

LAST REVIEW: 2009-2010
(i.e. 2003-2004)

NEXT REVIEW: 2014-2015
(i.e. 2008-2009)

STATUS:
(A, I, D)

COURSE TITLE: Paramedic Science 1

COMMON COURSE NUMBER: EMS 2631

CREDIT HOURS: 3

CONTACT HOUR BREAKDOWN
(per 16 week term)

CLOCK HOURS: 48
(Voc. Course ONLY)

Lecture: 48 Lab:
Clinic: Other:

PREREQUISITE(S): Departmental approval

COREQUISITE(S): EMS 2010, EMS 2631L, EMS 2650

PRE/COREQUISITE(S):

COURSE DESCRIPTION *(750 characters, maximum):*

CATALOG COURSE DESCRIPTION: Topics deal with EMS systems, Paramedic role and responsibilities, Paramedic well-being, injury, and disease prevention. Legal aspects, ethics, therapeutic communications, life span development, medical terminology, patient documentation including web based computer recording is covered. Didactic aspects of EMS/ambulance operations, Multiple Incident Command (MIC), rescue awareness and operations, hazardous materials incidents and crime scene awareness is presented. Basic math computation for medication administration is introduced. Material includes 1998 U.S. Department of Transportation, (DOT), and National Paramedic curriculum objectives for Module 1, Units 1-5, 9, 10, Module 3, Unit 6, and Module 8. This course is designed to prepare the beginning paramedic in the first of four lectures covering selected modules of the NHTSA National Paramedic Curriculum. Term Offered: I, II & III/Central

UNIT TITLES

UNIT TITLES:

- 1. EMS Systems- Roles and Responsibilities**
- 2. Paramedic Well-being**
- 3. Illness and Injury Prevention**
- 4. Infectious Disease Protection**
- 5. Medical/Legal Issues**
- 6. Ethics**
- 7. Therapeutic Communications**
- 8. Life Span Development**
- 9. Patient Assessment Documentation**
- 10. EMS Operations**
- 11. MIC**
- 12. Rescue Awareness**
- 13. Hazardous Materials Incidents**
- 14. Crime Scene Awareness**
- 15. FSDAP- Web based computer recording**
- 16. Math Computations for Medication Administration**

UNITS

UNIT TERMINAL OBJECTIVE

- 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.

COGNITIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 1-1.1 Define the following terms: (C-1)
- a. EMS Systems
 - b. Licensure
 - c. Certification
 - d. Registration
 - e. Profession
 - f. Professionalism
 - g. Health care professional
 - h. Ethics
 - i. Peer review
 - j. Medical direction
 - k. Protocols
- 1-1.2 Describe key historical events that influenced the development of national Emergency Medical Services (EMS) systems. (C-1)
- 1-1.3 Identify national groups important to the development, education, and implementation of EMS. (C-1)
- 1-1.4 Differentiate among the four nationally recognized levels of EMS training / education, leading to licensure / certification / registration. (C-1)
- 1-1.5 Describe the attributes of a paramedic as a health care professional. (C-1)
- 1-1.6 Describe the recognized levels of EMS training/ education, leading to licensure / certification in his or her state. (C-1)
- 1-1.7 Explain paramedic licensure / certification, recertification, and reciprocity requirements in his or her state. (C-1)
- 1-1.8 Evaluate the importance of maintaining one's paramedic license/ certification. (C-3)
- 1-1.9 Describe the benefits of paramedic continuing education. (C-1)
- 1-1.10 List current state requirements for paramedic education in his/ her state. (C-1)
- 1-1.11 Discuss the role of national associations and of a national registry agency. (C-1)
- 1-1.12 Discuss current issues in his/ her state impacting EMS. (C-1)
- 1-1.13 Discuss the roles of various EMS standard setting agencies. (C-1)
- 1-1.14 Identify the standards (components) of an EMS System as defined by the National Highway Traffic Safety Administration. (C-1)
- 1-1.15 Describe how professionalism applies to the paramedic while on and off duty. (C-1)
- 1-1.16 Describe examples of professional behaviors in the following areas: integrity, empathy, self-motivation, appearance and personal hygiene, self-confidence, communications, time management, teamwork and diplomacy, respect, patient advocacy, and careful delivery of service. (C-1)

- 1-1.17 Provide examples of activities that constitute appropriate professional behavior for a paramedic. (C-2)
- 1-1.18 Describe the importance of quality EMS research to the future of EMS. (C-3)
- 1-1.19 Identify the benefits of paramedics teaching in their community. (C-1)
- 1-1.20 Describe what is meant by "citizen involvement in the EMS system." (C-1)
- 1-1.21 Analyze how the paramedic can benefit the health care system by supporting primary care to patients in the out-of-hospital setting. (C-3)
- 1-1.22 List the primary and additional responsibilities of paramedics. (C-1)
- 1-1.23 Describe the role of the EMS physician in providing medical direction. (C-1)
- 1-1.24 Describe the benefits of medical direction, both on-line and off-line. (C-1)
- 1-1.25 Describe the process for the development of local policies and protocols. (C-2)
- 1-1.26 Provide examples of local protocols. (C-1)
- 1-1.27 Discuss Prehospital and out-of-hospital care as an extension of the physician. (C-1)
- 1-1.28 Describe the relationship between a physician on the scene, the paramedic on the scene, and the EMS physician providing on-line medical direction. (C-1)
- 1-1.29 Describe the components of continuous quality improvement. (C-1)
- 1-1.30 Analyze the role of continuous quality improvement with respect to continuing medical education and research. (C-3)
- 1-1.31 Define the role of the paramedic relative to the safety of the crew, the patient, and bystanders. (C-1)
- 1-1.32 Identify local health care agencies and transportation resources for patients with special needs. (C-1)
- 1-1.33 Describe the role of the paramedic in health education activities related to illness and injury prevention. (C-1)
- 1-1.34 Describe the importance and benefits of research. (C-2)
- 1-1.35 Explain the EMS provider's role in data collection. (C-1)
- 1-1.36 Explain the basic principles of research. (C-1)
- 1-1.37 Describe a process of evaluating and interpreting research. (C-3)

AFFECTIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 1-1.38 Assess personal practices relative to the responsibility for personal safety, the safety of the crew, the patient, and bystanders. (A-3)
- 1-1.39 Serve as a role model for others relative to professionalism in EMS. (A-3)
- 1-1.40 Value the need to serve as the patient advocate inclusive of those with special needs, alternate life styles and cultural diversity. (A-3)
- 1-1.41 Defend the importance of continuing medical education and skills retention. (A-3)
- 1-1.42 Advocate the need for supporting and participating in research efforts aimed at improving EMS systems. (A-3)
- 1-1.43 Assess personal attitudes and demeanor that may distract from professionalism. (A-3)
- 1-1.44 Value the role that family dynamics plays in the total care of patients. (A-3)
- 1-1.45 Advocate the need for injury prevention, including abusive situations. (A-1)
- 1-1.46 Exhibit professional behaviors in the following areas: integrity, empathy, self-motivation, appearance and personal hygiene, self-confidence, communications, time management, teamwork and diplomacy, respect, patient advocacy, and careful delivery of service. (A-2)

PSYCHOMOTOR OBJECTIVES

None identified for this unit.

UNIT TERMINAL OBJECTIVE

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.

COGNITIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 1-2.1 Discuss the concept of wellness and its benefits. (C-1)
- 1-2.2 Define the components of wellness. (C-1)
- 1-2.3 Describe the role of the paramedic in promoting wellness. (C-1)
- 1-2.4 Discuss the components of wellness associated with proper nutrition. (C-1)
- 1-2.5 List principles of weight control. (C-1)
- 1-2.6 Discuss how cardiovascular endurance, muscle strength, and flexibility contribute to physical fitness. (C-2)
- 1-2.7 Describe the impact of shift work on circadian rhythms. (C-1)
- 1-2.8 Discuss how periodic risk assessments and knowledge of warning signs contribute to cancer and cardiovascular disease prevention. (C-1)
- 1-2.9 Differentiate proper from improper body mechanics for lifting and moving patients in emergency and non-emergency situations. (C-3)
- 1-2.10 Describe the problems that a paramedic might encounter in a hostile situation and the techniques used to manage the situation. (C-1)
- 1-2.11 Given a scenario involving arrival at the scene of a motor vehicle collision, assess the safety of the scene and propose ways to make the scene safer. (C-3)
- 1-2.12 List factors that contribute to safe vehicle operations. (C-1)
- 1-2.13 Describe the considerations that should be given to: (C-1)
 - a. Using escorts
 - b. Adverse environmental conditions
 - c. Using lights and siren
 - d. Proceeding through intersections
 - e. Parking at an emergency scene
- 1-2.14 Discuss the concept of "due regard for the safety of all others" while operating an emergency vehicle. (C-1)
- 1-2.15 Describe the equipment available for self-protection when confronted with a variety of adverse situations. (C-1)
- 1-2.16 Describe the benefits and methods of smoking cessation. (C-1)
- 1-2.17 Describe the three phases of the stress response. (C-1)
- 1-2.18 List factors that trigger the stress response. (C-1)
- 1-2.19 Differentiate between normal/ healthy and detrimental reactions to anxiety and stress. (C-3)
- 1-2.20 Describe the common physiological and psychological effects of stress. (C-1)
- 1-2.21 Identify causes of stress in EMS. (C-1)
- 1-2.22 Describe behavior that is a manifestation of stress in patients and those close to them and how these relate to paramedic stress. (C-1)
- 1-2.23 Identify and describe the defense mechanisms and management techniques commonly used to deal with stress. (C-1)

- 1-2.24 Describe the components of critical incident stress management (CISM). (C-1)
- 1-2.25 Provide examples of situations in which CISM would likely be beneficial to paramedics. (C-1)
- 1-2.26 Given a scenario involving a stressful situation, formulate a strategy to help cope with the stress. (C-3)
- 1-2.27 Describe the stages of the grieving process (Kubler-Ross). (C-1)
- 1-2.28 Describe the needs of the paramedic when dealing with death and dying. (C-1)
- 1-2.29 Describe the unique challenges for paramedics in dealing with the needs of children and other special populations related to their understanding or experience of death and dying. (C-1)
- 1-2.30 Discuss the importance of universal precautions and body substance isolation practices. (C-1)
- 1-2.31 Describe the steps to take for personal protection from airborne and bloodborne pathogens. (C-1)
- 1-2.32 Given a scenario in which equipment and supplies have been exposed to body substances, plan for the proper cleaning, disinfection, and disposal of the items. (C-3)
- 1-2.33 Explain what is meant by an exposure and describe principles for management. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 1-2.34 Advocate the benefits of working toward the goal of total personal wellness. (A-2)
- 1-2.35 Serve as a role model for other EMS providers in regard to a total wellness lifestyle. (A-3)
- 1-2.36 Value the need to assess his / her own lifestyle. (A-2)
- 1-2.37 Challenge his / herself to each wellness concept in his / her role as a paramedic. (A-3)
- 1-2.38 Defend the need to treat each patient as an individual, with respect and dignity. (A-2)
- 1-2.39 Assess his / her own prejudices related to the various aspects of cultural diversity. (A-3)
- 1-2.40 Improve personal physical well-being through achieving and maintaining proper body weight, regular exercise and proper nutrition. (A-3)
- 1-2.41 Promote and practice stress management techniques. (A-3)
- 1-2.42 Defend the need to respect the emotional needs of dying patients and their families. (A-3)
- 1-2.43 Advocate and practice the use of personal safety precautions in all scene situations. (A-3)
- 1-2.44 Advocate and serve as a role model for other EMS providers relative to body substance isolation practices. (A-3)

PSYCHOMOTOR OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 1-2.45 Demonstrate safe methods for lifting and moving patients in emergency and non-emergency situations. (P-2)
- 1-2.46 Demonstrate the proper procedures to take for personal protection from disease. (P-2)

COGNITIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 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.
- 1-4.1 Differentiate between legal and ethical responsibilities. (C-2)
- 1-4.2 Describe the basic structure of the legal system in the United States. (C-1)
- 1-4.3 Differentiate between civil and criminal law as it pertains to the paramedic. (C-1)
- 1-4.4 Identify and explain the importance of laws pertinent to the paramedic. (C-1)
- 1-4.5 Differentiate between licensure and certification as they apply to the paramedic. (C-1)
- 1-4.6 List the specific problems or conditions encountered while providing care that a paramedic is required to report, and identify in each instance to whom the report is to be made. (C-1)
- 1-4.7 Define the following terms: (C-1)
 - a. Abandonment
 - b. Advance directives
 - c. Assault
 - d. Battery
 - e. Breach of duty
 - f. Confidentiality
 - g. Consent (expressed, implied, informed, involuntary)
 - h. Do not resuscitate (DNR) orders
 - i. Duty to act
 - j. Emancipated minor
 - k. False imprisonment
 - l. Immunity
 - m. Liability
 - n. Libel
 - o. Minor
 - p. Negligence
 - q. Proximate cause
 - r. Scope of practice
 - s. Slander
 - t. Standard of care
 - u. Tort
- 1-4.8 Differentiate between the scope of practice and the standard of care for paramedic practice. (C-3)
- 1-4.9 Discuss the concept of medical direction, including off-line medical direction and on-line medical direction, and its relationship to the standard of care of a paramedic. (C-1)
- 1-4.10 Describe the four elements that must be present in order to prove negligence. (C-1)
- 1-4.11 Given a scenario in which a patient is injured while a paramedic is providing care, determine whether the four components of negligence are present. (C-2)
- 1-4.12 Given a scenario, demonstrate patient care behaviors that would protect the paramedic from claims of negligence. (C-3)

- 1-4.13 Explain the concept of liability as it might apply to paramedic practice, including physicians providing medical direction and paramedic supervision of other care providers. (C-2)
- 1-4.14 Discuss the legal concept of immunity, including Good Samaritan statutes and governmental immunity, as it applies to the paramedic. (C-1)
- 1-4.15 Explain the importance and necessity of patient confidentiality and the standards for maintaining patient confidentiality that apply to the paramedic. (C-1)
- 1-4.16 Differentiate among expressed, informed, implied, and involuntary consent. (C-2)
- 1-4.17 Given a scenario in which a paramedic is presented with a conscious patient in need of care, describe the process used to obtain consent. (C-2)
- 1-4.18 Identify the steps to take if a patient refuses care. (C-1)
- 1-4.19 Given a scenario, demonstrate appropriate patient management and care techniques in a refusal of care situation. (C-3)
- 1-4.20 Describe what constitutes abandonment. (C-1)
- 1-4.21 Identify the legal issues involved in the decision not to transport a patient, or to reduce the level of care being provided during transportation. (C-1)
- 1-4.22 Describe how hospitals are selected to receive patients based on patient need and hospital capability and the role of the paramedic in such selection. (C-1)
- 1-4.23 Differentiate between assault and battery and describe how to avoid each. (C-2)
- 1-4.24 Describe the conditions under which the use of force, including restraint, is acceptable. (C-1)
- 1-4.25 Explain the purpose of advance directives relative to patient care and how the paramedic should care for a patient who is covered by an advance directive. (C-1)
- 1-4.26 Discuss the responsibilities of the paramedic relative to resuscitation efforts for patients who are potential organ donors. (C-1)
- 1-4.27 Describe the actions that the paramedic should take to preserve evidence at a crime or accident scene. (C-1)
- 1-4.28 Describe the importance of providing accurate documentation (oral and written) in substantiating an incident. (C-1)
- 1-4.29 Describe the characteristics of a patient care report required to make it an effective legal document. (C-1)
- 1-4.30 Given a scenario, prepare a patient care report, including an appropriately detailed narrative. (C-2)

AFFECTIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 1-4.31 Advocate the need to show respect for the rights and feelings of patients. (A-3)
- 1-4.32 Assess his/ her personal commitment to protecting patient confidentiality. (A-3)
- 1-4.33 Given a scenario involving a new employee, explain the importance of obtaining consent for adults and minors. (A-2)
- 1-4.34 Defend personal beliefs about withholding or stopping patient care. (A-3)
- 1-4.35 Defend the value of advance medical directives. (A-3)

UNIT TERMINAL OBJECTIVE

- 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.

COGNITIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 1-8.1 Review the specific anatomy and physiology pertinent to medication administration. (C-1)
- 1-8.2 Review mathematical principles. (C-1)
- 1-8.3 Review mathematical equivalents. (C-1)
- 1-8.4 Differentiate temperature readings between the Centigrade and Fahrenheit scales. (C-3)
- 1-8.5 Discuss formulas as a basis for performing drug calculations. (C-1)
- 1-8.6 Discuss applying basic principles of mathematics to the calculation of problems associated with medication dosages. (C-1)
- 1-8.7 Describe how to perform mathematical conversions from the household system to the metric system. (C-1)
- 1-8.8 Describe the indications, equipment needed, technique used, precautions, and general principles of peripheral venous or external jugular cannulation. (C-1)
- 1-8.9 Describe the indications, equipment needed, technique used, precautions, and general principles of intraosseous needle placement and infusion. (C-1)
- 1-8.10 Discuss legal aspects affecting medication administration. (C-1)
- 1-8.11 Discuss the "six rights" of drug administration and correlate these with the principles of medication administration. (C-1)
- 1-8.12 Discuss medical asepsis and the differences between clean and sterile techniques. (C-1)
- 1-8.13 Describe use of antiseptics and disinfectants. (C-1)
- 1-8.14 Describe the use of universal precautions and body substance isolation (BSI) procedures when administering a medication. (C-1)
- 1-8.15 Differentiate among the different dosage forms of oral medications. (C-3)
- 1-8.16 Describe the equipment needed and general principles of administering oral medications. (C-3)
- 1-8.17 Describe the indications, equipment needed, techniques used, precautions, and general principles of administering medications by the inhalation route. (C-3)
- 1-8.18 Describe the indications, equipment needed, techniques used, precautions, and general principles of administering medications by the gastric tube. (C-3)
- 1-8.19 Describe the indications, equipment needed, techniques used, precautions, and general principles of rectal medication administration. (C-3)
- 1-8.20 Differentiate among the different parenteral routes of medication administration. (C-3)
- 1-8.21 Describe the equipment needed, techniques used, complications, and general principles for the preparation and administration of parenteral medications. (C-1)
- 1-8.22 Differentiate among the different percutaneous routes of medication administration. (C-3)
- 1-8.23 Describe the purpose, equipment needed, techniques used, complications, and general principles for obtaining a blood sample. (C-1)
- 1-8.24 Describe disposal of contaminated items and sharps. (C-1)

- 1-8.25 Synthesize a pharmacologic management plan including medication administration. (C-3)
- 1-8.26 Integrate pathophysiological principles of medication administration with patient management. (C-3)

AFFECTIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 1-8.27 Comply with paramedic standards of medication administration. (A-1)
- 1-8.28 Comply with universal precautions and body substance isolation (BSI). (A-1)
- 1-8.29 Defend a pharmacologic management plan for medication administration. (A-3)
- 1-8.30 Serve as a model for medical asepsis. (A-3)

- 1-8.31 Serve as a model for advocacy while performing medication administration. (A-3)
- 1-8.32 Serve as a model for disposing contaminated items and sharps. (A-3)

PSYCHOMOTOR OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 1-8.33 Use universal precautions and body substance isolation (BSI) procedures during medication administration. (P-2)
- 1-8.34 Demonstrate cannulation of peripheral or external jugular veins. (P-2)
- 1-8.35 Demonstrate intraosseous needle placement and infusion. (P-2)
- 1-8.36 Demonstrate clean technique during medication administration. (P-3)
- 1-8.37 Demonstrate administration of oral medications. (P-2)
- 1-8.38 Demonstrate administration of medications by the inhalation route. (P-2)
- 1-8.39 Demonstrate administration of medications by the gastric tube. (P-2)
- 1-8.40 Demonstrate rectal administration of medications. (P-2)
- 1-8.41 Demonstrate preparation and administration of parenteral medications. (P-2)
- 1-8.42 Demonstrate preparation and techniques for obtaining a blood sample. (P-2)
- 1-8.43 Perfect disposal of contaminated items and sharps. (P-3)

UNIT TERMINAL OBJECTIVE

- 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.

COGNITIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 1-10.1 Compare the physiological and psychosocial characteristics of an infant with those of an early adult. (C-3)
- 1-10.2 Compare the physiological and psychosocial characteristics of a toddler with those of an early adult. (C-3)
- 1-10.3 Compare the physiological and psychosocial characteristics of a pre-school child with those of an early adult. (C-3)
- 1-10.4 Compare the physiological and psychosocial characteristics of a school-aged child with those of an early adult. (C-3)

- 1-10.5 Compare the physiological and psychosocial characteristics of an adolescent with those of an early adult. (C-3)
- 1-10.6 Summarize the physiological and psychosocial characteristics of an early adult. (C-3)
- 1-10.7 Compare the physiological and psychosocial characteristics of a middle aged adult with those of an early adult. (C-3)
- 1-10.8 Compare the physiological and psychosocial characteristics of a person in late adulthood with those of an early adult. (C-3)

AFFECTIVE OBJECTIVES

- 1-10.9 Value the uniqueness of infants, toddlers, pre-school, school aged, adolescent, early adulthood, middle aged, and late adulthood physiological and psychosocial characteristics. (A-3)

UNIT TERMINAL OBJECTIVE

- 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.

COGNITIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 8-1.1 Identify current local and state standards which influence ambulance design, equipment requirements and staffing of ambulances. (C-1)
- 8-1.2 Discuss the importance of completing an ambulance equipment/ supply checklist. (C-1)
- 8-1.3 Discuss the factors to be considered when determining ambulance stationing within a community. (C-1)
- 8-1.4 Describe the advantages and disadvantages of air medical transport. (C-1)
- 8-1.5 Identify the conditions/ situations in which air medical transport should be considered. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 8-1.6 Assess personal practices relative to ambulance operations which may affect the safety of the crew, the patient and bystanders. (A-3)
- 8-1.7 Serve as a role model for others relative to the operation of ambulances. (A-3)
- 8-1.8 Value the need to serve as the patient advocate to ensure appropriate patient transportation via ground or air. (A-2)

PSYCHOMOTOR OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 8-1.9 Demonstrate how to place a patient in, and remove a patient from, an ambulance. (P-1)

UNIT TERMINAL OBJECTIVE

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.

COGNITIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 8-2.1 Explain the need for the incident management system (IMS) / incident command system (ICS) in managing emergency medical services incidents. (C-1)
- 8-2.2 Define the term multiple casualty incident (MCI). (C-1)
- 8-2.3 Define the term disaster management. (C-1)
- 8-2.4 Describe essential elements of scene size-up when arriving at a potential MCI. (C-1)
- 8-2.5 Describe the role of the paramedics and EMS systems in planning for MCIs and disasters. (C-1)
- 8-2.6 Define the following types of incidents and how they affect medical management: (C-1)
 - a. Open or uncontained incident
 - b. Closed or contained incident
- 8-2.7 Describe the functional components of the incident management system in terms of the following: (C-1)
 - 45 Command
 - 46 Finance
 - 47 Logistics
 - 48 Operations
 - 49 Planning
- 8-2.8 Differentiate between singular and unified command and when each is most applicable. (C-3)
- 8-2.9 Describe the role of command. (C-1)
- 8-2.10 Describe the need for transfer of command and procedures for transferring it. (C-1)
- 8-2.11 Differentiate between command procedures used at small, medium and large scale medical incidents. (C-1)
- 8-2.12 Explain the local/ regional threshold for establishing command and implementation of the incident management system including threshold MCI declaration. (C-1)
- 8-2.13 List and describe the functions of the following groups and leaders in ICS as it pertains to EMS incidents: (C-1)
 - a. Safety
 - b. Logistics
 - c. Rehabilitation (rehab)
 - d. Staging
 - e. Treatment
 - f. Triage
 - g. Transportation
 - h. Extrication/ rescue
 - l Disposition of deceased (morgue)
 - j. Communications

- 8-2.14 Describe the methods and rationale for identifying specific functions and leaders for these functions in ICS. (C-1)
- 8-2.15 Describe the role of both command posts and emergency operations centers in MCI and disaster management. (C-1)
- 8-2.16 Describe the role of the physician at multiple casualty incidents. (C-1)
- 8-2.17 Define triage and describe the principles of triage. (C-1)
- 8-2.18 Describe the START (simple triage and rapid treatment) method of initial triage. (C-1)
- 8-2.19 Given a list of 20 patients with various multiple injuries, determine the appropriate triage priority with 90% accuracy. (C-3)
- 8-2.20 Given color coded tags and numerical priorities, assign the following terms to each: (C-1)
- Immediate
 - Delayed
 - Hold
 - Deceased
- 8-2.21 Define primary and secondary triage. (C-1)
- 8-2.22 Describe when primary and secondary triage techniques should be implemented. (C-1)
- 8-2.23 Describe the need for and techniques used in tracking patients during multiple casualty incidents. (C-1)
- 8-2.24 Describe techniques used to allocate patients to hospitals and track them. (C-1)
- 8-2.25 Describe modifications of telecommunications procedures during multiple casualty incidents. (C-1)
- 8-2.26 List and describe the essential equipment to provide logistical support to MCI operations to include: (C-1)
- Airway, respiratory and hemorrhage control
 - Burn management
 - Patient packaging/ immobilization
- 8-2.27 List the physical and psychological signs of critical incident stress. (C-1)
- 8-2.28 Describe the role of critical incident stress management sessions in MCIs. (C-1)
- 8-2.29 Describe the role of the following exercises in preparation for MCIs: (C-1)
- Table top exercises
 - Small and large MCI drills

AFFECTIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 8-2.30 Understand the rationale for initiating incident command even at a small MCI event. (A-1)

- 8-2.31 Explain the rationale for having efficient and effective communications as part of an incident command/ management system. (A-1)
- 8-2.32 Explain why common problems of an MCI can have an adverse effect on an entire incident. (A-1)
- 8-2.33 Explain the organizational benefits for having standard operating procedures (SOPs) for using the incident management system or incident command system. (A-1)

PSYCHOMOTOR OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 8-2.34 Demonstrate the use of local / regional triage tagging system used for primary and secondary triage. (P-1)
- 8-2.35 Given a simulated tabletop multiple casualty incident, with 5-10 patients: (P-1)
- a. Establish unified or singular command
 - b. Conduct a scene assessment
 - c. Determine scene objectives
 - d. Formulate an incident plan
-
- e. Request appropriate resources
 - f. Determine need for ICS expansion and groups
 - g. Coordinate communications and groups leaders
 - h. Coordinate outside agencies
- 8-2.36 Demonstrate effective initial scene assessment and update (progress) reports. (P-1)
- 8-2.37 Given a classroom simulation of a MCI with 5-10 patients, fulfill the role of triage group leader. (P-3)
- 8-2.38 Given a classroom simulation of a MCI with 5-10 patients, fulfill the role of treatment group leader. (P-3)
- 8-2.39 Given a classroom simulation of a MCI with 5-10 patients, fulfill the role of transportation group leader. (P-3)

UNIT TERMINAL OBJECTIVE

- 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.

COGNITIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 8-3.1 Define the term rescue. (C-1)
- 8-3.2 Explain the medical and mechanical aspects of rescue situations. (C-1)
- 8-3.3 Explain the role of the paramedic in delivering care at the site of the injury, continuing through the rescue process and to definitive care. (C-1)
- 8-3.4 Describe the phases of a rescue operation. (C-1)
- 8-3.5 List and describe the types of personal protective equipment needed to safely operate in the rescue environment to include: (C-1)

- a. Head protection
 - b. Eye protection
 - c. Hand protection
 - d. Personal flotation devices
 - e. Thermal protection/ layering systems
 - f. High visibility clothing
 - g. Specialized footwear
- 8-3.6 Explain the differences in risk between moving water and flat water rescue. (C-1)
- 8-3.7 Explain the effects of immersion hypothermia on the ability to survive sudden immersion and self rescue. (C-1)
- 8-3.8 Explain the phenomenon of the cold protective response in cold water drowning situations. (C-1)
- 8-3.9 Identify the risks associated with low head dams and the rescue complexities they pose. (C-1)
- 8-3.10 Given a picture of moving water, identify and explain the following features and hazards associated with: (C-2)
- a. Hydraulics
 - b. Strainers
 - c. Dams / hydro-electric sites
- 8-3.11 Explain why water entry or go techniques are methods of last resort. (C-1)
- 8-3.12 Explain the rescue techniques associated with reach-throw-row-go. (C-1)
- 8-3.13 Given a list of rescue scenarios, identify the victim survivability profile and which are rescue versus body recovery situations. (C-1)
- 8-3.14 Explain the self rescue position if unexpectedly immersed in moving water. (C-1)
- 8-3.15 Given a series of pictures identify which would be considered "confined spaces" and potentially oxygen deficient. (C-3)
- 8-3.16 Identify the hazards associated with confined spaces and risks posed to potential rescuers to include: (C-1)
- a. Oxygen deficiency
 - b. Chemical/ toxic exposure/ explosion
 - c. Engulfment
 - d. Machinery entrapment
 - e. Electricity
- 8-3.17 Identify components necessary to ensure site safety prior to confined space rescue attempts. (C-1)
- 8-3.18 Identify the poisonous gases commonly found in confined spaces to include: (C-1)
- a. Hydrogen sulfide (H₂S)
 - b. Carbon dioxide (CO₂)
 - c. Carbon monoxide (CO)

- d. Low / high oxygen concentrations (FiO_2)
 - e. Methane (CH_4)
 - f. Ammonia (NH_3)
 - g. Nitrogen dioxide (NO_2)
- 8-3.19 Explain the hazard of cave-in during trench rescue operations. (C-1)
- 8-3.20 Describe the effects of traffic flow on the highway rescue incident including limited access superhighways and regular access highways. (C-1)
- 8-3.21 List and describe the following techniques to reduce scene risk at highway incidents: (C-1)
- a. Apparatus placement
 - b. Headlights and emergency vehicle lighting
 - c. Cones, flares
 - d. Reflective and high visibility clothing
- 8-3.22 List and describe the hazards associated with the following auto/ truck components: (C-1)
- a. Energy absorbing bumpers
 - b. Air bag / supplemental restraint systems
 - c. Catalytic converters and conventional fuel systems
 - d. Stored energy
 - e. Alternate fuel systems
- 8-3.23 Given a diagram of a passenger auto, identify the following structures: (C-1)
- a. A, B, C, D posts
 - b. Fire wall
 - c. Unibody versus frame designs
- 8-3.24 Describe methods for emergency stabilization using rope, cribbing, jacks, spare tire, and come-a-longs for vehicles found on their: (C-1)
- a. Wheels
 - b. Side
 - c. Roof
 - d. Inclines
- 8-3.25 Describe the electrical hazards commonly found at highway incidents (above and below ground). (C-1)
- 8-3.26 Explain the difference between tempered and safety glass, identify its locations on a vehicle and how to break it safely. (C-3)
- 8-3.27 Explain typical door anatomy and methods to access through stuck doors. (C-1)
- 8-3.28 Explain SRS or "air bag" systems and methods to neutralize them. (C-1)
- 8-3.29 Define the following terms: (C-1)
- a. Low angle
 - b. High angle
 - c. Belay
 - d. Rappel
 - e. Scrambling
 - f. Hasty rope slide
- 8-3.30 Describe the procedure for stokes litter packaging for low angle evacuations. (C-1)
- 8-3.31 Explain the procedures for low angle litter evacuation to include: (C-1)
- a. Anchoring
 - b. Litter / rope attachment
 - c. Lowering and raising procedures

- 8-3.32 Explain techniques to be used in non-technical litter carries over rough terrain. (C-1)
- 8-3.33 Explain non-technical high angle rescue procedures using aerial apparatus. (C-1)
- 8-3.34 Develop specific skill in emergency stabilization of vehicles and access procedures and an awareness of specific extrication strategies. (C-1)
- 8-3.35 Explain assessment procedures and modifications necessary when caring for entrapped patients. (C-1)
- 8-3.36 List the equipment necessary for an "off road" medical pack. (C-1)

- 8-3.37 Explain specific methods of improvisation for assessment, spinal immobilization and extremity splinting. (C-1)
- 8-3.38 Explain the indications, contraindications and methods of pain control for entrapped patients. (C-1)
- 8-3.39 Explain the need for and techniques of thermal control for entrapped patients. (C-1)
- 8-3.40 Explain the pathophysiology of "crush trauma" syndrome. (C-1)
- 8-3.41 Develop an understanding of the medical issues involved in providing care for a patient in a rescue environment. (C-1)
- 8-3.42 Develop proficiency in patient packaging and evacuation techniques that pertain to hazardous or rescue environments. (C-1)
- 8-3.43 Explain the different types of "stokes" or basket stretchers and the advantages and disadvantages associated with each. (C-1)

AFFECTIVE OBJECTIVES

None identified for this unit.

- 8-3.44 Using cribbing, ropes, lifting devices, spare tires, chains, and hand winches, demonstrate the following stabilization procedures: (P-1)
 - a. Stabilization on all four wheels
 - b. Stabilization on its side
 - c. Stabilization on its roof
 - d. Stabilization on an incline/ embankments
- 8-3.45 Using basic hand tools demonstrate the following: (P-1)
 - a. Access through a stuck door
 - b. Access through safety and tempered glass
 - b. Access through the trunk
 - d. Access through the floor
 - e. Roof removal
 - f. Dash displacement/ roll-up
 - g. Steering wheel/ column displacement
 - h. Access through the roof
- 8-3.46 Demonstrate methods of "stokes" packaging for patients being: (P-1)
 - a. Vertically lifted (high angle)
 - b. Horizontally lifted (low angle)
 - c. Carried over rough terrain
- 8-3.47** Demonstrate methods of packaging for patients being vertically lifted without stokes litter stretcher packaging. (P-1)
- 8-3.48 Demonstrate the following litter carrying techniques: (P-1)
 - a. Stretcher lift straps
 - b. "Leap frogging"
 - c. Passing litters over and around obstructions

- 8-3.49 Demonstrate litter securing techniques for patients being evacuated by aerial apparatus. (P-1)
- 8-3.50 Demonstrate in-water spinal immobilization techniques. (P-1)
- 8-3.51 Demonstrate donning and properly adjusting a PFD. (P-1)
- 8-3.52 Demonstrate use of a throw bag. (P-1)

UNIT TERMINAL OBJECTIVE

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.

COGNITIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- 8-4.1 Explain the role of the paramedic / EMS responder in terms of the following: (C-1)
 - a. Incident size-up
 - b. Assessment of toxicologic risk
 - c. Appropriate decontamination methods
 - d. Treatment of semi-decontaminated patients
 - e. Transportation of semi-decontaminated patients
- 8-4.2 Size-up a hazardous materials (haz-mat) incident and determine the following: (C-1)
 - a. Potential hazards to the rescuers, public and environment
 - b. Potential risk of primary contamination to patients
 - c. Potential risk of secondary contamination to rescuers
- 8-4.3 Identify resources for substance identification, decontamination and treatment information including the following: (C-1)
 - a. Poison control center
 - b. Medical control
 - c. Material safety data sheets (MSDS)
 - d. Reference textbooks
 - e. Computer databases (CAMEO)
 - f. CHEMTREC
 - g. Technical specialists
 - h. Agency for toxic substances and disease registry
- 8-4.4 Explain the following terms / concepts: (C-1)
 - a. Primary contamination risk
 - b. Secondary contamination risk
- 8-4.5 List and describe the following routes of exposure: (C-1)
 - a. Topical
 - b. Respiratory
 - c. Gastrointestinal
 - d. Parenteral
- 8-4.6 Explain the following toxicologic principles: (C-1)
 - a. Acute and delayed toxicity
 - b. Route of exposure

- c. Local versus systemic effects
 - d. Dose response
 - e. Synergistic effects
- 8-4.7 Explain how the substance and route of contamination alters triage and decontamination methods. (C-1)
- 8-4.8 Explain the limitations of field decontamination procedures. (C-1)
- 8-4.9 Explain the use and limitations of personal protective equipment (PPE) in hazardous material situations. (C-1)
- 8-4.10 List and explain the common signs, symptoms and treatment for the following substances: (C-1)
- a. Corrosives (acids / alkalis)
 - b. Pulmonary irritants (ammonia / chlorine)
 - c. Pesticides (carbarnates / organophosphates)
 - d. Chemical asphyxiants (cyanide / carbon monoxide)
 - e. Hydrocarbon solvents (xylene, methylene chloride)
- 8-4.11 Explain the potential risk associated with invasive procedures performed on contaminated patients. (C-1)
- 8-4.12 Given a contaminated patient determine the level of decontamination necessary and: (C-1)
- a. Level of rescuer PPE
 - b. Decontamination methods
 - c. Treatment
 - d. Transportation and patient isolation techniques
- 8-4.13 Identify local facilities and resources capable of treating patients exposed to hazardous materials. (C-1)
- 8-4.14 Determine the hazards present to the patient and paramedic given an incident involving hazardous materials. (C-2)
- 8-4.15 Define the following and explain their importance to the risk assessment process: (C-1)
- a. Boiling point
 - b. Flammable / explosive limits
 - c. Flash point
 - d. Ignition temperature
 - e. Specific gravity
 - f. Vapor density
 - g. Vapor pressure
 - h. Water solubility
 - i. Alpha radiation
 - j. Beta radiation
 - k. Gamma radiation
- 8-4.16 Define the toxicologic terms and their use in the risk assessment process: (C-1)
- a. Threshold limit value (TLV)
 - b. Lethal concentration and doses (LD)
 - c. Parts per million / billion (ppm / ppb)
 - d. Immediately dangerous to life and health (IDLH)
 - e. Permissible exposure limit (PEL)
 - f. Short term exposure limit (TLV-STEL)
 - g. Ceiling level (TLV-C)
- 8-4.17 Given a specific hazardous material be able to do the following: (C-1)

- a. Research the appropriate information about its physical and chemical characteristics and hazards
 - b. Suggest the appropriate medical response
 - c. Determine risk of secondary contamination
- 8-4.18 Determine the factors which determine where and when to treat a patient to include: (C-)
- a. Substance toxicity
 - b. Patient condition
 - c. Availability of decontamination
- 8-4.19 Determine the appropriate level of PPE to include: (C-1)
- a. Types, application, use and limitations
 - b. Use of chemical compatibility chart
- 8-4.20 Explain decontamination procedures when functioning in the following modes: (C-1)
- a. Critical patient rapid two step decontamination process
 - b. Non-critical patient eight step decontamination process
- 8-4.21 Explain specific decontamination procedures. (C-1)
- 8-4.22 Explain the four most common decontamination solutions used to include: (C-1)
- a. Water
 - b. Water and tincture of green soap
 - c. Isopropyl alcohol
 - d. Vegetable oil
- 8-4.23 Identify the areas of the body difficult to decontaminate to include: (C-1)
- a. Scalp / hair
 - b. Ears / ear canals / nostrils
 - c. Axilla
 - d. Finger nails
 - e. Navel
 - f. Groin / buttocks / genitalia
 - g. Behind knees
 - h. Between toes, toe nails
- 8-4.24 Explain the medical monitoring procedures of hazardous material team members to be used both pre and post entry, to include: (C-1)
- a. Vital signs
 - b. Body weight
 - c. General health
 - d. Neurologic status
 - e. ECG
- 8-4.25 Explain the factors which influence the heat stress of hazardous material team personnel to include: (C-1)
- a. Hydration
 - b. Physical fitness
 - c. Ambient temperature
 - d. Activity
 - e. Level of PPE
 - f. Duration of activity
- 8-4.26 Explain the documentation necessary for Haz-Mat medical monitoring and rehabilitation operations. (C-1)
- a. The substance

- b. The toxicity and danger of secondary contamination
- c. Appropriate PPE and suit breakthrough time
- d. Appropriate level of decontamination
- e. Appropriate antidote and medical treatment
- f. Transportation method

8-4.27 Given a simulated hazardous substance, use reference material to determine the appropriate actions. (C-3)

8-4.28 Integrate the principles and practices of hazardous materials response in an effective manner to prevent and limit contamination, morbidity, and mortality

AFFECTIVE OBJECTIVES

None identified for this unit.

PSYCHOMOTOR OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

8-4.29 Demonstrate the donning and doffing of appropriate PPE. (P-1)

8-4.30 Set up and demonstrate an emergency two step decontamination process. (P-1)

8-4.31 Set up and demonstrate an eight step decontamination process. (P-1)

UNIT TERMINAL OBJECTIVE

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.

COGNITIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

8-5.1 Explain how EMS providers are often mistaken for the police. (C-1)

8-5.2 Explain specific techniques for risk reduction when approaching the following types of routine EMS scenes: (C-1)

- a. Highway encounters
- b. Violent street incidents
- c. Residences and "dark houses"

8-5.3 Describe warning signs of potentially violent situations. (C-1)

8-5.4 Explain emergency evasive techniques for potentially violent situations, including: (C-1)

- a. Threats of physical violence.
- b. Firearms encounters
- c. Edged weapon encounters

8-5.5 Explain EMS considerations for the following types of violent or potentially violent situations: (C-1)

- a. Gangs and gang violence

- b. Hostage/ sniper situations
 - c. Clandestine drug labs
 - d. Domestic violence
 - e. Emotionally disturbed people
 - f. Hostage/ sniper situations
- 8-5.6 Explain the following techniques: (C-1)
- a. Field "contact and cover" procedures during assessment and care
 - b. Evasive tactics
 - c. Concealment techniques
- 8-5.7 Describe police evidence considerations and techniques to assist in evidence preservation. (C-1)

AFFECTIVE OBJECTIVES

None identified for this unit.