

2006 Mississippi Curriculum Framework

Postsecondary Emergency Medical Technology - Basic

(Program CIP 51.0904 – Emergency Medical Technology/Technician)

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

EMT-Basic: National Standard Curriculum Modules

U.S. Department of Transportation. (1994). *EMT-Basic: National standard curriculum*. Washington, DC: Author.

Related Academic Standards

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Workplace Skills for the 21st Century

Secretary's Commission on Achieving Necessary Skills

National Educational Technology Standards for Students

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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 on 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.

Each postsecondary program of instruction consists of a program description and a suggested sequence of courses which 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/junior colleges in reporting students.
- Course Abbreviation – A common abbreviation that will be used by all community/junior colleges in reporting students.
- Classification – Courses may be classified as:
 - 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 which provides academic skills and knowledge directly related to the program area.
 - Academic core – An academic course which is required as part of the requirements for an Associate degree.
- Description – A short narrative which 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 percent of the time allocated to each course. The remaining 25 percent of each course should be developed at the local district level and may reflect:
 - 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 which 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/revised.
 - Activities which implement components of the Mississippi Tech Prep initiative, including integration of academic and vocational-technical skills and coursework, school-to-work transition activities, and articulation of secondary and postsecondary vocational-technical programs.
 - Individualized learning activities, including worksite learning activities, to better prepare individuals in the courses for their chosen occupational area.
- 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/junior college has the discretion to select the actual courses that are required to meet this academic core requirement.

- In instances where secondary programs are directly related to community and junior college programs, competencies and suggested objectives from the high school programs are listed as Baseline Competencies. These competencies and objectives reflect skills and knowledge that are directly related to the community and junior college vocational-technical program. In adopting the curriculum framework, each community and junior college is asked to give assurances that:
 - Students who can demonstrate mastery of the Baseline Competencies do not receive duplicate instruction, and
 - Students who cannot demonstrate mastery of this content will be given the opportunity to do so.
- The roles of the Baseline Competencies are to:
 - Assist community/junior college personnel in developing articulation agreements with high schools, and
 - Ensure that all community and junior college courses provide a higher level of instruction than their secondary counterparts.
- The Baseline Competencies may be taught as special “Introduction” courses for 3-6 semester hours of institutional credit which will not count toward Associate degree requirements. Community and junior colleges may choose to integrate the Baseline Competencies into ongoing courses in lieu of offering the “Introduction” courses or may offer the competencies through special projects or individualized instruction methods.
- Technical elective courses have been 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:

- Adding new competencies and suggested objectives.
- Revising or extending the suggested objectives for individual competencies.
- Integrating baseline competencies from associated high school programs.
- 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:

- Resequencing courses within the suggested course sequence.
- Developing and adding a new course which 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 Technology - Basic is a one semester instructional program that prepares individuals to function in the pre-hospital environment. The EMT-Basic program provides instruction in basic life support care of sick and injured persons. This includes airway assessment, 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. Emergency Medical Technicians – Basic are certified by the Mississippi State Department of Health Emergency Medical Services. Students who complete the program are eligible to take the National Registry of Emergency Medical Technicians – Basic Level.

Industry standards are based on the *EMT-Basic: National Standard Curriculum Modules*.

Suggested Course Sequence*

Emergency Medical Technology - Basic

Baseline Competencies for Emergency Medical Technology - Basic**

FIRST YEAR

6 sch EMT Basic (EMT 1116)

6 sch

* Students who lack entry level skills in math, English, science, etc. will be provided related studies.

** Baseline competencies are taken from the high school Allied Health program. Students who can document mastery of these competencies should not receive duplicate instruction. Students who cannot demonstrate mastery will be required to do so.

Emergency Medical Technology - Basic Course

Course Name: EMT Basic

Course Abbreviation: EMT 1116

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. (6 sch: 2 hr. lecture, 6 hr. lab, 3 hr. clinical)

Prerequisites: None

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-Basic.
 - a. Define EMS systems.
 - b. Differentiate between the roles and responsibilities of the EMT-Basic and the roles and responsibilities of other prehospital care providers.
 - c. Describe the roles and responsibilities related to personal safety.
 - d. Discuss the roles and responsibilities of the EMT-Basic toward the safety of the crew, the patient, and bystanders.
 - e. Define quality improvement and discuss the EMT-Basic's role in the process.
 - f. Define medical direction and discuss the EMT-Basic's role in the process.
 - g. State the specific statutes and regulations in your state regarding the EMS system.
 - h. Assess areas of personal attitude and conduct of the EMT-Basic.
 - i. Characterize the various methods used to access the EMS system in your community.
2. Recognize factors associated with stress and personal safety.
 - a. List possible emotional reactions that the EMT-Basic may experience when faced with trauma, illness, death, and dying.
 - b. Discuss the possible reactions that a family member may exhibit when confronted with death and dying.
 - c. State the steps in the EMT-Basic's approach to the family confronted with death and dying.
 - d. State the possible reactions that the family of the EMT-Basic may exhibit due to their outside involvement in EMS.
 - e. Recognize the signs and symptoms of critical incident stress.
 - f. State possible steps that the EMT-Basic may take to help reduce/alleviate stress.
 - g. Explain the need to determine scene safety.
 - h. Discuss the importance of body substance isolation.
 - i. Describe the steps the EMT-Basic should take for personal protection from airborne and bloodborne pathogens.
 - j. List the personal protective equipment necessary for each of the following situations:
 - (1) Hazardous materials
 - (2) Rescue operations

<ul style="list-style-type: none"> (3) Violent scenes (4) Crime scenes (5) Exposure to bloodborne pathogens (6) Exposure to airborne pathogens k. Explain the rationale for serving as an advocate for the use of appropriate protective equipment. l. 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. m. Given the above scenario, complete disinfection/cleaning and all reporting documentation.
<p>3. Explain medical, legal, and ethical implications that impact the functioning of an EMT-Basic.</p> <ul style="list-style-type: none"> a. Define the EMT-Basic scope of practice. b. Discuss the importance of Do Not Resuscitate [DNR] (advance directives) and local or state provisions regarding EMS application. c. Define consent and discuss the methods of obtaining consent. d. Differentiate between expressed and implied consent. e. Explain the role of consent of minors in providing care. f. Discuss the implications for the EMT-Basic in patient refusal of transport. g. Discuss the issues of abandonment, negligence, and battery and their implications to the EMT-Basic. h. State the conditions necessary for the EMT-Basic to have a duty to act. i. Explain the importance, necessity, and legality of patient confidentiality, including HIPAA. j. Discuss the considerations of the EMT-Basic in issues of organ retrieval. k. Differentiate the actions that an EMT-Basic should take to assist in the preservation of a crime scene. l. State the conditions that require an EMT-Basic to notify local law enforcement officials. m. Explain the role of EMS and the EMT-Basic regarding patients with DNR orders. n. Explain the rationale for the needs, benefits, and usage of advance directives. o. Explain the rationale for the concept of varying degrees of DNR.
<p>4. Discuss anatomy and physiology using medical terminology.</p> <ul style="list-style-type: none"> a. Identify the following topographic terms: medial, lateral, proximal, distal, superior, inferior, anterior, posterior, midline, right and left, mid-clavicular, bilateral, and mid-axillary. b. Describe the anatomy and pathophysiology of the following major body systems: respiratory, circulatory, musculoskeletal, nervous, and endocrine.
<p>5. Demonstrate and explain the importance of obtaining the different aspects of vital signs in patient assessment.</p> <ul style="list-style-type: none"> a. Identify the components of vital signs. b. Describe the methods to obtain a breathing rate. c. Identify the attributes that should be obtained when assessing breathing. d. Differentiate among shallow, labored, and noisy breathing. e. Describe the methods to obtain a pulse rate. f. Identify the information obtained when assessing a patient's pulse.

- g. Differentiate among a strong, weak, regular, and irregular pulse.
 - h. Describe the methods to assess the skin color, temperature, condition, and capillary refill in infants and children.
 - i. Identify the normal and abnormal skin colors.
 - j. Explain among pale, blue, red, and yellow skin color.
 - k. Identify the normal and abnormal skin temperature.
 - l. Differentiate among hot, cool, and cold skin temperature.
 - m. Identify normal and abnormal skin conditions.
 - n. Identify normal and abnormal capillary refill in infants and children.
 - o. Describe the methods to assess the pupils.
 - p. Identify normal and abnormal pupil size.
 - q. Differentiate between dilated (big) and constricted (small) pupil size.
 - r. Differentiate between reactive and non-reactive pupils and equal and unequal pupils.
 - s. Describe the methods to assess blood pressure.
 - t. Define systolic pressure.
 - u. Define diastolic pressure.
 - v. Explain the difference between auscultation and palpation for obtaining a blood pressure.
 - w. Identify the components of the SAMPLE history.
 - x. Differentiate between a sign and a symptom.
 - y. State the importance of accurately reporting and recording the baseline vital signs.
 - z. Discuss the need to search for additional medical identification.
 - aa. Explain the value of performing the baseline vital signs.
 - bb. Recognize and respond to the feelings patients experience during assessment.
 - cc. Defend the need for obtaining and recording an accurate set of vital signs.
 - dd. Explain the rationale of recording additional sets of vital signs.
 - ee. Explain the importance of obtaining a SAMPLE history.
 - ff. Demonstrate the skills involved in assessment of breathing.
 - gg. Demonstrate the skills associated with obtaining a pulse.
 - hh. Demonstrate the skills associated with the skin color, temperature, condition, and capillary refill in infants and children.
 - ii. Demonstrate the skills associated with assessing the pupils.
 - jj. Demonstrate the skills associated with obtaining blood pressure.
 - kk. Demonstrate the skills that should be used to obtain information from the patient, family, or bystanders at the scene.
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.
- a. Demonstrate skills associated with maintaining an open airway for the adult, child, and infant.
 - b. Demonstrate the appropriate methods for assessing ventilation and the adequacy of artificial ventilation.
 - c. Demonstrate techniques for assessing circulation.
 - d. Demonstrate techniques for appropriate CPR for the adult, child, and infant, including the use of an automated external defibrillator.
 - e. Demonstrate the ability to recognize foreign body airway obstruction in the adult, child, and infant.

- f. Demonstrate the ability to manage foreign body airway obstruction in the adult, child, and infant.
7. Demonstrate the appropriate methods and equipment utilized for lifting and moving patients allowing for safety of the patient and self.
- Define body mechanics.
 - Discuss the guidelines and safety precautions that need to be followed when lifting a patient.
 - Describe the safe lifting of cots and stretchers.
 - Describe the guidelines and safety precautions for carrying patients and equipment.
 - Discuss one-handed carrying techniques.
 - Describe correct and safe carrying procedures on stairs.
 - State the guidelines for reaching and their application.
 - Describe correct reaching for log rolls.
 - State the guidelines for pushing and pulling.
 - Discuss the general considerations of moving patients.
 - State three situations that may require the use of an emergency move.
 - Identify the following patient carrying devices:
 - Wheeled ambulance stretcher
 - Stair chair
 - Scoop stretcher
 - Long spine board
 - Basket stretcher
 - Flexible stretcher
 - Explain the rationale for properly lifting and moving patients.
 - Working with a partner, prepare each of the following devices for use, transfer a patient to the device, properly position the patient on the device, move the device to the ambulance, and load the patient into the ambulance:
 - Wheeled ambulance stretcher
 - Portable ambulance stretcher
 - Stair chair
 - Scoop stretcher
 - Long spine board
 - Basket stretcher
 - Flexible stretcher
 - Working with a partner, demonstrate techniques for the transfer of a patient from an ambulance stretcher to a hospital stretcher.
8. Discuss the respiratory system and appropriate airway and ventilatory management.
- Label the major structures of the respiratory system on a diagram.
 - Describe the pathophysiology of the respiratory system.
 - List the signs of adequate breathing.
 - List the signs of inadequate breathing.
 - Describe the steps in performing the head-tilt chin lift.
 - Relate mechanism of injury to opening the airway.
 - Describe the steps in performing the jaw thrust.
 - State the importance of having a suction unit ready for immediate use when providing emergency care.

- i. Describe the techniques of suctioning.
- j. Describe how to artificially ventilate a patient with a pocket mask.
- k. Describe the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask while using the jaw thrust.
- l. List the parts of a bag-valve-mask system.
- m. Describe the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask for one, two, and three rescuers.
- n. Describe the signs of adequate artificial ventilation using the bag-valve-mask.
- o. Describe the signs of inadequate artificial ventilation using the bag-valve-mask.
- p. Describe the steps in artificially ventilating a patient with a flow-restricted, oxygen-powered ventilation device.
- q. List the steps in performing the actions taken when providing mouth-to-mask and BVM-to-stoma artificial ventilation.
- r. Describe how to measure and insert an oropharyngeal (oral) airway.
- s. Describe how to measure and insert a nasopharyngeal (nasal) airway.
- t. Explain the components of an oxygen delivery system including pulse oximetry.
- u. Identify a nonrebreather face mask and state the oxygen flow requirements needed for its use.
- v. Describe the indications for using a nasal cannula versus a nonrebreather face mask.
- w. Identify a nasal cannula and state the flow requirements needed for its use.
- x. Explain the rationale for basic life support, artificial ventilation, and airway protective skills taking priority over most other basic life support skills.
- y. Explain the rationale for providing adequate oxygenation through high inspired oxygen concentrations to patients who, in the past, may have received low concentrations.
- z. Demonstrate the steps in performing the head-tilt chin lift.
- aa. Demonstrate the steps in performing the jaw thrust.
- bb. Demonstrate the techniques of suctioning.
- cc. Demonstrate the steps in providing mouth-to-mask artificial ventilation with body substance isolation.
- dd. Demonstrate how to use a pocket mask to artificially ventilate an adult patient.
- ee. Demonstrate the assembly of a bag-valve-mask unit.
- ff. Demonstrate the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask for one, two and three rescuers.
- gg. Demonstrate the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask while using the jaw thrust.
- hh. Demonstrate artificial ventilation of a patient with a flow-restricted, oxygen-powered ventilation device.
- ii. Demonstrate how to artificially ventilate a patient with a stoma.
- jj. Demonstrate how to insert an oropharyngeal (oral) airway.
- kk. Demonstrate how to insert a nasopharyngeal (nasal) airway.
- ll. Demonstrate the correct operation of oxygen tanks and regulators.
- mm. Demonstrate the use of a nonrebreather face mask and state the oxygen flow requirements needed for its use.
- nn. Demonstrate the use of a nasal cannula and state the flow requirements needed for its use.
- oo. Demonstrate how to artificially ventilate the infant and child patient.

pp. Demonstrate oxygen administration for the infant and child patient.
qq. Discuss the use of a pulse oximeter.
9. Explain the rationale for crew members to evaluate scene safety prior to entering the scene. <ol style="list-style-type: none">Recognize hazards and potential hazards.Describe common hazards found at the scene of a trauma and a medical patient.Determine if the scene is safe to enter.Discuss common mechanisms of injury and nature of illness.Discuss the reason for identifying the total number of patients at the scene.Explain the reason for identifying the need for additional help or assistance.Explain the rationale for crew members to evaluate scene safety prior to entering.Serve as a model for others explaining how patient situations affect the evaluation of mechanism of injury or illness.Observe various scenarios and identify potential hazards.
10. Explain the importance of learning a general impression of the patient. <ol style="list-style-type: none">Summarize the reasons for forming a general impression of the patient.Discuss methods of assessing altered mental status.Differentiate among assessing the altered mental status in the adult, child, and infant patient.Discuss methods of assessing the airway in the adult, child, and infant patient.State reasons for management of the cervical spine once the patient has been determined to be a trauma patient.Describe methods used for assessing if a patient is breathing.State what care should be provided to the adult, child, and infant patient with adequate breathing.State what care should be provided to the adult, child, and infant patient without adequate breathing.Differentiate between a patient with adequate and inadequate breathing in relation to pathophysiology of the respiratory system.Distinguish among methods of assessing breathing in the adult, child, and infant patient.Compare the methods of providing airway care to the adult, child, and infant patient.Describe the methods used to obtain a pulse.Differentiate among obtaining a pulse in an adult, child, and infant patient.Discuss the need for assessing the patient for external bleeding.Describe normal and abnormal findings when assessing skin color.Describe normal and abnormal findings when assessing skin temperature.Describe normal and abnormal findings when assessing skin condition.Describe normal and abnormal findings when assessing skin capillary refill in the infant and child patient.Explain the reason for prioritizing a patient for care and transport.Explain the value of performing an initial assessment.Demonstrate the techniques for assessing mental status.Demonstrate the techniques for assessing the airway.Demonstrate the techniques for assessing if the patient is breathing.Demonstrate the techniques for assessing if the patient has a pulse.Demonstrate the techniques for assessing the patient for external bleeding.Demonstrate the techniques for assessing the patient's skin color, temperature,

<p>condition, and capillary refill (infants and children only).</p> <p>aa. Demonstrate the ability to prioritize patients.</p>
<p>11. Demonstrate the different aspects of a rapid trauma assessment in order to provide patient care.</p> <ol style="list-style-type: none"> Discuss the reasons for reconsideration concerning the mechanism of injury. State the reasons for performing a rapid trauma assessment. Recite examples and explain why patients should receive a rapid trauma assessment. Describe the areas included in the rapid trauma assessment and discuss what should be evaluated. Explain when the rapid assessment may be altered in order to provide patient care. Discuss the reason for performing a focused history and physical exam. Recognize and respect the feelings that patients might experience during assessment. Demonstrate the rapid trauma assessment that should be used to assess a patient based on mechanism of injury.
<p>12. Demonstrate the different aspects of patient assessment with varying degrees of patient's responsiveness.</p> <ol style="list-style-type: none"> Describe the unique needs for assessing an individual with a specific chief complaint with no known prior history. Differentiate between the history and physical exam that are performed for responsive patients with no known prior history and responsive patients with a known prior history. Describe the needs for assessing an individual who is unresponsive. Differentiate between the assessment that is performed for a patient who is unresponsive or has an altered mental status and other medical patients requiring assessment. Recognize the feelings that patients and family members might be experiencing. Demonstrate the patient assessment skills that should be used to assist a patient who is responsive with no known history. Demonstrate the patient assessment skills that should be used to assist a patient who is unresponsive or has an altered mental status.
<p>13. Determine the components of the detailed physical exam and the care to be provided to the patient during assessment.</p> <ol style="list-style-type: none"> Discuss the components of the detailed physical exam. State the areas of the body that are evaluated during the detailed physical exam. Explain what additional care should be provided while performing the detailed physical exam. Distinguish between the detailed physical exam that is performed on a trauma patient and that of the medical patient. Explain the rationale for the feelings that these patients might be experiencing. Demonstrate the skills involved in performing the detailed physical exam.
<p>14. Explain the components and importance of the ongoing assessment.</p> <ol style="list-style-type: none"> Discuss the reasons for repeating the initial assessment as part of the ongoing assessment. Describe the components of the ongoing assessment. Describe trending of assessment components. Explain the value of performing an ongoing assessment. Respect the feelings that patients and family members might experience during assessment.

<ul style="list-style-type: none">f. Explain the value of trending assessment components to other health professionals who assume care of the patient.g. Demonstrate the skills involved in performing the ongoing assessment.
<p>15. Demonstrate the proper procedure and skills for effective radio communications.</p> <ul style="list-style-type: none">a. List the proper methods of initiating and terminating a radio call.b. State the proper sequence for delivery of patient information.c. Explain the importance of effective communication of patient information in the verbal report.d. Identify the essential components of the verbal report.e. Describe the attributes for increasing effectiveness and efficiency of verbal communications.f. State legal aspects to consider in verbal communication.g. Discuss the communication skills that should be used to interact with the patient.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.i. List the correct radio procedures in the following phases of a typical call:<ul style="list-style-type: none">(1) To the scene(2) At the scene(3) To the facility(4) At the facility(5) To the station(6) At the stationj. Explain the rationale for providing efficient and effective radio communications and patient reports.k. Perform a simulated, organized, concise radio transmission.l. Perform an organized, concise patient report that would be given to the staff at a receiving facility.m. Perform a brief, organized report that would be given to an ALS provider arriving at an incident scene at which the EMT-Basic was already providing care.
<p>16. Develop appropriate documentation which adheres to state and local requirements.</p> <ul style="list-style-type: none">a. Explain the components of the written report, and list the information that should be included in the written report.b. Identify the various sections of the written report.c. Describe what information is required in each section of the prehospital care report and how it should be entered.d. Define the special considerations concerning patient refusal.e. Describe the legal implications associated with the written report.f. Discuss all state and local record and reporting requirements.g. Explain the rationale for patient care documentation.h. Explain the rationale for the EMS system gathering data.i. Explain the rationale for using medical terminology correctly.j. Explain the rationale for using an accurate and synchronous clock so that information can be used in trending.k. Complete a prehospital care report.

17. Discuss pharmacology relative to the EMT-Basic.
- Identify which medications will be carried on the unit.
 - State the medications carried on the unit by the generic name.
 - Identify the medications with which the EMT-Basic may assist the patient with administering.
 - State the medications the EMT-Basic can assist the patient with by the generic name.
 - Discuss the forms in which the medications may be found.
 - Explain the rationale for the administration of medications.
 - Demonstrate general steps for assisting the patient with self-administration of medications.
 - Read the labels and inspect each type of medication.
18. Describe the respiratory system and procedures for airway and ventilation management.
- List the structure, function, and pathophysiology of the respiratory system.
 - Identify the signs and symptoms of a patient with breathing difficulty.
 - Describe the emergency medical care and management of the patient with breathing difficulty.
 - Recognize the need for medical direction to assist in the emergency medical care of the patient with breathing difficulty.
 - Describe the emergency medical care and management of the patient with breathing distress.
 - Explain the relationship between airway management and the patient with breathing difficulty.
 - Identify the signs of adequate air exchange.
 - State the generic name, medication forms, dose, administration, action, indications, and contraindications for the prescribed inhaler.
 - Distinguish among the emergency medical care of the infant, child, and adult patient with breathing difficulty.
 - Differentiate between upper airway obstruction and lower airway disease in the infant and child patient.
 - Defend EMT-Basic treatment regimens for various respiratory emergencies.
 - Explain the rationale for administering an inhaler.
 - Demonstrate the emergency medical care for breathing difficulty.
 - Perform the steps in facilitating the use of an inhaler.
19. Demonstrate cardiac interventions and the management of the cardiac patient.
- Describe the structure and function of the cardiovascular system.
 - Discuss the emergency medical care of the patient experiencing chest pain or discomfort, including application of the cardiac monitor.
 - List the indications for automated external defibrillation.
 - List the contraindications for automated external defibrillation.
 - Define the role of the EMT-Basic in the emergency cardiac care system.
 - Explain the impact of age and weight on defibrillation.
 - Discuss the position of comfort for patients with various cardiac emergencies.
 - Establish the relationship between airway management and the patient with cardiovascular compromise.
 - Predict the relationship between the patient experiencing cardiovascular compromise and basic life support.

- j. Discuss the fundamentals of early defibrillation.
- k. Explain the rationale for early defibrillation.
- l. Explain that not all chest pain patients result in cardiac arrest and do not need to be attached to an automated external defibrillator.
- m. Explain the importance of prehospital Advanced Cardiac Life Support (ACLS) intervention if it is available.
- n. Explain the importance of urgent transport to a facility with ACLS if it is not available in the prehospital setting.
- o. Discuss the various types of adult and pediatric automated external defibrillators.
- p. Differentiate between the fully automated and the semiautomated defibrillator.
- q. Discuss the procedures that must be taken into consideration for standard operations of the various types of automated external defibrillators.
- r. State the reasons for assuring that the patient is pulseless and apneic when using the automated external defibrillator.
- s. Discuss the circumstances which may result in inappropriate shocks.
- t. Explain the considerations for interruption of CPR when using the automated external defibrillator.
- u. Discuss the advantages and disadvantages of automated external defibrillators.
- v. Summarize the speed of operation of automated external defibrillation.
- w. Discuss the use of remote defibrillation through adhesive pads.
- x. Discuss the special considerations for rhythm monitoring.
- y. List the steps in the operation of the automated external defibrillator.
- z. Discuss the standard of care that should be used to provide care to a patient with persistent ventricular fibrillation and no available ACLS.
- aa. Discuss the standard of care that should be used to provide care to a patient with recurrent ventricular fibrillation and no available ACLS.
- bb. Differentiate between single rescuer and multi-rescuer care with an automated external defibrillator.
- cc. Explain the reason for not checking pulses between shocks with an automated external defibrillator.
- dd. Discuss the importance of coordinating ACLS trained providers with personnel using automated external defibrillators.
- ee. Discuss the importance of post-resuscitation care.
- ff. List the components of post-resuscitation care.
- gg. Explain the importance of frequent practice with the automated external defibrillator.
- hh. Discuss the need to complete the Automated Defibrillator: Operator's Shift Checklist.
- ii. Discuss the role of the American Heart Association (AHA) in the use of automated external defibrillation.
- jj. Explain the role medical direction plays in the use of automated external defibrillation.
- kk. State the reasons that a case review should be completed following the use of the automated external defibrillator.
- ll. Discuss the components that should be included in a case review.
- mm. Discuss the goal of quality improvement in automated external defibrillation.
- nn. Recognize the need for medical direction of protocols to assist in the emergency medical care of the patient with chest pain.
- oo. List the indications for the use of nitroglycerin.

- pp. State the contraindications and side effects for the use of nitroglycerin.
- qq. Define the function of all controls on an automated external defibrillator, and describe event documentation and battery defibrillator maintenance.
- rr. Defend the reasons for obtaining initial training in automated external defibrillation and the importance of continuing education.
- ss. Defend the reason for maintenance of automated external defibrillators.
- tt. Explain the rationale for administering nitroglycerin to a patient with chest pain or discomfort.
- uu. Demonstrate the assessment and emergency medical care of a patient experiencing chest pain or discomfort.
- vv. Demonstrate the application and operation of the automated external defibrillator.
- ww. Demonstrate the maintenance of an automated external defibrillator.
- xx. Demonstrate the assessment and documentation of patient response to the automated external defibrillator.
- yy. Demonstrate the skills necessary to complete the Automated Defibrillator: Operator's Shift Checklist.
- zz. Perform the steps in facilitating the use of nitroglycerin for chest pain or discomfort.
- aaa. Demonstrate the assessment and documentation of patient response to nitroglycerin.
- bbb. Practice completing a prehospital care report for patients with cardiac emergencies.

20. Perform prehospital interventions for a patient with a diabetic emergency.

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

21. Demonstrate the management of a patient with an allergic reaction.

- a. Recognize the patient experiencing an allergic reaction.
- b. Describe the emergency medical care of the patient with an allergic reaction.
- c. Establish the relationship between the patient with an allergic reaction and airway management.
- d. Describe the mechanisms of allergic response and the implications for airway management.
- e. State the generic and trade names, medication forms, dose, administration, action, and contraindications for the epinephrine auto-injector.

- f. Evaluate the need for medical direction in the emergency medical care of the patient with an allergic reaction.
- 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.
- h. Explain the rationale for administering epinephrine using an auto-injector.
- i. Demonstrate the emergency medical care of the patient experiencing an allergic reaction.
- j. Demonstrate the use of the epinephrine auto-injector.
- k. Demonstrate the assessment and documentation of patient response to an epinephrine injection.
- l. Demonstrate proper disposal of equipment.
- m. Demonstrate completing a prehospital care report for patients with allergic emergencies.

22. Discuss appropriate intervention methods for poisoning.

- a. List various ways that poisons enter the body.
- b. List signs and symptoms associated with poisoning.
- c. Discuss the emergency medical care for the patient with possible overdose.
- d. Describe the steps in the emergency medical care for the patient with suspected poisoning.
- e. Establish the relationship between the patient suffering from poisoning or overdose and airway management.
- f. State the generic and trade names, indications, contraindications, medication form, dose, administration, actions, side effects, and reassessment strategies for activated charcoal.
- g. Recognize the need for medical direction in caring for the patient with poisoning or overdose.
- h. Explain the rationale for administering activated charcoal.
- i. Explain the rationale for contacting medical direction early in the prehospital management of the poisoning or overdose patient.
- j. Demonstrate the steps in the emergency medical care for the patient with possible overdose.
- k. Demonstrate the steps in the emergency medical care for the patient with suspected poisoning.
- l. Perform the necessary steps required to provide a patient with activated charcoal.
- m. Demonstrate the assessment and documentation of patient response.
- n. Demonstrate proper disposal of the equipment for administration of activated charcoal.
- o. Demonstrate completing a prehospital care report for patients with a poisoning or overdose emergency.

23. Identify environmental conditions that pose a hazard to the body and discuss appropriate management techniques.

- a. Describe the various ways that the body loses heat.
- b. List the signs and symptoms of exposure to cold.
- c. Explain the steps in providing emergency medical care to a patient exposed to cold.
- d. List the signs and symptoms of exposure to heat.
- e. Explain the steps in providing emergency care to a patient exposed to heat.
- f. Recognize the signs and symptoms of water-related emergencies.
- g. Describe the complications of near drowning.

<ul style="list-style-type: none"> h. Discuss the emergency medical care of bites and stings. i. Demonstrate the assessment and emergency medical care of a patient with exposure to cold. j. Demonstrate the assessment and emergency medical care of a patient with exposure to heat. k. Demonstrate the assessment and emergency medical care of a near drowning patient. l. Demonstrate completing a prehospital care report for patients with environmental emergencies.
<p>24. Appraise behaviors relative to the potential for harm and explain appropriate intervention.</p> <ul style="list-style-type: none"> a. Define behavioral emergencies. b. Discuss the general factors that may cause an alteration in patient's behavior. c. State the various reasons for psychological crises. d. Discuss the characteristics of an individual's behavior which suggest that the patient is at risk for suicide. e. Discuss special medical and legal considerations for managing behavioral emergencies. f. Discuss the special considerations for assessing a patient with behavioral problems. g. Discuss the general principles of an individual's behavior which suggest that he or she is at risk for violence. h. Discuss methods to calm behavioral emergency patients. i. Explain the rationale for learning how to modify behavior toward the patient with a behavioral emergency. j. Demonstrate the assessment and emergency medical care of the patient experiencing a behavioral emergency. k. Demonstrate various techniques to safely restrain a patient with a behavioral problem.
<p>25. Manage an obstetrical emergency to include care for the neonate.</p> <ul style="list-style-type: none"> a. Identify the following structures: uterus, vagina, fetus, placenta, umbilical cord, amniotic sac, and perineum. b. Identify and explain the use of the contents of an obstetrics kit. c. Identify predelivery emergencies. d. State indications of an imminent delivery. e. Differentiate between the emergency medical care provided to a patient with predelivery emergencies from a normal delivery. f. State the steps in the predelivery preparation of the mother. g. Establish the relationship between body substance isolation and childbirth. h. State the steps to assist in the delivery. i. Describe care of the baby as the head appears. j. Describe how and when to cut the umbilical cord. k. Discuss the steps in the delivery of the placenta. l. List the steps in the emergency medical care of the mother post-delivery. m. Summarize neonatal resuscitation procedures. n. Describe the procedures for the following abnormal deliveries: breech birth, prolapsed cord, limb presentation. o. Differentiate between the special considerations for multiple births and considerations for single birth. p. Describe special considerations of meconium. q. Describe special considerations of a premature baby.

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

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

27. Explain soft tissue injuries and perform the techniques used in the management of various soft tissue injuries.
- a. State the major functions of the skin.
 - b. List the layers of the skin.

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

mm. Demonstrate the steps in the emergency medical care of a patient with a chemical burn.
nn. Demonstrate completing a prehospital care report for patients with soft tissue injuries.

28. Integrate the anatomy and physiology of the musculoskeletal system with the mechanisms of immobilization of the painful, swollen, deformed extremity.

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

29. Explain the anatomy and physiology of the nervous system, explain the pathophysiology of traumatic injuries, and demonstrate the prehospital skills necessary for the neurological injured patient.

- a. State the components of the nervous system.
- b. List the functions of the central nervous system.
- c. Define the structure of the skeletal system as it relates to the nervous system.
- d. Relate mechanism of injury to potential injuries of the head and spine.
- e. Describe the implications of not properly caring for potential spine injuries.
- f. State the signs and symptoms of a potential spine injury.
- g. Describe the method of determining if a responsive patient may have a spine injury.
- h. Relate the airway emergency medical care techniques to the patient with a suspected spine injury.
- i. Describe how to stabilize the cervical spine.
- j. Discuss indications for sizing and using a cervical spine immobilization device.
- k. Establish the relationship between airway management and the patient with head and spine injuries.
- l. Describe a method for sizing a cervical spine immobilization device.
- m. Describe how to log roll a patient with a suspected spine injury.
- n. Describe how to secure a patient to a long spine board.
- o. List instances when a short spine board should be used.
- p. Describe how to immobilize a patient using a short spine board.
- q. Describe the indications for the use of rapid extrication.
- r. List steps in performing rapid extrication.
- s. State the circumstances when a helmet should be left on a patient.
- t. Discuss the circumstances when a helmet should be removed.
- u. Identify different types of helmets.

- v. Describe the unique characteristics of sports helmets.
- w. Explain the preferred methods to remove a helmet.
- x. Discuss alternative methods for removal of a helmet.
- y. Describe how the patient's head is stabilized to remove the helmet.
- z. Differentiate between how the head is stabilized with a helmet compared to without a helmet.
- aa. Explain the rationale for immobilization of the entire spine when a cervical spine injury is suspected.
- bb. Explain the rationale for utilizing immobilization methods apart from the straps on the cots.
- cc. Explain the rationale for utilizing a short spine immobilization device when moving a patient from the sitting to the supine position.
- dd. Explain the rationale for utilizing rapid extraction approaches only when they will make the difference between life and death.
- ee. Defend the reasons for leaving a helmet in place for transport of a patient.
- ff. Defend the reasons for removal of a helmet prior to transport of a patient.
- gg. Demonstrate opening the airway in a patient with suspected spinal cord injury.
- hh. Demonstrate evaluating a responsive patient with a suspected spinal cord injury.
- ii. Demonstrate stabilization of the cervical spine.
- jj. Demonstrate the four person log roll for a patient with a suspected spinal cord injury.
- kk. Demonstrate how to log roll a patient with a suspected spinal injury using two people.
- ll. Demonstrate securing a patient to a long spine board.
- mm. Demonstrate using the short board immobilization technique.
- nn. Demonstrate the procedure for rapid extrication.
- oo. Demonstrate preferred methods for stabilization of a patient wearing a helmet.
- pp. Demonstrate helmet removal techniques.
- qq. Demonstrate alternative methods for stabilization of a patient wearing a helmet.
- rr. Demonstrate completing a prehospital care report for patients with head and spinal injuries.

30. Contrast the care required for pediatric patients versus adult patients and perform the skills necessary for prehospital pediatric intervention.
- a. Identify the developmental considerations for the following age groups: infants, toddlers, pre-school, school age, and adolescent.
 - b. Describe differences in the anatomy and pathophysiology of the infant, child, and adult patient.
 - c. Differentiate between the response of the ill or injured infant or child (age specific) and that of an adult.
 - d. Indicate various causes of respiratory emergencies.
 - e. Differentiate between respiratory distress and respiratory failure.
 - f. List the steps in the management of foreign body airway obstruction.
 - g. Summarize emergency medical care strategies for respiratory distress and respiratory failure.
 - h. Identify the signs and symptoms of shock (hypoperfusion) in the infant and child patient.
 - i. Describe the methods of determining end organ perfusion in the infant and child patient.
 - j. State the usual cause of cardiac arrest in infants and children versus adults.

- k. List the common causes of seizures in the infant and child patient.
- l. Describe the management of seizures in the infant and child patient.
- m. Differentiate among the injury patterns in adults, infants, and children.
- n. Discuss the field management of the infant and child trauma patient.
- o. Summarize the indicators of possible child abuse and neglect.
- p. Describe the medical legal responsibilities in suspected child abuse.
- q. Recognize the need for EMT-Basic 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.
- s. Recognize the feelings of the family when dealing with an ill or injured infant or child.
- t. Understand the provider's own response (emotional) to caring for infants or children.
- u. Demonstrate the techniques of foreign body airway obstruction removal in the infant.
- v. Demonstrate the techniques of foreign body airway obstruction removal in the child.
- w. Demonstrate the assessment of the infant and child.
- x. Demonstrate bag-valve-mask artificial ventilation for the infant.
- y. Demonstrate bag-valve-mask artificial ventilation for the child.
- z. Demonstrate oxygen delivery for the infant and child.

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

p.	Explain the rationale for having the unit prepared to respond.
32.	Explain the purpose and process of extrication. <ol style="list-style-type: none"> Describe the purpose of extrication. Discuss the role of the EMT-Basic in extrication. Identify what equipment for personal safety is required for the EMT-Basic. Define the fundamental components of extrication. State the steps that should be taken to protect the patient during extrication. Evaluate various methods of gaining access to the patient. Distinguish between simple and complex access.
33.	Identify hazardous materials and demonstrate knowledge of hazardous procedures. <ol style="list-style-type: none"> Explain the EMT-Basic's role during a call involving hazardous materials. Describe what the EMT-Basic should do if there is a reason to believe that there is a hazard at the scene. Describe the actions that an EMT-Basic should take to ensure bystander safety. State the role the EMT-Basic should perform until appropriately trained personnel arrive at the scene of a hazardous materials situation. Break down the steps to approaching a hazardous situation. Discuss the various environmental hazards that affect EMS. Describe the criteria for a multiple-casualty situation. Evaluate the role of the EMT-Basic in the multiple-casualty situation. Summarize the components of basic triage. Define the role of the EMT-Basic in a disaster operation. Describe basic concepts of incident management. Explain the methods for preventing contamination of self, equipment, and facilities. Review the local mass casualty incident plan. Perform triage given a scenario of a mass casualty incident.

STANDARDS

EMT-Basic National Standard Curriculum Modules

EMB1	Preparatory
EMB2	Airway
EMB3	Patient Assessment
EMB4	Medical
EMB5	Trauma
EMB6	Infants and Children
EMB7	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
- A3 Data Interpretation (graph, table, chart, diagram)
- A5 Measurement (money, time, temperature, length, area, volume)
- 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)

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Workplace Skills for the 21st Century

- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.
- WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.
- WP5 Selects, applies, and maintains/troubleshoots technology.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management.

National Educational Technology Standards for Students

- T1 Basic operations and concepts
- T2 Social, ethical, and human issues
- T4 Technology communications tools

- T5 Technology research tools
 T6 Technology problem-solving and decision-making tools

SUGGESTED REFERENCES

- Bass, R., Potter, J., McGinnid, K., & Miyahira, T. (2004). Surveying emerging trends in emergency-related information delivery for the EMS profession. *Topics in Emergency Medicine*, 26(2), 93-102.
- Beebe, R., & Funk, D. (2001). *Fundamentals of emergency care*. Albany, NY: Delmar.
- Bograkos, W. (2005, March/April). Building bridges from EMS to public health. *NAEMT News*, 6-7.
- Boykin, A., Bulfin, S., Baldwin, J., & Southern, R. (2004). Transforming care in the emergency department. *Topics in Emergency Medicine*, 26(4), 331-336.
- EMS scope of practice document moves forward. (2005, January/February). *NAEMT News*, 6.
- Hanfling, D., Schafer, K. O., & Armstrong, C. W. (2004). Making healthcare preparedness a part of the Homeland Security equation. *Topics in Emergency Medicine*, 26(2), 128-142.
- Hoyt, K. S., Potter, J., & Wheeler, T. E. (2004). A vision for 21st century emergency response communications. *Topics in Emergency Medicine*, 26(2), 83-85.
- Mississippi Emergency Medical Technicians Association. (n.d.). Retrieved April 19, 2005, from www.memta.org
- Mississippi State Department of Health Emergency Medical Services. (n.d.). Retrieved April 19, 2005, from <http://www.ems.doh.ms.gov/ems/index.html>
- Rippen, H. E., Gursky, E., & Yasnoff, W. A. (2004). Implementing a national health information infrastructure to support the medical response to emerging microbial pathogens and bioterrorism. *Topics in Emergency Medicine*, 26(2), 110-118.
- Salvucci, A., Kuehl, A., Clawson, J. J., & Martin, R. L. (2004). The response time myth. *Topics in Emergency Medicine*, 26(2), 86-92.
- Sandmire, D. A., & Boyce, P. F. (2004). Pairing of opposite learning styles among allied health students. *Journal of Allied Health*, 33(2), 156-163.
- Scott, S. B., Harrison, A. D., Baker, T., & Wills, J. D. (2005). Interdisciplinary community partnership for health professional students. *Journal of Allied Health*, 34(1), 31-35.
- Stay alive in 2005. (2005, January/February). Scene safety: Women providers are especially vulnerable. *NAEMT News*, 7.

Weerakoon, P., Jones, M. K., Pynor, R., & Kilburn-Watt, E. (2004). Allied health professional students' perceived level of comfort in clinical situations that have sexual connotations. *Journal of Allied Health, 33*(3), 189-193.

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"
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 O₂ 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

Recommend that teachers have access to:

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)

Student Competency Profile for Emergency Medical Technology - Basic

Student: _____

This record is intended to serve as a method of noting student achievement of the competencies in each unit. Noted in parentheses beside each unit is the cluster competency from the MS-CPAS. This form may be duplicated for each student and serve as a cumulative record of competencies achieved in the course.

As an alternative to the use of this form, you may note competency achievement by attaching a report showing comparable results for each student. Please indicate that you are using this alternative report by checking here. _____

EMT - Basic (EMT 1116)

- _____ 1. Acquire a professional knowledge and skills of Emergency Medical Services (EMS) systems to include the roles and responsibilities of an EMT-Basic.
- _____ 2. Recognize factors associated with stress and personal safety.
- _____ 3. Explain medical, legal, and ethical implications that impact the functioning of an EMT-Basic.
- _____ 4. Discuss anatomy and physiology using medical terminology.
- _____ 5. Demonstrate and explain the importance of obtaining the different aspects of vital signs in patient assessment.
- _____ 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.
- _____ 7. Demonstrate the appropriate methods and equipment utilized for lifting and moving patients allowing for safety of the patient and self.
- _____ 8. Discuss the respiratory system and appropriate airway and ventilatory management.
- _____ 9. Explain the rationale for crew members to evaluate scene safety prior to entering the scene.
- _____ 10. Explain the importance of learning a general impression of the patient.
- _____ 11. Demonstrate the different aspects of a rapid trauma assessment in order to provide patient care.
- _____ 12. Demonstrate the different aspects of patient assessment with varying degrees of patient's responsiveness.
- _____ 13. Determine the components of the detailed physical exam and the care to be provided to the patient during assessment.
- _____ 14. Explain the components and importance of the ongoing assessment.
- _____ 15. Demonstrate the proper procedure and skills for effective radio communications.
- _____ 16. Develop appropriate documentation which adheres to state and local requirements.
- _____ 17. Discuss pharmacology relative to the EMT-Basic.
- _____ 18. Describe the respiratory system and procedures for airway and ventilation management.
- _____ 19. Demonstrate cardiac interventions and the management of the cardiac patient.
- _____ 20. Perform prehospital interventions for a patient with a diabetic emergency.

- ____ 21. Demonstrate the management of a patient with an allergic reaction.
- ____ 22. Discuss appropriate intervention methods for poisoning.
- ____ 23. Identify environmental conditions that pose a hazard to the body and discuss appropriate management techniques.
- ____ 24. Appraise behaviors relative to the potential for harm and explain appropriate intervention.
- ____ 25. Manage an obstetrical emergency to include care for the neonate.
- ____ 26. Describe the pathophysiology of hypoperfusion and demonstrate emergency interventions.
- ____ 27. Explain soft tissue injuries and perform the techniques used in the management of various soft tissue injuries.
- ____ 28. Integrate the anatomy and physiology of the musculoskeletal system with the mechanisms of immobilization of the painful, swollen, deformed extremity.
- ____ 29. Explain the anatomy and physiology of the nervous system, explain the pathophysiology of traumatic injuries, and demonstrate the prehospital skills necessary for the neurological injured patient.
- ____ 30. Contrast the care required for pediatric patients versus adult patients and perform the skills necessary for prehospital pediatric intervention.
- ____ 31. Describe ambulance call procedures associated with vehicle and patient care.
- ____ 32. Explain the purpose and process of extrication.
- ____ 33. Identify hazardous materials and demonstrate knowledge of hazardous procedures.

Baseline Competencies

The following competencies and suggested objectives are taken from the publication *Mississippi Curriculum Framework for Allied Health*. These competencies and objectives represent the baseline which was used to develop the community/junior college Emergency Medical Technology - Basic courses. Students enrolled in postsecondary courses should either (1) have documented mastery of these competencies, or (2) be provided with these competencies before studying the advanced competencies in the Emergency Medical Technology - Basic program.

Baseline competencies may be integrated into existing courses in the curriculum or taught as special “Introduction” courses. The “Introduction” courses may be taught for up to six semester hours of institutional credit and may be divided into two courses. If the Baseline Competencies are to be taught as “Introduction” courses, each course should be at least 3 credit hours. The following course number(s) and description should be used:

Course Name(s): Introduction to Emergency Medical Technology - Basic, Introduction to Emergency Medical Technology - Basic I, or Introduction to Emergency Medical Technology - Basic II

Course Abbreviation(s): EMT 100(3-6), EMT 1013, EMT 1023

Classification: Vocational-Technical Core

Description: These courses contain the baseline competencies and suggested objectives from the high school curriculum which directly relate to the community college program. The courses are designed for students entering the community college who have had no previous training or documented experience in the field. (3-6 semester hours based upon existing skills for each student. May be divided into 2 courses for a maximum total of 6 hours of institutional credit.)

Competencies and Suggested Objectives:

1. Review material related to course and professional organizations.
 - a. Identify student and course expectations.
 - b. Identify allied health professional student organizations and their roles in individual career development.
 - c. Compare the timeline of medical history.
2. Recognize safety procedures and policies.
 - a. Describe basic safety procedures.
 - b. Describe accident prevention methods and disaster plans of the local school district.
 - c. Discuss a safe and clean environment.
 - d. Follow state and facility guidelines, including dress requirements for clinical-type experiences.
3. Explain effective communication skills.
 - a. Identify the main factors required for the communication process.
 - b. Identify factors which can interfere with the communication process.
 - c. Demonstrate effective teamwork skills.

- d. Explore professional literature and medical references.
4. Introduce careers in the health care industry.
 - a. Introduce careers in health care information and administration.
 - b. Introduce careers in direct health care.
 - c. Introduce careers in medical therapy.
 - d. Introduce careers in diagnostic health care.
5. Discuss education and credentials required for health care careers.
 - a. Discuss educational levels for health careers, including certification, associate degree, bachelor's degree, master's degree, and doctoral degree.
 - b. Compare the credentials needed for careers in health care, including certification, registration, and licensure.
6. Discuss professional ethics.
 - a. Explain professional ethics.
 - b. Discuss confidentiality.
 - c. Discuss HIPAA, the Health Insurance Portability and Accountability Act of 1996.
7. Discuss legal responsibility and client's rights.
 - a. Explain torts and legal responsibility.
 - b. Identify ways to promote clients' rights and privacy.
 - c. Discuss the requirement for health care workers to undergo a background check.
8. Explain standard precautions.
 - a. Explain importance of standard precautions in life practices and health care.
 - b. Explain the state and federal government's role in standard precautions.
 - c. Relate standard precautions to the transmission of infectious diseases including HIV, AIDS, HBV, and TB.
9. Utilize standard precautions.
 - a. Demonstrate hand-washing technique.
 - b. Demonstrate donning and removing clean gloves.
10. Perform basic emergency procedures.
 - a. Explain first aid procedures for sudden illness.
 - b. Explain first aid procedures for accidents.
11. Perform advanced emergency procedures.
 - a. Perform CPR.
 - b. Demonstrate first aid for an obstructed airway.
12. Explain medical terminology.
 - a. Spell designated medical terms correctly.
 - b. Demonstrate the use of medical references to spell medical terms correctly.
 - c. Define and divide medical terms into root words, prefixes, and suffixes.
13. Recognize and use medical terminology.
 - a. Interpret the common medical abbreviations and symbols including meanings and uses.
 - b. Demonstrate the use of medical terms and abbreviations in reading, speaking, interpreting, and writing simulated medical records.
14. Review the relationship among cells, tissues, organs, and systems.
 - a. Review the main parts of a cell.
 - b. Review the functions of the main parts of a cell.
 - c. Compare types of tissues and their relationships to body organs and systems.

15. Identify the body planes, directions, and cavities.
 - a. Identify the names of the planes and the directional terms.
 - b. Locate the body cavities.
 - c. Identify the body organs in each cavity.
 - d. Describe the abdominal regions.
16. Interpret the basic structures and functions of the integumentary system.
 - a. Identify the parts of the integumentary system.
 - b. Explain the functions of the integumentary system.
 - c. Discuss related diseases and disorders.
17. Interpret the basic structures and functions of the muscular system.
 - a. Identify major muscles.
 - b. Explain the function of the muscles.
 - c. Discuss related diseases and disorders.
 - d. Demonstrate active range of motion exercises and indications for use.
18. Interpret the basic structure and function of the skeletal system.
 - a. Identify the bones of the body.
 - b. Explain functions of the skeletal system.
 - c. Discuss related diseases and disorders.
 - d. Demonstrate procedures for patient transfer using a stretcher, wheelchair, or a pneumatic lift.
19. Interpret the basic structures and functions of the circulatory system.
 - a. Identify components of blood and their function.
 - b. Identify the types of blood vessels and the action of each.
 - c. Identify the anatomy of the heart.
 - d. Explain the flow of blood through the heart.
 - e. Discuss related diseases and disorders.
20. Measure vital signs.
 - a. Measure oral temperature.
 - b. Explain procedures for measuring axillary, rectal, and tympanic temperatures.
 - c. Identify the body's pulse points.
 - d. Demonstrate radial pulse measurement.
 - e. Measure blood pressure.
21. Interpret the basic structures of the respiratory system.
 - a. Identify the structures of the respiratory system.
 - b. Discuss related diseases and disorders.
 - c. Auscultate lung sounds.
22. Interpret the basic functions of the respiratory system.
 - a. Discuss how gas exchange occurs in the lungs.
 - b. Recognize factors that cause respiratory disorders.
 - c. Count respirations.
23. Interpret the basic structures and functions of the digestive system.
 - a. Identify organs of the digestive system.
 - b. Discuss the functions of organs of the digestive system.
 - c. Discuss related diseases and disorders.
24. Interpret the basic structures and functions of the urinary system.
 - a. Identify structures of the urinary system.

- b. State the functions of each structure of the urinary system.
 - c. Discuss related diseases and disorders.
25. Interpret the basic structures and functions of the nervous system.
- a. Identify the major structures and functions of the nervous system.
 - b. Recognize procedures for neurological exam.
 - c. Perform neurological exams.
 - d. Discuss related diseases and disorders.
26. Interpret basic structure and functions of the sensory systems.
- a. Label the basic structures of the sensory organs.
 - b. Identify the functions of the sensory organs.
27. Interpret the basic structures and functions of the female reproductive system.
- a. Identify the major structures and functions of the female reproductive system.
 - b. Discuss diseases and disorders of the female reproductive system.
 - c. Discuss the procedures of a breast exam.
 - d. Perform breast exam on model in lab.
28. Interpret the basic structures and functions of the male reproductive system.
- a. Identify major structures and functions of the male reproductive system.
 - b. Discuss diseases and disorders of the male reproductive system.
 - c. Discuss procedures of a testicular exam.
 - d. Perform testicular exam on model in lab.
29. Interpret the basic structures of the endocrine system.
- a. Define key terms related to the endocrine system.
 - b. Label structures of the endocrine system.
30. Interpret the basic functions of the endocrine system.
- a. Analyze the actions of hormones on various body functions.
 - b. Recognize diseases and disorders of the endocrine system.
31. Discuss stages of growth and development.
- a. Review the reproductive system.
 - b. Identify physical, mental, emotional, and social development characteristics of each of Erikson's stages of development from infancy through late adulthood.
 - c. Identify Maslow's Hierarchy of Human Needs.
 - d. Discuss cultural practices that affect needs.
32. Describe careers available in the field of emergency health care.
- a. Compare job descriptions in the field of emergency health care.
 - b. Differentiate educational levels and credentials required.
33. Explain procedures related to emergency health care.
- a. Qualify for certification for CPR at the professional health care level.
 - b. Review first aid skills.
 - c. Discuss triage for medical emergency health care.

Appendix A: EMT-Basic National Standard Curriculum Modules¹

EMB1	Preparatory
EMB2	Airway
EMB3	Patient Assessment
EMB4	Medical
EMB5	Trauma
EMB6	Infants and Children
EMB7	Operations

¹ U.S. Department of Transportation. (1994). *EMT-Basic: National standard curriculum*. Washington, DC: Author.

Appendix B: Related Academic Standards²

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)

² CTB/McGraw-Hill LLC. (1994). *Tests of adult basic education, Forms 7 and 8*. Monterey, CA: Author. Reproduced with permission of CTB/McGraw-Hill LLC. TABE is a registered trademark of The McGraw-Hill Companies, Inc. Copyright © 1994 by CTB/McGraw-Hill LLC. Reproduction of this material is permitted for educational purposes only.

Appendix C: Workplace Skills for the 21st Century³

- WP1 Allocates resources (time, money, materials and facilities, and human resources).
- WP2 Acquires, evaluates, organizes and maintains, and interprets/communicates information, including the use of computers.
- WP3 Practices interpersonal skills related to careers including team member participation, teaching other people, serving clients/customers, exercising leadership, negotiation, and working with culturally diverse.
- WP4 Applies systems concept including basic understanding, monitoring and correction system performance, and designing and improving systems.
- WP5 Selects, applies, and maintains/troubleshoots technology.
- WP6 Employs thinking skills including creative thinking, decision making, problem solving, reasoning, and knowing how to learn.
- WP7 Basic Skills: Employs basic academic skills including reading, writing, arithmetic and mathematics, speaking, and listening.
- WP8 Personal Qualities: Practices work ethics related to individual responsibility, integrity, honesty, and personal management

³ Secretary's commission on achieving necessary skills. (1991). Retrieved July 13, 2004, from <http://wdr.doleta.gov/SCANS/>

Appendix D: National Educational Technology Standards for Students⁴

- T1 Basic operations and concepts
- Students demonstrate a sound understanding of the nature and operation of technology systems.
 - Students are proficient in the use of technology.
- T2 Social, ethical, and human issues
- Students understand the ethical, cultural, and societal issues related to technology.
 - Students practice responsible use of technology systems, information, and software.
 - Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.
- T3 Technology productivity tools
- Students use technology tools to enhance learning, increase productivity, and promote creativity.
 - Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.
- T4 Technology communications tools
- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
 - Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.
- T5 Technology research tools
- Students use technology to locate, evaluate, and collect information from a variety of sources.
 - Students use technology tools to process data and report results.
 - Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.
- T6 Technology problem-solving and decision-making tools
- Students use technology resources for solving problems and making informed decisions.
 - Students employ technology in the development of strategies for solving problems in the real world.

⁴ ISTE: *National educational technology standards (NETS)*. (2000). Retrieved July 13, 2004, from <http://cnets.iste.org/>