
5. Classify the three major responsibilities of a communications officer. HS-PSC-2.5
6. Assess the characteristics of an effective communications officer, including proper conduct and dress code. HS-PSC-2.6

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7. Illustrate the importance of reporting for duty and the impact absences have on a communication center. HS-PSC-2.7

HS-PSC-3. Connect ethical and liability issues faced by communication officers in accordance with current local, state, and federal laws, as well as agency policies. HS-PSC-3

1. Research the legalities of the Health Insurance Portability and Accountability Act and how it relates to communications officers. HS-PSC-3.1
2. Evaluate personal gain, negligence, values, and confidentiality as it could relate to a communications officer. HS-PSC-3.2
3. Explain liability and the categories of legal liability. HS-PSC-3.3
4. Define negligence and explain the criteria for successful legal action based on the Theory of Negligence. HS-PSC-3.4
5. Identify and describe the two elements necessary for recovery of damages under the Civil Rights Act (42 U.S.C. 1983). HS-PSC-3.5
6. Describe the areas of "high liability" for communication officers. HS-PSC-3.6
7. Identify and describe the protection afforded to communications operators under the Georgia Emergency Telephone Number '911' Service Act, O.C.G.A., §46-5-131. HS-PSC-3.7
8. Determine strategies to avoid litigation and defenses that may be available to a communications officer in a civil liability lawsuit. HS-PSC-3.8

HS-PSC-4. Explain how stress can affect the body and identify methods to properly manage stress. HS-PSC-4

1. Connect job-related stressors and the effects on a communications officer's ability to properly perform job duties. HS-PSC-4.1
2. Differentiate how stress manifests itself in the following areas: Physical, emotional, cognitive, and behavioral. HS-PSC-4.2
3. Compare and contrast maladaptive and positive solutions for coping with stress. HS-PSC-4.3
4. Investigate post-traumatic stress disorder (PTSD) and explain management of this condition. HS-PSC-4.4
5. Construct a personal stress management plan based on the American Heart Association Stress Management standards. HS-PSC-4.5

HS-PSC-5. Given actual and hypothetical scenarios, apply interpersonal communications skills and concepts to effectively process emergency and non-emergency calls consistent with professional, state, and agency communication standards. HS-PSC-5

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1. Differentiate selective from active listening. HS-PSC-5.1

2. Demonstrate techniques used to answer the phone and calm the caller. HS-PSC-5.2
3. Identify and describe appropriate information to obtain based on call type. HS-PSC-5.3
4. Discuss techniques for processing calls from callers with limited English language proficiency. HS-PSC-5.4
5. Obtain and organize pertinent information for dispatch. HS-PSC-5.5
6. Differentiate questioning techniques from interrogation techniques. HS-PSC-5.6
7. Explain the importance of briefing on-coming communication officers. HS-PSC-5.7

HS-PSC-6. Perform operational skills required of a communications officer by demonstrating appropriate federal, state, and local laws and regulations for disseminating and receiving information. HS-PSC-6

1. Describe ways incoming calls may be received and techniques for prioritizing and managing multiple calls. HS-PSC-6.1
2. Demonstrate the ability to document information in the appropriate forms, logs and/or files. HS-PSC-6.2
3. Explain procedures for processing calls from Telematic Providers. HS-PSC-6.3
4. Demonstrate techniques utilized with callers with limited communication ability. HS-PSC-6.4
5. Apply key concepts and procedures for communicating with impaired callers in accordance with Title II of the Americans with Disabilities Act and compliance standards established by the Department of Justice. HS-PSC-6.5
6. Obtain and process requests for service and/or resources from field units in a timely manner. HS-PSC-6.6
7. Explore various procedures used when dispatching emergency and non-emergency calls. HS-PSC-6.7
8. Analyze the importance of knowing and informing co-workers of incidents that may adversely affect operations. HS-PSC-6.8
9. Explain geographical jurisdiction and how it affects agency response. HS-PSC-6.9
10. Apply proper procedures for the effective use of public safety radios consistent with professional communication standards. HS-PSC-6.10

HS-PSC-7. Given actual and hypothetical scenarios, identify a crisis situation and apply techniques to properly handle the crisis consistent with professional communications standards. HS-PSC-7

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1. Define crisis and differentiate the steady state and the crisis state as it relates to callers or personnel. HS-PSC-7.1
2. Identify the types of crisis and compare the behavioral characteristics of each. HS-PSC-7.2
3. Differentiate the stages of crisis and the six phases of emotional reaction to crisis. HS-PSC-7.3
4. Identify and explain the "do's and don'ts" of crisis intervention and methods for dealing with difficult callers. HS-PSC-7.4
5. Follow agency protocol in gathering information to determine the severity of risk in suicidal calls. HS-PSC-7.5

HS-PSC-8. Apply the proper procedures for the effective handling of law enforcement calls with special emphasis placed on officer safety issues consistent with professional communication standards. HS-PSC-8

1. Summarize the roles and responsibilities of law enforcement officers and analyze various reasons citizens request police assistance in order to determine call priority. HS-PSC-8.1
2. Research the different ways federal, state, local and agency protocol treat various crisis situations. HS-PSC-8.2
3. Define the role of the communication officer (this may vary according to agency protocol and may involve someone with more advanced training) during a crisis call incident and his/her role in officer safety including unit status checks and officer distress calls. HS-PSC-8.3
4. Describe the proper techniques for transmitting information regarding "look-outs for persons and/or vehicles", physical descriptions, vehicle descriptions, and weapons. HS-PSC-8.4
5. Follow established procedures/protocols for gathering and transmitting information in reference to missing persons, including AMBER ALERT, Levi's Call, Mattie's Call, ADAM and SILVER alerts, if appropriate. HS-PSC-8.5

HS-PSC-9. Apply the procedures to effectively handle calls related to fire and hazardous materials with special emphasis on safety of the responders and the general public. HS-PSC-9

1. Summarize the roles and responsibilities of fire department responders and analyze types of fire emergency calls. HS-PSC-9.1
2. Identify and describe the nature of fire, the phases of the burning process, and the four classifications of fire. HS-PSC-9.2
3. Follow agency protocols in relaying instructions critical to safety of the responder and the general public during fire and hazardous materials calls. HS-PSC-9.3
4. Describe the Integrated Incident Command System (ICS) and the communications officer's role in ICS. HS-PSC-9.4

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5. Define Hazardous Materials as substances that when released are capable of causing harm to people, the environment, and property. HS-PSC-9.5
6. Identify the type of material using the Department of Transportation (DOT) Emergency Response Guide (ERG) and the location of the caller. HS-PSC-9.6
7. Identify and describe the appropriate Personal Protective Equipment (PPE) to protect the responder and others in a hazardous materials incident. HS-PSC-9.7

HS-PSC-10. Apply proper procedures to effectively handle calls related to emergency medical services with special emphasis on safety of the responder and the general public. HS-PSC-10

1. Differentiate the levels of EMS providers in Georgia and response types, modes and pre-determined response configurations. HS-PSC-10.1
2. Describe the three phases of dispatching and the roles of the communication officer in the EMS Chain of Survival. HS-PSC-10.2
3. Differentiate among primary and secondary units, basic life support (BLS), and advanced life support (ALS). HS-PSC-10.3
4. Prioritize the essential items of information which must be obtained from callers requesting EMS assistance. HS-PSC-10.4
5. Analyze pre-arrival instructions and pre-arrival medical instructions. HS-PSC-10.5
6. Classify special issues related to medical dispatching based on: children callers, elderly callers, dead on arrivals (DOAs), do not resuscitate (DNR) orders, and medical confidentiality and HIPAA. HS-PSC-10.6
7. Determine the appropriate resources to be allocated by considering such factors as the nature, size and severity of the problem; personnel and vehicles available; vehicle proximity to the patient; ambulance coverage zones; and the type of equipment and trained personnel carried by each resource. HS-PSC-10.7
8. Explore the definition of a multi casualty incident (MCI) and the role and responsibility of communications during a MCI. HS-PSC-10.8
9. Define trauma center, trauma center classifications and trauma alert criteria. HS-PSC-10.9

HS-PSC-11. Identify potential terrorists and weapons of mass destruction (WMD) events and respond in accordance with established federal, state, local and agency guidelines. HS-PSC-11

1. Define terrorism and distinguish between domestic and international terrorism. HS-PSC-11.1
2. Identify and classify potential targets of terrorism. HS-PSC-11.2
3. Based on information received, describe the indicators of the usage of WMD. HS-PSC-11.3

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4. Explain the procedures identified in the all hazards protocol. HS-PSC-11.4
5. Research various procedures that might be utilized for handling and documenting bomb threats and reports of suspicious substances or packages. (This information may be handled by someone with more advanced training per agency protocol.) HS-PSC-11.5
6. Follow agency protocols in identifying key questions to be asked when handling incidence involving aircraft emergencies. HS-PSC-11.6
7. Identify and describe the weaponry or agents referred to in the acronym CBRNE (Chemicals, biological, radiological, nuclear, and explosives). HS-PSC-11.7

HS-PSC-12. Successfully complete current CPR, AED, and First Aid training according to American Heart Association or American Red Cross, or other nationally recognized certifying agency. HS-PSC-12

1. Successfully complete CPR, AED, and First Aid training. HS-PSC-12.1

HS-PSC-13. Explore the various Homeland Security Agencies and Departments for their structure, organization and function at each level of government. HS-PSC-13

1. Compare the effectiveness and efficiency of different organizations/agencies at the federal, state, and local levels of government during a disaster. HS-PSC-13.1
2. Distinguish between hazard, emergency, and disaster. HS-PSC-13.2
3. Explain the phases of the emergency management process. HS-PSC-13.3
4. Explore the concept of mutual aid. HS-PSC-13.4
5. Describe the role and challenges faced by a communication officer during a disaster. HS-PSC-13.5
6. Describe proper response to events which may require an emergency management response including: terrorism, WMD, MCI, and weather events. HS-PSC-13.6
7. Examine the role and responsibility of the communications officer in the NIMS (National Incident Management System). HS-PSC-13.7
8. Display knowledge of the local emergency management agency including: disaster preparedness plans, emergency operations plans, and emergency operations. HS-PSC-13.8

HS-PSC-14. Given actual and hypothetical scenarios, students will apply proper procedures for the effective handling of law enforcement, fire and hazardous materials, and emergency medical service calls. HS-PSC-14

1. Utilize simulation to respond as a public safety communications officer. HS-PSC-14.1

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2. Apply safety protocol to both personnel and public when responding as a public safety communications officer. HS-PSC-14.2

Patient Care Fundamentals (25.436)

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

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

HS-PCF-2. Examine the needs of the elderly and how those needs can impact their care and well-being. HS-PCF-2

1. Discuss the philosophy of restorative care when meeting needs. HS-PCF-2.1
2. Examine principals of human growth and development for the elderly and apply knowledge. HS-PCF-2.2
3. Examine the physical, social, and emotional changes that occur in the elderly and chronically ill. HS-PCF-2.3
4. Respect and advocate for the resident/patient/client's rights. HS-PCF-2.4
5. Uncover and examine the special needs of residents/patients/clients with disabilities, including physical limitations, mental and emotional conditions, as well as dementias. HS-PCF-2.5

HS-PCF-3. Apply the employability skills required for proficiency working in the Patient Care field. HS-PCF-3

1. Assess self accurately, set personal goals, monitor progress, and exhibit self-control. HS-PCF-3.1
2. Differentiate work ethic skills such as adaptability, dependability, and responsibility and such social behaviors as tolerance, honesty, empathy, and courtesy and cite evidence of them in the school and workplace. HS-PCF-3.2

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3. Analyze an effective response to the needs of people of different ages, genders, cultures, socioeconomic backgrounds, attitudes, and abilities and perform correctly. HS-PCF-3.3
4. Formulate an appropriate response to the needs of customers/clients and manage conflict. HS-PCF-3.4
5. Construct the organizational structure for a healthcare business including the individual roles and responsibilities of employees and their relationships to one another. HS-PCF-3.5
6. Construct a personal career development plan, investigate how educational achievement will affect one's goals, and predict how choices affect family patterns and one's lifestyle show career progression (ex. CNA to LPN to RN). HS-PCF-3.6
7. Critique personal skills for seeking and securing employment and summarize strategies for gaining employment opportunities. HS-PCF-3.7
8. Examine state requirements for licensure and discuss the purpose of continuing education. HS-PCF-3.8
9. Identify potential workplace stressors and formulate responses for management of stress. HS-PCF-3.9

HS-PCF-4. Maintain resident/patient's rights and practice resident/patient/client's privacy, according to Omnibus Budget Reconciliation Act (OBRA) and Health Insurance Portability and Accountability Act (HIPAA) guidelines. HS-PCF-4

1. Examine nurse aide practice in order to protect privacy and confidentiality. HS-PCF-4.1
2. Apprise clients of their right to personal choices to accommodate their needs. HS-PCF-4.2
3. Research the role of an Ombudsman to give assistance in resolving grievances and disputes. HS-PCF-4.3
4. Provide needed assistance getting to and participating in resident/patient/client and family groups and activities. HS-PCF-4.4
5. Adhere to facility policies and procedures regarding the security of personal possessions of the residents/patients/clients. HS-PCF-4.5
6. Examine care methods for freedom from abuse, mistreatment, and neglect and report any instances of such treatment to appropriate staff/instructor. HS-PCF-4.6
7. Investigate the need for restraints in accordance with current professional standards and uncover alternative options. HS-PCF-4.7

HS-PCF-5. Communicate effectively with residents/patients/clients' healthcare team members and resident/patient/client family or visitors using appropriate customer service skills. HS-PCF-5

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1. Utilize the correct medical terminology and acronyms according to regulating agencies for effective communication in written documentation. HS-PCF-5.1
2. Demonstrate correct use of appropriate communication devices. HS-PCF-5.2
3. Examine resident/patient/client procedures and conditions appropriately, using one's senses to make pertinent observations and record and report objectively. HS-PCF-5.3
4. Assess residents/patients/clients that have various sensory impairments to determine effective methods of communication. HS-PCF-5.4
5. Select formal and informal, written, and oral, communication skills when planning and providing care. HS-PCF-5.5
6. Formulate and show courteous and compassionate care for the resident/patient/client and their family and friends. HS-PCF-5.6
7. Examine methods for communicating with residents with cognitive impairments. HS-PCF-5.7

HS-PCF-6. Demonstrate appropriate behaviors meeting mental health and social service needs of resident/patient/client. HS-PCF-6

1. Investigate the components of proper mental health and evaluate the inter-relatedness of physical and mental health. HS-PCF-6.1
2. Differentiate the signs and symptoms of various cognitive impairment including dementia, Alzheimer's Disease, delirium, and delusions that should be documented and reported. HS-PCF-6.2
3. Assess the correct nursing assistant plan of action in providing care for resident/patients/clients with cognitive impairments. HS-PCF-6.3

HS-PCF-7. Analyze the organizational structure of the nursing facility and adhere to policies and procedures. HS-PCF-7

1. Differentiate between long-term care and other healthcare agencies. HS-PCF-7.1
2. Examine the administrative structure for healthcare agencies. HS-PCF-7.2
3. Compare and contrast the relationship between various governmental and private agencies that define the guidelines for resident/patient/client quality care. HS-PCF-7.3
4. Adhere to approved institutional policies and procedures when providing care. HS-PCF-7.4

HS-PCF-8. Adhere to the scope of practice for patient care assistant and demonstrate appropriate actions while respecting a patient's right to privacy and proper treatment. HS-PCF-8

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1. Demonstrate responsible nursing assistant actions supporting resident/patient/client rights. HS-PCF-8.1

2. Assess the provision of resident/patient/client privacy as needed and provide accordingly. HS-PCF-8.2
3. Practice confidentiality according to the Health Insurance Portability and Accountability Act (HIPAA) and Omnibus Budget Reconciliation Act (OBRA) guidelines. HS-PCF-8.3
4. Differentiate elder abuse, misappropriation of property, and resident/patient/client neglect. HS-PCF-8.4
5. Compare and contrast practices that would promote legal responsibility and the consequences of failing to fulfill legal responsibilities. HS-PCF-8.5
6. Formulate a plan of care for a dying resident/patients/client and family members. HS-PCF-8.6
7. Examine the training requirements and scope of practice for the nursing assistant. HS-PCF-8.7

HS-PCF-9. Adhere to regulations and practice appropriate safety measures in providing resident/patient/client care. HS-PCF-9

1. Differentiate the nursing assistant's role in various disaster situations in the healthcare setting. HS-PCF-9.1
2. Examine ways to promote safety and handle non-medical emergencies in the healthcare setting. HS-PCF-9.2
3. Assess the safety of the resident/patient/client's environment and cite evidence of safe nursing assistant care. HS-PCF-9.3
4. Assess the use of correct body mechanics. HS-PCF-9.4
5. Formulate and follow emergency procedures for fire and other types of disasters. HS-PCF-9.5
6. Demonstrate how to recognize and respond to medical emergencies including the Heimlich maneuver for clearing foreign body airway obstructions for both conscious and unconscious victims. HS-PCF-9.6
7. Demonstrate procedures for positioning and transferring and turning residents/ patients/clients and assess proper technique. HS-PCF-9.7
8. Discuss with the client the location and function of staff/emergency contact devices (call light, restroom emergency button) and position within easy reach for the resident/patient/client. HS-PCF-9.8
9. Select the correct restraints/safety devices according to facility standards and demonstrate proper use. HS-PCF-9.9
10. Successfully complete Basic Life Support CPR course by a recognized agency such as American Heart Association or American Red Cross. HS-PCF-9.10

HS-PCF-10. Describe and demonstrate infection control practices. HS-PCF-10

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1. Cite evidence of medical aseptic hand washing techniques and demonstrate. HS-PCF-10.1

2. Apprise and implement the use of standard precautions when providing care. HS-PCF-10.2
3. Apprise and use isolation precautions correctly when providing care. HS-PCF-10.3
4. Apprise and use Personal Protective Equipment PPE) correctly. HS-PCF-10.4
5. Demonstrate sterile technique. HS-PCF-10.5

HS-PCF-11. Examine the role and responsibility of individual members of the healthcare team; and interact effectively and sensitively with all team members in promoting the delivery and quality of healthcare. HS-PCF-11

1. Judge the effectiveness of one's role as a team member in a patient care facility and provide quality care. HS-PCF-11.1
2. Compare and contrast the roles of the other members of the patient care team. HS-PCF-11.2

HS-PCF-12. Utilize information on the resident/patient/client care plan to assist with Activities of Daily Living (ADL) skills while promoting the resident's/patient's/client's independence. In addition, beginning and ending procedures should be properly sequenced and performed with all resident/patient/client care. HS-PCF-12

1. Model the proper technique to administer a bed bath while citing evidence of patient/client privacy and dignity. HS-PCF-12.1
2. Assess and assure the resident/patient/client of personal hygiene while providing patient/client privacy. HS-PCF-12.2
3. Apply concepts of good skin care evidences by observation, reporting and recording. HS-PCF-12.3
4. Assess the resident/patient/client by providing oral hygiene, denture care, and eyeglasses care. HS-PCF-12.4
5. Create a model that reveals how to perform a therapeutic backrub. HS-PCF-12.5
6. Compare and contrast shaving techniques between male and female residents and patients; and investigate the safety hazards of an electric vs. a non-electric razor contraindications of its use. HS-PCF-12.6
7. Investigate and model the proper uses of adaptive devices for dressing and grooming. HS-PCF-12.7
8. Construct special diets and hydrations necessary to meet the nutritional needs of the residents/patients, and the clients. HS-PCF-12.8
9. Investigate and compare the proper techniques used for feeding the resident/patient/clients. HS-PCF-12.9
10. Formulate a plan of care for the resident/patient/client evidenced by establishing a routine elimination pattern. HS-PCF-12.10

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HS-PCF-13. Perform basic patient care skills within the scope of practice for a nursing assistant while maintaining resident/patient/client rights, including beginning and ending procedures (i.e. washing hands, gathering equipment, identifying client, providing privacy, etc.). HS-PCF-13

1. Assess and document vital signs including blood pressure using manual and electronic equipment. HS-PCF-13.1
2. Assess height and weight accurately. HS-PCF-13.2
3. Model respect and management for residents'/patients'/clients' environment. HS-PCF-13.3
4. Cite evidence that differentiates abnormal changes in body function of all body systems while keeping the supervisor apprised to the changes. HS-PCF-13.4
5. Formulate ways to implement and maintain fluid balance of residents/patients/clients, by differentiating between dehydration and edema. HS-PCF-13.5
6. Assess and revise as needed various types of urinary catheters while citing evidence of effectiveness. HS-PCF-13.6
7. Utilizing standard precautions, submit specimens per facility policy and procedure. HS-PCF-13.7
8. Construct and implement facility guidelines which detail how to care for residents/patients/clients with various drainage tubes. HS-PCF-13.8
9. Simulate and then critique the required steps necessary to construct the care of the resident/patient/client when death and/or post-mortem care is imminent. HS-PCF-13.9
10. Investigate options to enhance pulmonary functions for resident's/patient's/client's receiving oxygen therapy. HS-PCF-13.10

HS-PCF-14. Assess, demonstrate, and integrate principals of restorative care for the nursing assistant to include maintaining a resident's rights. HS-PCF-14

1. Differentiate the role of the nursing assistant for restorative care needs. HS-PCF-14.1
2. Assess and select methods to promote a resident's/patient's/client's independence. HS-PCF-14.2
3. Organize and demonstrate proper use of assistive devices and equipment when assisting a resident/patient/client in transferring and ambulation skills, to include the correct use of a gait/ambulate belt. HS-PCF-14.3
4. Examine the resident/patient/client and performs range of motion exercises. HS-PCF-14.4
5. Demonstrate correct bowel and bladder training and cite evidence concerning its effectiveness. HS-PCF-14.5

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6. Examine and demonstrate the correct techniques to prevent pressure sores and contractures. HS-PCF-14.6

HS-PCF-15. Cite evidence of the proper role of the nursing assistant in a home health environment. HS-PCF-15

1. Differentiate the nursing assistant's role in home care as compared to an acute and longterm care environment. HS-PCF-15.1
2. Apply concepts to make modifications or adaptations for procedures in a home-care environment. HS-PCF-15.2
3. Investigate methods to promote safety and infection control in the home care environment. HS-PCF-15.3