

**Emergency Medical Technician – Basic Course**  
**University of Massachusetts**

**Fall 2006**

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**Lesson 1:** 9/21/04

Introduction to Emergency Care Training (Ch 1 )

Overview of course objectives, EMT roles and responsibilities, EMS systems, EMT safety, medical direction, quality improvement, and introduction to the legal aspects of emergency care (including Massachusetts State EMS Laws and Regulations and expected standards of care).

Well Being of the EMT Basic (Ch 2 )

Describe importance of body substance isolation and describe steps for personal protection from airborne and bloodborne pathogens. Discuss the emotions that EMTs may encounter when dealing with traumatic events such as serious injuries, illnesses, death, and dying. Recognize signs and symptoms of critical incident stress and list steps to reduce stress. Teach students how to recognize emotions of a family dealing with death and how to help the family cope with these emotions. Begin to discuss the importance of determining scene safety and list equipment necessary for protection at HAZMAT, rescue, violent, and crime scenes.

**Lesson 2:** 9/23/04

Medical/Legal & Ethical Issues (Ch 3) Atty. William St.James

Define EMT-Basic's scope of practice. Discuss DNR/Comfort Care issues. Define and discuss consent issues (implied, actual, informed, etc.). Discuss duty to act, abandonment, negligence, battery (as related to EMS), consent relating to minors and the handicapped, and the implications of patient refusals. Explain and discuss issues regarding patient confidentiality, organ donation, crime scene operations, mandatory reporting laws, and other local laws.

The Human Body (Ch 4 ) (Bring a white T-shirt)

Define topographic terms. Describe anatomy and function of respiratory, circulatory, nervous, musculoskeletal and endocrine systems

**Lesson 3:** 9/28/04

Baseline Vital Signs & Sample History (Ch 5 and Handout)

Identify, describe, and obtain vital signs. Indicate difference between signs and symptoms. Discuss how to obtain a SAMPLE history from a patient. Know the importance of recording and reporting history and vital signs. Discuss the need to look for medical ID bracelets or necklaces.

Lifting and Moving Patients (Ch 6 & 39)

Define good body mechanics and explain how to take the proper safety precautions when lifting patients. Demonstrate and describe safe lifting techniques using all lifting and carrying devices found on an ambulance, and demonstrate and practice all patient lifts, moves, and carries used by EMTs (solo and with a partner). Load and unload a patient from an ambulance.

**Lesson 4:** (Continuation of Lesson 3) 9/30/04

Lifting and Moving Patients (Ch 6 & 39)

Define good body mechanics and explain how to take the proper safety precautions when lifting patients. Demonstrate and describe safe lifting techniques using all lifting and carrying devices found on an ambulance, and demonstrate and practice all patient lifts, moves, and carries used by EMTs (solo and with a partner). Load and unload a patient from an ambulance.

Evaluation: All skills through Lesson 4

Evaluation of all cognitive, affective, and psychomotor skills in the previous four lessons. Written quiz/test and practical skills evaluation.

**Lesson 5: 10/2/04 (Saturday)**

Airway (Ch 7 & Appendix 1)

Describe airway system for adults, children and infants and review the anatomy and physiology of the respiratory system. Describe and demonstrate how to open an airway, suction, ventilate a patient with barrier devices, pocket mask enriched with oxygen, basal-valve-mask, and flow restricted oxygen powered delivery devices. Demonstrate use of oral and nasal airways, oxygen delivery systems, oxygen masks and nasal cannulas. Learn to differentiate between normal and abnormal breathing.

**Lesson 6: 10/3/03 (Sunday)**

Airway Practical Skills Lab Allow students to practice the techniques introduced to them in Lesson 5

Evaluation: Airway skills and CPR skills

Evaluation of all cognitive, affective, and psychomotor skills in the previous two lessons. Written quiz/test and practical skills evaluation.

**Lesson 7: 10/5/04**

Scene size-up (Ch 8)

Define real and potential hazards at trauma and medical scenes. Discuss the proper methods to determine if a scene is safe to enter. Discuss and explain reasons for identifying the number of potential patients at a scene and the need to call for additional resources if the situation requires it.

### Initial Assessment (Ch 9 & 10)

List reasons for forming a general impression of all patients (adults, children, and infants). Describe and demonstrate a primary survey; Assessment of the airway, breathing and circulation; controlling and assessing external bleeding; identifying life threatening injuries; assessing the mental status of a patient (AVPU); exposing all injuries and possible injuries; checking vital signs. Describe and demonstrate techniques for assessing skin color, temperature, and capillary refill. Discuss the rationale behind prioritizing patients for care and transport.

### Focused History and Physical Exam – Trauma

For all patients begin to discuss mechanisms of injury (will be covered in more detail later in Lesson 23), the need for rapid assessment and how assessment may be altered to provide needed care. Discuss and demonstrate rapid trauma assessment, focused examination and taking a patient history.

### **Lesson 8 10/07/03**

#### Focused History and Physical Exam – Trauma

For all patients begin to discuss mechanisms of injury (will be covered in more detail later in Lesson 23), the need for rapid assessment and how assessment may be altered to provide needed care. Discuss and demonstrate rapid trauma assessment, focused examination and taking a patient history.

### Focused history and Physical Exam – Medical (Ch 9&10)

For adults, children and infants, describe and demonstrate how to assess a patient with a specific chief complaint and no known prior history. Discuss and demonstrate the differences between assessing responsive versus unresponsive patients, with or without a known prior history. Illustrate an assessment of a patient with altered mental status and special considerations in assessing the geriatric patient.

### **Lesson 9: 10/12/04**

#### Detailed Physical Exam (Ch 9 & 10)

Describe and demonstrate components of a detailed physical examination. Explain what care should be provided during the detailed exam and the differences between the detailed exams of medical and trauma patients.

### On-going Assessment

Describe and discuss the need for repeating the initial assessment as part of the on-going assessment process. Perform the components of an ongoing assessment and discuss their importance.

### Communications (Ch 11)

Discuss and demonstrate the proper methods of initiating and terminating a radio call. State proper sequence and identify essential components of a verbal report made for delivery of patient information. Discuss the proper radio procedures to be used throughout a call. Demonstrate correct procedures for verbal reports to ALS personnel arriving on scene and to hospital personnel. Describe legal aspects of verbal reports and communications. Describe and demonstrate the communication skills that must be used when interacting with patients, family members, bystanders, and individuals from other agencies.

## Documentation (Ch 12)

Describe essential components of a written patient report. Describe what information is required in each section of a patient report. Describe and discuss special considerations surrounding consent and patient refusals. Discuss the legal implications of written and local reports plus state and local requirements. Describe and discuss the importance of records, data gathering, proper terminology use, etc. Complete sample patient care reports.

### **Lesson 10: 10/14/04**

#### Practical Skills Lab: Pt. Assessment

These two lab lesson will allow students to practice all skills learned up to this point. Through the use of role playing, students will hone their patient assessment skills. Students will perform scene size-ups, initial and focused assessments, patient care, and verbal and written reports of findings.

### **Lesson 11: 10/16/04**

#### Practical Skills Lab: Pt. Assessment

These two lab lesson will allow students to practice all skills learned up to this point. Through the use of role playing, students will hone their patient assessment skills. Students will perform scene size-ups, initial and focused assessments, patient care, and verbal and written reports of findings.

#### Evaluation, Patient Assessment Skills

Will include an evaluation of all cognitive, affective, and psychomotor skills practiced in lessons 7 –11. A written quiz/test will be administered and practical skills will be evaluated.

### **Lesson 12: 10/17/04 (Sunday)**

#### General Pharmacology (Ch 13)

State which medications are carried on the ambulance and the indications for their use. State medications carried by a patient that an EMT may assist in administering and under what conditions the EMT may help with their administration. Know generic and trade names, and how to inspect labels and read labels. Medications covered should be the following (be sure to cover indications/contraindications of each): oxygen, syrup of ipecac, activated charcoal, oral glucose, prescribed inhaler, prescribed nitroglycerin and epinephrine auto-injector.

#### Respiratory Emergencies (Ch 14)

Review the anatomy and physiology of the respiratory system. Discuss the signs, symptoms, and care of adult, child, and infant patients in respiratory distress. Review how to use a patient's inhaler. Learn how to recognize upper airway obstructions and lower airway diseases and how to treat them. Demonstrate prehospital care for patients in respiratory distress.

**Lessons 13: 10/19/04**Cardiovascular Emergencies (Ch 14,15, & 16)

Review the anatomy and physiology of the respiratory system. Discuss the signs, symptoms, and care of adult, child, and infant patients with chest pain or in cardiac arrest. Explain how to differentiate between angina and a myocardial infarction. Describe and demonstrate how and when to use a patient's nitroglycerin. State when and when not to use a semi-automatic defibrillator (SAED). Describe and demonstrate the proper prehospital care for patients with cardiovascular emergencies. Include a discussion about the role of medical direction in the use of nitroglycerin and the SAED and practice recording prehospital care reports for patient with cardiac emergencies.

**Lessons 14: 10/21/04**

A continuation of lesson 13

**Lesson 15: 10/26/04**Diabetes, Altered Mental Status (Ch 17-20)

Describe diabetes, medications taken and altered mental status. Indicate the difference between hypoglycemia and hyperglycemia and the signs and symptoms related to each. Know importance of airway management and when and when not to administer oral glucose. Discuss reasons for altered mental status other than diabetes. Perform and record assessments of patients with diabetic and altered mental status conditions. Signs, symptoms, and treatment of CVAs will also be discussed

Allergies (Ch 20) Robert Manners NREMT-P

Recognize signs and symptoms of allergic reaction and discuss treatment of allergic reactions. Review possible triggers of allergic reactions (stings, food allergies, etc.). Describe and demonstrate airway management care and assessment of patients having an allergic reaction. Discuss and demonstrate proper use of epinephrine auto-injector (recording vitals before and after use) and how to dispose of the auto-injector after use.

**Lesson 16: 10/28/04**Poisoning/Overdose (Ch 21-23))

Describe signs and symptoms of poisoning/overdose. Describe and demonstrate care for suspected poisoning/overdose. Discuss the use of activated charcoal and syrup of ipecac. Explain need for ongoing assessment and recording of patient responses.

Environmental Emergencies (Ch 24 & 25)

Describe the affects of heat and cold on the body. Recognize sings and symptoms of exposure to heat and cold. Describe and demonstrate care for heat and cold exposure. Recognize the signs and symptoms of water related emergencies. Discuss the proper prehospital treatment for drowning and near drowning patients. Describe and demonstrate recognition, signs, symptoms, and care for bites and strings. Record assessment findings, care rendered and patient responses for all of the above.

**Lesson 17: 10/31/04 (Sunday)**

Behavioral Emergencies (Ch 26)

Describe behavioral emergencies and various reasons for crises. Discuss risk factors for suicide and violent behavior and the medico-legal aspects in managing behavioral emergencies. Discuss and demonstrate methods for calming patients with behavioral emergencies and assessment and care for such patients. Demonstrate various techniques to safely restrain patients and discuss when such measures may be used.

Obstetrics/Gynecology (Ch 27)

Recognize and demonstrate care for pre-delivery emergencies and delivery of baby, cutting of cord, delivery of placenta and care for infant and mother. Discuss need for body substance precautions. Explain how to assess the newborn infant and the mother, and how to give a verbal report to ALS/hospital. Discuss the need of proper written recording of findings. Describe and demonstrate care for breech presentations, multiple births, premature birth and gynecological emergencies.

**Lessons 18: 11/02/04**

Practical Skills Lab

Demonstrate all cognitive, affective and psychomotor objectives learned since Lesson 12. Incorporate skills and knowledge from all lessons learned up to this point into assessment, care, and recording of information.

**Lessons 19: 11/4/04**

Practical Skills Lab

Demonstrate all cognitive, affective and psychomotor objectives learned since Lesson 12. Incorporate skills and knowledge from all lessons learned up to this point into assessment, care, and recording of information.

Evaluation: Medical/Behavioral and OB/GYN

Evaluation of all cognitive, affective and psychomotor skills from Lessons 12-19. Written quiz/test and practical skills evaluation covering Lessons and 12-19 inclusive.

**Lesson 20: 11/9/04**

Bleeding and Shock (Ch 28 & 29)

Describe and demonstrate the recognition and care for internal and external bleeding. Describe and demonstrate body substance isolation. Discuss the signs and symptoms of shock and how to prevent and care for shock.

Soft Tissue Injuries (Ch 30 & 31)

Describe and demonstrate the recognition and care of open and closed soft tissue injuries. Discuss the treatment of impaled objects. Describe and demonstrate care for various types of burns such as thermal, chemical and electrical. Describe and demonstrate applications of dressings and bandages to all areas of the body.

**Lessons 21: 11/11/04****Musculoskeletal Care** (Ch 32)

Discuss anatomy and physiology of the muscular and skeletal systems. Describe the major bone groupings and differentiate between open and closed fractures. Discuss symptoms of musculoskeletal injury such as edema, deformity and point tenderness. Describe rules, reasons and complications of splinting. Demonstrate emergency care and splinting of persons with painful, swollen, and/or deformed extremities and prepare written reports.

**Lessons 22: 11/16/04****Injuries to the Head, Spine, Chest, and Abdomen** (Ch 33-36)

Describe the anatomy and physiology of the nervous system and the cranial cavity. Relate mechanism of injury to potential for head and spine injuries. Describe and demonstrate care for head, neck, and spine injuries using long and short spineboards, cervical collars, etc. Demonstrate logroll, helmet removal, immobilization with a helmet on and rapid extrication techniques.

**Lesson 23: 11/18/04 & 11/23/04****Practical Skills Lab: Trauma**

For adults, children, and infants, describe and demonstrate proficiency in all cognitive, affective, and psychomotor objectives in Lessons 21-23 inclusive. Perform scene size-ups, initial and focused assessments, KED, long and short boards use, patient care and verbal and written reports. Supervised practice and evaluation of all practical skills.

**Evaluation: Trauma Module**

Evaluation of all cognitive, affective, and psychomotor skills in previous lessons. Written quiz/test and practical skills evaluation covering Lessons 21-23.

**Lesson 24: 11/30/04****Infants and Children** (Ch 38)

Describe and discuss differences between infant, child and adult anatomy, physiology and responses. Describe signs and symptoms of respiratory distress, respiratory failure, airway problems, cardiac arrest, seizures and trauma in children and infants. Discuss the signs and symptoms and causes of croup and epiglottitis. Describe the proper prehospital care for the disorder noted. Describe and discuss differences between child abuse and neglect and reporting requirements for suspected cases of abuse/neglect.

**Lesson 25: 12/02/04****Practical Skills Lab: Infants and Children**

For adults, children, and infants, describe and demonstrate proficiency in all cognitive, affective, and psychomotor objectives from Lesson 24. Incorporate previously learned knowledge. Perform scene size-ups, initial and focused assessments, patient care and verbal and written recording of findings. Supervised practice and evaluation of all practical skills.

**Examination: Infants and Children Module**

Evaluation of all cognitive, affective, and psychomotor skills in previous lessons. Written quiz/test and practical skills evaluation covering Lessons 24 & 25.

**Lesson 26: 12/7/04**

Ambulance Operations (Ch 40)

Describe and discuss the equipment needed on ambulance calls, phases of a call, state laws governing ambulances, contributing factors to unsafe driving, due regard for safety of persons and property, essential information, report writing, moving patient to the vehicle, loading and unloading the stretcher from the ambulance, cleaning and preparing vehicle for next call.

Overviews (Ch 42-44)

Describe and discuss the EMT's role in hazardous materials incidents, environmental hazards that affect EMS and mass casualty incidents. Describe and discuss safety zones, bystander and rescuer safety, and steps to prevent contamination of EMTs, equipment and facilities. Discuss and demonstrate concepts for triage, mass casualty incident management, incident command system and disaster operations.

**Lesson 27: 12/4/04 (Saturday)**

Gaining Access (Ch 41)

Describe and discuss need for personal safety and proper equipment for gaining access to patient in a variety of settings. Describe and discuss need for extrication and the EMT's role in protecting a patient during extrication.

**Lesson 28: 12/9/03**

Evaluation: Trauma Module

Evaluation of all cognitive, affective, and psychomotor skills in previous lessons. Written quiz/test and practical skills evaluation covering Lessons 27 & 28.

Review

**Lesson 29: 12/12/04**

Final Written Evaluation

**Lesson 30: 12/14/04**

Final Practical Examination

HOMEWORK:

Read all assigned chapters in the text prior to class.

GRADING:

75% is the minimum passing grade on each review and exam. A passing grade must be maintained on the practical skill portion of the course. Five written assessments must be also be completed

6 Tests 60%

Mid-Term 15%

Final Exam 25%

ATTENDANCE:

100% attendance is expected. There will be no makeup for tests! Any more than 3 absences will require permission from the instructor to continue.