2010 Mississippi Curriculum Framework

Postsecondary Emergency Medical Technician

(Program CIP: 51.0904 – Emergency Medical Technology/Technician)

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Published by

Office of Vocational Education and Workforce Development
Mississippi Department of Education
Jackson, MS 39205

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Standards in this document are based on information from the following organizations:

National EMS Educational Standards

U.S. Department of Transportation. (2009). *National EMS Educational Standards*. Washington, DC: Author.

Related Academic Standards

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21st Century Skills

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Preface

Emergency Medical Technician Research Synopsis

Emergency Medical Technicians (EMTs) function as the first responders to medical emergencies. They are trained to care for patients in the field and while transporting the patient to the hospital. EMTs are trained to assess patients' conditions and assist in the management of cardiac, respiratory, and trauma emergencies. To be an emergency medical technician, individuals must be certified by either their state or the National Registry of Emergency Medical Technicians (US Bureau of Labor Statistics, 2010).

Articles, books, Web sites, and other materials listed at the end of the course were considered during the revision process and were especially useful in providing insight into trends and issues in the field. These references are suggested for use by instructors and students during the study of the topics outlined.

Industry advisory team members from colleges throughout the state were asked to give input related to changes to be made to the curriculum framework. Specific comments related to soft skills needed in this program included punctuality, time management, professionalism, reliability, interpersonal skills with both patients and other medical professionals, a sense of empathy, and the ability to maintain level-headedness in times of great stress. Occupational-specific skills that were highlighted as being necessary included patient assessment and management, field diagnosis, developing a treatment plan, dosage calculation, measurement conversion, use of emergency equipment, emergency communication protocol, and standard operation of an ambulance. Safety practices emphasized included personal protection, safe lifting techniques, correct patient movement procedures, body substance isolation, scene safety, recognition of a potential hazardous materials scene, and safe driving practices.

Needs of the Future Workforce

The EMT Pathway will prepare students for EMT certification. Students will learn about cardiac, respiratory, and trauma emergency management. Completers will be prepared for entry-level employment in emergency medical services. EMTs and paramedics combined held about 212,000 jobs in 2009. About 20% of them worked for hospitals. 29% worked for local governments, and about 45% worked for ambulance services (US Bureau of Labor Statistics, 2010).

EMT Employment Projections and Earnings

Employment of EMTs is expected to grow slower than average in the United States, 5%, and much slower than average in Mississippi, 1% (EMSI, 2010). Job prospects will be best for those in metropolitan areas. Demand is expected to increase with aging populations and patient overcrowding in emergency departments (US Bureau of Labor Statistics, 2010).

Region	2010 Jobs	2019 Jobs	Change	% Change	Median Hourly Earnings
Regional Total	1,700	1,710	10	1%	$12.33
National Total	212,378	223,735	11,357	5%	$14.12

Source: EMSI Complete Employment - 1st Quarter 2010

Curriculum
The following national standards were referenced in each course of the curriculum:

- CTB/McGraw-Hill LLC *Tests of Adult Basic Education, forms 7 and 8* Academic Standards
- *21st Century Skills*
- *National EMS Educational Standards*

Industry and instructor comments, along with current research, were considered by the curriculum revision team during the revision process, and changes were made as needed and appropriate. Many of the skills and topics noted in the research were already included in the curriculum framework. Specific changes made to the curriculum at the June 2010 curriculum revision meeting included the following:

- Competencies and objectives were reviewed to ensure accuracy and appropriateness.
- Competencies and objectives were added in consideration of amended national standards.
- The course title was changed to Emergency Medical Technician from EMT-Basic.
- The course abbreviation was changed from EMT to EMS.
- EMS 1116 was changed to 1118 to reflect a change from 6 semester credit hours to 8 semester credit hours.
- The prerequisite/corequisite was added for EMS 1118 (formerly EMT 1116).

Assessment
Students will be assessed using the *National Registry of Emergency Medical Technicians Exam*.

Best Practices
Teachers are expected to use a wide variety of teaching strategies throughout the curriculum to instruct competencies in various methods. Teachers should develop strategies that reflect academic achievement, problem solving, and industry needs for daily use in the classroom.

Professional Learning
It is suggested that instructors participate in professional learning related to the following concepts:

- Smart classrooms, virtual learning experiences, and simulation labs/instructional materials
- Differentiated instruction – To learn more about differentiated instruction, please go to http://www.paec.org/teacher2teacher/additional_subjects.html, and click on Differentiated Instruction. Work through this online course, and review the additional resources.

Foreword

As the world economy continues to evolve, businesses and industries must adopt new practices and processes in order to survive. Quality and cost control, work teams and participatory management, and an infusion of technology are transforming the way people work and do business. Employees are now expected to read, write, and communicate effectively; think creatively, solve problems, and make decisions; and interact with each other and the technologies in the workplace. Vocational–technical programs must also adopt these practices in order to provide graduates who can enter and advance in the changing work world.

The curriculum framework in this document reflects these changes in the workplace and a number of other factors that impact local vocational–technical programs. Federal and state legislation calls for articulation between high school and community college programs, integration of academic and vocational skills, and the development of sequential courses of study that provide students with the optimum educational path for achieving successful employment. National skills standards, developed by industry groups and sponsored by the U.S. Department of Education and Labor, provide vocational educators with the expectations of employers across the United States. All of these factors are reflected in the framework found in this document.

Referenced throughout the courses of the curriculum are the 21st Century Skills, which were developed by the Partnership for 21st Century Skills, a group of business and education organizations concerned about the gap between the knowledge and skills learned in school and those needed in communities and the workplace. A portion of the 21st Century Skills addresses learning skills needed in the 21st century, including information and communication skills, thinking and problem-solving skills, and interpersonal and self-directional skills. The need for these types of skills has been recognized for some time, and the 21st Century Skills are adapted in part from the 1991 report from the U.S. Secretary of Labor's Commission on Achieving Necessary Skills (SCANS). Another important aspect of learning and working in the 21st century involves technology skills, and the International Society for Technology in Education, developer of the National Educational Technology Standards (NETS), was a strategic partner in the Partnership for 21st Century Skills.

Each postsecondary program of instruction consists of a program description and a suggested sequence of courses that focus on the development of occupational competencies. Each vocational–technical course in this sequence has been written using a common format, which includes the following components:

- Course Name – A common name that will be used by all community and junior colleges in reporting students

- Course Abbreviation – A common abbreviation that will be used by all community and junior colleges in reporting students

- Classification – Courses may be classified as the following:
    - Vocational–technical core – A required vocational–technical course for all students

  - Area of concentration (AOC) core – A course required in an area of concentration of a cluster of programs
  - Vocational–technical elective – An elective vocational–technical course
  - Related academic course – An academic course that provides academic skills and knowledge directly related to the program area
  - Academic core – An academic course that is required as part of the requirements for an associate's degree

- Description – A short narrative that includes the major purpose(s) of the course and the recommended number of hours of lecture and laboratory activities to be conducted each week during a regular semester

- Prerequisites – A listing of any courses that must be taken prior to or on enrollment in the course

- Corequisites – A listing of courses that may be taken while enrolled in the course

- Competencies and Suggested Objectives – A listing of the competencies (major concepts and performances) and of the suggested student objectives that will enable students to demonstrate mastery of these competencies

The following guidelines were used in developing the program(s) in this document and should be considered in compiling and revising course syllabi and daily lesson plans at the local level:

- The content of the courses in this document reflects approximately 75% of the time allocated to each course. The remaining 25% of each course should be developed at the local district level and may reflect the following:
  - Additional competencies and objectives within the course related to topics not found in the state framework, including activities related to specific needs of industries in the community college district
  - Activities that develop a higher level of mastery on the existing competencies and suggested objectives
  - Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework was developed or revised
  - Activities that implement components of the Mississippi Tech Prep initiative, including integration of academic and vocational–technical skills and course work, school-to-work transition activities, and articulation of secondary and postsecondary vocational–technical programs
  - Individualized learning activities, including work-site learning activities, to better prepare individuals in the courses for their chosen occupational areas

- Sequencing of the course within a program is left to the discretion of the local district. Naturally, foundation courses related to topics such as safety, tool and equipment usage, and other fundamental skills should be taught first. Other courses related to specific skill areas and related academics, however, may be sequenced to take advantage of seasonal and climatic conditions, resources located outside of the school, and other factors.

- Programs that offer an Associate of Applied Science degree must include a minimum 15-semester-credit-hour academic core. Specific courses to be taken within this core are to be determined by the local district. Minimum academic core courses are as follows:
    - 3 semester credit hours — Math/Science Elective
    - 3 semester credit hours — Written Communications Elective
    - 3 semester credit hours — Oral Communications Elective
    - 3 semester credit hours — Humanities/Fine Arts Elective
    - 3 semester credit hours — Social/Behavioral Science Elective

  It is recommended that courses in the academic core be spaced out over the entire length of the program so that students complete some academic and vocational–technical courses each semester. Each community or junior college has the discretion to select the actual courses that are required to meet this academic core requirement.

Technical elective courses can be included to allow community colleges and students to customize programs to meet the needs of industries and employers in their area.

In order to provide flexibility within the districts, individual courses within a framework may be customized by doing the following:

- Adding new competencies and suggested objectives
- Revising or extending the suggested objectives for individual competencies
- Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the State Board for Community and Junior Colleges [SBCJC] of the change)

In addition, the curriculum framework as a whole may be customized by doing the following:

- Resequencing courses within the suggested course sequence
- Developing and adding a new course that meets specific needs of industries and other clients in the community or junior college district (with SBCJC approval)
- Utilizing the technical elective options in many of the curricula to customize programs

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Program Description

Emergency Medical Technician is a one-semester instructional program that prepares individuals to provide basic emergency medical care and transportation for critical and emergent patients who access the emergency medical system. Emergency Medical Technicians function as part of a comprehensive EMS response, under medical oversight, trained in airway management, communications, documentation, general pharmacology, hemorrhage control, ambulance operations, and splinting of adult, pediatric, and infant patients; and special care of patients exposed to heat, cold, radiation, or contagious disease. Students who complete the program are eligible to take the National Registry of Emergency Medical Technicians Exam and become state certified.

Industry standards are based on the *National EMS Education Standards* and the *Emergency Medical Technician Instructional Guidelines.*

Suggested Course Sequence*
Emergency Medical Technician

FIRST YEAR

8 sch EMT (EMS 1118)

____
8 sch

* Students who lack entry-level skills in math, English, science, and so forth may be provided related studies.

** Students must pass each module with a minimum score of 75% before progressing in the course.

NOTE: Students must pass the final comprehensive exam in order to successfully complete the course.

Module System of Study**

Module 1: Introduction to EMS Systems and Operations

Module 2: Medical Terminology, Lifespan Development, Anatomy/Physiology

Module 3: Airway

Module 4: Pathophysiology, Shock and Resuscitation

Module 5: Patient Assessment

Module 6: Pharmacology, Medical

Module 7: Trauma

Module 8: Special Patient Populations

Emergency Medical Technician Courses

Course Name: EMT

Course Abbreviation: EMS 1118

Classification: Vocational–Technical Core

Description: This course includes responsibilities of the EMT during each phase of an ambulance run, patient assessment, emergency medical conditions, appropriate emergency care, and appropriate procedures for transporting patient. (8 sch: 5-hr lecture, 4-hr lab, 3-hr clinical) (135 clock hr – lecture and lab; 48 clock hr – clinical and field)

Prerequisite/Corequisite: Current American Heart Association BLS Health-care Provider card

Competencies and Suggested Objectives
1. Acquire a professional knowledge and skills of Emergency Medical Services (EMS) systems to include the roles and responsibilities of an EMT. EMB 1 a. Define EMS systems. DOK 1 b. Differentiate between the roles and responsibilities of the EMT and the roles and responsibilities of other out-of-hospital care providers. DOK 1 c. Describe the roles and responsibilities related to personal safety. DOK 1 d. Discuss the roles and responsibilities of the EMT toward the safety of the crew, the patient, and bystanders. DOK 1 e. Define quality improvement, and discuss the EMT's role in the process. DOK 1 f. Define medical direction, and discuss the EMT's role in the process. DOK 1 g. State the specific statutes and regulations in your state regarding the EMS system. DOK 1 h. Assess areas of personal attitude and conduct of the EMT. DOK 1 i. Characterize the various methods used to access the EMS system in your community. DOK 1 j. Describe evidence-based decision making. DOK 1 k. Use simple knowledge of the principles of illness and injury prevention in emergency care. DOK 1
2. Recognize factors associated with wellness and personal safety. EMB 1 a. List possible emotional reactions that the EMT may experience when faced with trauma, illness, death, and dying. DOK 1 b. Discuss the possible reactions that a family member may exhibit when confronted with death and dying. DOK 1 c. State the steps in the EMT's approach to the family confronted with death and dying. DOK 1 d. State the possible reactions that the family members of the EMT may exhibit due to their outside involvement in EMS. DOK 1 e. Recognize the signs and symptoms of critical incident stress. DOK 1 f. State possible steps that the EMT may take to help reduce/alleviate stress. DOK 1 g. Explain the need to determine scene safety. DOK 1

h. Discuss the importance of body substance isolation. DOK 1
i. Describe the steps the EMT should take for personal protection from airborne and bloodborne pathogens. DOK 1
j. List the personal protective equipment necessary for each of the following situations: DOK 1

(1) Hazardous materials
(2) Rescue operations
(3) Violent scenes
(4) Crime scenes
(5) Exposure to bloodborne pathogens
(6) Exposure to airborne pathogens

k. Describe infectious pathogens including HIV, MRSA, hepatitis, meningitis, and tuberculosis. DOK 1
l. Explain the rationale for serving as an advocate for the use of appropriate protective equipment. DOK 1
m. Given a scenario with potential infectious exposure, use appropriate personal protective equipment; at the completion of the scenario, properly remove and discard the protective garments. DOK 2
n. Given the above scenario, complete disinfection/cleaning and all reporting documentation. DOK 2
o. Demonstrate proper techniques for lifting and moving patients. DOK 1
p. Explain the rationale for crew members to evaluate scene safety prior to entering the scene. DOK 1

3. Explain medical, legal, and ethical implications that impact the functioning of an EMT. EMB 1, EMB6

a. Define the EMT scope of practice. DOK 1
b. Discuss the importance of Do Not Resuscitate [DNR] (advance directives) and local or state provisions regarding EMS application. DOK 1
c. Define consent, and discuss the methods of obtaining consent. DOK 1
d. Differentiate between expressed and implied consent. DOK 1
e. Explain the role of consent of minors in providing care. DOK 1
f. Discuss the implications for the EMT in patient refusal of transport. DOK 1
g. Discuss the issues of abandonment, negligence, and battery and their implications to the EMT. DOK 1
h. State the conditions necessary for the EMT to have a duty to act. DOK 1
i. Explain the importance, necessity, and legality of patient confidentiality, including HIPAA. DOK 1
j. Discuss the considerations of the EMT in issues of organ retrieval. DOK 1
k. Differentiate the actions that an EMT should take to assist in the preservation of a crime scene. DOK 1
l. State conditions that require an EMT to notify local law enforcement officials. DOK 1
m. Explain the role of EMS and the EMT regarding patients with DNR orders. DOK 1
n. Explain the rationale for the needs, benefits, and usage of advance directives. DOK 1
o. Explain the rationale for the concept of varying degrees of DNR. DOK 1

4. Apply fundamental knowledge of the anatomy and function of all human systems to the practice of EMS. EMB 2

a. Describe anatomy and body functions. DOK 1
b. Discuss the life support chain. DOK 1
c. Identify age-related variations. DOK 1

5. Use foundational anatomical and medical terms and abbreviations in written and oral communication with colleagues and other health-care professionals. EMB 3

6. Demonstrate the appropriate methods and equipment utilized for cardiopulmonary resuscitation of the adult and pediatric patient, and obtain a health-care provider CPR card. EMB 1, EMB 8, EMB 11

a. Demonstrate skills associated with maintaining an open airway for the adult, child, and infant. DOK 2
b. Demonstrate the appropriate methods for assessing ventilation and the adequacy of artificial ventilation. DOK 2
c. Demonstrate techniques for assessing circulation. DOK 2
d. Demonstrate techniques for appropriate CPR for the adult, child, and infant, including the use of an automated external defibrillator. DOK 2
e. Demonstrate the ability to recognize foreign body airway obstruction in the adult, child, and infant. DOK 2
f. Demonstrate the ability to manage foreign body airway obstruction in the adult, child, and infant. DOK 2

7. Apply fundamental knowledge of therapeutic communication to the provision of emergency care. EMB 1, EMB 5, EMB 13

8. Demonstrate the proper procedure and skills for effective radio communications. EMB 14

a. List the proper methods of initiating and terminating a radio call. DOK 1
b. State the proper sequence for delivery of patient information. DOK 1
c. Explain the importance of effective communication of patient information in the verbal report. DOK 1
d. Identify the essential components of the verbal report. DOK 1
e. Describe the attributes for increasing effectiveness and efficiency of verbal communications. DOK 1
f. State legal aspects to consider in verbal communication. DOK 1
g. Discuss the communication skills that should be used to interact with the patient. DOK 1
h. Discuss the communication skills that should be used to interact with the family, bystanders, and individuals from other agencies while providing patient care and the difference between skills used to interact with the patient and those used to interact with others. DOK 1
i. List the correct radio procedures in the following phases of a typical call: DOK 1
   (1) To the scene
   (2) At the scene
   (3) To the facility
   (4) At the facility
   (5) To the station
   (6) At the station
j. Explain the rationale for providing efficient and effective radio communications and patient reports. DOK 1
k. Perform a simulated, organized, concise radio transmission. DOK 1
l. Perform an organized, concise patient report that would be given to the staff at a

receiving facility. DOK 2

m. Perform a brief, organized report that would be given to an ALS provider arriving at an incident scene at which the EMT was already providing care. DOK 2

9. Develop appropriate documentation that adheres to state and local requirements. EMB 1, EMB 14

a. Explain the components of the written report, and list the information that should be included in the written report. DOK 1
b. Identify the various sections of the written report. DOK 1
c. Describe what information is required in each section of the out-of-hospital care report and how it should be entered. DOK 1
d. Define the special considerations concerning patient refusal. DOK 1
e. Describe the legal implications associated with the written report. DOK 1
f. Discuss all state and local record and reporting requirements. DOK 1
g. Explain the rationale for patient care documentation. DOK 1
h. Explain the rationale for the EMS system gathering data. DOK 1
i. Explain the rationale for using medical terminology correctly. DOK 1
j. Explain the rationale for using an accurate and synchronous clock so that information can be used in trending. DOK 1
k. Complete an out-of-hospital care report. DOK 1

10. Discuss the respiratory system and appropriate airway and ventilatory management. EMB 8

a. Label the major structures of the respiratory system on a diagram. DOK 1
b. Describe the pathophysiology of the respiratory system. DOK 2
c. List the signs of adequate breathing. DOK 1
d. List the signs of inadequate breathing. DOK 1
e. Describe the steps in performing the head-tilt chin lift. DOK 1
f. Relate mechanism of injury to opening the airway. DOK 2
g. Describe the steps in performing the jaw thrust. DOK 1
h. State the importance of having a suction unit ready for immediate use when providing emergency care. DOK 1
i. Describe the techniques of suctioning. DOK 1
j. Describe how to artificially ventilate a patient with a pocket mask. DOK 1
k. Describe the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask while using the jaw thrust. DOK 1
l. List the parts of a bag-valve-mask system. DOK 1
m. Describe the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask for one, two, and three rescuers. DOK 1
n. Describe the signs of adequate artificial ventilation using the bag-valve-mask. DOK 1
o. Describe the signs of inadequate artificial ventilation using the bag-valve-mask. DOK 1
p. Describe the steps in artificially ventilating a patient with a flow-restricted, oxygen-powered ventilation device. DOK 1
q. List the steps in performing the actions taken when providing mouth-to-mask and BVM-to-stoma artificial ventilation. DOK 1
r. Describe how to measure and insert an oropharyngeal (oral) airway. DOK 1
s. Describe how to measure and insert a nasopharyngeal (nasal) airway. DOK 1
t. Explain the components of an oxygen delivery system including pulse oximetry. DOK 1
u. Identify a nonrebreather face mask, and state the oxygen flow requirements needed

for its use. DOK 1

v. Describe the indications for using a nasal cannula versus a nonrebreather face mask. DOK 1

w. Identify a nasal cannula, and state the flow requirements needed for its use. DOK 1

x. Explain the rationale for basic life support, artificial ventilation, and airway protective skills taking priority over most other basic life support skills. DOK 1

y. Explain the rationale for providing adequate oxygenation through high inspired oxygen concentrations to patients who, in the past, may have received low concentrations. DOK 1

z. Explain the rationale for providing proper ventilations to neurological patients. DOK 1

aa. Demonstrate the steps in performing the head-tilt chin lift. DOK 2

bb. Demonstrate the steps in performing the jaw thrust. DOK 2

cc. Demonstrate the techniques of suctioning. DOK 2

dd. Demonstrate the steps in providing mouth-to-mask artificial ventilation with body substance isolation. DOK 2

ee. Demonstrate how to use a pocket mask to artificially ventilate an adult patient. DOK 2

ff. Demonstrate the assembly of a bag-valve-mask unit. DOK 1

gg. Demonstrate the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask for one, two, and three rescuers. DOK 2

hh. Demonstrate the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask while using the jaw thrust. DOK 2

ii. Demonstrate artificial ventilation of a patient with a flow-restricted, oxygen-powered ventilation device. DOK 2

jj. Demonstrate how to artificially ventilate a patient with a stoma. DOK 2

kk. Demonstrate how to insert an oropharyngeal (oral) airway. DOK 2

ll. Demonstrate how to insert a nasopharyngeal (nasal) airway. DOK 2

mm. Demonstrate the correct operation of oxygen tanks and regulators. DOK 2

nn. Demonstrate the use of a nonrebreather face mask, and state the oxygen flow requirements needed for its use. DOK 2

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rr. Demonstrate the use of a pulse oximeter. DOK 2

ss. Demonstrate the use of oxygen humidifiers. DOK 2

tt. Demonstrate the use of partial rebreather masks. DOK 2

uu. Demonstrate the use of Venturi masks. DOK 2

vv. Demonstrate the use of automated transport ventilators. DOK 2

11. Apply patient assessment to the emergency care of medical and trauma patients throughout the different stages of the life span. EMB 5,EMB 9, EMB 10, EMB 12

a. Explain the components of scene size-up. DOK 1

b. Demonstrate the components of scene size-up. DOK 1

c. Explain the components of primary assessment. DOK 1

d. Demonstrate the components of primary assessment. DOK 1

e. Explain the assessment of vital signs. DOK 1

f. Demonstrate the assessment of vital signs. DOK 1

g. Explain the components of history taking. DOK 1
h. Demonstrate the components of history taking. DOK 1
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l. Demonstrate the use of monitoring devices. DOK 1
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    b. Discuss generic and trade names. DOK 1
    c. Discuss medication forms. DOK 1
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    e. Demonstrate medication administration. DOK 1
    f. Read the labels, and inspect each type of medication. DOK 1
    g. Discuss the six rights of medication administration. DOK 1

13. Describe the assessment, care, and treatment of patients with respiratory emergencies. EMB 2, EMB 8
    a. List the structure, function, and pathophysiology of the respiratory system. DOK 1
    b. Identify the signs and symptoms of a patient with breathing difficulty. DOK 1
    c. Describe the emergency medical care and management of the patient with breathing difficulty. DOK 1
    d. Recognize the need for medical direction to assist in the emergency medical care of the patient with breathing difficulty. DOK 1
    e. Describe the emergency medical care and management of the patient with breathing distress. DOK 1
    f. Explain the relationship between airway management and the patient with breathing difficulty. DOK 2
    g. Identify the signs of adequate air exchange. DOK 1
    h. Assist the patient with a prescribed nebulized/aerosolized inhaler. DOK 1
    i. Distinguish among the emergency medical care of the infant, child, and adult patient with breathing difficulty. DOK 1
    j. Differentiate between upper airway obstruction and lower airway disease in the infant and child patient. DOK 2
    k. Discuss EMT treatment regimens for various respiratory emergencies. DOK 1
    l. Explain the rationale for administering an inhaler. DOK 1
    m. Demonstrate the emergency medical care for breathing difficulty. DOK 2
    n. Perform the steps in facilitating the use of an inhaler. DOK 1

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    a. Describe the structure and function of the cardiovascular system. DOK 1
    b. Discuss the emergency medical care of the patient experiencing chest pain or discomfort, including application of the cardiac monitor. DOK 1
    c. List the indications for automated external defibrillation. DOK 1
    d. List the contraindications for automated external defibrillation. DOK 1
    e. Define the role of the EMT in the emergency cardiac care system. DOK 1
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m. Explain the importance of out-of-hospital Advanced Cardiac Life Support (ACLS) intervention if it is available. DOK 1
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y. Discuss the special considerations for rhythm monitoring. DOK 1
z. List the steps in the operation of the automated external defibrillator. DOK 1
aa. Discuss the standard of care that should be used to provide care to a patient with persistent ventricular fibrillation and no available ACLS. DOK 1
bb. Discuss the standard of care that should be used to provide care to a patient with recurrent ventricular fibrillation and no available ACLS. DOK 1
cc. Differentiate between single rescuer and multi-rescuer care with an automated external defibrillator. DOK 1
dd. Explain the reason for not checking pulses between shocks with an automated external defibrillator. DOK 1
ee. Discuss the importance of coordinating ACLS trained providers with personnel using automated external defibrillators. DOK 1
ff. Discuss the importance of post-resuscitation care. DOK 1
gg. List the components of post-resuscitation care. DOK 1
hh. Explain the importance of frequent practice with the automated external defibrillator. DOK 1
ii. Discuss the need to complete the Automated Defibrillator: Operator's Shift Checklist. DOK 1
jj. Discuss the role of the American Heart Association (AHA) in the use of automated external defibrillation. DOK 1

kk. Explain the role medical direction plays in the use of automated external defibrillation. DOK 1

ll. State the reasons that a case review should be completed following the use of the automated external defibrillator. DOK 1

mm. Discuss the components that should be included in a case review. DOK 1

nn. Discuss the goal of quality improvement in automated external defibrillation. DOK 1

oo. Recognize the need for medical direction of protocols to assist in the emergency medical care of the patient with chest pain. DOK 1

pp. List the indications for the use of nitroglycerin. DOK 1

qq. State the contraindications and side effects for the use of nitroglycerin. DOK 1

rr. List the indications for the use of aspirin. DOK 1

ss. State the contraindications and side effects for the use of aspirin. DOK 1

tt. Define the function of all controls on an automated external defibrillator, and describe event documentation and battery defibrillator maintenance. DOK 1

uu. Defend the reasons for obtaining initial training in automated external defibrillation and the importance of continuing education. DOK 1

vv. Defend the reason for maintenance of automated external defibrillators. DOK 1

ww. Explain the rationale for administering nitroglycerin to a patient with chest pain or discomfort. DOK 1

xx. Demonstrate the assessment and emergency medical care of a patient experiencing chest pain or discomfort. DOK 2

yy. Demonstrate the application and operation of the automated external defibrillator. DOK 2

zz. Demonstrate the maintenance of an automated external defibrillator. DOK 1

aaa. Demonstrate the assessment and documentation of patient response to the automated external defibrillator. DOK 1

bbb. Demonstrate the skills necessary to complete the Automated Defibrillator: Operator's Shift Checklist. DOK 1

ccc. Perform the steps in facilitating the use of nitroglycerin for chest pain or discomfort. DOK 1

ddd. Demonstrate the assessment and documentation of patient response to nitroglycerin. DOK 1

eee. Practice completing an out-of-hospital care report for patients with cardiac emergencies. DOK 1

fff. Describe the anatomical, physiological, pathophysiological, assessment, and management considerations of the following: DOK 1

(1) Sickle cell crisis
(2) Clotting disorders

15. Apply fundamental knowledge to provide basic emergency care and transportation based on assessment findings for patients suffering from abdominal, gastrointestinal, or genitourinary disorders. EMB 9, EMB 10

a. Describe the anatomical, physiological, pathophysiological, assessment, and management considerations of the following: DOK 1

(3) Acute and chronic gastrointestinal hemorrhage
(4) Peritonitis
(5) Ulcerative diseases

b. Describe the anatomical, physiological, pathophysiological, assessment, and management considerations of the following: DOK 1
   (1) Complications related to the following:
      - Renal dialysis
      - Urinary catheter management (not insertion)
   (2) Kidney stones

16. Perform out-of-hospital interventions for a patient with a diabetic emergency. EMB 10
   a. Identify the patient taking diabetic medications with altered mental status and the implications of a diabetes history. DOK 1
   b. State the steps in the emergency medical care of the patient taking diabetic medicine with an altered mental status and a history of diabetes. DOK 1
   c. Establish the relationship between airway management and the patient with altered mental status. DOK 2
   d. State the generic and trade names, medication forms, dose, administration, action, and contraindications for oral glucose. DOK 1
   e. Evaluate the need for medical direction in the emergency medical care of the diabetic patient. DOK 1
   f. Explain the rationale for administering oral glucose. DOK 1
   g. Demonstrate the steps in the emergency medical care for the patient taking diabetic medicine with an altered mental status and a history of diabetes. DOK 2
   h. Demonstrate the steps in the administration of oral glucose. DOK 1
   i. Demonstrate the assessment and documentation of patient response to oral glucose. DOK 1
   j. Demonstrate how to complete an out-of-hospital care report for patients with diabetic emergencies. DOK 1

17. Demonstrate the management of a patient with an allergic reaction. EMB 10
   a. Recognize the patient experiencing an allergic reaction. DOK 1
   b. Describe the emergency medical care of the patient with an allergic reaction. DOK 1
   c. Establish the relationship between the patient with an allergic reaction and airway management. DOK 2
   d. Describe the mechanisms of allergic response and the implications for airway management. DOK 1
   e. State the generic and trade names, medication forms, dose, administration, action, and contraindications for the epinephrine auto-injector. DOK 1
   f. Evaluate the need for medical direction in the emergency medical care of the patient with an allergic reaction. DOK 1
   g. Differentiate between the general category of those patients having an allergic reaction and those patients having an allergic reaction and requiring immediate medical care, including immediate use of the epinephrine auto-injector. DOK 1
   h. Explain the rationale for administering epinephrine using an auto-injector. DOK 1
   i. Demonstrate the emergency medical care of the patient experiencing an allergic reaction. DOK 1
   j. Demonstrate the use of the epinephrine auto-injector. DOK 1
   k. Demonstrate the assessment and documentation of patient response to an epinephrine injection. DOK 1
   l. Demonstrate proper disposal of equipment including sharps. DOK 1

m. Demonstrate completing an out-of-hospital care report for patients with allergic emergencies. DOK 1
n. Describe the anatomical, physiological, pathophysiological, assessment, and management considerations related to hypersensitivity emergencies and/or anaphylactic reactions. DOK 1

18. Discuss appropriate intervention methods for poisoning. EMB 10
    a. List various ways that poisons enter the body. DOK 1
    b. List signs and symptoms associated with poisoning. DOK 1
    c. Discuss the emergency medical care for the patient with possible overdose. DOK 1
    d. Describe the steps in the emergency medical care for the patient with suspected poisoning. DOK 1
    e. Establish the relationship between the patient suffering from poisoning or overdose and airway management. DOK 2
    f. Recognize the need for medical direction in caring for the patient with poisoning or overdose. DOK 1
    g. Explain the rationale for contacting medical direction early in the out-of-hospital management of the poisoning or overdose patient. DOK 1
    h. Demonstrate the steps in the emergency medical care for the patient with possible overdose. DOK 2
    i. Demonstrate the steps in the emergency medical care for the patient with suspected poisoning. DOK 2
    j. Demonstrate the assessment and documentation of patient response. DOK 1
    k. Demonstrate completing an out-of-hospital care report for patients with a poisoning or overdose emergency. DOK 1

19. Identify environmental conditions that pose a hazard to the body, and discuss appropriate management techniques. EMB 10
    a. Describe the various ways that the body loses heat. DOK 1
    b. List the signs and symptoms of exposure to cold. DOK 1
    c. Explain the steps in providing emergency medical care to a patient exposed to cold. DOK 1
    d. List the signs and symptoms of exposure to heat. DOK 1
    e. Explain the steps in providing emergency care to a patient exposed to heat. DOK 1
    f. Recognize the signs and symptoms of water-related emergencies. DOK 1
    g. Describe the complications of near drowning. DOK 1
    h. Discuss the emergency medical care of bites and stings. DOK 1
    i. Demonstrate the assessment and emergency medical care of a patient with exposure to cold. DOK 2
    j. Demonstrate the assessment and emergency medical care of a patient with exposure to heat. DOK 2
    k. Demonstrate the assessment and emergency medical care of a near drowning patient. DOK 2
    l. Demonstrate completing an out-of-hospital care report for patients with environmental emergencies. DOK 1

20. Appraise behaviors relative to the potential for harm, and explain appropriate intervention. EMB 10
    a. Define behavioral emergencies. DOK 1

b. Discuss the general factors that may cause an alteration in patient's behavior. DOK 1
c. State the various reasons for psychological crises. DOK 1
d. Discuss the characteristics of an individual's behavior that suggest that the patient is at risk for suicide. DOK 1
e. Discuss special medical and legal considerations for managing behavioral emergencies. DOK 1
f. Discuss the special considerations for assessing a patient with behavioral problems. DOK 1
g. Discuss the general principles of an individual's behavior that suggest that he or she is at risk for violence. DOK 1
h. Discuss methods to calm behavioral emergency patients. DOK 1
i. Explain the rationale for learning how to modify behavior toward the patient with a behavioral emergency. DOK 1
j. Demonstrate the assessment and emergency medical care of the patient experiencing a behavioral emergency. DOK 1
k. Demonstrate various techniques to safely restrain a patient with a behavioral problem. DOK 1
l. Demonstrate the proper assessment and management of the following: DOK 2
    (1) Acute psychosis
    (2) Suicidal/risk
    (3) Agitated delirium

21. Manage an obstetrical emergency to include care for the neonate. EMB 10
a. Identify the following structures: uterus, vagina, fetus, placenta, umbilical cord, amniotic sac, and perineum. DOK 1
b. Identify and explain the use of the contents of an obstetrics kit. DOK 1
c. Identify pre-delivery emergencies to include preeclampsia, eclampsia, and premature rupture of membranes. DOK 1
d. State indications of an imminent delivery. DOK 1
e. Differentiate between the emergency medical care provided to a patient with pre-delivery emergencies from a normal delivery. DOK 2
f. State the steps in the pre-delivery preparation of the mother. DOK 1
g. Establish the relationship between body substance isolation and childbirth. DOK 2
h. State the steps to assist in the delivery. DOK 1
i. Describe care of the baby as the head appears. DOK 1
j. Describe how and when to cut the umbilical cord. DOK 1
k. Discuss the steps in the delivery of the placenta. DOK 1
l. List the steps in the emergency medical care of the mother post-delivery. DOK 1
m. Summarize neonatal resuscitation procedures. DOK 1
n. Describe the procedures for the following abnormal deliveries: breech birth, prolapsed cord, and limb presentation. DOK 1
o. Differentiate between the special considerations for multiple births and considerations for single birth. DOK 2
p. Describe special considerations of meconium. DOK 1
q. Describe special considerations of a premature baby. DOK 1
r. Discuss the emergency medical care of a patient with a gynecological emergency. DOK 1

s. Discuss sexually transmitted diseases and pelvic inflammatory disease. DOK 1
t. Explain the rationale for understanding the implications of treating two patients (mother and baby). DOK 1
u. Demonstrate the steps to assist in the normal cephalic delivery. DOK 2
v. Demonstrate necessary care procedures of the fetus as the head appears. DOK 2
w. Demonstrate infant neonatal procedures. DOK 2
x. Demonstrate post-delivery care of the infant. DOK 2
y. Demonstrate how and when to cut the umbilical cord. DOK 2
z. Attend to the steps in the delivery of the placenta. DOK 2
aa. Demonstrate the post-delivery care of the mother. DOK 2
bb. Demonstrate the procedures for the following abnormal deliveries: vaginal bleeding, breech birth, prolapsed cord, and limb presentation. DOK 2
cc. Demonstrate the steps in the emergency medical care of the mother with excessive bleeding. DOK 2
dd. Demonstrate completing an out-of-hospital care report for patients with obstetrical and gynecological emergencies. DOK 1

22. Describe the pathophysiology of hypoperfusion, and demonstrate emergency interventions. EMB 4, EMB 11

a. List the structure and function of the circulatory system. DOK 1
b. Differentiate among arterial, venous, and capillary bleeding. DOK 1
c. State methods of emergency medical care of external bleeding. DOK 1
d. Establish the relationship between body substance isolation and bleeding. DOK 2
e. Establish the relationship between airway management and the trauma patient. DOK 2
f. Establish the relationship between mechanism of injury and internal bleeding. DOK 2
g. List the signs of internal bleeding. DOK 1
h. List the steps in the emergency medical care of the patient with signs and symptoms of internal bleeding. DOK 1
i. List signs and symptoms of shock (hypoperfusion). DOK 1
j. List the steps in the emergency medical care of the patient with signs and symptoms of shock (hypoperfusion). DOK 1
k. Explain the sense of urgency to transport patients that are bleeding and show signs of shock (hypoperfusion). DOK 1
l. Demonstrate direct pressure as a method of emergency medical care of external bleeding. DOK 1
m. Demonstrate the use of diffuse pressure as a method of emergency medical care of external bleeding. DOK 2
n. Demonstrate timely and appropriate tourniquet use for refractory external bleeding. DOK 2
o. Demonstrate the care of the patient exhibiting signs and symptoms of internal bleeding. DOK 2
p. Demonstrate the care of the patient exhibiting signs and symptoms of shock (hypoperfusion). DOK 2
q. Demonstrate completing a out-of-hospital care report for the patient with bleeding or shock (hypoperfusion). DOK 1

23. Explain soft tissue injuries, and perform the techniques used in the management of various soft tissue injuries. EMB 12

a. State the major functions of the skin. DOK 1
b. List the layers of the skin. DOK 1
c. Establish the relationship between body substance isolation (BSI) and soft tissue injuries. DOK 2
d. List the types of closed soft tissue injuries. DOK 1
e. Describe the emergency medical care of the patient with a closed soft tissue injury. DOK 1
f. State the types of open soft tissue injuries. DOK 1
g. Describe the emergency medical care of the patient with an open soft tissue injury. DOK 1
h. Discuss the emergency medical care considerations for a patient with a penetrating chest injury. DOK 1
i. State the emergency medical care considerations for a patient with an open wound to the abdomen. DOK 1
j. Differentiate between the care of an open wound to the chest and the care of an open wound to the abdomen. DOK 1
k. List the classifications of burns. DOK 1
l. Define superficial burns. DOK 1
m. List the characteristics of a superficial burn. DOK 1
n. Define partial thickness burn. DOK 1
o. List the characteristics of a partial thickness burn. DOK 1
p. Define full thickness burn. DOK 1
q. List the characteristics of a full thickness burn. DOK 1
r. Describe the emergency medical care of the patient with a superficial burn. DOK 1
s. Describe the emergency medical care of the patient with a partial thickness burn. DOK 1
t. Describe the emergency medical care of the patient with a full thickness burn. DOK 1
u. List the functions of dressing and bandaging. DOK 1
v. Describe the purpose of a bandage. DOK 1
w. Describe the steps in applying a pressure dressing. DOK 1
x. Establish the relationship between airway management and the patient with chest injury, burns, and blunt and penetrating injuries. DOK 2
y. Describe the effects of improperly applied dressings, splints, and tourniquets. DOK 1
z. Describe the emergency medical care of a patient with an impaled object. DOK 1
aa. Describe the emergency medical care of a patient with an amputation. DOK 1
bb. Describe the emergency medical care for a chemical burn. DOK 1
cc. Describe the emergency medical care for an electrical burn. DOK 1
dd. Demonstrate the steps in the emergency medical care of closed soft tissue injuries. DOK 2
ee. Demonstrate the steps in the emergency medical care of a patient with an open chest wound. DOK 2
ff. Demonstrate the steps in the emergency medical care of a patient with open abdominal wounds. DOK 2
gg. Demonstrate the steps in the emergency medical care of a patient with an impaled object. DOK 2
hh. Demonstrate the steps in the emergency medical care of a patient with an amputation. DOK 2

ii. Demonstrate the steps in the emergency medical care of an amputated part. DOK 2
jj. Demonstrate the steps in the emergency medical care of a patient with superficial burns. DOK 2
kk. Demonstrate the steps in the emergency medical care of a patient with partial thickness burns. DOK 2
ll. Demonstrate the steps in the emergency medical care of a patient with full thickness burns. DOK 2
mm. Demonstrate the steps in the emergency medical care of a patient with a chemical burn. DOK 2
nn. Demonstrate completing a out-of-hospital care report for patients with soft tissue injuries. DOK 1

24. Integrate the anatomy and physiology of the musculoskeletal system with the mechanisms of immobilization of the painful, swollen, deformed extremity. EMB 2, EMB 12
a. Describe the function of the muscular system. DOK 1
b. Describe the function of the skeletal system. DOK 1
c. List the major bones or bone groupings of the spinal column, the thorax, the upper extremities, and the lower extremities. DOK 1
d. Differentiate between an open and a closed painful, swollen, deformed extremity. DOK 1
e. State the reasons for splinting. DOK 1
f. List the general rules of splinting. DOK 1
g. List the complications of splinting. DOK 1
h. List the emergency medical care for a patient with a painful, swollen, deformed extremity. DOK 1
i. Explain the rationale for splinting at the scene versus load and go. DOK 1
j. Explain the rationale for immobilization of the painful, swollen, deformed extremity. DOK 1
k. Demonstrate the emergency medical care of a patient with a painful, swollen, deformed extremity. DOK 2
l. Demonstrate completing an out-of-hospital care report for patients with musculoskeletal injuries. DOK 1

25. Explain the anatomy and physiology of the nervous system, explain the pathophysiology of traumatic injuries, and demonstrate the out-of-hospital skills necessary for the neurological injured patient. EMB 2, EMB 12
a. State the components of the nervous system. DOK 1
b. List the functions of the central nervous system. DOK 1
c. Define the structure of the skeletal system as it relates to the nervous system. DOK 1
d. Relate mechanism of injury to potential injuries of the head and spine. DOK 2
e. Describe the implications of not properly caring for potential spine injuries. DOK 1
f. State the signs and symptoms of a potential spine injury. DOK 1
g. Describe the method of determining if a responsive patient may have a spine injury. DOK 1
h. Relate the airway emergency medical care techniques to the patient with a suspected spine injury. DOK 2
i. Describe how to stabilize the cervical spine. DOK 1
j. Discuss indications for sizing and using a cervical spine immobilization device. DOK 1

k. Establish the relationship between airway management and the patient with head and spine injuries. DOK 2
l. Describe a method for sizing a cervical spine immobilization device. DOK 1
m. Describe how to log roll a patient with a suspected spine injury. DOK 1
n. Describe how to secure a patient to a long spine board. DOK 1
o. List instances when a short spine board should be used. DOK 1
p. Describe how to immobilize a patient using a short spine board. DOK 1
q. Describe the indications for the use of rapid extrication. DOK 1
r. List steps in performing rapid extrication. DOK 1
s. State the circumstances when a helmet should be left on a patient. DOK 1
t. Discuss the circumstances when a helmet should be removed. DOK 1
u. Identify different types of helmets. DOK 1
v. Describe the unique characteristics of sports helmets. DOK 1
w. Explain the preferred methods to remove a helmet. DOK 1
x. Discuss alternative methods for removal of a helmet. DOK 1
y. Describe how the patient's head is stabilized to remove the helmet. DOK 1
z. Differentiate between how the head is stabilized with a helmet compared to without a helmet. DOK 1
aa. Explain the rationale for immobilization of the entire spine when a cervical spine injury is suspected. DOK 1
bb. Explain the rationale for utilizing immobilization methods apart from the straps on the cots. DOK 1
cc. Explain the rationale for utilizing a short spine immobilization device when moving a patient from the sitting to the supine position. DOK 1
dd. Explain the rationale for utilizing rapid extraction approaches only when they will make the difference between life and death. DOK 1
ee. Defend the reasons for leaving a helmet in place for transport of a patient. DOK 1
ff. Defend the reasons for removal of a helmet prior to transport of a patient. DOK 1
gg. Demonstrate opening the airway in a patient with suspected spinal cord injury. DOK 2
hh. Demonstrate evaluating a responsive patient with a suspected spinal cord injury. DOK 2
ii. Demonstrate stabilization of the cervical spine. DOK 2
jj. Demonstrate the four person log roll for a patient with a suspected spinal cord injury. DOK 2
kk. Demonstrate how to log roll a patient with a suspected spinal injury using two people. DOK 2
ll. Demonstrate securing a patient to a long spine board. DOK 2
mm. Demonstrate using the short board immobilization technique. DOK 2
nn. Demonstrate the procedure for rapid extrication. DOK 2
oo. Demonstrate preferred methods for stabilization of a patient wearing a helmet. DOK 2
pp. Demonstrate helmet removal techniques. DOK 2
qq. Demonstrate alternative methods for stabilization of a patient wearing a helmet. DOK 2
rr. Demonstrate completing an out-of-hospital care report for patients with head and spinal injuries. DOK 1

26. Contrast the care required for pediatric patients versus adult patients, and perform the skills necessary for out-of-hospital pediatric intervention. EMB 5, EMB 13
a. Identify the developmental considerations for the following age groups: infants,

toddlers, preschool, school age, and adolescent. DOK 1

b. Describe differences in the anatomy and pathophysiology of the infant, child, and adult patient. DOK 1
c. Differentiate between the response of the ill or injured infant or child (age specific) and that of an adult. DOK 1
d. Indicate various causes of respiratory emergencies. DOK 1
e. Differentiate between respiratory distress and respiratory failure. DOK 1
f. List the steps in the management of foreign body airway obstruction. DOK 1
g. Summarize emergency medical care strategies for respiratory distress and respiratory failure. DOK 1
h. Identify the signs and symptoms of shock (hypoperfusion) in the infant and child patient. DOK 1
i. Describe the methods of determining end organ perfusion in the infant and child patient. DOK 1
j. State the usual cause of cardiac arrest in infants and children versus adults. DOK 1
k. List the common causes of seizures in the infant and child patient. DOK 1
l. Describe the management of seizures in the infant and child patient. DOK 1
m. Differentiate among the injury patterns in adults, infants, and children. DOK 1
n. Discuss the field management of the infant and child trauma patient. DOK 1
o. Summarize the indicators of possible child abuse and neglect. DOK 1
p. Describe the medical legal responsibilities in suspected child abuse. DOK 1
q. Recognize the need for EMT debriefing following a difficult infant or child transport.
r. Explain the rationale for having knowledge and skills appropriate for dealing with the infant and child patient. DOK 1
s. Recognize the feelings of the family when dealing with an ill or injured infant or child. DOK 1
t. Understand the provider's own response (emotional) to caring for infants or children. DOK 1
u. Demonstrate the techniques of foreign body airway obstruction removal in the infant. DOK 2
v. Demonstrate the techniques of foreign body airway obstruction removal in the child. DOK 2
w. Demonstrate the assessment of the infant and child. DOK 2
x. Demonstrate bag-valve-mask artificial ventilation for the infant. DOK 2
y. Demonstrate bag-valve-mask artificial ventilation for the child. DOK 2
z. Demonstrate oxygen delivery for the infant and child. DOK 2
aa. Discuss specific pathophysiology, assessment, and management of the following: DOK 1

(1) SIDS
(2) Gastrointestinal diseases

27. Describe the changes associated with aging, psychosocial aspects of aging, and age-related assessment and treatment modifications for the major or common geriatric diseases and/or emergencies including the following: EMB 5, EMB 13

(1) Cardiovascular diseases DOK 1
(2) Respiratory diseases
(3) Neurological diseases

(4) Endocrine diseases
(5) Alzheimer's
(6) Dementia

28. Describe the health care implications of the following: EMB 5, EMB 13
    (1) Abuse DOK 1
    (2) Neglect
    (3) Homelessness
    (4) Poverty
    (5) Bariatrics
    (6) Technology dependent
    (7) Hospice/ terminally ill
    (8) Tracheostomy care/dysfunction
    (9) Home care
    (10) Sensory deficit/loss
    (11) Developmental disability

29. Describe ambulance call procedures associated with vehicle and patient care. EMB 14
    a. Discuss the medical and non-medical equipment needed to respond to a call. DOK 1
    b. List the phases of an ambulance call. DOK 1
    c. Describe the general provisions relating to the operation of the ambulance and privileges in any or all of the following categories: DOK 1
        (1) Speed
        (2) Warning lights
        (3) Sirens
        (4) Right-of-way
        (5) Parking
        (6) Turning
    d. List contributing factors to unsafe driving conditions. DOK 1
    e. Describe the considerations that should be given to the following: DOK 1
        (1) Request for escorts
        (2) Following an escort vehicle
        (3) Intersections
    f. Discuss "Due Regard for Safety of All Others" while operating an emergency vehicle. DOK 1
    g. State what information is essential in order to respond to a call. DOK 1
    h. Discuss various situations that may affect response to a call. DOK 1
    i. Differentiate among the various methods of moving a patient to the unit based upon injury or illness. DOK 1
    j. Apply the components of the essential patient information in a written report. DOK 1
    k. Summarize the importance of preparing the unit for the next response. DOK 1
    l. Identify what is essential for completion of a call. DOK 1
    m. Distinguish among the terms cleaning, disinfection, high-level disinfection, and sterilization. DOK 1
    n. Describe how to clean or disinfect items following patient care. DOK 1
    o. Explain the rationale for appropriate report of patient information. DOK 1
    p. Explain the rationale for having the unit prepared to respond. DOK 1

30. Explain the purpose and process of extrication. EMB 14

a. Describe the purpose of extrication. DOK 1
b. Discuss the role of the EMT in extrication. DOK 1
c. Identify what equipment for personal safety is required for the EMT. DOK 1
d. Define the fundamental components of extrication. DOK 1
e. State the steps that should be taken to protect the patient during extrication. DOK 1
f. Evaluate various methods of gaining access to the patient. DOK 1
g. Distinguish between simple and complex access. DOK 1

31. Identify hazardous materials, and demonstrate knowledge of hazardous procedures. EMB 14
    a. Explain the EMT's role during a call involving hazardous materials. DOK 1
    b. Describe what the EMT should do if there is a reason to believe that there is a hazard at the scene. DOK 1
    c. Describe the actions that an EMT should take to ensure bystander safety. DOK 1
    d. State the role the EMT should perform until appropriately trained personnel arrive at the scene of a hazardous materials situation. DOK 1
    e. Break down the steps to approaching a hazardous situation. DOK 1
    f. Discuss the various environmental hazards that affect EMS. DOK 1
    g. Describe the criteria for a multiple-casualty situation. DOK 1
    h. Evaluate the role of the EMT in the multiple-casualty situation. DOK 1
    i. Summarize the components of basic triage. DOK 1
        (1) Performing
        (2) Re-triage
        (3) Destination guidelines
        (4) Post traumatic and cumulative stress
    j. Define the role of the EMT in a disaster operation. DOK 1
    k. Describe basic concepts of incident management. DOK 1
    l. Explain the methods for preventing contamination of self, equipment, and facilities. DOK 1
    m. Review the local mass casualty incident plan. DOK 1
    n. Perform triage given a scenario of a mass casualty incident. DOK 1

STANDARDS

National EMS Educational Standards

EMB1 Preparatory
EMB2 Anatomy and Physiology
EMB3 Medical Terminology
EMB4 Pathophysiology
EMB5 Life Span Development
EMB6 Public Health
EMB7 Pharmacology
EMB8 Airway Management, Respiration, and Artificial Ventilation
EMB9 Assessment
EMB10 Medicine
EMB11 Shock and Resuscitation
EMB12 Trauma

EMB13 Special Patient Populations
EMB14 EMS Operations

Related Academic Standards

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)
M1 Addition of Whole Numbers (no regrouping, regrouping)
M2 Subtraction of Whole Numbers (no regrouping, regrouping)
M3 Multiplication of Whole Numbers (no regrouping, regrouping)
M4 Division of Whole Numbers (no remainder, remainder)
M5 Decimals (addition, subtraction, multiplication, division)
M6 Fractions (addition, subtraction, multiplication, division)
M7 Integers (addition, subtraction, multiplication, division)
M8 Percents
M9 Algebraic Operations
A1 Numeration (ordering, place value, scientific notation)
A2 Number Theory (ratio, proportion)
A3 Data Interpretation (graph, table, chart, diagram)
A4 Pre-Algebra and Algebra (equations, inequality)
A5 Measurement (money, time, temperature, length, area, volume)
A6 Geometry (angles, Pythagorean theory)
A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
A8 Estimation (rounding, estimation)
L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)
S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

21st Century Skills

CS1 Global Awareness
CS2 Financial, Economic, and Business Literacy
CS3 Civic Literacy
CS4 Health Literacy
CS7 Critical Thinking and Problem Solving

CS8 Communication and Collaboration
CS9 Information Literacy
CS11 ICT Literacy
CS12 Flexibility and Adaptability
CS13 Initiative and Self-Direction
CS14 Social and Cross-Cultural Skills
CS15 Productivity and Accountability
CS16 Leadership and Responsibility

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Recommended Tools and Equipment

CAPITALIZED ITEMS

1. Anatomical manikin w/removable organs (1 per program)
2. Chair, stair (1 per program)
3. Cot, ambulance (1 per program)
4. Defibrillator, automated external, educational (1 per program)
5. Heart model, external/internal (1 per program)
6. Manikin, full body, CPR (1 per program)
7. Manikin, obstetrical (1 per program)
8. Manikin, airway trainer in infant, child, and adult (1 set per program)
9. Skeleton, human (replica) (1 per program)
10. Pneumatic anti-shock garment (1 per program)
11. TV, color, 31 in.
12. Computer (1 per program)
13. Printer (1 per program)

NON-CAPITALIZED ITEMS

1. Arm sling (1 per 2 students)
2. Bag-valve-mask device for infant, child, and adult (1 per 2 students)
3. Blanket (1 per stretcher/cot)
4. Blood pressure cuff for infant, child, adult, and thigh (1 infant, 1 child, 4 adult, 1 thigh per program)
5. Cervical collar, assorted sizes (4 per program)
6. Containers, assorted medication
    a. NTGS-L
    b. Epinephrine auto-injector trainer
    c. Beta agonist metered dose inhaler
    d. Oral glucose
    e. Activated charcoal
7. Cravats (1 per 2 students)
8. Flow restricted oxygen powered ventilation device (FROPVD)
9. Head immobilizer (CID) (1 per program)
10. Immobilization/extrication device (1 per program)
11. Spine back board (2)
12. Manikin, child, CPR (1 per program)
13. Manikin, infant, CPR (1 per program)
14. Moulage kit (1 per program)
15. Nasal cannula (5 per program)
16. Nasopharyngeal airway (2 per program)
17. Nonrebreather masks (5 per program)
18. Oropharyngeal airway, various sizes
19. Oxygen cylinder (2 per program)
20. Oxygen regulator and flowmeter (1 per program)

21. Pen light (1 per 2 students)
22. Pillows (6 per program)
23. Pocket mask w/1-way valve and O_2 port (2 per program)
24. Scissors, trauma (4 per program)
25. Sheets, ambulance Cot (2 per program)
26. Short spine board (2 per program)
27. Splint, air, various sizes
28. Splint, ladder (1 per program)
29. Splint, traction, sager-hare (2 per program)
30. Stethoscope (1 per 2 students)
31. Stethoscope, dual head (1 per program)
32. Straps, various sizes
33. Stretcher, scoop (1 per program)
34. Suction device, portable (1 per program)
35. Ear thermometer (1 per program)

RECOMMENDED INSTRUCTIONAL AIDS

It is recommended that instructors have access to the following items:

1. Screen, projection (1 per program)
2. Projector, overhead (1 per program)
3. Data projector (1 per program)
4. DVD/VCR (1 per program)
5. Computer table (1 per computer)

Assessment

This program is assessed using the *National Registry of Emergency Medical Technicians Exam*.

Appendix A: National EMS Educational Standards

EMB1	Preparatory
EMB2	Anatomy and Physiology
EMB3	Medical Terminology
EMB4	Pathophysiology
EMB5	Life Span Development
EMB6	Public Health
EMB7	Pharmacology
EMB8	Airway Management, Respiration, and Artificial Ventilation
EMB9	Assessment
EMB10	Medicine
EMB11	Shock and Resuscitation
EMB12	Trauma
EMB13	Special Patient Populations
EMB14	EMS Operations

Appendix B: Related Academic Standards[1]

Reading

R1 Interpret Graphic Information (forms, maps, reference sources)
R2 Words in Context (same and opposite meaning)
R3 Recall Information (details, sequence)
R4 Construct Meaning (main idea, summary/paraphrase, compare–contrast, cause–effect)
R5 Evaluate/Extend Meaning (fact/opinion, predict outcomes, point of view)

Mathematics Computation

M1 Addition of Whole Numbers (no regrouping, regrouping)
M2 Subtraction of Whole Numbers (no regrouping, regrouping)
M3 Multiplication of Whole Numbers (no regrouping, regrouping)
M4 Division of Whole Numbers (no remainder, remainder)
M5 Decimals (addition, subtraction, multiplication, division)
M6 Fractions (addition, subtraction, multiplication, division)
M7 Integers (addition, subtraction, multiplication, division)
M8 Percents
M9 Algebraic Operations

Applied Mathematics

A1 Numeration (ordering, place value, scientific notation)
A2 Number Theory (ratio, proportion)
A3 Data Interpretation (graph, table, chart, diagram)
A4 Pre-Algebra and Algebra (equations, inequality)
A5 Measurement (money, time, temperature, length, area, volume)
A6 Geometry (angles, Pythagorean theory)
A7 Computation in Context (whole numbers, decimals, fractions, algebraic operations)
A8 Estimation (rounding, estimation)

Language

L1 Usage (pronoun, tense, subject–verb agreement, adjective, adverb)
L2 Sentence Formation (fragments, run-on, clarity)
L3 Paragraph Development (topic sentence, supporting sentence, sequence)
L4 Capitalization (proper noun, titles)
L5 Punctuation (comma, semicolon)
L6 Writing Conventions (quotation marks, apostrophe, parts of a letter)

Spelling

S1 Vowel (short, long)
S2 Consonant (variant spelling, silent letter)
S3 Structural Unit (root, suffix)

[1] CTB/McGraw-Hill LLC. (1994). *Tests of adult basic education, forms 7 and 8.* Monterey, CA: Author.

Appendix C: 21st Century Skills[2]

CSS1-21st Century Themes

CS1 Global Awareness

1. Using 21st century skills to understand and address global issues
2. Learning from and working collaboratively with individuals representing diverse cultures, religions and lifestyles in a spirit of mutual respect and open dialogue in personal, work, and community contexts
3. Understanding other nations and cultures, including the use of non-English languages

CS2 Financial, Economic, Business, and Entrepreneurial Literacy

1. Knowing how to make appropriate personal economic choices
2. Understanding the role of the economy in society
3. Using entrepreneurial skills to enhance workplace productivity and career options

CS3 Civic Literacy

1. Participating effectively in civic life through knowing how to stay informed and understanding governmental processes
2. Exercising the rights and obligations of citizenship at local, state, national, and global levels
3. Understanding the local and global implications of civic decisions

CS4 Health Literacy

1. Obtaining, interpreting, and understanding basic health information and services and using such information and services in ways that enhance health
2. Understanding preventive physical and mental health measures, including proper diet, nutrition, exercise, risk avoidance, and stress reduction
3. Using available information to make appropriate health-related decisions
4. Establishing and monitoring personal and family health goals
5. Understanding national and international public health and safety issues

CS5 Environmental Literacy

1. Demonstrate knowledge and understanding of the environment and the circumstances and conditions affecting it, particularly as relates to air, climate, land, food, energy, water, and ecosystems.
2. Demonstrate knowledge and understanding of society's impact on the natural world (e.g., population growth, population development, resource consumption rate, etc.).
3. Investigate and analyze environmental issues, and make accurate conclusions about effective solutions.
4. Take individual and collective action towards addressing environmental challenges (e.g., participating in global actions, designing solutions that inspire action on environmental issues).

CSS2-Learning and Innovation Skills

CS6 Creativity and Innovation

1. Think Creatively
2. Work Creatively with Others
3. Implement Innovations

CS7 Critical Thinking and Problem Solving

1. Reason Effectively
2. Use Systems Thinking
3. Make Judgments and Decisions
4. Solve Problems

CS8 Communication and Collaboration

1. Communicate Clearly
2. Collaborate with Others

[2] *21st century skills.* (n.d.). Washington, DC: Partnership for 21st Century Skills.

CSS3-Information, Media and Technology Skills

CS9 Information Literacy
1. Access and Evaluate Information
2. Use and Manage Information

CS10 Media Literacy
1. Analyze Media
2. Create Media Products

CS11 ICT Literacy
1. Apply Technology Effectively

CSS4-Life and Career Skills

CS12 Flexibility and Adaptability
1. Adapt to change
2. Be Flexible

CS13 Initiative and Self-Direction
1. Manage Goals and Time
2. Work Independently
3. Be Self-directed Learners

CS14 Social and Cross-Cultural Skills
1. Interact Effectively with others
2. Work Effectively in Diverse Teams

CS15 Productivity and Accountability
1. Manage Projects
2. Produce Results

CS16 Leadership and Responsibility
1. Guide and Lead Others
2. Be Responsible to Others