

# EMERGENCY MEDICAL SERVICES (EMS)

The Emergency Medical Service (EMS) Program at NMSU Grants is designed to provide comprehensive training and education for individuals seeking a career in emergency medical services. Our program is committed to equipping students with the knowledge, skills, and practical experience necessary to excel in various roles within the healthcare field, particularly in emergency medical response.

Emergency Medical Services (EMS) - Basic Certificate (<https://catalogs.nmsu.edu/grants/degree-certificate-programs/emergency-medical-services/ems-basic-certificate-completion/>)

Emergency Medical Services (EMS) Intermediate - Associate of Applied Science (<https://catalogs.nmsu.edu/grants/degree-certificate-programs/emergency-medical-services/ems-intermediate-associate-applied-science/>)

## **OEEEM 101. CPR for the Health Care Professional**

### **1 Credit (1)**

Students learn identification and response to airway and circulation emergencies, including use of a SAED and accessing the EMS system. This course is taught using the American Heart Association guidelines for course completion. Required: grade of C or better.

## **OEEEM 103. Heartsaver First Aid/CPR**

### **1 Credit (1)**

Students learn how to identify and respond to airway, circulation and basic first aid emergencies, to include using a SAED and accessing the EMS system. This course is intended for students who are not Allied Health Majors and utilizes the American Heart Association guidelines for course completion. Restricted to: Community Colleges only.

## **OEEEM 115. First Responder Prehospital Professional**

### **3 Credits (2+3P)**

Provides training in prehospital medical and traumatic emergencies. Consent of instructor required. Requires a C or better to pass. Restricted to majors.

**Corequisite(s):** OEEEM 101.

## **OEEEM 120. Emergency Medical Technician Basic**

### **6 Credits (6)**

EMT-Basic skills to include care of soft tissue and muscular/skeletal injuries, circulatory, nervous, general medical and respiratory emergencies. Requires a "C" or better to pass. May be repeated up to 6 credits. Consent of Instructor required.

**Corequisite(s):** OEEEM 101, OEEEM 120L, OEEEM 121.

**Prerequisite(s)/Corequisite(s):** OEEEM 153. Restricted to: OEEEM majors. Restricted to Community Colleges campuses only.

## **OEEEM 120 L. Emergency Medical Technician Basic Lab**

### **2 Credits (6P)**

EMT-Basic skills development with emphasis on assessment, skills competency and team-work in patient care in the prehospital setting. May be repeated up to 2 credits.

**Corequisite(s):** OEEEM 101, OEEEM 120, OEEEM 121.

**Prerequisite(s)/Corequisite(s):** OEEEM 153. Restricted to: OEEEM majors. Restricted to Community Colleges campuses only.

## **OEEEM 121. Emergency Medical Technician Basic Field/Clinical**

### **1 Credit (3P)**

Covers the patient care experience provided through assigned shifts in the hospital and/or ambulance setting. Requires a "C" or better to pass. May be repeated up to 1 credits. Consent of Instructor required.

**Prerequisite(s)/Corequisite(s):** OEEEM 101, OEEEM 120, OEEEM 120L, OEEEM 153. Restricted to: OEEEM majors. Restricted to Community Colleges campuses only.

## **OEEEM 150. Emergency Medical Technician Intermediate**

### **5 Credits (5)**

Theory of the roles, responsibilities and scope of practice of the EMT-Intermediate. Assessment and management of respiratory, cardiac, trauma, environmental, behavior, reproduction, and childhood emergencies. May be repeated up to 5 credits. Consent of Instructor required. Restricted to: OEEEM majors. Restricted to Community Colleges campuses only.

**Prerequisite(s):** Current EMT-basic license, pretest and consent of instructor.

## **OEEEM 150 L. Emergency Medical Technician Intermediate Lab**

### **2 Credits (6P)**

EMT-Intermediate skills development with an emphasis on assessment, skills competency, and team work in patient care in the prehospital setting. Requires a C or better to pass.

**Prerequisite(s)/Corequisite(s):** OEEEM 150, OEEEM 151. Restricted to: OEEEM majors. Restricted to Community Colleges campuses only.

## **OEEEM 151. Emergency Medical Technician Intermediate Field/Clinical**

### **2 Credits (6P)**

Patient care experience provided through assigned shifts in the hospital and/or ambulance setting.

**Prerequisite(s)/Corequisite(s):** OEEEM 150, OEEEM 150 L. Restricted to: OEEEM majors. Restricted to Community Colleges campuses only.

## **OEEEM 153. Introduction to Anatomy and Physiology for the EMS Provider**

### **3 Credits (3)**

To properly assess and manage a patient, a prehospital provider must have a solid foundation in human anatomy and physiology. This course provides a systematic approach to building this foundation. Grade of "C" or better is required to pass the course. Consent of Instructor required. Restricted to Community Colleges campuses only.

## **OEEEM 155. Special Topics**

### **1-6 Credits**

Specific topics to be listed in Schedule of Classes. May be repeated for a maximum of 10 credits.

## **OEEEM 201. Human Systems, Pathophysiology and Development**

### **3 Credits (3)**

A course which provides a survey of human anatomy and physiology, pathological processes, and life span development. Emphasis is placed on interrelationships among organ systems and deviation from homeostasis. Restricted to: OEEEM majors. Restricted to Community Colleges campuses only. May be repeated up to 3 credits.

**Prerequisite:** OEEEM 120, OEEEM 120 L.

### **Learning Outcomes**

1. Explain the general terminology, anatomy, and physiology of the human body.
2. Apply principles of normal anatomy and physiology of the human body to the pathophysiologic processes of common health problems.
3. Associate pathophysiology to patient assessment and treatment.
4. Describe key physiologic and psychosocial changes that occur in different age groups.

## **OEEEM 202. Airway and Respiratory Emergencies**

### **2 Credits (2)**

A course which focuses on the anatomy, physiology, and pathophysiology of the respiratory system. Integrates the knowledge to develop and implement a comprehensive treatment plan, with the goal of assuring a patent airway, adequate mechanical ventilation and respiration for patients of all ages. Requires a "C" or better to pass. Restricted to: OEEM majors. Restricted to Community Colleges campuses only. May be repeated up to 2 credits.

**Prerequisite:** OEEM 201, OEEM 206, OEEM 207.

**Corequisite:** OEEM 202 L.

#### **Learning Outcomes**

1. Demonstrates an understanding of the mechanics, neurological control and diseases impacting respiration and ventilation.
2. Demonstrates an understanding of various methods, tools and techniques to assure a patent airway, ventilation and respiration.
3. Integrate assessment findings with emergency pharmacology and relevant tools to create and implement treatment plans for patients with medical or trauma related respiratory complaints.

#### **OEEM 202 L. Airway and Respiratory Emergencies**

##### **1 Credit (3P)**

A course which focuses on the anatomy, physiology, and pathophysiology of the respiratory system. Integrates the knowledge to develop and implement a comprehensive treatment plan, with the goal of assuring a patent airway, adequate mechanical ventilation and respiration for patients of all ages. Requires a "C" or better to pass. Restricted to: OEEM majors. Restricted to Community Colleges campuses only. May be repeated up to 2 credits.

**Prerequisite:** OEEM 201, OEEM 206, OEEM 207.

**Corequisite:** OEEM 202.

#### **Learning Outcomes**

1. Appropriately utilizes various methods, tools and techniques to assure a patent airway, ventilation and respiration.
2. Integrates assessment findings with emergency pharmacology and relevant tools to implement treatment plans for patients with medical or trauma related respiratory complaints.
3. Act as an entry-level Paramedic team leader in an airway management, ventilation or respiratory simulation.

#### **OEEM 203. Paramedic Trauma Care**

##### **2 Credits (2)**

A course which covers the mechanism of injury, pathophysiology, diagnosis, assessment, treatment and care of the trauma and environmental emergency patient. Consent of instructor. Restricted to majors. Requires a C or better to pass. Restricted to: OEEM majors. Restricted to Community Colleges campuses only. May be repeated up to 2 credits.

**Prerequisite:** OEEM 201, OEEM 206, OEEM 207.

**Corequisite:** OEEM 203 L.

#### **Learning Outcomes**

1. Understands epidemiology, trauma scoring and destination decisions.
2. Formulates comprehensive and focused assessment strategies for minor, moderate and critically ill patients with bleeding; chest, abdominal, genitourinary, orthopedic, soft tissue, head, face, neck, spine, nervous system trauma.
3. Construct assessment and treatment plans for vulnerable trauma patient populations including the cognitively impaired, pregnant, pediatrics and geriatrics.
4. Understands the pathophysiology, assessment, management and treatment of environmental emergencies.

5. Understands the pathophysiology, assessment, management and treatment of the multisystem trauma patient.

#### **OEEM 203 L. Paramedic Trauma Care Lab**

##### **1 Credit (3P)**

A practical course which covers the mechanism of injury, pathophysiology, diagnosis, assessment, treatment and care of the trauma and environmental patient. Consent of instructor. Restricted to majors. Requires a C or better to pass. Restricted to: OEEM majors. Restricted to Community Colleges campuses only. May be repeated up to 1 credit.

**Prerequisite:** OEEM 201, OEEM 206, OEEM 207.

**Corequisite:** OEEM 203.

#### **Learning Outcomes**

1. Applies an understanding of epidemiology, trauma scoring and destination decisions.
2. Implements comprehensive and focused assessment strategies for minor, moderate and critically ill patients with bleeding; chest, abdominal, genitourinary, orthopedic, soft tissue, head, face, neck, spine, nervous system trauma.
3. Constructs and applies assessment and treatment plans for vulnerable trauma patient populations including the cognitively impaired, pregnant, pediatrics and geriatrics.
4. Applies an understanding of the pathophysiology, assessment, management and treatment of environmental emergencies.
5. Applies an understanding of the pathophysiology, assessment, management and treatment of the multisystem trauma patient.

#### **OEEM 206. Introduction Paramedic Practice**

##### **3 Credits (3)**

A course which introduces students to the advanced practice of prehospital medicine, research, medical legal issues, the wellbeing of the provider. Reviews foundational EMS knowledge and the NM Paramedic Scope of Practice. Emphasizes paramedic operations within the healthcare system. Requires a C or better to pass. Restricted to majors. Consent of instructor required. Restricted to: Community Colleges only. Restricted to OEEM majors. May be repeated up to 3 credits.

**Prerequisite:** OEEM 120, OEEM 120 L, OEEM 121.

#### **Learning Outcomes**

1. Discuss paramedic roles and responsibilities within an EMS system.
2. Analyze and interpret research and describe how to integrate findings into evidence
3. Integrates health and safety principles to maintain provider, crew and situational awareness, safety, and wellbeing.
4. Uses appropriate written or electronic tools to effectively document the essential elements of patient care and transport.
5. Explains the components of the EMS communications systems and the importance of Quality Assurance/Quality Improvement.
6. Applies the appropriate techniques of therapeutic communication with patients, families and other healthcare team members.
7. Identifies relevant laws and ethical issues which impact decisions made in healthcare settings.

#### **OEEM 207. Emergency Pharmacology**

##### **2 Credits (2)**

A course which integrates comprehensive knowledge of pharmacology to formulate a treatment plan intended to mitigate emergencies and improve the overall health of the patient. Discusses physiologic actions, pharmacodynamics, pharmacokinetics, therapeutic effects, medication administration, dosages and interactions. Restricted to majors. Requires

a C or better to pass. Restricted to: Community Colleges only. Restricted to OEEM majors. May be repeated up to 2 credits.

**Prerequisite:** OEEM 120 OEEM 120 L, OEEM 121.

**Corequisite:** OEEM 207 L.

#### **Learning Outcomes**

1. Explains relevant terms, processes and definitions relating to pharmacology.
2. Describes safety, storage and security, legislation, naming, classification and scheduling of medications.
3. Demonstrates appropriate decision making regarding medication administration to mitigate emergencies and improve overall health of the patient.
4. Demonstrates an understanding of the dosages, routes, indications, contraindications, mechanism of actions, side effects of medications in the National and NM Paramedic Scope of Practice.
5. Demonstrates application of ethical, legal, communication and documentation aspects of emergency pharmacology.

#### **OEEM 207 L. Emergency Pharmacology Lab**

##### **1 Credit (3P)**

A course which integrates comprehensive knowledge of pharmacology to formulate a treatment plan intended to mitigate emergencies and improve the overall health of the patient. Students will practice medication administration, calculate medication dosages, vascular access, fluid administration and other related skills. Requires a C or better to pass. Instructor permission required. Restricted to: Community Colleges only. Restricted to OEEM majors. May be repeated up to 1 credit.

**Prerequisite:** OEEM 120, OEEM 120 L, OEEM 121.

**Corequisite:** OEEM 207.

#### **Learning Outcomes**

1. Demonstrates an ability to safely administer medications in the national and NM Paramedic Scope of Practice.
2. Calculates the correct volume, flow rate and amount of medication to be administered in a given situation.
3. Demonstrates an ability to administer medications as appropriate based on patient presentations.

#### **OEEM 210. Cardiac Rhythm Interpretation**

##### **3 Credits (2+3P)**

Cardiac conduction system: electrophysiology, electrocardiogram, monitor, atrial, sinus, ventricular and junctional dysrhythmias, multiple lead EKG and 12 lead EKG interpretation. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEEM, OEMS majors. Restricted to Community Colleges campuses only.

**Prerequisite(s):** OEEM 201, OEEM 206, OEEM 207.

#### **OEEM 212. EMT-Paramedic Cardiovascular Emergencies**

##### **3 Credits (2+3P)**

Review anatomy, physiology, and pathophysiology of cardiovascular system. Assessment and management of cardiovascular emergencies in the prehospital setting. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

**Prerequisite(s):** OEEM 210.

#### **OEEM 213. EMT-Paramedic: Medical Emergencies I**

##### **3 Credits (2+3P)**

Study of the disease process; assessment and management of neurological, endocrine, gastrointestinal, renal emergencies and infectious disease. Requires a "C" or better to pass. May be repeated up

to 3 credits. Consent of Instructor required. Restricted to: OEEM, OEMS majors. Restricted to Community Colleges campuses only.

**Prerequisite(s):** OEEM 212.

#### **OEEM 214. EMT--Paramedic: Medical Environmental Emergencies II** **3 Credits (2+3P)**

Study of disease process, assessment, and management of poisoning, drug and alcohol abuse, environmental, behavioral and geriatric emergencies. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

**Prerequisite(s):** OEEM 213.

#### **OEEM 216. EMT-Paramedic: Reproductive and Childhood Emergencies** **3 Credits (2+3P)**

Covers anatomy, physiology, disease processes, assessment and management of male and female reproductive system emergencies, childhood emergencies and growth and development. Restricted to majors. Requires a C or better to pass. Restricted to: Community Colleges only.

**Prerequisite(s):** OEEM 214 and consent of instructor.

#### **OEEM 218. Pediatric Advance Life Support for the Healthcare Professional**

##### **1 Credit (1)**

Identify and respond to life threatening pediatric emergencies. Taught using the American Heart Association guidelines for course completion. Graded S/U.

**Prerequisite:** OEEM 101.

#### **OEEM 219. Advance Cardiac Life Support for the Healthcare Provider** **1 Credit (1)**

Identify and respond to life threatening cardiac emergencies. Taught using the American Heart Association guidelines for course completion. Graded S/U.

**Prerequisite:** OEEM 101.

#### **OEEM 230. EMT-Paramedic Clinical Experience I** **3 Credits (9P)**

Assigned clinical experiences in patient assessment and specific management techniques. Successful completion includes minimum required hours and completion of course objectives. Restricted to majors. Requires a C or better to pass.

**Prerequisite:** consent of instructor.

#### **OEEM 231. EMT-Paramedic Clinical Experience II** **3 Credits (9P)**

Assigned clinical experiences in patient assessment and specific management techniques. Successful completion includes minimum required hours and completion of course objectives. Requires a "C" or better to pass. May be repeated up to 3 credits. Consent of Instructor required.

**Prerequisite(s)/Corequisite(s):** OEEM 230. Restricted to: OEMS, OEEM majors. Restricted to Community Colleges campuses only.

#### **OEEM 240. EMT-Paramedic Field Experience I** **3 Credits (9P)**

Advanced prehospital skills and knowledge. Successful completion of at least the minimum required hours and course objectives. Restricted to majors. Requires a C or better to pass.

**Prerequisite:** consent of instructor.

#### **OEEM 241. EMT-Paramedic Field Experience II** **3 Credits (9P)**

Continued focus on advanced prehospital skills and knowledge, with increasing responsibility for patient care. Successful completion includes meeting at least the minimum required hours and course objectives.

**Prerequisite(s)/Corequisite(s):** OEEM 240. Requires a C- or better to pass.

**OEEM 242. EMT-Paramedic Field Internship**

**3 Credits (9P)**

Emphasis on total patient care responsibility and team leadership skills. Successful completion includes meeting the minimum hours required and course objectives. Pre/ Consent of Instructor required. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

**Prerequisite(s):** OEEM 231, OEEM 241.

**OEEM 243. EMT-Paramedic Preparation for Practice**

**2 Credits (2)**

Comprehensive final program testing to prepare for licensing examination. Requires a "C" or better to pass. May be repeated up to 2 credits. Consent of Instructor required. Restricted to: OEEM majors. Restricted to Community Colleges campuses only.

**Prerequisite(s):** OEEM 242.

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