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Course Outline for EMS 91

EMERGENCY MEDICAL TECHNICIAN - REFRESHER

Effective: Fall 2018

I. CATALOG DESCRIPTION:
EMS 91 — EMERGENCY MEDICAL TECHNICIAN - REFRESHER — 1.00 units

Provides a refresher in the foundation and knowledge required of the EMT – 1 scope of practice. The EMT – 1 certification is the minimum requirement for ambulance attendants and most entry-level firefighter positions. EMT-1 certification is also required for entry into paramedic training. This refresher program is accredited by the Alameda County Emergency Medical Services Agency. The course provides a minimum of 24 hours of continuing education units or a course completion certificate. Additionally, the course provides skills verification testing that EMTs must complete every two years.

0.50 Units Lecture 0.50 Units Lab

Prerequisite
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Proof of California State EMSA or National Registration Certification as an “Emergency Medical Technician.” Certification must be current, or expired less than 6 months. Student may also present documentation from the National Registry of Emergency Medical Technicians showing failure of initial three attempts at NREMT Certification Examination which now requires completion of EMS 91 for additional attempts to register for certification examination.

Grading Methods:
Letter or P/NP

Discipline:
- Emergency Medical Technologies

	MIN
Lecture Hours:	9.00
Lab Hours:	27.00
Total Hours:	36.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT:

III. PREREQUISITE AND/OR ADVISORY SKILLS:

IV. MEASURABLE OBJECTIVES:

Upon completion of this course, the student should be able to:

A. Explain how the Emergency Medical Services (EMS) system works and how the first responder's role in the EMS system differs from citizen responder's role
B. Identify guidelines to follow to ensure personal safety and the safety of others at an emergency scene
C. Explain what happens in the body if one or more body systems fail to function
D. Identify ways in which diseases are transmitted and describe the universal safety precautions to prevent transmission
E. Explain the four emergency action principles
F. Recognize breathing emergencies, such as choking, and provide proper care for them
G. Recognize life-threatening bleeding and demonstrate how to control it
H. Identify the major risk factors for cardiovascular disease and injury, and describe how to control them
I. Recognize the signs and symptoms of a possible heart attack, and describe how to care for someone who is experiencing a persistent chest pain and/or other signs and symptoms of heart attack
J. Recognize the signs and symptoms of cardiac arrest, and demonstrate how to provide cardiopulmonary resuscitation (CPR) for the infant, child and adult
K. Identify breathing devices and demonstrate how to use them
L. Recognize the signs and symptoms of shock, and describe how to minimize the effects of shock
M. Recognize the signs and symptoms of medical emergencies, including poisoning, heat and cold emergencies, and stroke, and describe both general and specific care for medical emergencies
N. Recognize emergency care needs of special populations
O. Describe the care of the pregnant woman to include child birth and care of the newborn
P. identify situations that require crisis intervention
Q. Identify the correct process for gaining access and moving patients
R. Describe the process for managing multiple casualty incidents
S. Recognize situations that require automated external defibrillation
T. Recognize the importance of healthy life styles, to include illness and injury prevention

V. CONTENT:

A. Review of preparatory information, including:
1. Roles and responsibilities of the EMT-1, medical direction, quality improvement, and continuing education
2. Well-being of the EMT-1, body substance isolation, protective equipment, and scene safety
3. Medical, legal, and ethical issues; reviews of Federal, State, and Local laws pertinent to EMT-1 scope of practice, including confidentiality, advance directives, and ethical/moral issues
4. Basic anatomy, physiology, and medical terminology
5. Vital signs and patient history, review and development of skills learned in prerequisite coursework
6. Techniques for lifting and moving patients with a focus on body mechanics and injury prevention

B. Review of airway management including:
1. Ventilation and oxygen therapy
2. Respiratory function and anatomy of adult and pediatric patients including pulse oximetry
3. Utilization of airway adjuncts including oxygen administration techniques and utilization for pediatric and adult patients and assisting the Paramedic with the endotracheal tube

C. Review of patient assessment including:
1. Scene evaluation – determination of mechanism of injury, resource needs, and identification of scene hazards
2. Patient evaluation – an assessment-based approach to patient evaluation; diagnosis of specific injuries and illness is de-emphasized; integration of patient assessment techniques into overall scene management and treatment modalities
3. Assessment of geriatric patients – understand the differences between the average adult; geriatric, and pediatric patient
4. Communications skills, equipment, and systems used by the EMT-1. Emphasis on medical direction and on-line communications
5. Documentation – utilization of the “Prehospital Care Report” and standardized data set established by the January 2009 DOT EMT Scope of Practice and Instructional Guidelines

D. Review of medical, behavioral, and obstetrics/gynecology including:
1. General pharmacology – medication terminology, indications, contraindications, dosage, actions, and side effects of the six medications within the EMT-1 scope of practice
2. Respiratory emergencies – signs and symptoms of breathing difficulty and respiratory distress. Pathophysiology of common respiratory conditions. Review of adult and pediatric anatomy, training in treatment modalities for respiratory distress and failure
3. Cardiac emergencies – signs and symptoms of cardiac compromise. Pathophysiology of cardiovascular disease. Recognition of acute cardiac events and rapid intervention
4. Automated External Defibrillation – awareness level training in the use of AED equipment by the EMT-1
5. Altered Mental Status, diabetic emergencies – recognition of the signs and symptoms of altered mental status and the relationship of life-threatening conditions. Pathophysiology of diabetic emergencies and prehospital treatment
6. Altered Mental Status with loss of function – understanding the cause, nature and care of patients with cerebrovascular accidents and transient ischemic attacks
7. Altered Mental Status, seizures and syncope – review the causes, nature, and treatment of patients experiencing a loss of consciousness or seizure activity including the use of blood glucometry assessment
8. Allergic reactions – recognition of the signs and symptoms of anaphylaxis and prehospital care of these patients including the treatmentof anaphalaxis using intramuscular self injected Epinephrine Pen
9. Poisoning emergencies – recognition of the signs and symptoms of accidental or intentional poisonings and the management of these patients
10. Drug and alcohol emergencies – recognition of the signs and symptoms of drug and alcohol emergencies and management of these patients including intranasal administration of Naloxone HCL (Narcan) using a mucosal atomizing device
11. Acute abdominal pain – discussion of the pathophysiology of acute abdominal pain and recognition of urgent situations requiring management and rapid transport
12. Environmental emergencies – recognition of the signs and symptoms of hypothermia and hypothermia and related conditions. Management of these patients in the prehospital environments
13. Drowning, near-drowning, and diving emergencies – understanding of water-related emergencies with and emphasis on rescuer safety
14. Behavioral emergencies – awareness, recognition, and management of behavioral emergencies with an emphasis on scene and rescuer safety

E. Review of trauma including:
1. Mechanism of injury – kinetics of traumas, study of the physics of motion that may produce injury, patterns of injury produced by vehicle accidents, falls, and projectiles
2. Bleeding and shock – recognition and management of internal and external bleeding, including the use of tourniquiets, principles of tactical combat cassualty care (TCC), and decreased perfusion states
3. Soft tissue injuries – management of various types of soft tissue injuries with emphasis on bleeding control and hypo perfusion
4. Burn emergencies – recognition and management of thermal, chemical, and electrical burns with emphasis on inhalation injuries and rescuer safety
5. Musculoskeletal injuries – recognition and management of sprains, strains, dislocations, and fractures. Review of splinting techniques and assessment
6. Injuries to the head – recognition and management of head injury patients with an emphasis on airway management and altered mental status
7. Injuries of the spine – utilizing scene size-up and mechanism of injury considerations to maintain a high index of suspicion of spinal injury. Utilize various methods of spinal immobilization and patient extrication
8. Eye, face and neck injuries – recognition and management of facial injuries with emphasis on airway management and spinal stabilization
9. Chest, abdomen, and genitalia injuries – recognition, and management of chest, abdominal, and genitalia emergencies and identification of life-threatening injuries
10. Agricultural and industrial emergencies – special situations that require specialized teams of rescuers on equipment. Review of scene safety and evaluation

F. Review of infants and children including:
1. Anatomical and physiological differences between children and adults
2. Injuries and illnesses in infants and children

G. Review of operations including:
1. Moving patients – study of various techniques and equipment for moving patients. Identify the need for emergency, urgent and non-urgent moves
2. Ambulance operations – maintenance and operation of the ambulance as well as cleaning, disinfections, and disposal of contaiminated items
3. Gaining access and extrication – awareness of rescue procedures and recognition of the need for special training and equipment for technical rescue situations
4. Hazardous Materials emergencies – first responder awareness training as required by Title 22. Recognition of Haz-Mat incidents and rescuer safety
5. Multiple casualty incidents – utilizing the incident command system and standardized triage systems for the management of multiple casualties

VI. METHODS OF INSTRUCTION:

A. **Lab** - Scenario-based skills lab
B. Reading assignments in text and other resources
C. **Lecture** - Lectures in basic concepts and skills

VII. TYPICAL ASSIGNMENTS:
A. Lecture
1. Respiratory emergencies
B. Reading
1. Read Chapter 14 in text (Respiratory Emergencies)
2. Review Airway Management skills in skills book
C. Skills Lab
1. Practice patient assessment skills in small groups with primary instructor
2. As a team, manage a simulated gunshot victim and critique performance with the primary instructor

VIII. EVALUATION:
A. **Methods**

1. Quizzes
2. Other:
a. EMT Skills Evaluations

B. **Frequency**

1. 3 quizzes
2. 10 skills evaluations

IX. TYPICAL TEXTS:
1. Limmer and O'Keefe, . *Emergency Care.* 13th ed., Pearson, 2015.
2. American Academy of Orthopaedic Surgeons. *Emergency Care and Transportation of the Sick and Injured.* 11th ed., JBLearning, 2017.

X. OTHER MATERIALS REQUIRED OF STUDENTS: