

# Coconino Community College

## Emergency Medical Technician Program

### EMS 131 - Emergency Medical Technology - 8 Credits

Students will learn the techniques of pre-hospital emergency medical care for the Emergency Medical Technician (EMT). Includes history of emergency medical care delivery systems, roles, and responsibilities of emergency medical services (EMS) providers, ethical and legal issues, and patient assessment. Also includes symptoms of illnesses, injuries, medical emergencies, appropriate medical techniques, triage, and ambulance operations.

### Information

Students must be 18 years of age when class begins. Students must have cardiopulmonary resuscitation (CPR) certification at the Healthcare Provider or Professional Rescuer Level. Students must provide immunization records for MMR, TDap, TB skin test, Varicella, flu vaccine and Covid vaccination. Students will be required to be fit tested for use of an N-95 mask during clinical and vehicular rotations. Students must meet College admissions' requirements and will be required to create an Arizona Department of Health Services online account upon commencement of course activities.

Admission requires verification of reading comprehension to the 9<sup>th</sup> grade level through one of a variety of options:

- Pre-requisite or placement into Course: RDG 99 Fundamentals of Composition. Prerequisite: ENG 095 or placement beyond prerequisite course.
- Or pre-requisite or placement into: ENG 101A or ENG 101, Prerequisites: \*ENG 099 and \*RDG 099
- Or placement OR o A high school graduation unweighted GPA of 2.75 or higher.  
\*Placement scores or academic history (unofficial transcript) of completing one of the courses above will be required for registration.

Certification testing requires an additional fee to the National Registry of Emergency Medical Technicians (NREMT). Students with felony and some misdemeanor convictions may not be eligible for certification— contact the Arizona Department of Health Services for additional information about eligibility.

### What can I do with this certificate?

- **Career Options:** Take required Arizona and National Registry of Emergency Medical Technicians exams that qualify you to work as an emergency medical technician.
- **Academic Options:** Once you receive EMT certification and work as an emergency medical technician you may continue your studies by pursuing the Paramedic Studies Associate of Applied Science Degree.
- **Accreditation:** This program is approved by the Arizona Department of Health Services, Bureau of Emergency Medical Services toward certification as an EMT in the State of Arizona.

### Terminal Program Objectives

Upon successful completion of the Program, the graduate will be able to:

1. Utilize the knowledge and skills derived from the core curriculum to guide clinical practice of the sick and injured.
2. Perform an assessment appropriate in level to the patient's status and developmental level.
3. Delegate appropriately to other health care team members in order to provide safe, effective and fluid transition of patient care.
4. Delegate appropriately to health care team members to provide safe and effective care to a group of patients.
5. Adapt care to the patient's present or developing stage of health.
6. Collaborate and coordinate with other members of the health care team in acute and long-term care facilities to promote an optimal degree of care for the patient and other interested parties.
7. Effectively communicate constantly with other team members, the patient, and the family.
8. Always assume immediate responsibility for the care of assigned patients, including supervision of care given by other team members.
9. Consistently document relevant patient information according to standards of practice.
10. Judge the effectiveness of emergency interventions by determining patient response to treatment through continuous evaluations.
11. Continuously modify care to achieve desired goals.
12. Assume responsibility for the care of patients, including the supervision of care provided by other members of the health care team.

### **Learning Outcomes**

Upon successful completion of the Emergency Medical Technology program, the learner will be able to:

1. Demonstrate the proper donning and doffing of protective gear appropriate for the EMT and situation.
2. Perform CPR, both 1 and 2 person for adult, child, and infant to Healthcare provider level consistent with American Heart Association level.
3. Perform basic airway mgt. techniques including insertion of adjuncts intended for the oropharynx and nasopharynx.
4. Demonstrate the ability to assist patients with their own prescribed medicines.
5. Assess, manage, and stabilize patients of all ages and demographics with medical emergencies.
6. Assess, manage, and stabilize patients of all ages and demographics with traumatic emergencies.
7. Demonstrate the ability to properly prepare the patient for transport while limiting or aggravating any injuries.
8. Demonstrate the knowledge of triage and assigning patients to the appropriate level facility.
9. Demonstrate the ability to interact with other responders appropriately including giving and taking Advice on patient care. Interact as a member of a team.
10. Demonstrate the ability to complete a patient care report including a summation of treatment provided to the receiving facility or transporting ambulance.

### **Outline:**

- I. Emergency Medical Technician Preparation
  - A. Emergency medical care – origin and structure
  - B. Well-being of the EMT
  - C. Medical, legal and ethical issues
  - D. The human body
  - E. Baseline vital signs and SAMPLE history
- II. Airway
  - A. Obstruction

- B. Use of airway adjuncts
- C. Oxygen delivery
- III. Patient Assessment
  - A. Assessment
  - B. Communication
    - 1. Communication systems and equipment
    - 2. Regulations and protocol for radio communication
    - 3. Effective communication with patients from all segments of population
    - 4. Psychological aspects of emergency care
  - C. Documentation: written reports
- IV. Evaluating Injuries: Bleeding, Wounds, and Shock
  - A. Soft tissue injuries
  - B. Musculo-skeletal care and fractures of the upper extremities
  - C. Fractures of the pelvis, hip and lower extremities
  - D. Injuries to head, neck, face, and spine
  - E. Injuries to chest, abdomen, and genitalia
  - F. Dressing and bandaging
  - G. Spine and fracture immobilization
  - H. Pneumatic counter-pressure devices (MAST)
  - I. Shock: signs, symptoms, and emergency care.
- V. Medical Emergencies
  - A. General pharmacology
  - B. Respiratory emergencies
    - 1. Characteristics
    - 2. Significance
  - C. Cardiovascular emergencies
    - 1. Symptoms
    - 2. Use of automated external defibrillator (AED)
    - 3. General patient care
  - D. Neurologic emergencies
  - E. The acute abdomen
    - 1. Definition
    - 2. Symptoms
    - 3. Treatment
    - 4. Potential causes
    - 5. Referred pain
  - F. Diabetic emergencies
    - 1. Two types of emergencies
    - 2. Patient assessment
    - 3. Treatment
    - 4. Blood glucose monitoring procedures
    - 5. Indications and contraindications
    - 6. Regulatory issues
  - G. Allergic reactions, stings, and bites
    - 1. Causes, signs, and symptoms

- 2. Anaphylaxis
  - 3. Interventions including the use of epinephrine auto-injectors
- H. Substance abuse and poisoning
- I. Environmental emergencies
  - 1. Burns
  - 2. Hazardous materials
  - 3. Drowning
- J. Behavioral emergencies
  - 1. Acute psychological disturbances
  - 2. Chronic psychological disturbances
  - 3. Techniques for interaction with emotionally disturbed patients
  - 4. Critical incidence stress debriefing
- K. Obstetrics and gynecological emergencies
  - 1. Childbirth in the field
  - 2. Breech delivery
  - 3. Prolapsed umbilical cord
  - 4. Spontaneous abortion
- L. Sudden Infant Death Syndrome SIDS
- VI. Transporting Patients
  - A. Principles of extrication
  - B. Patient packaging
  - C. Lifting and moving patients
- VII. Ambulance Operations and Safe Driving
  - A. Regulations
  - B. Forms and reporting
  - C. Maintenance of vehicle and equipment
  - D. Emergency procedures
  - E. Scene control
  - F. Special scene situation
- VIII. Disaster Management
  - A. Triage
  - B. WMD's
- IX. Assisting with Advanced Life Support (ALS)
  - A. Intravenous lines
    - 1. Purpose of intravenous lines and the monitoring of intravenous lines by the Emergency Medical Technician
    - 2. Types and sizes of intravenous cannulas, tubing, etc.
    - 3. Intravenous fluids the Emergency Medical Technician is approved to monitor
    - 4. Assessment and monitoring
    - 5. Trouble-shooting intravenous lines
  - B. Cardiac monitoring
  - C. Intubation