

EMT-1302: EMERGENCY MEDICAL TECHNICIAN - BASIC

Cuyahoga Community College

Viewing: EMT-1302 : Emergency Medical Technician - Basic

Board of Trustees:

May 2023

Academic Term:

Fall 2024

Subject Code

EMT - Emergency Medical Technology

Course Number:

1302

Title:

Emergency Medical Technician - Basic

Catalog Description:

Comprehensive study of basic life support skills of Emergency Medical Technician-Basic based on the U.S. Department of Transportation National Standard EMT-Basic Curriculum and the EMT-Basic curriculum, most current version. Includes recognition of nature and seriousness of patient's condition or extent of injuries; and assessing requirements of emergency care, lifting, moving, handling and transporting patients as part of pre-hospital emergency care system. Successful completion of American Heart Association-Basic Life Support for the Healthcare Provider Course component of course required to successfully complete EMT-1302. Successful Completion of EMT-1302 and EMT-130L required for NREMT and State of Ohio EMT-Basic certification.

Credit Hour(s):

6

Lecture Hour(s):

5

Lab Hour(s):

2

Requisites

Prerequisite and Corequisite

ENG-0985 Introduction to College Literacies or appropriate score on English Placement Test; and MATH-0915 Basic Arithmetic and Pre-Algebra or qualified Math placement, and departmental approval: admission to the program.

Note: ENG-0980 Language Fundamentals I taken prior to Fall 2021 will also meet prerequisite requirements.

Outcomes

Course Outcome(s):

Exhibit professional, ethical and compassionate behavior when interacting with diverse groups of patients and their families, healthcare professionals, and community members.

Objective(s):

1. Describe the Emergency Medical Services (EMS) System and the history of its development.
 2. Differentiate the roles, responsibilities and profession of the Emergency Medical Technician (EMT), Emergency Medical Responder, Advanced EMT, and Paramedic.
 3. Describe the concept of lifespan development and how age of patients impacts the assessment and treatment of special populations.
 4. Examine important issues in EMS, including research, documentation, and ethical conflicts.
 5. Recognize the importance of the basic principles of public health, especially as related to response to nuclear, biological, and chemical incidents.
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Course Outcome(s):

Use tactical management, critical thinking and ethical decision-making skills to lead and operate an EMS Unit.

Objective(s):

1. Examine the concept of evidence based medicine and relate its importance to changes in EMS operations.
2. Demonstrate an appreciation for the ethics of the profession and examine the rights of the patient in EMS research.
3. Distinguish the important medical/Legal and ethical issues and circumstances encountered in EMS, including consent, criminal/civil law, confidentiality, and ethical conflicts.

Course Outcome(s):

Identify current and potential hazards and perform duties maintaining a safe work environment for oneself, co-workers, patients and bystanders.

Objective(s):

1. Employ operational roles and responsibilities to ensure patient, public, and personnel safety.
2. Discuss potential hazards an EMT may encounter in the work environment.
3. Demonstrate injury prevention techniques.
4. Maintain a safe work environment for the EMT, co-workers, the patient, and bystanders by utilizing occupational safety and injury prevention techniques.

Course Outcome(s):

Identify stress within oneself and co-workers and use appropriate stress management techniques to ensure physical and emotional health.

Objective(s):

1. Identify stress reduction techniques to utilize for reducing personal stress, patient stress, and bystander stress.
2. Discuss general wellness techniques.

Course Outcome(s):

Use correct medical terminology when communicating with healthcare professionals regarding patient conditions and to completely and accurately document patient care information that meets federal, state and organizational requirements.

Objective(s):

1. Recognize standard medical abbreviations and acronyms.
2. Define medical terms.
3. Demonstrate correct use of medical terminology verbally, in writing, and within an electronic medical record.
4. Discuss the EMS communication system.
5. Demonstrate therapeutic communications techniques with patients.

Course Outcome(s):

Apply knowledge of anatomy, physiology, medicolegal and ethical issues, basic patient assessment skills, and basic medical equipment to identify mechanism of injury or nature of illness to determine therapeutic modalities for the medical and trauma patient and establish the priority of interventions needed to improve the patient's outcome within the EMT-Basic level's scope of practice.

Objective(s):

1. Describe the pathophysiology of conditions and injuries affecting the body systems.
2. Assess the simulated patient's condition using a fundamental understanding of anatomy, physiology, and pathophysiology as they apply to the body systems.
3. Analyze scene information and patient assessment findings (scene size-up, primary and secondary assessment, patient history, reassessment) to guide emergency management.
4. Identify basic techniques for performing primary assessment, secondary assessment, and reassessment of patient condition.
5. Interpret signs and symptoms of medical complaints in the simulated patient in order to categorize the problems by body systems for non-traumatic problems.
6. Interpret signs and symptoms representing shock and the need for resuscitation in a simulated patient.
7. Interpret signs and symptoms of traumatic injuries in simulated patients in order to determine the appropriate interventions.
8. Explain appropriate interventions for all the various types of trauma.
9. Discuss special considerations in trauma situations.
10. Explain procedures/treatment for environmental emergencies.

Course Outcome(s):

Demonstrate skill proficiency in pre-hospital assessments and treatments using basic medical techniques and equipment available within the EMT-Basic scope of practice.

Objective(s):

1. Explain the principles of pharmacology and use of emergency medications and delivery devices, including epinephrine autoinjector, metered-dose inhaler, and small volume nebulizer.
2. Demonstrate techniques used to determine vital signs.
3. Demonstrate techniques used to move patients.
4. Demonstrate techniques used to splint spinal and musculoskeletal injuries.
5. Demonstrate techniques for administering medications utilized in emergency situations to simulated patients within the EMT scope of practice.
6. Demonstrate methods used to establish and maintain the patient's airway and manage respiration/ventilation within the EMT scope of practice.
7. Demonstrate Basic Life Support for Healthcare Provider level CPR.
8. Demonstrate basic emergency care and transportation based on assessment findings for an acutely ill patient.
9. Demonstrate basic emergency care and transportation based on assessment findings for an acutely injured patient.
10. Demonstrate basic emergency care and transportation based on assessment findings for special patient populations, including pregnant women, neonatal, pediatric, geriatric, and special challenges patients.
11. Discuss safe operations of a ground ambulance.
12. Explain procedures for handling a multiple casualty incident (MCI) including incidents caused by terrorism and disasters.
13. Identify situations requiring air medical transport.
14. Discuss techniques used to extricate patient from a vehicle.
15. Recognize situations with potential for hazardous material exposure.

Course Outcome(s):

Be prepared to sit for the National Registry of Emergency Medical Technician (NREMT) Basic Exam.

Objective(s):

1. Describe the processes and procedures to achieve NREMT Basic certification and State of Ohio EMT Basic certification.
2. Recognize and describe the process to recertify the State of Ohio EMT Basic Certification.

Methods of Evaluation:

1. Quizzes, written examinations
2. Workbook exercises
3. Performance on practical skills at National Registry standards
4. American Heart Association Basic Life Support examination
5. Competency testing for physical assessments
6. Competency testing for accurate vital signs skills
7. Competency testing for accurate documentation
8. Comprehensive final examination
9. National Registry examination

Course Content Outline:

1. Concepts
 - a. Preparatory information
 - i. The Emergency Medical Service (EMS) System
 - ii. Research
 - iii. Workforce safety and wellness
 - iv. Documentation
 - v. EMS system communications
 - vi. Therapeutic communications
 - vii. Medical/legal and ethics
 - b. Anatomy and physiology

- i. Anatomy and body functions
 - ii. Life support chain
 - iii. Age-related variations for pediatrics and geriatrics
- c. Medical terminology
 - i. Medical terminology
 - ii. Medical terms
 - iii. Standard medical abbreviations and acronyms
- d. Pathophysiology
 - i. Composition of ambient air
 - ii. Patency of the airway
 - iii. Respiratory compromise
 - iv. Alteration in regulation of respiration due to medical or traumatic conditions
 - v. Ventilation/perfusion ratio and mismatch
 - vi. Perfusion and shock
 - vii. Microcirculation
 - viii. Blood pressure
 - ix. Alteration of cell metabolism
- e. Life span development
 - i. Infancy, birth to one year
 - ii. Toddler, one to three years
 - iii. Preschooler, three to five years
 - iv. School age, six to twelve years
 - v. Adolescence, 13 to 18 years
 - vi. Early adulthood, 20 to 40 years
 - vii. Middle adulthood, 41 to 60 years
 - viii. Late adulthood, 61 years and older
- f. Public health
 - i. Basic principles of public health
- g. Pharmacology
 - i. Principles of pharmacology
 - ii. Medication administration
 - iii. Emergency medications
- h. Airway management, respiration, and artificial ventilation
 - i. Airway management
 - ii. Respirations
 - iii. Artificial Ventilation
- i. Patient assessment
 - i. Scene size up
 - ii. Primary assessment
 - iii. History taking
 - iv. Secondary assessment
 - v. Monitoring devices
 - vi. Reassessment
- vii. Medicine
 - 1. Medical overview
 - 2. Neurology
 - 3. Abdominal and gastrointestinal disorders
 - 4. Immunology
 - 5. Infectious disease
 - 6. Endocrine disorders
 - 7. Psychiatric
 - 8. Cardiovascular
 - 9. Toxicology
 - 10. Respiratory
 - 11. Hematology
 - 12. Genitourinary/Renal
 - 13. Gynecology

- 14. Non-traumatic musculoskeletal disorders
- 15. Diseases of the eyes, ears, nose and throat
- j. Shock and resuscitation
 - i. Ethical issues in resuscitation
 - ii. Anatomy and physiology review
 - iii. Respiratory failure
 - iv. Respiratory arrest
 - v. Cardiac arrest
 - vi. Resuscitation
 - vii. Automated External Defibrillator (AED)
 - viii. Shock, poor perfusion
- k. Trauma
 - i. Trauma overview
 - ii. Bleeding
 - iii. Chest trauma
 - iv. Abdominal and genitourinary trauma
 - v. Orthopedic trauma
 - vi. Soft tissue trauma
 - vii. Head, facial neck, and spine trauma
 - viii. Nervous system trauma
 - ix. Special consideration in trauma
 - x. Environmental emergencies
 - xi. Multisystems trauma
- l. Special patient populations
 - i. Obstetrics
 - ii. Neonatal care
 - iii. Pediatrics
 - iv. Geriatrics
 - v. Patients with special challenges
- m. EMS Operations
 - i. Safely operating a ground ambulance
 - ii. Incident management
 - iii. Multiple casualty incidents(MCI)
 - iv. Air medical
 - v. Vehicle extrication
 - vi. Hazardous materials awareness
 - vii. MCI due to terrorism and disaster
- 2. Skills
 - a. Documentation
 - b. Techniques for assuring a patent airway
 - c. Oxygen therapy and ventilation
 - d. Epinephrine autoinjector
 - e. Metered dose inhaler
 - f. Small volume nebulizer
 - g. Splinting
- 3. Issues
 - a. Research
 - i. Ethics of research on patients
 - ii. Lack of research in EMS issues
 - b. Documentation
 - i. Falsification of documentation
 - c. Ethical conflicts
 - i. Futility of care
 - ii. Allocation of limited resources
 - iii. Professional misconduct
 - iv. Economic triage
 - v. Special populations

Resources

American Heart Association. *Basic Life Support for the Healthcare Provider*. American Heart Association, 2020.

American Academy of Orthopaedic Surgeons (AAOS). *Emergency Care and transportation of the Sick and Injured Essentials Package*. 12th ed.

Resources Other

1. U. S. Department of Transportation Office of EMS EMT-Basic National Standard Curriculum. <https://www.ems.gov/education.html>
2. U. S. Department of Transportation Office of EMS EMT Scope of Practice Model. <https://www.ems.gov/education.html>
3. U. S. Department of Transportation Office of EMS EMT Education Standards. <https://www.ems.gov/education.html>
4. State of Ohio, Division of EMS, EMT Curriculum. <https://ems.ohio.gov/education-and-testing> (<https://ems.ohio.gov/education-and-testing/>)
5. State of Ohio, Division of EMS, EMT Basic Scope of Practice. <https://ems.ohio.gov/education-and-testing> (<https://ems.ohio.gov/education-and-testing/>)
6. American Health Association Health Care Provider. BLS. <https://cpr.heart.org/en/cpr-courses-and-kits/healthcare-professional/basic-life-support-bls-training> (<https://cpr.heart.org/en/cpr-courses-and-kits/healthcare-professional/basic-life-support-bls-training/>)
7. National Registry of Emergency Medical Technicians National EMS Practice Analysis. <https://www.nremt.org/News/EMS-practice-analysis-accepted-for-publication> (<https://www.nremt.org/News/EMS-practice-analysis-accepted-for-publication/>)

Instructional Services

CTAN Number:

Career Technical Assurance Guide CTEMS002 (1 of 2 courses, both must be taken)

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