

**Health Careers Certification**

**SYLLABUS**

**FOR**

**Emergency Medical Technician**

3/14

**Total Hours**

661 hours

**Emergency Medical Technician Major Description**

Core First Aid and Healthcare Provider CPR is included in this career major. Students in this major learn about airway management, how to perform patient assessment, how to respond and treat patients in common medical emergencies as well as how to manage trauma patients. They will gain fundamental knowledge of EMS operational roles and responsibilities, including ethics, to ensure safe and effective response, scene management, and transport of patients. Students practice in a variety of settings as chosen by the instructor. Students must obtain EMT certification to work in this field. This career major is based upon successful completion of all EMR competencies (didactic, psychomotor and affective domains). This career major requires classroom, lab and clinical.

***Preparatory for the EMT***

**Course Description**

The student will use simple knowledge of the EMS system, safety/well-being of the EMT, medical/legal issues at the scene of an emergency while awaiting a higher level of care.

**Course Length**

37 hours

**Knowledge and Skills**

**Preparatory** 37 hours (31.5 hours classroom, 5.5 hours lab)
Use simple knowledge of the EMS system, safety/well-being of the EMR, medical/legal issues at the scene of an emergency while awaiting a higher level of care.

**EMS Systems Objectives** 1 hour
EMR Material PLUS: Simple depth, foundational breadth • EMS systems • History of EMS • Roles/ responsibilities/ professionalism of EMS personnel • Quality improvement • Patient safety

**Research** 1 hour
EMR Material PLUS: Simple depth, simple breadth • Evidence-based decision making

**Workforce Wellness and Safety** 4 hours (1 hour classrroom, 3 hours lab)
EMR Material PLUS: Fundamental depth, foundational breadth • Standard safety precautions • Personal protective equipment • Stress management o Dealing with death and dying • Prevention of work related injuries • Lifting and moving patients • Disease transmission • Wellness principles

**Documentation** 2 hours
EMR Material PLUS: Fundamental depth, foundational breadth • Principles of medical documentation and report writing

**EMS System Communications** 1 hour
EMR Material PLUS: Simple depth, simple breadth • EMS communication system • Communication with other health care professionals • Team communication and dynamics

**Therapeutic Communication** 1 hour
EMR Material PLUS: Simple depth, simple breadth Principles of communicating with patients in a manner that achieves a positive relationship • Adjusting communication strategies for age, stage of development, patients with special needs, and differing cultures

**Medical/Legal and Ethics** 2 hours
Fundamental depth, foundational breadth • Interviewing techniques • Verbal defusing strategies • Family presence issues. EMR Material PLUS:
Fundamental depth, foundational breadth • Consent/refusal of care • Confidentiality • Advanced
directives • Tort and criminal actions • Evidence preservation • Statutory responsibilities •
Mandatory reporting • Ethical principles/moral obligations

**Anatomy and Physiology** 10 hours classroom
Applies fundamental knowledge of the anatomy and function of all human systems to the
practice of EMS.

**Medical Terminology** 2 hours classroom
Uses foundational anatomical and medical terms and abbreviations in written and oral
communication with colleagues and other health care professionals.

**Pathophysiology** 6 hours classroom
Applies fundamental knowledge of the pathophysiology of respiration and perfusion to patient
assessment and management.

**Life Span Development** 2 hours
Applies fundamental knowledge of life span development to patient assessment and
management.

**Public Health** 0.5 hours
Uses simple knowledge of the principles of illness and injury prevention in emergency care.

**Pharmacology** 4 hours:(2 classroom, 2.5 lab)
Applies fundamental knowledge of the medications that the EMT may assist/administer to a patient during an emergency.

**Principles of Pharmacology** 1 hour classroom
Simple depth, simple breadth • Medication safety • Kinds of medications used during an
emergency

**Medication Administration** 1 hour classroom
EMR Material PLUS: Fundamental depth, foundational breadth Within the scope of practice
of the EMT how to • Assist/administer medications to a patient

**Emergency Medications** 2.5 hours lab
EMR Material PLUS: Fundamental depth, simple breadth Within the scope of practice of the
EMT • Names • Actions • Indications • Contraindications • Complications • Routes of
administration • Side effects • Interactions • Dosages for the medications administered

***Airway for EMT***

**Course Description**

The content of the course assists the student to apply fundamental depth and breadth of knowledge of general anatomy and physiology to patient assessment and management in order to assure a patient airway, adequate mechanical ventilation and respiration for patients of all ages.

This course has 8 hours of classroom and 8 hours of lab.

**Course Length**

16 hours

**Knowledge and Skills**

**Airway management** 2 hours classroom
EMR Material PLUS: Fundamental depth, foundational breadth within the scope of practice of
the EMT • Airway anatomy • Airway assessment • Techniques of assuring a patent airway

**Respiration 12 hours** (4 hours classroom, 8 hours lab)
EMR Material PLUS: Fundamental depth, foundational breadth • Anatomy of the respiratory
system • Physiology and pathophysiology of respiration • Pulmonary ventilation • Oxygenation • Respiration • External • Internal • Cellular • Assessment and management of adequate and
inadequate respiration • Supplemental oxygen therapy

**Artificial Ventilation** 2 hours classroom
EMR Material PLUS: Fundamental depth, foundational breadth Assessment and management of
adequate and inadequate ventilation • Artificial ventilation • Minute ventilation • Alveolar ventilation • Effect of artificial ventilation on cardiac output

***Patient Assessment for EMT***

**Course Description**

Applies scene information and patient assessment findings (scene size up, primary and secondary assessment, patient history, and reassessment) to guide emergency management. This course contains 12 hours classroom, 8 hours lab.

**Course Length**

20 hours

**Knowledge and Skills**

**Scene Size-up** (2 hours classroom)
EMR Material PLUS: Fundamental depth, foundational breadth • Scene management • Multiple
patient situations

**Primary Assessment** 6 hours (2 hours classroom, 4 hours lab)
EMR Material PLUS: Fundamental depth, simple breadth • Primary assessment for all patient
situations • Initial general impression • Level of consciousness • ABCs • Identifying life threats
• Assessment of vital functions • Integration of treatment/ procedures needed to preserve life
 **History Taking** (2 hours classroom)
EMR Material PLUS: Fundamental depth, foundational breadth • Investigation of the chief
complaint • Mechanism of injury/nature of illness • Past medical history • Associated signs and
symptoms • Pertinent negatives

**Secondary Assessment** 4 hours (2 hours classroom, 2 hours lab)
EMR Material PLUS: Fundamental depth, foundational breadth Techniques of physical
examination • Respiratory system o Presence of breath sounds • Cardiovascular system
• Neurological system • Musculoskeletal system • All anatomical regions

**Monitoring Devices** 4 hours (2 hours classroom, 2 hours lab)
Simple depth, simple breadth within the scope of practice of the EMT, obtaining and using
information from patient monitoring devices including but not limited to Pulse oximetry,
non-invasive blood pressure.

**Reassessment** 2 hours Classroom
EMR Material PLUS: Fundamental depth, foundational breadth • how and when to perform a
reassessment for all patient situations

***Medicine for EMT***

**Course Description**

This course provides the student with fundamental understanding and management of common medical emergencies based on assessment findings. 42 hours total (27.5 hours classroom, 14.5 hours lab)

**Course Length**

42 hours

**Knowledge and Skills**

**Medical Overview** (1 hour classroom)

EMR Material PLUS: Simple depth, foundational breadth Pathophysiology, assessment, and

management of a medical complaints to include • Transport mode • Destination decisions

**Neurology** 6 hours (4 hours classroom, 2.5 hours lab)

EMR Material PLUS: Fundamental depth, foundational breadth Anatomy, physiology,

pathophysiology, assessment and management of • Stroke/ transient ischemic attack • Seizure •

Status epilepticus • Headache

**Abdominal and Intestinal Disorders** (2 hours classroom)

EMR Material PLUS: Fundamental depth, foundational breadth Anatomy, physiology,

pathophysiology, assessment, and management of • Acute and chronic gastrointestinal

hemorrhage Simple depth, simple breadth • Peritonitis • Ulcerative diseases

**Immunology** 2 hours (1 hour classroom, 1 hour lab)

EMR Material PLUS: Fundamental depth, foundational breadth Anatomy, physiology,

pathophysiology, assessment, and management of hypersensitivity disorders and/or

emergencies • Anaphylactic reactions

**Infectious Diseases** (1 hour classroom)

EMR Material PLUS: Simple depth, simple breadth Assessment and management of • A patient

who may have an infectious disease • How to decontaminate the ambulance and equipment

after treating a patient

**Endocrine disorders** 4 hours (3 hours classroom, 1 hour lab)

EMR Material PLUS: Fundamental depth, foundational breadth Anatomy, physiology,

pathophysiology, assessment and management of • Acute diabetic emergencies

**Psychiatric** 3 hours (2 hours classroom, 1 hour lab)

EMR Material PLUS: Simple depth, simple breadth • Basic principles of the mental health

system Fundamental depth, foundational breadth Assessment and management of • Acute

psychosis • Suicidal/risk • Agitated delirium

**Cardiovascular** 8 hours (4 hours classroom, 4 hours lab)

EMR Material PLUS: Anatomy, physiology, pathophysiology, assessment, and management of

Fundamental depth, foundational breadth • Acute coronary syndrome o Angina pectoris o

Myocardial infarction • Aortic aneurysm/dissection • Thromboembolism Simple depth, simple

breadth • Heart failure • Hypertensive emergencies

**Toxicology** 3 hours (2 hours classroom, 1 hour lab)

EMR Material PLUS: Fundamental depth, foundational breadth Anatomy, physiology,

pathophysiology, assessment, and management of • Inhaled poisons • Ingested poisons

• Injected poisons • Absorbed poisons • Alcohol intoxication

**Respiratory** 8 hours (4 hours classroom, 4 hours lab)

EMR Material PLUS: Fundamental depth, foundational breadth Anatomy, physiology,

pathophysiology, assessment, and management of • Inhaled poisons • Ingested poisons

• Injected poisons • Absorbed poisons • Alcohol intoxication

**Genitourinary/Renal** (0.5 hours classroom)

EMR Material PLUS: Simple depth, simple breadth Anatomy, physiology, pathophysiology,

assessment, and management of • Complications related to o Renal dialysis o Urinary catheter

management (not insertion) • Kidney stones

**Gynecology** (1 hour classroom)

EMR Material Plus: Anatomy, physiology, assessment findings, and management of

Fundamental depth, foundational breadth • Vaginal bleeding • Sexual assault (to include

appropriate emotional support) Simple depth, simple breadth • Infections

**Non-Traumatic Musculoskeletal Disorders** (0.5 hours classroom)

Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment

and management of • Non-traumatic fractures

**Diseases of the eyes, Ears, Nose and Throat** (0. 5 hours classroom)

Simple depth, simple breadth in the recognition and management of nose bleed

Same as Previous Level

***Trauma for EMT***

**Course Description**

This course provides the student with fundamental understanding and management of the trauma patient. 38 hours (23 hours classroom, 15 hours lab)

**Course Length**

38 hours

**Knowledge and Skills**

**Trauma Overview** 3 hours classroom
Fundamental depth, foundational breadth Pathophysiology, assessment, and management of
the trauma patient • Trauma scoring • Rapid transport and destination issues • Transport mode
CDC/Oklahoma triage

**Bleeding** 3 hours (1 hour classroom, 2 hours lab)
EMR Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment,
and management of • Bleeding

**Chest Trauma** 2 hours (1 hour classroom, 1 hour lab)
EMR Material Plus: Fundamental depth, simple breadth Pathophysiology, assessment and
management • Blunt versus penetrating mechanisms • Hemothorax • Pneumothorax
• Open Simple • Tension • Cardiac tamponade • Rib fractures • Flail chest • Commotio cordis

**Abdominal and Genitourinary Trauma** 2 hours (1 hour classroom, 1 hour lab)
EMR Material Plus: Fundamental depth, simple breadth Pathophysiology, assessment and
management of • Solid and hollow organ injuries • Blunt versus penetrating mechanisms
• Evisceration • Injuries to the external genitalia • Vaginal bleeding due to trauma • Sexual assault

**Orthopedic Trauma** 8 hours (4 hours classroom, 4 hours lab)
EMR Material Plus: Pathophysiology, assessment, and management of Fundamental depth,
foundational breadth • Upper and lower extremity orthopedic trauma • Open fractures • Closed
fractures • Dislocations • Sprains/strains • Pelvic fractures • Amputations/replantation

**Soft Tissue Trauma** 5 hours (3 hours classroom, 2 hours lab)
EMR Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment,
and management • Wounds • Avulsions • Bite wounds • Lacerations • Puncture wounds •
Incisions • Burns • Electrical • Chemical • Thermal • Radiation Simple depth, simple breadth •
Crush syndrome

**Head, Facial, Neck and Spine Trauma** 6 hours (3 hours classroom, 3 hours lab)
EMR Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment,
and management of • Penetrating neck trauma • Laryngeotracheal injuries • Spine trauma
Simple depth, simple breadth • Facial fractures • Skull fractures • Foreign bodies in the eyes •
Dental trauma

**Special Considerations in Trauma** 1 hour
EMR Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment, and
management of trauma in the • Pregnant patient • Pediatric patient • Geriatric patient • Cognitively impaired patient

**Nervous System Trauma** 2 hours (1 hour classroom, 1 hour lab)
foundational breadth Pathophysiology, assessment, and management of • Traumatic brain injury
• Spinal cord injury

**Environmental Emergencies** 4 hours
EMR Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment, and
management of • Near drowning • Temperature-related illness • Bites and envenomations
• Dysbarism • High-altitude • Diving injuries • Electrical injury • Radiation exposure

**Multi-System Trauma** 2 hours (1 classroom, 1 lab)
EMR Material Plus: Fundamental depth, foundational breadth Pathophysiology, assessment, and
management of • Multi-system trauma • Blast injuries

***Special Patient Populations for EMT***

**Course Description**

This course provides the student with a fundamental knowledge of specialized assessment management techniques to provide basic emergency care and transportation for the obstetric, pediatric, geriatric and special needs patient. This course has 25 hours classroom and 17 hours lab.

**Course Length**

42 hours

**Knowledge and Skills**

**Obstetrics** 8 hours (4 hours classroom, 4 hours lab)
EMR Material Plus: Fundamental depth, foundational breadth • Anatomy and physiology of
normal pregnancy • Pathophysiology of complications of pregnancy • Assessment of the
pregnant patient • Management of o Normal delivery • Abnormal delivery • Nuchal cord •
Prolapsed cord • Breech delivery • Third trimester bleeding • Placenta previa • Abruptio
placenta • Spontaneous abortion/miscarriage • Ectopic pregnancy • Preeclampsia/Eclampsia

**Neonatal Care** 2 hours (1 hour classroom, 1 hour lab)
EMR Material Plus: Fundamental depth, foundational breadth Assessment and management •
Newborn • Neonatal resuscitation

**Pediatrics** 12 hours (6 hours classroom, 6 hours lab) EMS-C Supplement
EMR Material Plus: Fundamental depth, foundational breadth Age-related assessment
findings, age-related, and developmental stage related assessment and treatment
modifications for pediatric specific major diseases and/or emergencies • Upper airway
obstruction • Lower airway reactive disease • Respiratory distress/failure/arrest • Shock •
Seizures • Sudden Infant Death Syndrome • Gastrointestinal disease

**Geriatrics** 12 hours (8 hours classroom, 4 hours clinical)
EMR Material Plus: Fundamental depth, foundational breadth Changes associated with aging,
psychosocial aspects of aging and age-related assessment and treatment modifications for
the major or common geriatric diseases and/or emergencies • Cardiovascular diseases •
Respiratory diseases • Neurological diseases • Endocrine diseases • Alzheimer’s • Dementia

**Patients with Special Challenges** 8 hours (6 hours classroom, 2 hours lab)
EMR Material Plus: Simple depth, simple breadth Healthcare implications of • Abuse • Neglect •
Homelessness • Poverty • Bariatrics • Technology dependent • Hospice/ terminally ill •
Tracheostomy care/dysfunction • Homecare • Sensory deficit/loss • Developmental disability

***EMS Operations for the EMT***

**Course Description**

In this course, the student will gain fundamental knowledge of EMS operational roles and responsibilities to ensure safe and effective response, scene management, and transport for patient, public, and personnel. (7 hours classroom, 2 hours lab)

**Course Length**

9 hours

**Knowledge and Skills**

**Principles of Safely Operating a Ground Ambulance** 2 hours classroom
EMR Material Plus: Simple depth, foundational breadth • Risks and responsibilities of transport

**Incident Management** 0 hours, Co or Prerequisite
EMR Material Plus: Fundamental depth, foundational breadth • Establish and work within the
incident management system

**Multiple Casualty Incidents** 2 hours (1 hour classroom, 1 hour lab)
EMR Material Plus: Simple depth, foundational breadth • Triage • Performing • Re-Triage •
Destination Decisions • Post Traumatic and Cumulative Stress

**Air Medical** 1 hour Simple depth, simple breadth • Safe air medical operations • Criteria for utilizing air medical response

**Vehicle Extrication** 2 hours (1 hour classroom, 1 hour lab) May include EVOC
Simple depth, simple breadth • Safe vehicle extrication • Use of simple hand tools

**Hazardous Materials Awareness** 0 hours, Co or Prerequisite
Simple depth, simple breadth • Risks and responsibilities of operating in a cold zone at a
hazardous material or other special incident

**Mass Casualty Incidents due to Terrorism and Disaster** 2 hours classroom
Simple depth, simple breadth • Risks and responsibilities of operating on the scene of a natural
or man-made disaster
NOTE: (this section subject to ongoing collective and cooperative review and input from all
stakeholders including the Department of Transportation, Department of Homeland Security
and the Department of Health and Human Services)

***EMT Clinical***

**Course Description**

The EMT preceptorship is a clinical experience based in the hospital or in the field. The purpose of the preceptorship is to provide students with patient contact experience to allow practice of skills in a clinical setting. A minimum of 8 hours in either the ED or with an Ambulance Service is required - students can finish up their clinical requirement, after that, in either clinical.

**Course Length**

36 hours

**Knowledge and Skills**

The student will perform the following skills under the supervision of a qualified preceptor within their scope of practice. By the end of the clinical course the student will be expected to be able to perform:

**Assessment** - Perform a basic history and physical examination to identify acute complaints and monitor changes. Identify the actual and potential complaints of emergency patients.
Therapeutic communication and cultural competency - Communicate in a culturally sensitive manner.
**Psychomotor Skills** - Safely and effectively perform all psychomotor skills within the National EMS Scope of Practice Model AND state Scope of Practice at this level.
**Professionalism** - Demonstrate professional behavior including: but not limited to, integrity, empathy, self-motivation, appearance/personal hygiene, self-confidence, communications, time management, teamwork/ diplomacy, respect, patient advocacy, and careful delivery of service.
**Decision-making** - Initiates basic interventions based on assessment findings intended to mitigate the emergency and provide limited symptom relief while providing access to definitive care
**Record Keeping** - Report and document assessment data and interventions
**Patient complaints** - Perform a patient assessment and provide pre-hospital emergency care and transportation for patient complaints: abdominal pain, abuse/neglect, altered mental status/decreased level of consciousness, anxiety, apnea, ataxia, back pain, behavioral emergency, bleeding, cardiac arrest, cardiac rhythm disturbances, chest pain, constipation, cyanosis, dehydration, diarrhea, dizziness/vertigo, dysphasia, dyspnea, edema, eye pain, fatigue, fever, GI bleeding, headache, hematuria, hemoptysis, hypertension, hypotension, joint pain/swelling, multiple trauma, nausea/vomiting, pain, paralysis, pediatric crying/fussiness, poisoning, rash, rectal pain, shock, sore throat, stridor/drooling, syncope, urinary retention, visual disturbances, weakness, and wheezing.
**Scene Leadership** - Entry-level EMTs serve as an EMS team member on an emergency call with more experienced personnel in the lead role. EMTs may serve as a team leader following additional training and/or experience.
**Scene Safety** - Ensure the safety of the rescuer and others during an emergency.

 ***Shock for EMT***

**Course Description**

This course applies the fundamental knowledge of the causes, pathophysiology and management of shock, respiratory failure or arrest, cardiac failure or arrest and post resuscitation management. This course has 6 hours of classroom and 4 hours of laboratory instruction and practice to equal 10 total hours for the course.

**Course Length**

10 hours

**Knowledge and Skills**

* Describe the causes of shock.
* Describe the causes of respiratory failure and respiratory arrest.
* Describe the causes of cardiac failure and arrest.
* Discuss the pathophysiology of shock.
* Discuss the pathophysiology of respiratory failure and respiratory arrest.
* Discuss the pathophysiology of cardiac failure and cardiac arrest.
* Explain post resuscitation management of a patient after shock, respiratory failure or arrest and cardiac failure or arrest.

**Instructional Procedures**

Instruction for this course will be provided by Woodward EMT/Paramedic Instructors.

**Curriculum Resources**

Pre-Hospital Emergency Care, 10th Ed, J Mistovich, K Karren, Brady Publishing

Pre-Hospital Emergency Care Workbook, 10th Ed, Mistovich, K Karren, Brady Publishing

**EVALUATION OF STUDENT ACHIEVMENTS**

 For the purpose of evaluations, points will be earned in the following areas; weighted by

 percentages shown:

 A. Attendance/Work Ethic 25% of overall grade

 B. Written assignments 15%

 C. Quizzes 20%

 D. Projects/presentations 15%

 E. Tests 25%

**Students will be required to maintain 90% class attendance for the preceding 9 week session to be eligible for clinical assignment. In addition, 90% clinical attendance must be maintained for a passing clinical evaluation.**

Clinical skills must be completed at competency level prior to progressing to the next section.

Clinical evaluations will be entered as a test grade for each occupational area.

Final grades will be assigned on the following scale:

 90-100%=A Incomplete=I

 80-89%=B No Grade=NG

 70-79%=C Withdraw Passing=W/P

60-69%=D Withdraw Failing=W/F

Students will be kept informed of their grades and notified when examinations are scheduled. Quizzes will be unannounced. Students are encouraged to make an appointment with the instructor (before or after class, during break times and/or during lunch break) if he/she does not understand or disagrees with the grade earned. The rationale for scheduling an appointment is so the student and instructor may have a one-on-one discussion without unnecessary interruptions. The instructor will critique tests and student assignments in a classroom setting.