

COCONINO COMMUNITY COLLEGE
COURSE OUTLINE

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A. Identification:

1. Subject Area: Emergency Medical Services (EMS)
2. Course Number: 262
3. Course Title: Certified Emergency Paramedic
4. Credit Hours: 47
5. Course Description: Preparation of the Certified Basic Emergency Medical Technician for transition to an advanced Certified Emergency Paramedic provider level. Includes human anatomy and physiology, physical assessment, advanced airway and ventilation techniques, intervenous therapy, medical emergencies, and trauma patient management. Interested students will go through a rigorous testing process and should contact the EMS program coordinator. Prerequisite: EMS 131 or equivalent course/certification, current Arizona EMT certification. One year as a Certified EMT-Basic and acceptance to the program. Pre/Co-requisite: FSC 138. This course is provided in partnership with Northern Arizona Healthcare (NAH). Application to and acceptance into the program is required in order to take this course. See the NAH website at www.nahealth.com for application information. Twenty-seven lecture. Forty lab. Fall.

B. Course Goals:

1. To provide students with the knowledge required to perform their duties as a Certified Emergency Paramedic;
2. Paramedics have fulfilled prescribed requirements by a credentialing agency to practice the art and science of out-of-hospital medicine in conjunction with medical direction. Through performance of assessments and providing medical care, their goal is to prevent and reduce mortality and morbidity due to illness and injury. Paramedics primarily provide care to emergency patients in an out-of-hospital setting.
3. Paramedics possess the knowledge, skills and attitudes consistent with the expectations of the public and the profession. Paramedics recognize that they are an essential component of the continuum of care and serve as linkages among health resources.
4. Paramedics strive to maintain high quality, reasonable cost health care by delivering patients directly to appropriate facilities. As an advocate for patients, paramedics seek to be proactive in affecting long term health care by working in conjunction with other provider agencies, networks, and organizations. The emerging roles and responsibilities of the Paramedic include public education, health promotion, and participation in injury and illness prevention programs. As the scope of service continues to expand, the Paramedic will function as a facilitator of access to care, as well as an initial treatment provider.
5. Paramedics are responsible and accountable to medical direction, the public, and their peers. Paramedics recognize the importance of research and actively participate in the design, development, evaluation and publication of research. Paramedics seek to take part in life-long professional development, peer evaluation, and assume an active role in professional and community organizations.

C. Course Outcomes: Students will achieve the following outcomes and meet the competencies as associated with each course module:

Module 1:

At the completion of this module, the paramedic student will understand the roles and responsibilities of a Paramedic within an EMS system, apply the basic concepts of development, pathophysiology and pharmacology to assessment and management of emergency patients, be able to properly administer medications, and communicate effectively with patients.

- 1-1 At the completion of this unit, the paramedic student will understand his or her roles and responsibilities within an EMS system, and how these roles and responsibilities differ from other levels of providers.
- 1-2 At the completion of this unit, the paramedic student will understand and value the importance of personal wellness in EMS and serve as a healthy role model for peers.
- 1-3 At the completion of this unit, the paramedic student will be able to integrate the implementation of primary injury prevention activities as an effective way to reduce death, disabilities and health care costs.
- 1-4 At the completion of this unit, the paramedic student will understand the legal issues that impact decisions made in the out-of-hospital environment.
- 1-5 At the completion of this unit, the paramedic student will understand the role that ethics plays in decision making in the out-of-hospital environment.
- 1-6 At the completion of this unit, the paramedic student will be able to apply the general concepts of pathophysiology for the assessment and management of emergency patients.
- 1-7 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles of pharmacology and the assessment findings to formulate a field impression and implement a pharmacological management plan.
- 1-8 At the completion of this unit, the paramedic student will be able to safely and precisely access the venous circulation and administer medications.
- 1-9 At the completion of this unit, the paramedic student will be able to integrate the principles of therapeutic communication to effectively communicate with any patient while providing care.
- 1-10 At the completion of this unit, the paramedic student will be able to integrate the physiological, psychological, and sociological changes throughout human development with assessment and communication strategies for patients of all ages.

Module 2:

At the completion of this module, the paramedic student will be able to establish and/ or maintain a patent airway, oxygenate, and ventilate a patient.

- 2-1 At the completion of this unit, the paramedic student will be able to establish and/ or maintain a patent airway, oxygenate, and ventilate a patient.

Module 3:

At the completion of this module, the paramedic student will be able to take a proper history and perform a comprehensive physical exam on any patient, and communicate the findings to others.

- 3-1 At the completion of this unit, the paramedic student will be able to use the appropriate techniques to obtain a medical history from a patient.
- 3-2 At the completion end of this unit, the paramedic student will be able to explain the pathophysiological significance of physical exam findings.
- 3-3 At the end of this unit, the paramedic student will be able to integrate the principles of history taking and techniques of physical exam to perform a patient assessment.
- 3-4 At the end of this unit, the paramedic student will be able to apply a process of clinical decision making to use the assessment findings to help form a field impression.

- 3-5 At the completion of this unit, the paramedic student will be able to follow an accepted format for dissemination of patient information in verbal form, either in person or over the radio.
- 3-6 At the completion of this unit, the paramedic student will be able to effectively document the essential elements of patient assessment, care and transport.

Module 4:

At the completion of this module, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the trauma patient.

- 4-1 At the completion of this unit, the Paramedic student will be able to integrate the principles of kinematics to enhance the patient assessment and predict the likelihood of injuries based on the patient's mechanism of injury.
- 4-2 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with shock or hemorrhage.
- 4-3 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement the treatment plan for the patient with soft tissue trauma.
- 4-4 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement the management plan for the patient with a burn injury.
- 4-5 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the trauma patient with a suspected head injury.
- 4-6 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with a suspected spinal injury.
- 4-7 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for a patient with a thoracic injury.
- 4-8 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement the treatment plan for the patient with suspected abdominal trauma.
- 4-9 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement the treatment plan for the patient with a musculoskeletal injury.

Module 5:

At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the medical patient.

- 5-1 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with respiratory problems.

- 5-2 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with cardiovascular disease.
- 5-3 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with a neurological problem.
- 5-4 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with an endocrine problem.
- 5-5 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with an allergic or anaphylactic reaction
- 5-6 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with a gastroenterologic problem.
- 5-7 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with a renal or urologic problem.
- 5-8 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with a toxic exposure.
- 5-9 At the completion of this unit, the paramedic student will be able to integrate the pathophysiological principles of the hematopoietic system to formulate a field impression and implement a treatment plan.
- 5-10 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with an environmentally induced or exacerbated medical or traumatic condition.
- 5-11 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a management plan for the patient with infectious and communicable diseases.
- 5-12 At the end of this unit, the paramedic student will be able to describe and demonstrate safe, empathetic competence in caring for patients with behavioral emergencies.
- 5-13 At the end of this unit, the paramedic student will be able to utilize gynecological principles and assessment findings to formulate a field impression and implement the management plan for the patient experiencing a gynecological emergency.
- 5-14 At the completion of this unit, the paramedic student will be able to apply an understanding of the anatomy and physiology of the female reproductive system to the assessment and management of a patient experiencing normal or abnormal labor.

Module 6:

At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for neonatal, pediatric, and geriatric patients, diverse patients, and chronically ill patients.

- 6-1 At the completion of this lesson, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the neonatal patient.
- 6-2 At the completion of this lesson, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the pediatric patient.
- 6-3 At the completion of this unit, the paramedic student will be able to integrate the pathophysiological principles and the assessment findings to formulate and implement a treatment plan for the geriatric patient.
- 6-4 At the completion of this unit, the paramedic student will be able to integrate the assessment findings to formulate a field impression and implement a treatment plan for the patient who has sustained abuse or assault.
- 6-5 At the completion of this unit the paramedic student will be able to integrate pathophysiological and psychosocial principles to adapt the assessment and treatment plan for diverse patients and those who face physical, mental, social and financial challenges.
- 6-6 At the completion of this unit, the paramedic student will be able to integrate the pathophysiological principles and the assessment findings to formulate a field impression

Module 7:

At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for patients with common complaints.

- 7-1 At the completion of this unit, the paramedic student will be able to integrate the principles of assessment based management to perform an appropriate assessment and implement the management plan for patients with common complaints.

Module 8:

At the completion of this unit, the paramedic student will be able to safely manage the scene of an emergency.

- 8-1 At the completion of this unit, the paramedic will understand standards and guidelines that help ensure safe and effective ground and air medical transport.
- 8-2 At the completion of this unit, the paramedic student will be able to integrate the principles of general incident management and multiple casualty incident (MCI) management techniques in order to function effectively at major incidents.
- 8-3 At the completion of this unit, the paramedic student will be able to integrate the principles of rescue awareness and operations to safely rescue a patient from water, hazardous atmospheres, trenches, highways, and hazardous terrain.
- 8-4 At the completion of this unit, the paramedic student will be able to evaluate hazardous materials emergencies, call for appropriate resources, and work in the cold zone.
- 8-5 At the completion of this unit, the paramedic student will have an awareness of the human hazard of crime and violence and the safe operation at crime scenes and other emergencies.

D. Course Outcomes Assessment will include:

- 1. course grades determined by the instructor as outlined in the course syllabus;
- 2. written exams and quizzes on all presented materials;

3. comprehensive final written exam;
4. practical skills demonstrations and examinations;
5. performance on National Registry Exam;
6. completion of all portions of the course in the order presented and maintenance of an 80% average throughout the program;
7. and students must also meet certification requirements set by the Arizona Department of Health Service, Bureau of EMS.

E. Course Content will include the following topic areas in accordance with the current National Highway Traffic Safety Administration curriculum:

1. Preparatory:
 - a. EMS Systems;
 - b. Research;
 - c. workforce Safety and Wellness;
 - d. documentation;
 - e. EMS System Communication;
 - f. therapeutic Communication;
 - g. medical/Legal and Ethics;
2. anatomy and Physiology;
3. medical Terminology;
4. pathophysiology;
5. life Span Development;
6. public Health;
7. pharmacology:
 - a. principles of pharmacology;
 - b. medication administration;
 - c. emergency medications;
8. airway Management, Respirations and Artificial Ventilation:
 - a. airway management;
 - b. respiration;
 - c. artificial ventilation;
9. assessment:
 - a. scene size-up;
 - b. primary assessment;
 - c. history taking;
 - d. secondary assessment;
 - e. monitoring devices;
 - f. reassessment;
10. medicine:
 - a. medical overview;
 - b. neurology;
 - c. abdominal and gastrointestinal disorders;
 - d. immunology;
 - e. infectious diseases;
 - f. endocrine disorders;
 - g. psychiatric;
 - h. cardiovascular;
 - i. toxicology;
 - j. respiratory;
 - k. hematology;

- l. genitourinary/renal;
 - m. gynecology;
 - n. non-traumatic musculoskeletal disorders;
 - o. diseases of the eyes, ears, nose, and throat;
11. shock and resuscitation;
12. trauma:
- a. trauma overview;
 - b. bleeding;
 - c. chest trauma;
 - d. abdominal and genitourinary trauma;
 - e. orthopedic trauma;
 - f. soft tissue trauma;
 - g. head, facial, neck, and spine trauma;
 - h. environmental emergencies;
 - i. multisystem trauma;
13. special patient populations:
- a. obstetrics;
 - b. neonatal care;
 - c. pediatrics;
 - d. geriatric;
 - e. patients with special challenges;
14. EMS operations:
- a. principles of safely operating a ground ambulance;
 - b. incident management;
 - c. multiple casualty incidents;
 - d. air medical;
 - e. vehicle extrication;
 - f. hazardous materials;
 - g. and terrorism and disaster.