

Florida Department of Education
CURRICULUM FRAMEWORK

Program Title: Paramedic
Occupational Area: Health Science Education

PSV-C

CIP Number 0317.020600
Program Number W170206-**Only those grandfathered in programs may use this number-CIP .0317020602**
Grade Level College Credits
Program Length 42 Credits
Certificate/1100 hours

- I. MAJOR CONCEPTS/CONTENT: This is an instructional program that prepares students for employment as paramedics (079.364-026) or SOC 29-2041 (Emergency Medical Technicians & Paramedics) to function at the basic pre-hospital emergency medical technician - paramedic level and treat various medical/trauma conditions, using appropriate equipment and materials. The program prepares students for certification as paramedics in accordance with Chapter 64E-2 of the Florida Administrative Code. The program must be approved by the Department of Health, Office of Emergency Medical Services, and the curriculum must adhere to the US Department of Transportation (DOT) 1998 Emergency Medical Technician- Paramedic National Standards Curriculum. This is the second level for a career in emergency medical services.

Paramedic content includes, but is not limited to: patient assessment, advanced airway management, cardiovascular emergencies, external and internal bleeding and shock, traumatic injuries, fractures, dislocations, sprains, poisoning, heart attack, stroke, diabetes, pharmacology, medication administration, respiratory emergencies, endocrine emergencies, acute abdomen, communicable diseases, patients with abnormal behavior, substance abuse, the unconscious state, emergency childbirth, pediatric and geriatric emergencies, burns, environmental hazards, communications, documentation, extrication, mass casualty incident, incident command system, and transportation of patient.

The student must be proficient in patient assessment and evaluation, the use of suctioning devices, oral and nasal airways, resuscitation devices, oxygen equipment, sphygmomanometer and stethoscope, splints of all types, pneumatic antishock garments, medication administration techniques including intravenous, intramuscular, subcutaneous, inhalation, intraosseous, endotracheal administration, extrication tools, dressings and bandages, stretchers and patient carrying devices. Students must complete this program, or demonstrate the mastery of skills standards contained in this program, before advancing to the final program in this cluster: Emergency Medical Services Associate Degree.

This program meets the Department of Health's HIV/AIDS education requirements as specified in Section 381.0034, Florida Statutes. Upon completion of this program, the instructor will provide a certificate to the student verifying that the HIV/AIDS requirements have been met.

A Paramedic program must be taught by a Florida certified paramedic with two years experience meeting the qualifications as set forth in 64E-2 F. A. C.

- II. LABORATORY ACTIVITIES: Laboratory facilities and equipment must be provided. Laboratory activities must be correlated with didactic instruction, reinforced in the clinical area, and must be supervised by an instructor. The Human Patient Simulator (HPS) may be used for a limited number of clinical hours with prior approval of governing boards and/or agencies. The recommended instructor-student ratio should not exceed 1:6 in clinical. Hospital activity shall include supervised experience in the hospital setting. Clinical activity shall include appropriate patient assessment skills, intervention and documentation relevant to each clinical rotation.

Field Internship Activities: Field internship shall include a competency-based program to assure appropriate pre-hospital assessment and management of medical and trauma patients, as well as associated manual skills. The field internship activity shall include supervised experience in the field setting with a certified ALS transport ambulance agency or ALS fire department. The field internship activity shall include a minimum of 50 emergency runs resulting in patient care and/or transport appropriate for the Paramedic. In addition, the patient care component should include minimum competencies in patient assessment, airway management and ventilation, IV therapy, medication administration, cardiovascular, pediatric, trauma and medical emergencies.

- III. Special Note: An appropriate Career/Technical Student Organization (CSO) for providing the development of professionalism and leadership skills should be provided. These organizations may include HOSA (Health Occupations Students of America, Inc.), or an organization of the school's choice. This suggestion was made in light of the nature of EMT and Paramedic students, which includes the adult learner already involved in unions or EMS professional groups as well as the newly graduated high school senior. CSO, when provided, shall be an integral part of the vocational instructional program, and the activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065(8), FAC.

An American Heart Association or Red Cross certification in "professional" BLS or an equivalent is required of all candidates for entrance into a Paramedic program. A student physical requirement must be met in accordance with HRS guidelines. A student must demonstrate a basic vocational/college-level preparation competency in English, mathematics and reading on either a standardized entrance examination or through appropriate remedial education/instruction.

The standard length of this program is 1100 clock hours or 42 credit hours. This includes the Health Science Core (90 clock hours). The Student Performance Standards for Paramedic were adapted and condensed from the U S Department of Transportation 1998 Emergency Medical Technician- Paramedic National Standard Curriculum Instructor's Lesson Plans. Administrators and instructors should refer to these materials for additional detail.

This program meets the Department of Health HIV/AIDS and domestic violence education requirements. Upon completion of this program the instructor will provide a certificate to the student verifying that the HIV/AIDS and domestic violence requirements have been met.

When the word demonstrate is used in a standard, it shall require the actual performance and operation be accomplished, unless otherwise indicated. Simulation, explanation, and illustration may be substituted when actual operation is not feasible.

Reinforcement of basic skills in English, mathematics, and science appropriate for the job preparatory programs occurs through vocational classroom instruction and applied laboratory procedures or practice.

SCANS Competencies: Instructional strategies for this program must include methods that require students to identify, organize, and use resources appropriately; to work with each other cooperatively and productively; to acquire and use information; to understand social, organizational, and technological systems; and to work with a variety of tools and equipment. Instructional strategies must also incorporate the methods to improve students' personal qualities and high-order thinking skills.

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Adult students with disabilities must self-identify and request such services. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

This program may be offered in courses. Vocational credit shall be awarded to the student on a transcript in accordance with Section 1001.44 F.S.

Equipment List: A generic equipment list is available for this program and is printed in a supplement to this document.

INTENDED OUTCOMES:

Outcomes 01-11 are referred to as the Health Careers Core and do not have to be completed if the student has previously completed the Core in another health science program. The Core should be offered first or concurrently with the first course in the program. Following the successful completion of the core, the student is eligible to take the national internet certification examination (Nocti) with instructor approval and the completion of a portfolio.

After successfully completing the core curriculum of this program, the student will be able to:

HEALTH CAREERS CORE (1-11) OCP A-Basic Healthcare Worker-Industry Title- SOC 31-9099 Healthcare Support Worker, All Other

- 01.0 Demonstrate knowledge of the health care delivery system and health occupations.
- 02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
- 03.0 Demonstrate legal and ethical responsibilities.
- 04.0 Demonstrate an understanding of and apply wellness and disease concepts.
- 05.0 Recognize and practice safety and security procedures.
- 06.0 Recognize and respond to emergency situations.
- 07.0 Recognize and practice infection control procedures.
- 08.0 Demonstrate computer literacy.
- 09.0 Demonstrate employability skills.
- 10.0 Demonstrate knowledge of blood borne diseases, including AIDS.
- 11.0 Apply basic math and science skills.

PARAMEDIC (12.0 - 62.0) OCP B 079.364-026 or SOC 29-2041 Emergency Medical Technician and Paramedic

- 12.0 Demonstrate knowledge of the Paramedic's roles and responsibilities.
- 13.0 Describe wellness in EMS.

- 14.0 Describe primary injury prevention.
- 15.0 Describe medical/legal considerations.
- 16.0 Describe emergency medical services ethics.
- 17.0 Apply the general concepts of pathophysiology.
- 18.0 Demonstrate the knowledge of pharmacology and administer medications.
- 19.0 Demonstrate the knowledge of the venous circulation and safely administer medications.
- 20.0 Demonstrate effective therapeutic communications.
- 21.0 Demonstrate the knowledge of human development and assessment communication strategies.
- 22.0 Establish and/or maintain a patent airway and ventilation.
- 23.0 Demonstrate general patient assessment and initial management.
- 24.0 Demonstrate the technique of a physical exam to perform a patient assessment.
- 25.0 Demonstrate the ability to apply a process of clinical decision making.
- 26.0 Describe and demonstrate EMS communication systems.
- 27.0 Demonstrate proper patient documentation.
- 28.0 Integrate the principles of kinematics to enhance the patient assessment.
- 29.0 Implement the proper treatment plan for a patient with shock or hemorrhage.
- 30.0 Implement the proper treatment plan for a patient with soft tissue trauma.
- 31.0 Implement the proper treatment plan for a patient with burn injuries.
- 32.0 Implement the proper treatment plan for a trauma patient with a head injury.
- 33.0 Implement the proper treatment plan for a patient with suspected spinal injury.
- 34.0 Implement the proper treatment plan for a patient with suspected thoracic injury.
- 35.0 Implement the proper treatment plan for a patient with suspected abdominal trauma.
- 36.0 Implement the proper treatment plan for a patient with suspected musculoskeletal injury.
- 37.0 Implement the proper treatment plan for a patient with suspected respiratory problems.
- 38.0 Implement the proper treatment plan for a patient with suspected cardiovascular disease.
- 39.0 Implement the proper treatment plan for a patient with a suspected neurologic problem.
- 40.0 Implement the proper treatment plan for a patient with suspected endocrine problem.
- 41.0 Implement the proper treatment plan for a patient with a suspected allergic or anaphylactic reaction.
- 42.0 Implement the proper treatment plan for a patient with a suspected gastroenterologic problem.
- 43.0 Implement the proper treatment plan for a patient with a suspected renal or urologic problem.
- 44.0 Implement the proper treatment plan for a patient with suspected toxic exposure.
- 45.0 Implement the proper treatment plan for a hematopoietic patient.
- 46.0 Implement the proper treatment plan for a patient with suspected environmental problems.
- 47.0 Implement the proper treatment plan for a patient with suspected infectious or communicable disease.
- 48.0 Implement the proper treatment plan for a patient with a suspected behavioral emergency.
- 49.0 Implement the proper treatment plan for a patient with a suspected gynecological emergency.
- 50.0 Implement the proper treatment plan for a patient with a suspected obstetrical emergency.
- 51.0 Implement the proper treatment plan for a neonatal emergency.
- 52.0 Implement the proper treatment plan for a pediatric patient.
- 53.0 Implement the proper treatment plan for a geriatric patient.

- 54.0 Implement the proper treatment plan for a patient who has sustained abuse or assault.
- 55.0 Implement the proper treatment plan for a variety of diverse patients with a suspected emergency.
- 56.0 Implement the proper treatment plan for the chronic care patient.
- 57.0 Implement the proper treatment plan for patients with common complaints.
- 58.0 Demonstrate the proper procedures to ensure safe and effective ground and air transportation.
- 59.0 Integrate the principles of general incident management and multiple casualty incident management.
- 60.0 Integrate the principles of rescue awareness management.
- 61.0 Integrate the principles of human hazard awareness.
- 62.0 Integrate the principles of general incident management of hazardous materials emergencies.

Florida Department of Education
STUDENT PERFORMANCE STANDARDS

PROGRAM TITLE: Paramedic
POSTSECONDARY NUMBER: 0317.020600

HEALTH SCIENCE CORE : The Health Science Core is a core of basic knowledge necessary for any health occupations career. Students who have previously completed the Health Science Core in any other health occupations program do not have to repeat intended outcomes 01-11.

OCP A-Basic Healthcare Worker-Industry Title

01.0 DEMONSTRATE KNOWLEDGE OF THE HEALTH CARE DELIVERY SYSTEM AND HEALTH OCCUPATIONS -- The student will be able to:

- 01.01 Identify the basic components of the health care delivery system.
- 01.02 Describe the various types of health care providers and the range of services available including resources to victims of domestic violence.
- 01.03 Describe the composition and functions of a health care team.
- 01.04 Identify the general roles and responsibilities of the individual members of the health care team.
- 01.05 Develop a basic understanding of human needs throughout the lifespan.
- 01.06 Explain the importance of maintaining professional competence through continuing education.
- 01.07 Describe trends affecting the delivery system of health care.

02.0 DEMONSTRATE THE ABILITY TO COMMUNICATE AND USE INTERPERSONAL SKILLS EFFECTIVELY -- The student will be able to:

- 02.01 Develop basic listening skills.
- 02.02 Develop basic observational skills and related documentation strategies in written and oral form.
- 02.03 Identify characteristics of successful and unsuccessful communication including barriers.
- 02.04 Respond to verbal and non-verbal cues.
- 02.05 Compose written communication using correct spelling, grammar, and format.
- 02.06 Use appropriate medical terminology and abbreviations.
- 02.07 Recognize the importance of courtesy and respect for patients and other health care workers and maintain good interpersonal relationships.
- 02.08 Recognize the importance of patient/client education regarding health care.
- 02.09 Adapt communication skills to varied levels of understanding and cultural orientation.
- 02.10 Demonstrate telephone usage including taking messages.
- 02.11 Demonstrate ability to give and follow directions.
- 02.12 Distinguish between factual reports and personal opinion.
- 02.13 Read and discuss technical material.

03.0 DEMONSTRATE LEGAL AND ETHICAL RESPONSIBILITIES -- The student will be able to:

- 03.01 Discuss the legal framework of the health care occupation.
- 03.02 Explain the medical liability of health care workers.
- 03.03 Explain the patients' "Bill of Rights."
- 03.04 Describe a Code of Ethics consistent with the health care occupation.

- 03.05 Discuss the importance of maintaining confidentiality of information, including computer information.
 - 03.06 Recognize the limits of authority and responsibility of health care workers.
 - 03.07 Recognize and report illegal and unethical practices of health care workers.
 - 03.08 Recognize and report abuse and neglect.
 - 03.09 Recognize sexual harassment and domestic violence.
- 04.0 DEMONSTRATE AN UNDERSTANDING OF AND APPLY WELLNESS AND DISEASE CONCEPTS -- The student will be able to:
- 04.01 Develop a basic understanding of the structure and function of the body systems.
 - 04.02 Identify personal health practices and environmental factors which affect optimal function of each of the major body systems.
 - 04.03 Identify psychological reactions to illness including defense mechanisms.
 - 04.04 Recognize the steps in the grief process.
 - 04.05 Explain basic concepts of positive self image, wellness and stress.
 - 04.06 Develop a wellness and stress control plan that can be used in personal and professional life.
 - 04.07 Explain the nutrition pyramid.
- 05.0 RECOGNIZE AND PRACTICE SAFETY AND SECURITY PROCEDURES -- The student will be able to:
- 05.01 Demonstrate the safe use of medical equipment.
 - 05.02 Recognize and report safety hazards.
 - 05.03 Identify and practice security procedures for medical supplies and equipment.
 - 05.04 Demonstrate proper body mechanics.
 - 05.05 Demonstrate the procedure for properly identifying patients.
 - 05.06 Demonstrate procedures for the safe transport and transfer of patients.
 - 05.07 Describe fire safety and evacuation procedures.
- 06.0 RECOGNIZE AND RESPOND TO EMERGENCY SITUATIONS -- The student will be able to:
- 06.01 Monitor and record vital signs.
 - 06.02 Describe legal parameters relating to the administration of emergency care.
 - 06.03 Attain and maintain CPR skill at the appropriate level.
 - 06.04 Demonstrate basic understanding of first aid and emergency care.
 - 06.05 Recognize adverse drug related emergencies and take appropriate first aid action.
- 07.0 RECOGNIZE AND PRACTICE INFECTION CONTROL PROCEDURES -- The student will be able to:
- 07.01 Demonstrate knowledge of medical asepsis and practice procedures such as handwashing and isolation.
 - 07.02 Demonstrate knowledge of surgical asepsis as utilized in sterilization.
 - 07.03 Describe how to dispose correctly of biohazardous materials, according to appropriate government guidelines such as OSHA.
- 08.0 DEMONSTRATE COMPUTER LITERACY -- The student will be able to:
- 08.01 Define terms and demonstrate basic computer skills.

- 08.02 Describe the uses of computers in health care.
- 09.0 DEMONSTRATE EMPLOYABILITY SKILLS -- The student will be able to:
- 09.01 Conduct a job search.
 - 09.02 Secure information about a job.
 - 09.03 Identify documents that may be required when applying for a job.
 - 09.04 Complete a job application form correctly.
 - 09.05 Demonstrate competence in job interview techniques.
 - 09.06 Identify or demonstrate appropriate responses to criticism from employer, supervisor, or other persons.
 - 09.07 Identify acceptable work habits.
 - 09.08 Demonstrate knowledge of how to make job changes appropriately.
 - 09.09 Demonstrate desirable health habits.
 - 09.10 Recognize appropriate affective/professional behavior.
 - 09.11 Write an appropriate resume.
- 10.0 DEMONSTRATE KNOWLEDGE OF BLOOD BORNE DISEASES, INCLUDING AIDS -- The student will be able to:
- 10.01 Distinguish between fact and fallacy about the transmission and treatment of diseases caused by blood borne pathogens including Hepatitis B.
 - 10.02 Identify community resources and services available to the individuals with diseases caused by blood borne pathogens.
 - 10.03 Identify "at risk" behaviors which promote the spread of diseases caused by blood borne pathogens and the public education necessary to combat the spread of these diseases.
 - 10.04 Apply infection control techniques designed to prevent the spread of diseases caused by blood borne pathogens to the care of all patients following Centers for Disease Control (CDC) guidelines.
 - 10.05 Demonstrate knowledge of the legal aspects of AIDS, including testing.
- 11.0 APPLY BASIC MATH AND SCIENCE SKILLS -- The student will be able to:
- 11.01 Draw, read, and report on graphs, charts and tables.
 - 11.02 Measure time, temperature, distance, capacity, and mass/weight.
 - 11.03 Make and use measurements in both traditional and metric units.
 - 11.04 Make estimates and approximations and judge the reasonableness of the result.
 - 11.05 Convert from regular to 24 hour time.
 - 11.06 Demonstrate ability to evaluate and draw conclusions.
 - 11.07 Organize and communicate the results obtained by observation and experimentation.
 - 11.08 Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solution of such questions.
 - 11.09 Calculate ratios.

PARAMEDIC: Intended outcomes 12-62 complete the occupational exit of the Paramedic. The outcomes may be taught as one or more modules at the postsecondary level. At the completion of these competencies, the student will have reached OCP B Paramedic.

- 12.0 DEMONSTRATE KNOWLEDGE OF THE PARAMEDIC'S ROLES AND RESPONSIBILITIES-- 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. The student will be able to:

- 12.01 Define terms, including but not limited to: EMS systems, licensure, registration, profession, professionalism, health care professional, ethics, peer review, medical direction and protocols.
 - 12.02 Describe the attributes of a paramedic as a health care professional.
 - 12.03 Explain paramedic licensure/ certification, recertification, and reciprocity requirements in his or her state.
 - 12.04 Evaluate the importance of maintaining one's paramedic license/ certification.
 - 12.05 Describe the benefits of paramedic continuing education.
 - 12.06 Discuss the role of national associations and of a national registry agency.
 - 12.07 Discuss Chapter 401, Florida Statutes, and Chapter 64-E, Florida Administrative Code
 - 12.08 Discuss the roles of various EMS standard setting agencies.
 - 12.09 Identify the standards (components) of an EMS System as defined by the National Highway Traffic Safety Administration.
 - 12.10 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.
 - 12.11 Describe the importance of quality EMS research to the future of EMS.
 - 12.12 List the primary and additional responsibilities of paramedics.
 - 12.13 Describe the role of the EMS physician in providing medical direction.
 - 12.14 Describe the benefits of medical direction, both on-line and off-line.
 - 12.15 Provide examples of local protocols.
 - 12.16 Discuss prehospital and out-of-hospital care as an extension of the physician.
 - 12.17 Describe the relationship between a physician on the scene, the paramedic on the scene, and the EMS physician providing on-line medical direction.
 - 12.18 Define the role of the paramedic relative to the safety of the crew, the patient, and bystanders.
 - 12.19 Assess personal practices relative to the responsibility for personal safety, the safety of the crew, the patient, and bystanders.
 - 12.20 Advocate the need for injury prevention, including abusive situations.
 - 12.21 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.
- 13.0 DESCRIBE WELLNESS IN EMS-- 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. At the completion of this unit, the paramedic student will be able to:
- 13.01 Discuss the concept of wellness and its benefits.
 - 13.02 Discuss how cardiovascular endurance, muscle strength, and flexibility contribute to physical fitness.
 - 13.03 Describe the impact of shift work on circadian rhythms.
 - 13.04 Discuss how periodic risk assessments and knowledge of warning signs contribute to cancer and cardiovascular disease prevention.
 - 13.05 Differentiate proper from improper body mechanics for lifting and moving patients in emergency and non-emergency situations.
 - 13.06 Describe the problems that a paramedic might encounter in a hostile situation and the techniques used to manage the situation.
 - 13.07 Describe the equipment available for self-protection when confronted with a variety of adverse situations.
 - 13.08 Describe the three phases of the stress response.
 - 13.09 List factors that trigger the stress response.

- 13.10 Differentiate between normal/ healthy and detrimental reactions to anxiety and stress.
 - 13.11 Identify causes of stress in EMS.
 - 13.12 Identify and describe the defense mechanisms and management techniques commonly used to deal with stress.
 - 13.13 Describe the components of critical incident stress management (CISM).
 - 13.14 Describe the needs of the paramedic when dealing with death and dying.
 - 13.15 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.
 - 13.16 Discuss the importance of universal precautions and body substance isolation practices.
 - 13.17 Defend the need to treat each patient as an individual, with respect and dignity.
 - 13.18 Promote and practice stress management techniques.
 - 13.19 Defend the need to respect the emotional needs of dying patients and their families.
 - 13.20 Advocate and practice the use of personal safety precautions in all scene situations.
- 14.0 DESCRIBE PRIMARY INJURY PREVENTION-- 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. At the completion of this unit, the paramedic student will be able to:
- 14.01 Describe the incidence, morbidity and mortality of unintentional and alleged unintentional events.
 - 14.02 Identify the human, environmental, and socioeconomic impact of unintentional and alleged unintentional events.
 - 14.03 Identify health hazards and potential crime areas within the community.
 - 14.04 Identify the role of EMS in local municipal and community prevention programs.
 - 14.05 Value the contribution of effective documentation as one justification for funding of prevention programs.
- 15.0 DESCRIBE MEDICAL/LEGAL CONSIDERATIONS -- At the completion of this unit, the paramedic student will understand the legal issues that impact decisions made in the out-of-hospital environment. At the completion of this unit, the paramedic student will be able to:
- 15.01 Differentiate between legal and ethical responsibilities.
 - 15.02 Differentiate between licensure and certification as they apply to the paramedic.
 - 15.03 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.
 - 15.04 Define terms, including but not limited to, the following: abandonment, battery, breach of duty, consent (expressed, implied, informed, voluntary), DNR orders, duty to act, emancipated minor, false imprisonment, liability, libel, negligence, proximate cause, scope of practice, slander, and tort.
 - 15.05 Differentiate between the scope of practice and the standard of care for paramedic practice.
 - 15.06 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.
 - 15.07 Describe the four elements that must be present in order to prove negligence.

- 15.08 Discuss the legal concept of immunity, including Good Samaritan statutes and governmental immunity, as it applies to the paramedic.
 - 15.09 Explain the importance and necessity of patient confidentiality and the standards for maintaining patient confidentiality that apply to the paramedic.
 - 15.10 Differentiate among expressed, informed, implied, and involuntary consent.
 - 15.11 Given a scenario, demonstrate appropriate patient management and care techniques in a refusal of care situation.
 - 15.12 Describe what constitutes abandonment.
 - 15.13 Differentiate between assault and battery and describe how to avoid each.
 - 15.14 Describe the actions that the paramedic should take to preserve evidence at a crime or accident scene.
 - 15.15 Describe the importance of providing accurate documentation (oral and written) in substantiating an incident.
 - 15.16 Describe the characteristics of a patient care report required to make it an effective legal document.
- 16.0 DESCRIBE EMERGENCY MEDICAL SERVICES ETHICS-- 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. At the completion of this unit, the paramedic student will be able to:
- 16.01 Distinguish between ethical and moral decisions.
 - 16.02 Identify the premise that should underlie the paramedic's ethical decisions in out-of hospital care.
 - 16.03 Analyze the relationship between the law and ethics in EMS.
 - 16.04 Describe the criteria necessary to honor an advance directive in your state.
- 17.0 APPLY THE GENERAL CONCEPTS OF PATHOPHYSIOLOGY-- 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. At the completion of this unit, the paramedic student will be able to:
- 17.01 Describe cellular injury and cellular death.
 - 17.02 Describe the factors that precipitate disease in the human body.
 - 17.03 Discuss analyzing disease risk.
 - 17.04 Describe environmental risk factors.
 - 17.05 Discuss familial diseases and associated risk factors.
 - 17.06 Discuss hypoperfusion.
 - 17.07 Define terms including but not limited to: cardiogenic, hypovolemic, neurogenic, anaphylactic and septic shock.
 - 17.08 Describe multiple organ dysfunction syndrome.
 - 17.09 Describe the inflammation response.
 - 17.10 Describe the systemic manifestations of the inflammation response.
 - 17.11 Describe the resolution and repair from inflammation.
 - 17.12 Discuss hypersensitivity.
 - 17.13 Describe deficiencies in immunity and inflammation.
 - 17.14 Describe homeostasis as a dynamic steady state.
 - 17.15 Describe neuroendocrine regulation.
- 18.0 DEMONSTRATE KNOWLEDGE OF PHARMACOLOGY AND ADMINISTER MEDICATIONS-- 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 pharmacologic management plan. At the completion of this unit, the paramedic student will be able to:

- 18.01 Differentiate among the chemical, generic (nonproprietary), and trade (proprietary) names of a drug.
- 18.02 List the four main sources of drug products.
- 18.03 Describe how drugs are classified.
- 18.04 List legislative acts controlling drug use and abuse in the United States.
- 18.05 Differentiate among Schedule I, II, III, IV, and V substances.
- 18.06 Discuss standardization of drugs.
- 18.07 Discuss investigational drugs, including the Food and Drug Administration (FDA) approval process and the FDA classifications for newly approved drugs.
- 18.08 Discuss the paramedic's responsibilities and scope of management pertinent to the administration of medications.
- 18.09 List and describe general properties of drugs.
- 18.10 List and describe liquid and solid drug forms.
- 18.11 List and differentiate routes of drug administration.
- 18.12 Differentiate between enteral and parenteral routes of drug administration.
- 18.13 Describe mechanisms of drug action.
- 18.14 Describe the process called pharmacokinetics, pharmacodynamics, including theories of drug action, drug-response relationship, factors altering drug responses, predictable drug responses, iatrogenic drug responses, and unpredictable adverse drug responses.
- 18.15 Synthesize patient history information and assessment findings to form a field impression.

19.0 DEMONSTRATE KNOWLEDGE OF THE VENOUS CIRCULATION AND SAFELY ADMINISTER MEDICATIONS-- At the completion of this unit, the paramedic student will be able to safely and precisely access the venous circulation and administer medications. At the completion of this unit, the paramedic student will be able to:

- 19.01 Review the specific anatomy and physiology pertinent to medication administration.
- 19.02 Review mathematical principles.
- 19.03 Discuss formulas as a basis for performing drug calculations.
- 19.04 Describe the indications, equipment needed, technique used, precautions, and general principles of peripheral venous or external jugular cannulation.
- 19.05 Describe the indications, equipment needed, technique used, precautions, and general principles of intraosseous needle placement and infusion.
- 19.06 Discuss the "six rights" of drug administration and correlate these with the principles of medication administration.
- 19.07 Describe the use of universal precautions and body substance isolation (BSI) procedures when administering a medication.
- 19.08 Describe the equipment needed and general principles of administering oral medications.
- 19.09 Describe the indications, equipment needed, techniques used, precautions, and general principles of administering medications by the inhalation route.
- 19.10 Describe the indications, equipment needed, techniques used, precautions, and general principles of administering medications by the gastric tube.
- 19.11 Describe the indications, equipment needed, techniques used, precautions, and general principles of rectal medication administration.
- 19.12 Differentiate among the different percutaneous routes of medication administration.

- 19.13 Describe the purpose, equipment needed, techniques used, complications, and general principles for obtaining a blood sample.
 - 19.14 Synthesize a pharmacologic management plan including medication administration.
 - 19.15 Demonstrate cannulation of peripheral or external jugular veins.
 - 19.16 Demonstrate intraosseous needle placement and infusion.
 - 19.17 Demonstrate clean technique during medication administration.
 - 19.18 Demonstrate administration of oral medications.
 - 19.19 Demonstrate administration of medications by the inhalation route.
- 20.0 DEMONSTRATE EFFECTIVE THERAPEUTIC COMMUNICATION-- 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. At the completion of this unit, the paramedic student will be able to:
- 20.01 Identify internal and external factors that affect a patient/ bystander interview conducted by a paramedic.
 - 20.02 Restate the strategies for developing patient rapport.
 - 20.03 Summarize the methods to assess mental status based on interview techniques.
 - 20.04 Discuss the strategies for interviewing a patient who is unmotivated to talk.
 - 20.05 Summarize developmental considerations of various age groups that influence patient interviewing.
 - 20.06 Restate unique interviewing techniques necessary to employ with patients who have special needs.
 - 20.07 Discuss interviewing considerations used by paramedics in cross-cultural communications.
- 21.0 DEMONSTRATE THE KNOWLEDGE OF HUMAN DEVELOPMENT WITH ASSESSMENT AND COMMUNICATION STRATEGIES-- 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. At the completion of this unit, the paramedic student will be able to:
- 21.01 Compare the physiological and psychosocial characteristics of an infant with those of an early adult.
 - 21.02 Compare the physiological and psychosocial characteristics of a toddler with those of an early adult.
 - 21.03 Compare the physiological and psychosocial characteristics of a pre-school child with those of an early adult.
 - 21.04 Compare the physiological and psychosocial characteristics of a school-aged child with those of an early adult.
 - 21.05 Compare the physiological and psychosocial characteristics of an adolescent with those of an early adult.
 - 21.06 Compare the physiological and psychosocial characteristics of a middle aged adult with those of an early adult.
- 22.0 ESTABLISH AND/OR MAINTAIN A PATENT AIRWAY AND VENTILATION-- 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. At the completion of this unit, the paramedic student will be able to:
- 22.01 Explain the primary objective of airway maintenance.
 - 22.02 Explain the differences between adult and pediatric airway anatomy.
 - 22.03 Define gag reflex.
 - 22.04 List the concentration of gases that comprise atmospheric air.
 - 22.05 Describe the measurement of oxygen in the blood.
 - 22.06 Describe the measurement of carbon dioxide in the blood.

- 22.07 Describe peak expiratory flow.
 - 22.08 List factors that cause decreased oxygen concentrations in the blood.
 - 22.09 List the factors that increase and decrease carbon dioxide production in the body.
 - 22.10 Define pulsus paradoxes.
 - 22.11 Describe the Sellick (cricoid pressure) maneuver.
 - 22.12 Describe the use of an oral and nasal airway.
 - 22.13 Describe indications, contraindications, advantages, disadvantages, complications, and technique for ventilating a patient with an automatic transport ventilator (ATV). therapy regulator).
 - 22.14 Describe the indications, contraindications, advantages, disadvantages, complications, liter flow range, and concentration of delivered oxygen for supplemental oxygen delivery devices.
 - 22.15 Define, identify and describe a tracheostomy, stoma, and tracheostomy tube.
 - 22.16 Define, identify, and describe a laryngectomy.
 - 22.17 Describe the special considerations in airway management and ventilation for the pediatric patient.
 - 22.18 Describe the indications, contraindications, advantages, disadvantages, complications and equipment for rapid sequence intubation with neuromuscular blockade.
 - 22.19 Identify neuromuscular blocking drugs and other agents used in rapid sequence intubation.
 - 22.20 Describe the indications, contraindications, advantages, disadvantages, complications and equipment for sedation during intubation.
 - 22.21 Describe the indications, contraindications, advantages, disadvantages and complications for performing an open cricothyrotomy.
 - 22.22 Describe methods of assessment for confirming correct placement of an endotracheal tube.
 - 22.23 Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for extubation.
 - 22.24 Describe methods of endotracheal intubation in the pediatric patient.
 - 22.25 Perform pulse oximetry.
 - 22.26 Perform end-tidal CO₂ detection.
- 23.0 DEMONSTRATE GENERAL PATIENT ASSESSMENT AND INITIAL MANAGEMENT-- 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, and the paramedic student will be able to explain the pathophysiological significance of physical exam findings. At the completion of this unit, the paramedic student will be able to:
- 23.01 Describe the techniques of history taking.
 - 23.02 Demonstrate the importance of empathy when obtaining a health history.
 - 23.03 Describe the techniques of inspection, palpation, percussion, and auscultation.
 - 23.04 Describe the evaluation of mental status.
 - 23.05 Distinguish the importance of abnormal findings of the assessment of the skin.
 - 23.06 Describe the examination of the head and neck.
 - 23.07 Differentiate normal and abnormal assessment findings of the mouth and pharynx.
 - 23.08 Appreciate the limitations of conducting a physical exam in the out-of-hospital environment.
 - 23.09 Demonstrate the examination of skin, hair and nails.
 - 23.10 Demonstrate the examination of the head and neck.
 - 23.11 Demonstrate the examination of the eyes.
 - 23.12 Demonstrate the examination of the ears.
 - 23.13 Demonstrate the examination of the nose.

- 23.14 Demonstrate the examination of the mouth and pharynx.
- 23.15 Demonstrate the examination of the neck.
- 23.16 Demonstrate the examination of the thorax and ventilation.
- 23.17 Demonstrate the examination of the posterior chest.
- 23.18 Demonstrate auscultation of the chest.
- 23.19 Demonstrate percussion of the chest.
- 23.20 Demonstrate the examination of the arterial pulse including location, rate, rhythm, and amplitude.
- 23.21 Demonstrate special examination techniques of the cardiovascular examination.
- 23.22 Demonstrate the examination of the abdomen.
- 23.23 Demonstrate auscultation of the abdomen.
- 23.24 Demonstrate the external visual examination of the female genitalia.
- 23.25 Demonstrate the examination of the male genitalia.
- 23.26 Demonstrate the examination of the peripheral vascular system.
- 23.27 Demonstrate the examination of the musculoskeletal system.
- 23.28 Demonstrate the examination of the nervous system.

24.0 DEMONSTRATE TECHNIQUES OF A PHYSICAL EXAM TO PERFORM A PATIENT ASSESSMENT--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. At the completion of this unit, the paramedic student will be able to:

- 24.01 Describe common hazards found at the scene of a trauma and a medical patient.
- 24.02 Discuss common mechanisms of injury/ nature of illness.
- 24.03 Explain the reasons for identifying the need for additional help or assistance.
- 24.04 Summarize the reasons for forming a general impression of the patient.
- 24.05 Discuss methods of assessing mental status.
- 24.06 Categorize levels of consciousness in the adult, infant and child.
- 24.07 Discuss methods of assessing the airway in the adult, child and infant patient.
- 24.08 State reasons for management of the cervical spine once the patient has been determined to be a trauma patient.
- 24.09 Describe methods used for assessing if a patient is breathing.
- 24.10 Distinguish between methods of assessing breathing in the adult, child and infant patient.
- 24.11 Compare the methods of providing airway care to the adult, child and infant patient.
- 24.12 Differentiate between locating and assessing a pulse in an adult, child and infant patient.
- 24.13 Discuss the need for assessing the patient for external bleeding.
- 24.14 Describe normal and abnormal findings when assessing skin color, temperature, and condition.
- 24.15 Explain the reason for prioritizing a patient for care and transport.
- 24.16 Describe the evaluation of patient's perfusion status based on findings in the initial assessment.
- 24.17 State the reasons for performing a rapid trauma assessment.
- 24.18 Discuss the reason for performing a focused history and physical exam.
- 24.19 Discuss the components of the detailed physical exam in relation to the techniques of examination.
- 24.20 Discuss the reasons for repeating the initial assessment as part of the on-going assessment.
- 24.21 Describe the components of the on-going assessment.
- 24.22 Discuss medical identification devices/ systems.
- 24.23 Explain the rationale for crew members to evaluate scene safety prior to entering.
- 24.24 Explain the value of performing an initial assessment.

- 24.25 Observe various scenarios and identify potential hazards.
 - 24.26 Demonstrate the scene-size-up.
 - 24.27 Demonstrate the techniques for assessing mental status.
 - 24.28 Demonstrate the techniques for assessing the airway.
 - 24.29 Demonstrate the techniques for assessing if the patient is breathing.
 - 24.30 Demonstrate the techniques for assessing if the patient has a pulse.
 - 24.31 Demonstrate the techniques for assessing the patient for external bleeding.
 - 24.32 Demonstrate the techniques for assessing the patient's skin color, temperature, and condition.
 - 24.33 Demonstrate the ability to prioritize patients.
 - 24.34 Perform a detailed physical examination.
 - 24.35 Demonstrate the skills involved in performing the on-going assessment.
- 25.0 DEMONSTRATE THE ABILITY TO APPLY A PROCESS OF CLINICAL DECISION MAKING -- 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. At the end of this unit, the paramedic student will be able to:
- 25.01 Compare the factors influencing medical care in the out-of-hospital environment to other medical settings.
 - 25.02 Differentiate between critical life-threatening, potentially life-threatening, and non life-threatening patient presentations.
 - 25.03 Evaluate the benefits and shortfalls of protocols, standing orders and patient care algorithms.
 - 25.04 Define the components, stages and sequences of the critical thinking process for paramedics.
 - 25.05 Apply the fundamental elements of critical thinking for paramedics.
 - 25.06 Describe the effects of the fight or flight response and the positive and negative effects on a paramedic's decision making.
 - 25.07 Summarize the six R's of putting it all together: Read the patient, Read the scene, React, Reevaluate, Revise the management plan, Review performance.
- 26.0 DESCRIBE AND DEMONSTRATE EMS COMMUNICATIONS SYSTEMS -- 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. At the completion of this unit, the paramedic student will be able to:
- 26.01 Identify the role of verbal, written, and electronic communications in the provision of EMS.
 - 26.02 Describe the phases of communications necessary to complete a typical EMS event.
 - 26.03 Identify the importance of proper terminology when communicating during an EMS event.
 - 26.04 List factors that impede effective verbal communications.
 - 26.05 List factors which enhance verbal communications.
 - 26.06 List factors which impede effective written communications.
 - 26.07 List factors which enhance written communications.
 - 26.08 Recognize the legal status of written communications related to an EMS event.
 - 26.09 Identify the components of the local EMS communications system and describe their function and use.
 - 26.10 Identify and differentiate among the following communications systems: simplex, multiplex, duplex, trunked, digital communications, and cellular telephone.
 - 26.11 Describe the functions and responsibilities of the Federal Communications Commission.

- 26.12 Describe how an EMS dispatcher functions as an integral part of the EMS team.
 - 26.13 List appropriate information to be gathered by the Emergency Medical Dispatcher.
 - 26.14 Describe information that should be included in patient assessment information verbally reported to medical direction.
 - 26.15 Organize a list of patient assessment information in the correct order for electronic transmission to medical direction according to the format used locally.
- 27.0 DEMONSTRATE PROPER PATIENT DOCUMENTATION -- At the completion of this unit, the paramedic student will be able to effectively document the essential elements of patient assessment, care and transport. At the completion of this unit, the paramedic student will be able to:
- 27.01 Identify the general principles regarding the importance of EMS documentation and ways in which documents are used.
 - 27.02 Identify and use medical terminology correctly.
 - 27.04 Record all pertinent administrative information.
 - 27.06 Analyze the documentation for accuracy and completeness, including spelling.
 - 27.08 Describe the differences between subjective and objective elements of documentation.
 - 27.12 Describe the potential consequences of illegible, incomplete, or inaccurate documentation.
 - 27.13 Describe the special considerations concerning patient refusal of transport.
 - 27.15 Explain how to properly record direct patient or bystander comments.
 - 27.16 Describe the special considerations concerning mass casualty incident documentation.
 - 27.18 Identify and record the pertinent, reportable clinical data of each patient interaction.
 - 27.19 Note and record pertinent negative clinical findings.
 - 27.23 Demonstrate proper completion of an EMS event record used locally.
- 28.0 INTEGRATE THE PRINCIPLES OF KINEMATICS TO ENHANCE THE PATIENT ASSESSMENT -- 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. At the completion of this unit, the Paramedic student will be able to:
- 28.01 List and describe the components of a comprehensive trauma system.
 - 28.02 Describe the role of and differences between levels of trauma centers.
 - 28.03 Describe the criteria for transport to a trauma center.
 - 28.04 Describe the criteria and procedure for air medical transport.
 - 28.05 Define energy and force as they relate to trauma.
 - 28.06 Define laws of motion and energy and understand the role that increased speed has on injuries.
 - 28.07 Describe the pathophysiology of the head, spine, thorax, and abdomen that result from the above forces.
 - 28.08 List specific injuries and their causes as related to interior and exterior vehicle damage.
 - 28.09 Describe the kinematics of penetrating injuries.
- 29.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH SHOCK OR HEMORRHAGE - 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. At the completion of this unit, the paramedic student will be able to:

- 29.01 Describe the epidemiology, including the morbidity/ mortality and prevention strategies, for shock and hemorrhage.
- 29.02 Discuss the anatomy and physiology of the cardiovascular system.
- 29.03 Discuss the various types and degrees of shock and hemorrhage.
- 29.04 Discuss the pathophysiology of hemorrhage and shock.
- 29.05 Discuss the assessment findings associated with hemorrhage and shock.
- 29.06 Discuss the treatment plan and management of hemorrhage and shock.
- 29.07 Discuss the management of external hemorrhage.
- 29.08 Differentiate between the administration rate and amount of IV fluid in a patient with controlled versus uncontrolled hemorrhage.
- 29.09 Relate internal hemorrhage to the assessment findings of compensated and decompensated hemorrhagic shock.
- 29.10 Discuss the management of internal hemorrhage.
- 29.11 Describe the effects of decreased perfusion at the capillary level.
- 29.12 Relate pulse pressure changes to perfusion status.
- 29.13 Relate orthostatic vital sign changes to perfusion status.
- 29.14 Define compensated and decompensated hemorrhagic shock.
- 29.15 Differentiate between compensated and decompensated shock.
- 29.16 Differentiate between the normotensive, hypotensive, or profoundly hypotensive patient.
- 29.17 Differentiate between the administration of fluid in the normotensive, hypotensive, or profoundly hypotensive patient.
- 29.18 Develop, execute and evaluate a treatment plan based on the field impression for the hemorrhage or shock patient.

30.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH SOFT TISSUE TRAUMA --
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. At the completion of this unit, the paramedic student will be able to:

- 30.01 Identify the major functions of the integumentary system.
- 30.02 Discuss the pathophysiology of soft tissue injuries.
- 30.03 Differentiate between the following types of closed soft tissue injuries: contusions, hematoma and crush injuries.
- 30.04 Discuss the assessment findings associated with closed soft tissue injuries.
- 30.05 Discuss the management of a patient with closed soft tissue injuries.
- 30.06 Differentiate between the following types of open soft tissue injuries: abrasions, lacerations, major arterial lacerations, avulsions, impaled objects, amputations, incisions, crush injuries, blast injuries, and penetrations/punctures.
- 30.07 Discuss the incidence, morbidity, and mortality of blast injuries.
- 30.08 Predict blast injuries based on mechanism of injury, including primary, secondary and tertiary.
- 30.09 Discuss types of trauma, including but not limited to blunt, penetrating, barotrauma and bur
- 30.10 Discuss the effects of an explosion within an enclosed space on a patient.
- 30.11 Discuss the assessment findings associated with blast injuries.
- 30.12 Discuss the management of a patient with a blast injury.
- 30.13 Discuss the incidence, morbidity, and mortality of crush injuries.
- 30.14 Define crush injury, crush syndrome and compartment syndrome.
- 30.15 Discuss the management of a patient with a crush injury.
- 30.16 Discuss the pathophysiology of hemorrhage associated with soft tissue injuries, including capillary, venous and arterial.

- 30.17 Discuss the assessment findings associated with open soft tissue injuries.
 - 30.18 Differentiate between the various management techniques for hemorrhage control of open soft tissue injuries, including but not limited to: direct pressure, elevation, pressure dressing, pressure point and tourniquet application.
 - 30.19 Integrate pathophysiological principles to the assessment of a patient with a soft tissue injury.
 - 30.20 Formulate treatment priorities for patients with soft tissue injuries in conjunction with airway/face/neck trauma, thoracic trauma (open/closed), and abdominal trauma.
 - 30.21 Develop, execute, and evaluate a treatment plan based on the field impression for the patient with soft tissue trauma.
 - 30.22 Defend the rationale explaining why immediate life-threats must take priority over wound closure.
 - 30.23 Defend the management regimens for various soft tissue injuries.
- 31.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH BURN INJURIES -- 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. At the completion of this unit, the paramedic student will be able to:
- 31.01 Describe the epidemiology, including incidence, mortality/ morbidity, risk factors, and prevention strategies for the patient with a burn injury.
 - 31.02 Describe the pathophysiologic complications and systemic complications of a burn injury.
 - 31.03 Identify and describe types of burn injuries, including a thermal burn, an inhalation burn, a chemical burn, an electrical burn, and a radiation exposure.
 - 31.04 Identify and describe the depth classifications of burn injuries, including a superficial burn, a partial-thickness burn, a full-thickness burn, and other depth classifications described by local protocol.
 - 31.05 Identify and describe methods for determining body surface area percentage of a burn injury including the "rules of nines," the "rules of palms," and other methods described by local protocol.
 - 31.06 Identify and describe the severity of a burn including a minor burn, a moderate burn, a severe burn, and other severity classifications described by local protocol.
 - 31.07 Describe special considerations for a pediatric patient with a burn injury.
 - 31.08 Discuss conditions associated with burn injuries, including trauma, blast injuries, airway compromise, respiratory compromise, and child abuse.
 - 31.09 Describe the management of a burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.
 - 31.10 Describe the pathophysiology of a thermal burn injury.
 - 31.11 Identify and describe the depth classifications of a thermal burn injury.
 - 31.12 Describe the pathophysiology of an inhalation burn injury.
 - 31.13 Describe considerations which impact management and prognosis of the patient with an inhalation burn injury.
 - 31.14 Describe the management of an inhalation burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological,

- transport considerations, and psychological support/ communication strategies.
- 31.15 Describe the pathophysiology of a chemical burn injury, including types of chemicals and their burning processes and a chemical burn injury to the eye.
 - 31.16 Describe the management of a chemical burn injury and a chemical burn injury to the eye, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, and psychological support/ communication strategies.
 - 31.17 Identify and describe the severity of an electrical burn injury.
 - 31.18 Discuss mechanisms of burn injury and conditions associated with an electrical burn injury.
 - 31.19 Describe the management of an electrical burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, and psychological support/ communication strategies.
 - 31.20 Describe the pathophysiology of a radiation exposure, including the types and characteristics of ionizing radiation.
 - 31.21 Identify and describe the severity of a radiation exposure.
 - 31.22 Describe the management of a radiation exposure, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, and psychological support/ communication strategies.
 - 31.23 Develop, execute and evaluate a management plan based on the field impression for the patient with thermal, inhalation, chemical, electrical, and radiation burn injuries.
 - 31.24 Perform management of a thermal burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.
 - 31.25 Perform management of an inhalation burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.
 - 31.26 Perform management of a chemical burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.
 - 31.27 Perform management of an electrical burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.
 - 31.28 Perform management of a radiation exposure, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.

32.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A TRAUMA PATIENT WITH A HEAD INJURY -

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

- 32.01 Differentiate between facial injuries based on the assessment and history.
- 32.02 Develop a patient management plan for a patient with a facial injury based on the field impression.

- 32.03 Relate assessment findings associated with eye injuries to pathophysiology.
 - 32.04 Develop a patient management plan for a patient with an eye injury based on the field impression.
 - 32.05 Formulate a field impression for a patient with an ear injury based on the assessment findings.
 - 32.06 Develop a patient management plan for a patient with an ear injury based on the field impression.
 - 32.07 Formulate a field impression for a patient with a nose injury based on the assessment findings.
 - 32.08 Develop a patient management plan for a patient with a nose injury based on the field impression.
 - 32.09 Formulate a field impression for a patient with a throat injury based on the assessment findings.
 - 32.10 Develop a patient management plan for a patient with a throat injury based on the field impression.
 - 32.11 Formulate a field impression for a patient with a mouth injury based on the assessment findings.
 - 32.12 Develop a patient management plan for a patient with a mouth injury based on the field impression.
 - 32.13 Distinguish between head injury and brain injury.
 - 32.14 Define and explain the process involved with each of the levels of increasing ICP.
 - 32.15 Identify the need for rapid intervention and transport of the patient with a head/brain injury.
 - 32.16 Describe and explain the general management of the head/ brain injury patient, including pharmacological and non-pharmacological treatment.
 - 32.17 Explain the pathophysiology of skull fracture.
 - 32.18 Develop a management plan for a patient with a skull fracture.
 - 32.19 Develop a management plan for a patient with a cerebral contusion.
 - 32.20 Explain the pathophysiology of intracranial hemorrhage, including epidural, subdural, intracerebral, and subarachnoid.
 - 32.21 Develop a management plan for a patient with a intracranial hemorrhage, including epidural, subdural, intracerebral and subarachnoid.
- 33.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED SPINAL INJURY--- 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. At the completion of this unit, the paramedic student will be able to:
- 33.01 Describe the pathophysiology of spinal injuries.
 - 33.02 Describe the assessment findings associated with spinal injuries.
 - 33.03 Describe the management of spinal injuries.
 - 33.04 Develop a patient management plan based on the field impression.
 - 33.05 Describe the pathophysiology of traumatic spinal injury related to spinal shock, spinal neurogenic shock, quadriplegia/paraplegia, and incomplete cord injury/cord syndromes, including central cord syndrome, anterior cord syndrome and Brown-Sequard syndrome.
 - 33.06 Describe the assessment findings associated with traumatic spinal injuries.
 - 33.07 Describe the management of traumatic spinal injuries.
 - 33.08 Differentiate between traumatic and non-traumatic spinal injuries based on the assessment and history.
 - 33.09 Develop a patient management plan for traumatic spinal injury based on the field impression.

- 33.10 Describe the pathophysiology of non-traumatic spinal injury, including but not limited to, low back pain, herniated intervertebral disk and spinal cord tumors.
 - 33.11 Describe the management of non-traumatic spinal injuries.
 - 33.12 Differentiate between traumatic and non-traumatic spinal injuries based on the assessment and history.
 - 33.13 Develop a patient management plan for non-traumatic spinal injury based on the field impression.
 - 33.14 Demonstrate a clinical assessment to determine the proper management modality for a patient with a suspected traumatic spinal injury.
 - 33.15 Demonstrate a clinical assessment to determine the proper management modality for a patient with a suspected non-traumatic spinal injury.
 - 33.16 Demonstrate immobilization of the urgent and non-urgent patient with assessment findings of spinal injury from the following presentations: Supine, Prone, Semi-prone, Sitting, Standing
 - 33.17 Demonstrate preferred methods for stabilization of a helmet from a potentially spine injured patient.
 - 33.18 Demonstrate helmet removal techniques.
- 34.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED THORACIC INJURY -- 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. At the completion of this unit, the paramedic student will be able to:
- 34.01 Discuss the anatomy and physiology of the organs and structures related to thoracic injuries.
 - 34.02 Discuss the pathophysiology of thoracic injuries.
 - 34.03 Discuss the management of thoracic injuries.
 - 34.04 Identify the need for rapid intervention and transport of the patient with thoracic injuries.
 - 34.05 Discuss the pathophysiology of specific chest wall injuries, including rib fracture, flail segment, and sternal fracture.
 - 34.06 Identify the need for rapid intervention and transport of the patient with chest wall injuries.
 - 34.07 Discuss the management of chest wall injuries.
 - 34.08 Discuss the pathophysiology of injury to the lung, including but not limited to simple, open and tension pneumothorax, hemothorax, hemopneumothorax, and pulmonary contusion.
 - 34.09 Discuss the management of lung injuries.
 - 34.10 Discuss the pathophysiology of myocardial injuries, including but not limited to pericardial tamponade, myocardial contusion and myocardial rupture.
 - 34.11 Discuss the management of myocardial injuries.
 - 34.12 Discuss the pathophysiology of vascular injuries, including injuries to the aorta, vena cava, and pulmonary arteries and veins.
 - 34.13 Discuss the management of vascular injuries.
 - 34.14 Discuss the pathophysiology of tracheo-bronchial injuries.
 - 34.15 Discuss the management of tracheo-bronchial injuries.
 - 34.16 Discuss the pathophysiology of traumatic asphyxia.
 - 34.17 Discuss the assessment findings associated with traumatic asphyxia.
 - 34.18 Discuss the management of traumatic asphyxia.
 - 34.19 Demonstrate a clinical assessment for a patient with suspected thoracic trauma.
 - 34.20 Demonstrate the following techniques of management for thoracic injuries: Needle decompression, Fracture stabilization, Elective intubation, ECG monitoring Oxygenation and ventilation

- 35.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED ABDOMINAL TRAUMA -- At the completion of this unit, the paramedic student will be able to integrate pathophysiologic principles and the assessment findings to formulate a field impression and implement the treatment plan for the patient with suspected abdominal trauma. At the completion of this unit, the paramedic student will be able to:
- 35.01 Describe the anatomy and physiology of organs and structures related to abdominal injuries.
 - 35.02 Describe open and closed abdominal injuries.
 - 35.03 Explain the pathophysiology of abdominal injuries.
 - 35.04 Describe the management of abdominal injuries.
 - 35.05 Describe the assessment findings associated with solid organ injuries.
 - 35.06 Describe the treatment plan and management of solid organ injuries.
 - 35.07 Describe the assessment findings associated with hollow organ injuries.
 - 35.08 Describe the treatment plan and management of hollow organ injuries.
 - 35.09 Describe the assessment findings associated with pelvic fractures.
 - 35.10 Describe the treatment plan and management of pelvic fractures.
 - 35.11 Develop a patient management plan for a patient with abdominal injuries, based upon field impression.
- 36.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED MUSCULOSKELETAL INJURY -- 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. At the completion of this unit, the paramedic student will be able to:
- 36.01 Discuss the anatomy and physiology of the musculoskeletal system.
 - 36.02 Discuss types of musculoskeletal injuries, including fracture (open and closed), dislocation/fracture, sprain, and strain.
 - 36.03 Discuss the pathophysiology of musculoskeletal injuries.
 - 36.04 Discuss the assessment findings associated with musculoskeletal injuries.
 - 36.05 Discuss the management of musculoskeletal injuries.
 - 36.06 Discuss the general guidelines for splinting.
 - 36.07 Discuss the pathophysiology of open and closed fractures.
 - 36.08 Discuss the assessment findings associated with fractures.
 - 36.09 Discuss the management of fractures.
 - 36.10 Discuss the pathophysiology of dislocations.
 - 36.11 Discuss the out-of-hospital management of dislocation/fractures, including splinting and realignment.
 - 36.12 Explain the importance of manipulating a knee dislocation/fracture with an absent distal pulse.
 - 36.13 Discuss the assessment findings of sprains.
 - 36.14 Discuss the management of sprains.
 - 36.15 Discuss the management of strains.
 - 36.16 Discuss the management of a tendon injury.
 - 36.17 Develop a patient management plan for the musculoskeletal injury based on the field impression.
 - 36.18 Demonstrate a clinical assessment to determine the proper treatment plan for a patient with a suspected musculoskeletal injury.
 - 36.19 Demonstrate the proper use of fixation, soft and traction splints for a patient with a suspected fracture.
- 37.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH SUSPECTED RESPIRATORY PROBLEMS-- 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. At the completion of this unit, the paramedic student will be able to:

- 37.01 Identify and describe the function of the structures located in the upper and lower airway.
- 37.02 Discuss the physiology of ventilation and respiration.
- 37.03 Discuss abnormal assessment findings associated with pulmonary diseases and conditions.
- 37.04 Compare various airway and ventilation techniques used in the management of pulmonary diseases.
- 37.05 Review the pharmacological preparations that paramedics use for management of respiratory diseases and conditions.
- 37.06 Review the use of equipment used during the physical examination of patients with complaints associated with respiratory diseases and conditions.
- 37.07 Identify the epidemiology, anatomy, physiology, pathophysiology, assessment findings, and management for, but not limited to the following: adult respiratory distress syndrome, chronic bronchitis, bronchial asthma, emphysema, pneumonia, pulmonary edema, pulmonary thromboembolism, neoplasms of the lung, upper respiratory infections, spontaneous pneumothorax and hyperventilation syndrome.
- 37.08 Demonstrate proper use of airway and ventilation devices.
- 37.09 Conduct a history and patient assessment for patients with pulmonary diseases and conditions.

38.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH SUSPECTED CARDIOVASCULAR DISEASE-- 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. At the completion of this unit, the paramedic student will be able to:

- 38.01 Identify the risk factors most predisposing to coronary artery disease.
- 38.02 Describe the anatomy of the heart, including the position in the thoracic cavity, layers of the heart, chambers of the heart, and location and function of cardiac valves.
- 38.03 Identify the major structures of the vascular system.
- 38.04 Identify and define the components of cardiac output.
- 38.05 Identify phases of the cardiac cycle.
- 38.06 Identify the structure and course of all divisions and subdivisions of the cardiac conduction system.
- 38.07 Identify and describe how the heart's pacemaking control, rate, and rhythm are determined.
- 38.08 Describe the clinical significance of Starling's law.
- 38.09 Identify the structures of the autonomic nervous system (ANS).
- 38.10 Identify the effect of the ANS on heart rate, rhythm and contractility.
- 38.11 Identify and describe the components of the focused history as it relates to the patient with cardiovascular compromise.
- 38.12 Explain the purpose of ECG monitoring.
- 38.13 Correlate the electrophysiological and hemodynamic events occurring throughout the entire cardiac cycle with the various ECG wave forms, segments and intervals.
- 38.14 Given an ECG, identify the arrhythmia.
- 38.15 Describe a systematic approach to the analysis and interpretation of cardiac arrhythmias.
- 38.16 Describe the arrhythmias originating in the sinus node, the AV junction, the atria, and the ventricles.
- 38.17 Describe the arrhythmias originating or sustained in the AV junction.

- 38.18 Describe the abnormalities originating within the bundle branch system.
- 38.19 Describe the conditions of pulseless electrical activity.
- 38.20 Recognize the changes on the ECG that may reflect evidence of myocardial ischemia and injury.
- 38.21 Identify the major therapeutic objectives in the treatment of the patient with any arrhythmia.
- 38.22 Identify the clinical indications for transcutaneous and permanent artificial cardiac pacing.
- 38.23 Describe the techniques of applying a transcutaneous pacing system.
- 38.24 List the possible complications of pacing.
- 38.25 Describe the epidemiology, morbidity and mortality, and pathophysiology of angina pectoris.
- 38.26 List other clinical conditions that may mimic signs and symptoms of coronary artery disease and angina pectoris.
- 38.27 Identify the paramedic responsibilities associated with management of the patient with angina pectoris.
- 38.28 Describe the epidemiology, morbidity and mortality of myocardial infarction.
- 38.29 List and describe the assessment parameters to be evaluated in a patient with a suspected myocardial infarction.
- 38.30 List the characteristics of a patient eligible for thrombolytic therapy.
- 38.31 Describe the most commonly used cardiac drugs in terms of therapeutic effect and dosages, routes of administration, side effects and toxic effects.
- 38.32 Define the term "acute pulmonary edema" and describe its relationship to left ventricular failure.
- 38.33 Define preload, afterload and left ventricular end-diastolic pressure and relate each to the pathophysiology of heart failure.
- 38.34 Differentiate between early and late signs and symptoms of left ventricular failure and those of right ventricular failure.
- 38.35 Explain the clinical significance of paroxysmal nocturnal dyspnea.
- 38.36 List the interventions prescribed for the patient in acute congestive heart failure.
- 38.37 Describe the most commonly used pharmacological agents in the management of congestive heart failure in terms of therapeutic effect, dosages, routes of administration, side effects and toxic effects.
- 38.38 Define the term "cardiac tamponade".
- 38.39 Identify the paramedic responsibilities associated with management of a patient with cardiac tamponade.
- 38.40 Define the term "hypertensive emergency".
- 38.41 Describe the clinical features of the patient in a hypertensive emergency.
- 38.42 Identify the drugs of choice for hypertensive emergencies, rationale for use, clinical precautions and disadvantages of selected antihypertensive agents.
- 38.43 Define the term "cardiogenic shock".
- 38.44 Describe the most commonly used pharmacological agents in the management of cardiogenic shock in terms of therapeutic effects, dosages, routes of administration, side effects and toxic effects.
- 38.45 Define the term "cardiac arrest".
- 38.46 Describe the arrhythmias seen in cardiac arrest.
- 38.47 Define the terms defibrillation and synchronized cardioversion.
- 38.48 Describe the most commonly used pharmacological agents in the management of cardiac arrest in terms of therapeutic effects.
- 38.49 Identify the major factors involved in the pathophysiology of aortic aneurysm. myocardial infarction patient
- 38.50 Recognize and describe the signs and symptoms of dissecting thoracic or abdominal aneurysm.

- 38.51 Differentiate between signs and symptoms of cardiac tamponade, hypertensive emergencies, cardiogenic shock, and cardiac arrest.
- 38.52 Develop, execute, and evaluate a treatment plan based on field impression for the patient in need of a pacemaker.
- 38.53 Develop, execute and evaluate a treatment plan based on the field impression for the patient with chest pain.
- 38.54 Develop, execute and evaluate a treatment plan based on the field impression for the suspected myocardial infarction patient.
- 38.55 Develop, execute, and evaluate a treatment plan based on the field impression for the heart failure patient.
- 38.56 Develop, execute and evaluate a treatment plan based on the field impression for the patient with cardiac tamponade.
- 38.57 Develop, execute and evaluate a treatment plan based on the field impression for the patient with a hypertensive emergency.
- 38.58 Develop, execute, and evaluate a treatment plan based on the field impression for the patient with cardiogenic shock.
- 38.59 Demonstrate a working knowledge of various ECG lead systems.
- 38.60 Set up and apply a transcutaneous pacing system.
- 38.61 Demonstrate satisfactory performance of psychomotor skills of basic and advanced life support techniques according to the current American Heart Association Standards and Guidelines, including: cardiopulmonary resuscitation, defibrillation, synchronized cardioversion, and transcutaneous pacing.
- 38.62 Complete a communication patch with medical direction and law enforcement used for termination of resuscitation efforts.

39.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED NEUROLOGIC PROBLEM - 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. At the completion of this unit, the paramedic student will be able to:

- 39.01 Identify the risk factors most predisposing to the nervous system.
- 39.02 Discuss the anatomy and physiology of the organs and structures related to nervous system.
- 39.03 Discuss the assessment findings associated with non-traumatic neurologic emergencies.
- 39.04 Discuss the management of non-traumatic neurological emergencies.
- 39.05 Discuss the pathophysiology of coma and altered mental status.
- 39.06 Discuss the management/treatment plan of coma and altered mental status.
- 39.07 Describe and differentiate the major types of seizures.
- 39.08 Discuss the assessment findings associated with syncope.
- 39.09 Discuss the management/treatment plan of syncope.
- 39.10 Describe the types of stroke and intracranial hemorrhage.
- 39.11 Discuss the assessment findings associated with stroke and intracranial hemorrhage.
- 39.12 Discuss the management/treatment plan of stroke and intracranial hemorrhage.
- 39.13 Discuss the assessment findings associated with transient ischemic attack.
- 39.14 Discuss the management/treatment plan of transient ischemic attack.
- 39.15 Discuss the assessment findings associated with degenerative neurological diseases.
- 39.16 Discuss the management/treatment plan of degenerative neurological diseases.
- 39.17 Differentiate among the various treatment and pharmacological interventions used in the management of degenerative neurological diseases.

- 39.18 Perform an appropriate assessment of a patient with coma or altered mental status.
- 39.19 Perform a complete neurological examination as part of the comprehensive physical examination of a patient with coma or altered mental status.
- 39.20 Appropriately manage a patient with coma or altered mental status, including the administration of oxygen, oral glucose, 50% dextrose and narcotic reversal agents.
- 39.21 Perform an appropriate assessment of a patient with syncope.
- 39.22 Appropriately manage a patient with syncope.
- 39.23 Appropriately manage a patient with seizures, including the administration of diazepam or lorazepam.
- 39.24 Perform an appropriate assessment of a patient with stroke and intracranial hemorrhage or TIA.
- 39.25 Appropriately manage a patient with stroke and intracranial hemorrhage or TIA.

40.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED ENDOCRINE PROBLEM-- 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. At the completion of this unit, the paramedic student will be able to:

- 40.01 Identify the risk factors most predisposing to endocrinologic disease.
- 40.02 Discuss the anatomy and physiology of organs and structures related to endocrinologic diseases.
- 40.03 Discuss the general assessment findings associated with endocrinologic emergencies.
- 40.04 Discuss the management of endocrinologic emergencies.
- 40.05 Discuss the management of diabetic emergencies.
- 40.06 Differentiate between the pathophysiology of normal glucose metabolism and diabetic glucose metabolism.
- 40.07 Describe the mechanism of ketone body formation and its relationship to ketoacidosis.
- 40.08 Recognize the signs and symptoms of the patient with hypoglycemia.
- 40.09 Describe the compensatory mechanisms utilized by the body to promote homeostasis relative to hypoglycemia.
- 40.10 Describe the management of a responsive hypoglycemic patient.
- 40.11 Correlate abnormal findings in assessment with clinical significance in the patient with hypoglycemia.
- 40.12 Recognize the signs and symptoms of the patient with hyperglycemia.
- 40.13 Describe the management of hyperglycemia.
- 40.14 Discuss the pathophysiology of diabetic ketoacidosis.
- 40.15 Recognize the signs and symptoms of the patient with diabetic ketoacidosis.
- 37.16 Describe the management of diabetic ketoacidosis.
- 40.17 Discuss the pathophysiology of Cushing's syndrome.
- 40.18 Recognize signs and symptoms of the patient with Cushing's syndrome.
- 40.19 Describe the management of Cushing's syndrome.
- 40.20 Discuss the pathophysiology of adrenal Insufficiency.
- 40.21 Recognize signs and symptoms of the patient with adrenal insufficiency.
- 40.22 Describe the management of adrenal insufficiency.
- 40.23 Develop a patient management plan based on field impression in the patient with an endocrinologic emergency.

41.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED ALLERGIC OR ANAPHYLACTIC REACTION -- 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. At the completion of this unit, the paramedic student will be able to:

- 41.01 Define allergic reaction.
- 41.02 Define anaphylaxis.
- 41.03 Discuss the anatomy and physiology of the organs and structures related to anaphylaxis.
- 41.04 Describe the prevention of anaphylaxis and appropriate patient education.
- 41.05 Discuss the pathophysiology of allergy and anaphylaxis.
- 41.06 Describe the common methods of entry of substances into the body.
- 41.07 Define antigens and antibodies.
- 41.08 List common antigens most frequently associated with anaphylaxis.
- 41.09 Describe physical manifestations in anaphylaxis.
- 41.10 Differentiate manifestations of an allergic reaction from anaphylaxis.
- 41.11 Recognize the signs and symptoms related to anaphylaxis.
- 41.12 Differentiate among the various treatment and pharmacological interventions used in the management of anaphylaxis.
- 41.13 Develop a treatment plan based on field impression in the patient with allergic reaction and anaphylaxis.

42.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED GASTROENTEROLOGIC PROBLEM -- 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. At the conclusion of this unit, the paramedic student will be able to:

- 42.01 Discuss the anatomy and physiology of the organs and structures related to gastrointestinal diseases.
- 42.02 Discuss the pathophysiology of inflammation and its relationship to acute abdominal pain.
- 42.03 Differentiate between hemorrhagic and non-hemorrhagic abdominal pain.
- 42.04 Discuss the signs and symptoms of peritoneal inflammation relative to acute abdominal pain.
- 42.05 Describe the questioning technique and specific questions the paramedic should ask when gathering a focused history in a patient with abdominal pain.
- 42.06 Describe the technique for performing a comprehensive physical examination on a patient complaining of abdominal pain.
- 42.07 Define upper gastrointestinal bleeding.
- 42.08 Recognize the signs and symptoms related to upper gastrointestinal bleeding.
- 42.09 Describe the management for upper gastrointestinal bleeding.
- 42.10 Recognize the signs and symptoms related to lower gastrointestinal bleeding.
- 42.11 Describe the management for lower gastrointestinal bleeding.
- 42.12 Define acute gastroenteritis.
- 42.13 Recognize the signs and symptoms related to acute gastroenteritis.
- 42.14 Describe the management for acute gastroenteritis.
- 42.15 Recognize the signs and symptoms related to colitis.
- 42.16 Describe the management for colitis.
- 42.17 Recognize the signs and symptoms related to gastroenteritis.
- 42.18 Describe the management for gastroenteritis.
- 42.19 Recognize the signs and symptoms related to diverticulitis.
- 42.20 Describe the management for diverticulitis.
- 42.21 Recognize the signs and symptoms related to appendicitis.
- 42.22 Describe the management for appendicitis.
- 42.23 Recognize the signs and symptoms related to peptic ulcer disease.

- 42.24 Describe the management for peptic ulcer disease.
 - 42.25 Recognize the signs and symptoms related to bowel obstruction.
 - 42.26 Describe the management for bowel obstruction.
 - 42.27 Recognize the signs and symptoms related to Crohn's disease.
 - 42.28 Describe the management for Crohn's disease.
 - 42.29 Recognize the signs and symptoms related to pancreatitis.
 - 42.30 Describe the management for pancreatitis.
 - 42.31 Recognize the signs and symptoms related to esophageal varices.
 - 42.32 Describe the management for esophageal varices.
 - 42.33 Recognize the signs and symptoms related to hemorrhoids.
 - 42.34 Describe the management for hemorrhoids.
 - 42.35 Recognize the signs and symptoms related to cholecystitis.
 - 42.36 Describe the management for cholecystitis.
 - 42.37 Recognize the signs and symptoms related to acute hepatitis.
 - 42.38 Describe the management for acute hepatitis.
 - 42.39 Differentiate between gastrointestinal emergencies based on assessment findings.
 - 42.40 Correlate abnormal findings in the assessment with the clinical significance in the patient with abdominal pain.
 - 42.41 Develop a patient management plan based on field impression in the patient with abdominal pain.
- 43.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED RENAL OR UROLOGIC PROBLEM -- 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. At the conclusion of this unit, the paramedic student will be able to:
- 43.01 Describe the incidence, morbidity, mortality, and risk factors predisposing to urological emergencies.
 - 43.02 Discuss the anatomy and physiology of the organs and structures related to urogenital diseases.
 - 43.03 Define referred pain and visceral pain as it relates to urology.
 - 43.04 Describe the technique for performing a comprehensive physical examination of a patient complaining of abdominal pain.
 - 43.05 Discuss the pathophysiology of acute renal failure.
 - 43.06 Recognize the signs and symptoms related to acute renal failure.
 - 43.07 Describe the management for acute renal failure.
 - 43.08 Define chronic renal failure.
 - 43.09 Define renal dialysis.
 - 43.10 Discuss the common complication of renal dialysis.
 - 43.11 Discuss the pathophysiology of renal calculi.
 - 43.12 Recognize the signs and symptoms related to renal calculi.
 - 43.13 Describe the management for renal calculi.
 - 43.14 Discuss the pathophysiology of urinary tract infection.
 - 43.15 Recognize the signs and symptoms related to urinary tract infection.
 - 43.16 Describe the management for a urinary tract infection.
 - 43.17 Apply the epidemiology to develop prevention strategies for urological emergencies.
 - 43.18 Integrate pathophysiological principles to the assessment of a patient with abdominal pain.
 - 43.19 Synthesize assessment findings and patient history information to accurately differentiate between pain of a urogenital emergency and that of other origins.
 - 43.20 Develop, execute, and evaluate a treatment plan based on the field impression made in the assessment.
- 44.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED TOXIC EXPOSURE-- 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. At the completion of this unit, the paramedic student will be able to:

- 44.01 Describe the incidence, morbidity and mortality of toxic emergencies.
- 44.02 Identify the risk factors most predisposing to toxic emergencies.
- 44.03 Describe the routes of entry of toxic substances into the body.
- 44.04 Discuss the role of the Poison Control Center in the United States.
- 44.05 Discuss the assessment findings associated with various toxidromes.
- 44.06 Discuss the management of toxic substances.
- 44.07 List the most common poisonings by ingestion.
- 44.08 Recognize the signs and symptoms related to the most common poisonings by ingestion.
- 44.09 Differentiate among the various treatments and pharmacological interventions in the management of the most common poisonings by ingestion.
- 44.10 Discuss the factors affecting the decision to induce vomiting in a patient with ingested poison.
- 44.11 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with the most common poisonings by ingestion.
- 44.12 Define poisoning by inhalation.
- 44.13 List the most common poisonings by inhalation.
- 44.14 Describe the pathophysiology of poisoning by inhalation.
- 44.15 Recognize the signs and symptoms related to the most common poisonings by inhalation.
- 44.16 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with the most common poisonings by inhalation.
- 44.17 Define poisoning by injection.
- 44.18 List the most common poisonings by injection.
- 44.19 Recognize the signs and symptoms related to the most common poisonings by injection.
- 44.20 Differentiate among the various treatments and pharmacological interventions in the management of the most common poisonings by injection.
- 44.21 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with the most common poisonings by injection.
- 44.22 Define poisoning by surface absorption.
- 44.23 List the most common poisonings by surface absorption.
- 44.24 Describe the pathophysiology of poisoning by surface absorption.
- 44.25 Recognize the signs and symptoms related to the most common poisonings by surface absorption.
- 44.26 Differentiate among the various treatments and pharmacological interventions in the management of the most common poisonings by surface absorption.
- 44.27 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for patients with the most common poisonings by surface absorption.
- 44.28 Define poisoning by overdose.
- 44.29 List the most common poisonings by overdose.
- 44.30 Describe the pathophysiology of poisoning by overdose.
- 44.31 Recognize the signs and symptoms related to the most common poisonings by overdose.
- 44.32 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for patients with the most common poisonings by overdose.
- 44.33 Define drug abuse.

- 44.34 Define the following terms: Substance or drug abuse, Substance or drug dependence, Tolerance, Withdrawal, Addiction
- 44.35 List the most commonly abused drugs (both by chemical name and street names).
- 44.36 Describe the pathophysiology of commonly used drugs.
- 44.37 Recognize the signs and symptoms related to the most commonly abused drugs.
- 44.38 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for patients using the most commonly abused drugs.
- 44.39 List the clinical uses, street names, pharmacology, assessment finding and management for patient who have taken the following drugs or been exposed to the following substances: Cocaine, marijuana and cannabis compounds, Amphetamines and amphetamine-like drugs, Barbiturates, Sedative-hypnotics, Cyanide, Narcotics/opiates, cardiac medications, Caustics, common household substances, Drugs abused for sexual purposes/sexual gratification, Carbon monoxide, Alcohols, Hydrocarbons, Psychiatric medications, Newer anti-depressants and serotonin syndromes, Lithium, MAO inhibitors, Non-prescription pain medications, Nonsteroidal anti-inflammatory agents, Salicylates, Acetaminophen, Theophylline, Metals, Plants and mushrooms
- 44.40 Discuss common causative agents, pharmacology, assessment findings and management for a patient with food poisoning.
- 44.41 Discuss common offending organisms, pharmacology, assessment findings and management for a patient with a bite or sting.
- 44.42 Develop a patient management plan based on field impression in the patient exposed to a toxic substance.

45.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED HEMATOPOIETIC PATIENT--- 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. At the completion to this unit, the paramedic student will be able to:

- 45.01 Identify the anatomy of the hematopoietic system.
- 45.02 Describe volume and volume-control related to the hematopoietic system.
- 45.03 Describe normal red blood cell (RBC) production, function and destruction.
- 45.04 Explain the significance of the hematocrit with respect to red cell size and number.
- 45.05 Explain the correlation of the RBC count, hematocrit and hemoglobin values.
- 45.06 Define anemia.
- 45.07 Describe normal white blood cell (WBC) production, function and destruction.
- 45.08 Identify alterations in immunologic response.
- 45.09 List the leukocyte disorders.
- 45.10 Describe platelets with respect to normal function, life span and numbers.
- 45.11 Describe the components of the hemostatic mechanism.
- 45.12 Describe the function of coagulation factors, platelets and blood vessels necessary for normal coagulation.
- 45.13 Identify blood groups.
- 45.14 Identify the components of physical assessment as they relate to the hematologic system.
- 45.15 Describe the pathology and clinical manifestations and prognosis associated with Anemia, Leukemia, Lymphomas, Polycythemia,

- Disseminated intravascular coagulopathy Hemophilia, Sickle cell disease, Multiple myeloma
- 45.16 Integrate pathophysiological principles into the assessment of a patient with hematologic disease.
- 45.17 Perform an assessment of the patient with hematologic disorder.
- 46.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED ENVIRONMENTAL PROBLEM-- 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. At the completion of this unit, the paramedic student will be able to:
- 46.01 Define "environmental emergency."
- 46.02 Identify environmental factors that may cause illness or exacerbate a preexisting illness.
- 46.03 Identify environmental factors that may complicate treatment or transport decisions.
- 46.04 List the principal types of environmental illnesses.
- 46.05 Describe several methods of temperature monitoring.
- 46.06 Identify the components of the body's thermoregulatory mechanism.
- 46.07 Describe the general process of thermal regulation, including substances used and wastes generated.
- 46.08 Describe the body's compensatory process for over heating.
- 46.09 Describe the body's compensatory process for excess heat loss.
- 46.10 List the common forms of heat and cold disorders.
- 46.11 Integrate the pathophysiological principles and complicating factors common to environmental emergencies and discuss differentiating features between emergent and urgent presentations.
- 46.12 Relate symptomatic findings to the commonly used terms: heat cramps, heat exhaustion, and heatstroke.
- 46.13 Describe the contribution of dehydration to the development of heat disorders.
- 46.14 Describe the differences between classical and exertional heatstroke.
- 46.15 Define fever and discuss its pathophysiologic mechanism.
- 46.16 Discuss the role of fluid therapy in the treatment of heat disorders.
- 46.17 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient who has dehydration, heat exhaustion, or heatstroke.
- 46.18 Describe the pathophysiology of hypothermia.
- 46.19 Identify differences between mild and severe hypothermia.
- 46.20 Describe differences between chronic and acute hypothermia.
- 46.21 List signs and symptoms of hypothermia.
- 46.22 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient who has either mild or severe hypothermia.
- 46.23 Define frostbite.
- 46.24 Define superficial frostbite (frostnip).
- 46.25 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with superficial or deep frostbite.
- 46.26 Define near-drowning.
- 46.27 List signs and symptoms of near-drowning.
- 46.28 Describe the lack of significance of fresh versus saltwater immersion, as it relates to near-drowning.
- 46.29 Discuss the incidence of "wet" versus "dry" drownings and the differences in their management.

- 46.30 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the near-drowning patient.
 - 46.31 Define self contained underwater breathing apparatus (SCUBA).
 - 46.32 Describe the pathophysiology of diving emergencies.
 - 46.33 Define decompression illness (DCI).
 - 46.34 Identify the various conditions that may result from pulmonary over-pressure accidents.
 - 46.35 List signs and symptoms of diving emergencies.
 - 46.36 Describe the function of the Divers Alert Network (DAN) and how its members may aid in the management of diving related illnesses.
 - 46.37 Differentiate among the various treatments and interventions for the management of diving accidents.
 - 46.38 Describe the specific function and benefit of hyperbaric oxygen therapy for the management of diving accidents.
 - 46.39 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a management plan for the patient who has had a diving accident.
 - 46.40 Develop a patient management plan based on the field impression of the patient affected by an environmental emergency.
- 47.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED INFECTIOUS AND/OR COMMUNICABLE DISEASE -- 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. At the completion of this unit, the paramedic student will be able to:
- 47.01 Review the specific anatomy and physiology pertinent to infectious and communicable diseases.
 - 47.02 List and describe the steps of an infectious process.
 - 47.03 List and describe infectious agents, including bacteria, viruses, fungi, protozoans, and helminths (worms).
 - 47.04 Describe host defense mechanisms against infection.
 - 47.05 Describe characteristics of the immune system, including the categories of white blood cells, the reticuloendothelial system (RES), and the complement system.
 - 47.06 Describe and discuss the rationale for the various types of PPE.
 - 47.07 Describe the assessment of a patient suspected of, or identified as having, an infectious/communicable disease.
 - 47.08 Discuss the proper disposal of contaminated supplies (sharps, gauze sponges, tourniquets, etc.).
 - 47.09 Discuss disinfection of patient care equipment, and areas in which care of the patient occurred.
 - 47.10 Discuss the following relative to HIV - causative agent, body systems affected and potential secondary complications, modes of transmission, the seroconversion rate after direct significant exposure, susceptibility and resistance, signs and symptoms, specific patient management and personal protective measures, and immunization.
 - 47.11 Discuss Hepatitis A (infectious hepatitis), including the causative agent, body systems affected and potential secondary complications, routes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization.
 - 47.12 Discuss Hepatitis B (serum hepatitis), including the causative agent, the organ affected and potential secondary complications, routes of transmission, signs and symptoms, patient management and protective measures, and immunization.
 - 47.13 Discuss Hepatitis C, including the causative agent, the organ affected, routes of transmission, susceptibility and resistance, signs

- and symptoms, patient management and protective measures, and immunization and control measures.
- 47.14 Discuss Hepatitis D (Hepatitis delta virus), including the causative agent, the organ affected, routes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization and control measures.
- 47.15 Discuss Hepatitis E, including the causative agent, the organ affected, routes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization and control measures.
- 47.16 Discuss tuberculosis, including the causative agent, body systems affected and secondary complications, routes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization and control measures.
- 47.17 Discuss meningococcal meningitis (spinal meningitis), including causative organisms, tissues affected, modes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization and control measures.
- 47.18 Discuss pneumonia, including causative organisms, body systems affected, routes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization.
- 47.19 Discuss tetanus, including the causative organism, the body system affected, modes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization.
- 47.20 Discuss chickenpox, including the causative organism, the body system affected, mode of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization and control measures.
- 47.21 Discuss mumps, including the causative organism, the body organs and systems affected, mode of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization.
- 47.22 Discuss rubella (German measles), including the causative agent, the body tissues and systems affected, modes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization.
- 47.23 Discuss measles (rubeola, hard measles), including the causative organism, the body tissues, organs, and systems affected, mode of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization.
- 47.24 Discuss influenza, including causative organisms, the body system affected, mode of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization.
- 47.25 Discuss mononucleosis, including the causative organisms, the body regions, organs, and systems affected, modes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization.
- 47.26 Discuss the characteristics of, and organisms associated with, febrile and afebrile respiratory disease, to include bronchiolitis, bronchitis, laryngitis, croup, epiglottitis, and the common cold.
- 47.27 Discuss gastroenteritis, including the causative organisms, the body system affected, modes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization.
- 47.28 Consistently demonstrate the use of body substance isolation.
- 47.29 Demonstrate the ability to comply with body substance isolation guidelines.

- 47.30 Perform an assessment of a patient with an infectious/communicable disease.
- 47.31 Effectively and safely manage a patient with an infectious/communicable disease, including airway and ventilation care, support of circulation, pharmacological intervention, transport considerations, psychological support/communication strategies, and other considerations as mandated by local protocol.

48.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED BEHAVIORAL EMERGENCY-- 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. At the completion of this unit, the paramedic student will be able to:

- 48.01 Define behavior and distinguish between normal and abnormal behavior.
- 48.02 Discuss the prevalence of behavior and psychiatric disorders.
- 48.03 Discuss the factors that may alter the behavior or emotional status of an ill or injured individual.
- 48.04 Describe the medical legal considerations for management of emotionally disturbed patients.
- 48.05 Discuss the pathophysiology of behavioral and psychiatric disorders.
- 48.06 Define the following terms: Affect, Anger, Anxiety, Confusion, Depression, Fear, Mental status, Open-ended questions, Posture
- 48.07 Describe the verbal techniques useful in managing the emotionally disturbed patient.
- 48.08 Describe the circumstances when relatives, bystanders and others should be removed from the scene.
- 48.09 Describe the techniques that facilitate the systematic gathering of information from the disturbed patient.
- 48.10 Identify techniques for physical assessment in a patient with behavioral problems.
- 48.11 Describe methods of restraint that may be necessary in managing the emotionally disturbed patient.
- 48.12 List the risk factors for suicide.
- 48.13 List the behaviors that may be seen indicating that patient may be at risk for suicide.
- 48.14 Differentiate between the various behavioral and psychiatric disorders based on the assessment and history.
- 48.15 Develop a patient management plan based on the field impressions.
- 48.16 Demonstrate safe techniques for managing and restraining a violent patient.

49.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED GYNECOLOGICAL EMERGENCY-- 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. At the completion of this unit, the paramedic student will be able to:

- 49.01 Review the anatomic structures and physiology of the female reproductive system.
- 49.02 Identify the normal events of the menstrual cycle.
- 49.03 Describe how to assess a patient with a gynecological complaint.
- 49.04 Explain how to recognize a gynecological emergency.
- 49.05 Describe the general care for any patient experiencing a gynecological emergency.
- 49.06 Describe the pathophysiology, assessment, and management of specific gynecological emergencies.
- 49.07 Value the importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information.

- 49.08 Defend the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
- 49.09 Serve as a role model for other EMS providers when discussing or caring for patients with gynecological emergencies.
- 49.10 Demonstrate how to assess a patient with a gynecological complaint.
- 49.11 Demonstrate how to provide care for a patient with: Excessive vaginal bleeding, Abdominal pain Sexual assault.

50.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WITH A SUSPECTED OBSTETRICAL EMERGENCY-- 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. At the completion of this unit, the paramedic student will be able to:

- 50.01 Review the anatomic structures and physiology of the reproductive system.
- 50.02 Identify the normal events of pregnancy.
- 50.03 Describe how to assess an obstetrical patient.
- 50.04 Identify the stages of labor and the paramedic's role in each stage.
- 50.05 Differentiate between normal and abnormal delivery.
- 50.06 Identify and describe complications associated with pregnancy and delivery.
- 50.07 State indications of an imminent delivery.
- 50.08 Differentiate the management of a patient with predelivery emergencies from a normal delivery.
- 50.09 State the steps in the predelivery preparation of the mother.
- 50.10 State the steps to assist in the delivery of a newborn.
- 50.11 Describe how to care for the newborn.
- 50.12 Describe how and when to cut the umbilical cord.
- 50.13 Discuss the steps in the delivery of the placenta.
- 50.14 Describe the management of the mother post-delivery.
- 50.15 Describe the procedures for handling abnormal deliveries.
- 50.16 Describe the procedures for handling complications of pregnancy.
- 50.17 Describe the procedures for handling maternal complications of labor.
- 50.18 Describe special considerations when meconium is present in amniotic fluid or during delivery.
- 50.19 Describe special considerations of a premature baby.
- 50.20 Demonstrate how to assess an obstetric patient.
- 50.21 Demonstrate how to provide care for a patient with: Excessive vaginal bleeding, Abdominal pain Hypertensive crisis
- 50.22 Demonstrate how to prepare the obstetric patient for delivery.
- 50.23 Demonstrate how to assist in the normal cephalic delivery of the fetus.
- 50.24 Demonstrate how to deliver the placenta.
- 50.25 Demonstrate how to provide post-delivery care of the mother.
- 50.26 Demonstrate how to assist with abnormal deliveries.
- 50.27 Demonstrate how to care for the mother with delivery complications.

51.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A NEONATAL EMERGENCY -- 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 a neonatal patient. At the completion of this unit, the paramedic student will be able to:

- 51.01 Define the term neonate.
- 51.02 Identify important antepartum factors that can affect childbirth.
- 51.03 Identify important intrapartum factors that can term the newborn high risk.
- 51.04 Identify the factors that lead to premature birth and low birth weight newborns.

- 51.05 Discuss pulmonary perfusion and asphyxia.
- 51.06 Calculate the APGAR score given various newborn situations.
- 51.07 Determine when ventilatory assistance is appropriate for a newborn.
- 51.08 Prepare appropriate ventilation equipment, adjuncts and technique for a newborn.
- 51.09 Determine when chest compressions are appropriate for a newborn.
- 51.10 Discuss appropriate chest compression techniques for a newborn.
- 51.11 Determine when endotracheal intubation is appropriate for a newborn.
- 51.12 Discuss appropriate endotracheal intubation techniques for a newborn.
- 51.13 Identify complications related to endotracheal intubation for a newborn.
- 51.14 Determine when vascular access is indicated for a newborn.
- 51.15 Discuss the routes of medication administration for a newborn.
- 51.16 Determine when blow-by oxygen delivery is appropriate for a newborn.
- 51.17 Determine when an orogastric tube should be inserted during positive-pressure ventilation.
- 51.18 Discuss the signs of hypovolemia in a newborn.
- 51.19 Discuss the initial steps in resuscitation of a newborn.
- 51.20 Discuss the effects maternal narcotic usage has on the newborn.
- 51.21 Discuss appropriate transport guidelines for a newborn.
- 51.22 Determine appropriate receiving facilities for low and high risk newborns.
- 51.23 Describe the epidemiology, including the incidence, morbidity/mortality, risk factors and prevention strategies for meconium aspiration.
- 51.24 Discuss the management/treatment plan for meconium aspiration.
- 51.25 Discuss the pathophysiology of apnea in the neonate.
- 51.26 Discuss the assessment findings associated with apnea in the neonate.
- 51.27 Discuss the management/treatment plan for apnea in the neonate.
- 51.28 Describe the epidemiology, including the incidence, morbidity/mortality and risk factors for bradycardia in the neonate.
- 51.29 Discuss the assessment findings associated with bradycardia in the neonate.
- 51.30 Discuss the management/ treatment plan for bradycardia in the neonate.
- 51.31 Discuss the pathophysiology of premature infants.
- 51.32 Discuss the assessment findings associated with premature infants.
- 51.33 Discuss the management/treatment plan for premature infants.
- 51.34 Discuss the pathophysiology of respiratory distress/ cyanosis in the neonate.
- 51.35 Discuss the assessment findings associated with respiratory distress/ cyanosis in the neonate.
- 51.36 Discuss the management/treatment plan for respiratory distress/ cyanosis in the neonate.
- 51.37 Discuss the pathophysiology of seizures in the neonate.
- 51.38 Discuss the assessment findings associated with seizures in the neonate.
- 51.39 Discuss the management/treatment plan for seizures in the neonate.
- 51.40 Discuss the pathophysiology of fever in the neonate.
- 51.41 Discuss the assessment findings associated with fever in the neonate.
- 51.42 Discuss the management/treatment plan for fever in the neonate.
- 51.43 Discuss the pathophysiology of hypothermia in the neonate.
- 51.44 Discuss the assessment findings associated with hypothermia in the neonate.
- 51.45 Discuss the management/treatment plan for hypothermia in the neonate.
- 51.46 Discuss the pathophysiology of hypoglycemia in the neonate.
- 51.47 Discuss the assessment findings associated with hypoglycemia in the neonate.
- 51.48 Discuss the management/treatment plan for hypoglycemia in the neonate.
- 51.49 Discuss the pathophysiology of vomiting in the neonate.

- 51.50 Discuss the assessment findings associated with vomiting in the neonate.
- 51.51 Discuss the management/treatment plan for vomiting in the neonate.
- 51.52 Discuss the pathophysiology of common birth injuries in the neonate.
- 51.53 Discuss the assessment findings associated with common birth injuries in the neonate.
- 51.54 Discuss the management/treatment plan for common birth injuries in the neonate.
- 51.55 Discuss the pathophysiology of cardiac arrest in the neonate.
- 51.56 Discuss the assessment findings associated with cardiac arrest in the neonate.
- 51.57 Discuss the management/treatment plan for cardiac arrest in the neonate.
- 51.58 Discuss the pathophysiology of post arrest management of the neonate.
- 51.59 Discuss the management/treatment plan to stabilize the post arrest neonate.
- 51.60 Demonstrate preparation of a newborn resuscitation area.
- 51.61 Demonstrate appropriate assessment technique for examining a newborn.
- 51.62 Demonstrate appropriate assisted ventilations for a newborn.
- 51.63 Demonstrate appropriate endotracheal intubation technique for a newborn.
- 51.64 Demonstrate appropriate chest compression and ventilation technique for a newborn.
- 51.65 Demonstrate vascular access cannulation techniques for a newborn.
- 51.66 Demonstrate the initial steps in resuscitation of a newborn.
- 51.67 Demonstrate blow-by oxygen delivery for a newborn.

52.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR THE PEDIATRIC PATIENT-- 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 pediatric patient. At the completion of this unit, the paramedic student will be able to:

- 52.01 Identify key growth and developmental characteristics of infants and children and their implications.
- 52.02 Identify key anatomical and physiological characteristics of infants and children and their implications.
- 52.03 Describe techniques for successful assessment of infants and children.
- 52.04 Describe techniques for successful treatment of infants and children.
- 52.05 Outline differences in adult and childhood anatomy and physiology.
- 52.06 Identify "normal" age group related vital signs.
- 52.07 Determine appropriate airway adjuncts for infants and children.
- 52.08 Discuss complications of improper utilization of airway adjuncts with infants and children.
- 52.09 Discuss appropriate ventilation devices for infants and children.
- 52.10 Discuss complications of improper utilization of ventilation devices with infants and children.
- 52.11 Identify complications of improper endotracheal intubation procedure in infants and children.
- 52.12 List the indications and methods for gastric decompression for infants and children.
- 52.13 Differentiate between upper airway obstruction and lower airway disease.
- 52.14 Describe the general approach to the treatment of children with respiratory distress, failure, or arrest from upper airway obstruction or lower airway disease.
- 52.15 Discuss the common causes of hypoperfusion in infants and children.
- 52.16 Identify the major classifications of pediatric cardiac rhythms.
- 52.17 Discuss the primary etiologies of cardiopulmonary arrest in infants and children.

- 52.18 Discuss the appropriate equipment for vascular access in infants and children.
- 52.19 Identify complications of vascular access for infants and children.
- 52.20 Describe the primary etiologies of altered level of consciousness in infants and children.
- 52.21 Identify common lethal mechanisms of injury in infants and children.
- 52.22 Identify infant and child trauma patients who require spinal immobilization.
- 52.23 Discuss fluid management and shock treatment for infant and child trauma patient.
- 52.24 Determine when pain management and sedation are appropriate for infants and children.
- 52.25 Define child abuse.
- 52.26 Define child neglect.
- 52.27 Define sudden infant death syndrome (SIDS).
- 52.28 Discuss the parent/caregiver responses to the death of an infant or child.
- 52.29 Define children with special health care needs.
- 52.30 Discuss basic cardiac life support (CPR) guidelines for infants and children.
- 52.31 Integrate advanced life support skills with basic cardiac life support for infants and children.
- 52.32 Discuss the indications, dosage, route of administration and special considerations for medication administration in infants and children.
- 52.33 Discuss the pathophysiology of respiratory distress/failure in infants and children.
- 52.34 Discuss the assessment findings associated with respiratory distress/failure in infants and children.
- 52.35 Discuss the management/treatment plan for respiratory distress/failure in infants and children.
- 52.36 Discuss the pathophysiology of hypoperfusion in infants and children.
- 52.37 Discuss the assessment findings associated with hypoperfusion in infants and children.
- 52.38 Discuss the management/treatment plan for hypoperfusion in infants and children.
- 52.39 Discuss the pathophysiology of cardiac dysrhythmias in infants and children.
- 52.40 Discuss the assessment findings associated with cardiac dysrhythmias in infants and children.
- 52.41 Discuss the management/treatment plan for cardiac dysrhythmias in infants and children.
- 52.42 Discuss the pathophysiology of neurological emergencies in infants and children.
- 52.43 Discuss the assessment findings associated with neurological emergencies in infants and children.
- 52.44 Discuss the management/treatment plan for neurological emergencies in infants and children.
- 52.45 Discuss the pathophysiology of trauma in infants and children.
- 52.46 Discuss the assessment findings associated with trauma in infants and children.
- 52.47 Discuss the management/treatment plan for trauma in infants and children.
- 52.48 Discuss the pathophysiology of abuse and neglect in infants and children.
- 52.49 Discuss the assessment findings associated with abuse and neglect in infants and children.
- 52.50 Discuss the management/treatment plan for abuse and neglect in infants and children, including documentation and reporting.
- 52.51 Discuss the pathophysiology of children with special health care needs including technology assisted children.

- 52.52 Discuss the assessment findings associated for children with special health care needs including technology assisted children.
- 52.53 Discuss the management/treatment plan for children with special health care needs including technology assisted children.
- 52.54 Discuss the pathophysiology of SIDS in infants.
- 52.55 Discuss the assessment findings associated with SIDS infants.
- 52.56 Discuss the management/treatment plan for SIDS in infants.
- 52.57 Demonstrate the appropriate approach for treating infants and children.
- 52.58 Demonstrate appropriate intervention techniques with families of acutely ill or injured infants and children.
- 52.59 Demonstrate an appropriate assessment for different developmental age groups.
- 52.60 Demonstrate an appropriate technique for measuring pediatric vital signs.
- 52.61 Demonstrate the use of a length-based resuscitation device for determining equipment sizes, drug doses and other pertinent information for a pediatric patient.
- 52.62 Demonstrate the appropriate approach for treating infants and children with respiratory distress, failure, and arrest.
- 52.63 Demonstrate proper technique for administering blow-by oxygen to infants and children.
- 52.64 Demonstrate the proper utilization of a pediatric non-rebreather oxygen mask.
- 52.65 Demonstrate proper technique for suctioning of infants and children.
- 52.66 Demonstrate appropriate use of airway adjuncts with infants and children.
- 52.67 Demonstrate appropriate use of ventilation devices for infants and children.
- 52.68 Demonstrate endotracheal intubation procedures in infants and children.
- 52.69 Demonstrate appropriate treatment/management of intubation complications for infants and children.
- 52.70 Demonstrate appropriate needle cricothyroidotomy in infants and children.
- 52.71 Demonstrate proper placement of a gastric tube in infants and children.
- 52.72 Demonstrate an appropriate technique for insertion of peripheral intravenous catheters for infants and children.
- 52.73 Demonstrate an appropriate technique for administration of intramuscular, inhalation, subcutaneous, rectal, endotracheal and oral medication for infants and children.
- 52.74 Demonstrate an appropriate technique for insertion of an intraosseous line for infants and children.
- 52.75 Demonstrate age appropriate basic airway clearing maneuvers for infants and children with a completely obstructed airway.
- 52.76 Demonstrate proper technique for direct laryngoscopy and foreign body retrieval in infants and children with a completely obstructed airway.
- 52.77 Demonstrate appropriate airway and breathing control maneuvers for infant and child trauma patients.
- 52.78 Demonstrate appropriate immobilization techniques for infant and child trauma patients.
- 52.79 Demonstrate treatment of infants and children with head injuries.
- 52.80 Demonstrate appropriate treatment of infants and children with chest injuries.
- 52.81 Demonstrate appropriate treatment of infants and children with abdominal injuries.
- 52.82 Demonstrate appropriate treatment of infants and children with extremity injuries.
- 52.83 Demonstrate appropriate treatment of infants and children with burns.
- 52.84 Demonstrate appropriate parent/caregiver interviewing techniques for infant and child death situations.
- 52.85 Demonstrate proper infant CPR.

- 52.86 Demonstrate proper child CPR.
- 52.87 Demonstrate proper techniques for performing infant and child defibrillation and synchronized cardioversion.

53.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR THE GERIATRIC PATIENT-- 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. At the completion of this unit, the paramedic student will be able to:

- 53.01 Discuss common emotional and psychological reactions to aging to include causes and manifestations.
- 53.02 Discuss the problems with mobility in the elderly and develop strategies to prevent falls.
- 53.03 Discuss factors that may complicate the assessment of the elderly patient.
- 53.04 Describe principles that should be employed when assessing and communicating with the elderly.
- 53.05 Discuss common complaints of elderly patients.
- 53.06 Discuss the impact of polypharmacy and medication non-compliance on patient assessment and management.
- 53.07 Discuss medication issues of the elderly including polypharmacy, dosing errors and increased drug sensitivity.
- 53.08 Discuss the assessment of the elderly patient with pulmonary complaints, including pneumonia, chronic obstructive pulmonary diseases, and pulmonary embolism.
- 53.09 Identify the need for intervention and transport of the elderly patient with pulmonary complaints.
- 53.10 Develop a treatment and management plan of the elderly patient with pulmonary complaints, including pneumonia, chronic obstructive pulmonary diseases, and pulmonary embolism.
- 53.11 Discuss the assessment of the elderly patient with complaints related to the cardiovascular system, including myocardial infarction, heart failure, dysrhythmias, aneurism, and hypertension.
- 53.12 Develop a treatment and management plan of the elderly patient with cardiovascular complaints, including myocardial infarction, heart failure, dysrhythmias, aneurism and hypertension.
- 53.13 Discuss the assessment of the elderly patient with complaints related to the nervous system, including cerebral vascular disease, delirium, dementia, Alzheimer's disease and Parkinson's disease.
- 53.14 Develop a treatment and management plan of the elderly patient with complaints related to the nervous system, including cerebral vascular disease, delirium, dementia, Alzheimer's disease and Parkinson's disease.
- 53.15 Describe the epidemiology for endocrine diseases in the elderly, including incidence, morbidity/mortality, risk factors, and prevention strategies for patients with diabetes and thyroid diseases.
- 53.16 Discuss the assessment of the elderly patient with complaints related to the endocrine system, including diabetes and thyroid diseases.
- 53.17 Develop a treatment and management plan of the elderly patient with endocrine problems, including diabetes and thyroid diseases.
- 53.18 Develop and execute a treatment and management plan of the elderly patient with gastrointestinal problems.
- 53.19 Develop and execute a treatment and management plan of the elderly patient with toxicological problems.
- 53.20 Discuss the management/considerations when treating an elderly patient with drug and alcohol abuse.
- 53.21 Develop and execute a treatment and management plan of the elderly patient with environmental considerations.

- 53.22 Develop a treatment and management plan of the elderly psychiatric patient, including depression and suicide.
 - 53.23 Discuss the assessment findings common in elderly patients with traumatic injuries, including orthopedic injuries, burns and head injuries.
 - 53.24 Discuss the management/considerations when treating an elderly patient with traumatic injuries, including orthopedic injuries, burns and head injuries.
 - 53.25 Demonstrate the ability to assess a geriatric patient.
 - 53.26 Demonstrate the ability to adjust their assessment to a geriatric patient.
- 54.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A PATIENT WHO HAS SUSTAINED ABUSE OR ASSAULT-- 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. At the completion of this unit, the paramedic student will be able to:
- 54.01 Discuss the incidence of abuse and assault.
 - 54.02 Describe the categories of abuse.
 - 54.03 Discuss examples of spouse abuse.
 - 54.04 Discuss examples of elder abuse.
 - 54.05 Discuss examples of child abuse.
 - 54.06 Discuss examples of sexual assault.
 - 54.07 Describe the characteristics associated with the profile of the typical abuser of a spouse.
 - 54.08 Describe the characteristics associated with the profile of the typical abuser of the elder.
 - 54.09 Describe the characteristics associated with the profile of the typical abuser of children.
 - 54.10 Describe the characteristics associated with the profile of the typical assailant of sexual assault.
 - 54.11 Identify the profile of the "at-risk" spouse.
 - 54.12 Identify the profile of the "at-risk" elder.
 - 54.13 Identify the profile of the "at-risk" child.
 - 54.14 Discuss the assessment and management of the abused patient.
 - 54.15 Discuss the legal aspects associated with abuse situations.
 - 54.16 Discuss the documentation associated with abused and assaulted patient.
 - 54.17 Demonstrate the ability to assess a spouse, elder or child abused patient.
 - 54.18 Demonstrate the ability to assess a sexually assaulted patient.
- 55.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR A VARIETY OF DIVERSE PATIENTS WITH A SUSPECTED EMERGENCY -- 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. At the completion of this unit, the paramedic student will be able to:
- 55.01 Recognize the patient with a hearing impairment.
 - 55.02 Anticipate accommodations that may be needed in order to properly manage the patient with a hearing impairment.
 - 55.03 Recognize the patient with a visual impairment.
 - 55.04 Describe the various etiologies and types of speech impairments.
 - 55.05 Recognize the patient with a speech impairment.
 - 55.06 Describe paraplegia/quadriplegia.
 - 55.07 Describe the various etiologies of mental illness.
 - 55.08 Recognize the presenting signs of the various mental illnesses.
 - 55.09 Recognize the patient with a developmental disability.

- 55.10 Recognize the patient with Down's syndrome.
 - 55.11 Describe the various etiologies of emotional impairment.
 - 55.12 Recognize the patient with an emotional impairment.
 - 55.13 Describe the following diseases/illnesses: Arthritis, Cancer, Cerebral palsy, Cystic fibrosis Multiple sclerosis, Muscular dystrophy, Myasthenia gravis, Poliomyelitis, Spina bifida, patients with a previous head injury
 - 55.14 Identify the possible presenting sign(s) for the following diseases/illnesses: Arthritis, Cancer, Cerebral palsy, Cystic fibrosis, Multiple sclerosis, Muscular dystrophy, Myasthenia gravis, Poliomyelitis, Spina bifida, and patients with a previous head injury.
 - 55.15 Identify a patient that is terminally ill.
 - 55.16 Identify a patient with a communicable disease.
 - 55.17 Recognize the presenting signs of a patient with a communicable disease.
 - 55.18 Recognize sign(s) of financial impairments.
- 56.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR THE CHRONIC CARE PATIENT-- 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 and implement a treatment plan for the acute deterioration of a chronic care patient. At the completion of this unit, the paramedic student will be able to:
- 56.01 Identify the importance of home health care medicine as related to the ALS level of care.
 - 56.02 Differentiate between the role of EMS provider and the role of the home care provider.
 - 56.03 Discuss the aspects of home care that result in enhanced quality of care for a given patient.
 - 56.04 Discuss the aspects of home care that have a potential to become a detriment to the quality of care for a given patient.
 - 56.05 List complications commonly seen in the home care patients, which result in their hospitalization.
 - 56.06 Define hospice care, comfort care and DNR/DNAR as they relate to local practice, law and policy.
 - 56.07 List the stages of the grief process and relate them to an individual in hospice care.
 - 56.08 Given a series of home care scenarios, determine which patients should receive follow-up home care and which should be transported to an emergency care facility.
 - 56.09 Describe airway maintenance devices typically found in the home care environment.
 - 56.10 Describe devices that provide or enhance alveolar ventilation in the home care setting.
 - 56.11 List vascular access devices found in the home care setting.
 - 56.12 Describe complications of assessing each of the airway, vascular access, and GI/GU devices described above.
 - 56.13 Describe the indications and contraindications for urinary catheter insertion in an out-of-hospital setting.
 - 56.14 Identify the proper anatomy for placement of urinary catheters in males or females.
 - 56.15 Identify failure of GI/GU devices found in the home care setting.
 - 56.16 Identify failure of ventilatory devices found in the home care setting.
 - 56.17 Identify failure of vascular access devices found in the home care setting.
 - 56.18 Identify failure of drains.
 - 56.19 Discuss the rights of the terminally ill.
 - 56.20 Observe for an infected or otherwise complicated venous access point.

- 56.21 Demonstrate proper tracheotomy care.
- 56.22 Demonstrate the insertion of a new inner cannula and/or the use of an endotracheal tube to temporarily maintain an airway in a tracheostomy patient.
- 56.23 Demonstrate proper technique for drawing blood from a central venous line.
- 56.24 Demonstrate the method of accessing vascular access devices found in the home health care setting.

57.0 IMPLEMENT THE PROPER TREATMENT PLAN FOR PATIENTS WITH COMMON COMPLAINTS --

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

- 57.01 Explain how the paramedic's attitude affects assessment and decision making.
- 57.02 Explain how uncooperative patients affect assessment and decision making.
- 57.03 Explain the roles of the team leader and the patient care person.
- 57.04 List and explain the rationale for carrying the essential patient care items.
- 57.05 Explain the general approach to the emergency patient.
- 57.06 Explain the general approach, patient assessment, differentials, and management priorities for patients, including but not limited to the following problems: chest pain, medical and traumatic cardiac arrest, acute abdominal pain, GI bleed, altered mental status, dyspnea, syncope, seizures, environmental or thermal problems, hazardous material or toxic exposure, trauma or multi-trauma patients, allergic reactions, behavioral problems, obstetric or gynecological problems, and pediatric problems.
- 57.07 Describe how to effectively communicate patient information face to face, over the telephone, by radio, and in writing.
- 57.08 While serving as team leader, choreograph the EMS response team, perform a patient assessment, provide local/regionally appropriate treatment, present cases verbally and in writing given a moulaged and programmed simulated patient.
- 57.09 While serving as team leader, assess a programmed patient or mannequin, consider differentials, make decisions relative to interventions and transportation, provide the interventions, patient packaging and transportation, work as a team and practice various roles, including but not limited to the following common emergencies: chest pain. Cardiac arrest, acute abdominal pain, GI bleed, altered mental status, dyspnea, syncope, seizure, thermal/environmental problems, hazardous materials/toxicology, trauma, allergic reactions/bites/envenomation, behavioral, obstetrical, gynecological and pediatric.

58.0 DEMONSTRATE THE PROPER PROCEDURES TO ENSURE SAFE AND EFFECTIVE GROUND AND AIR TRANSPORT--

At the completion of this unit, the paramedic will understand standards and guidelines that help ensure safe and effective ground and air medical transport. At the completion of this unit, the paramedic student will be able to:

- 58.01 Identify current local and state standards which influence ambulance design, equipment requirements and staffing of ambulances.
- 58.02 Discuss the importance of completing an ambulance equipment/ supply checklist.

- 58.03 Discuss the factors to be considered when determining ambulance stationing within a community.
- 58.04 Describe the advantages and disadvantages of air medical transport.
- 58.05 Identify the conditions/situations in which air medical transport should be considered.
- 58.06 Assess personal practices relative to ambulance operations which may affect the safety of the crew, the patient and bystanders.
- 58.07 Serve as a role model for others relative to the operation of ambulances.
- 58.08 Value the need to serve as the patient advocate to ensure appropriate patient transportation via ground or air.
- 58.09 Demonstrate how to place a patient in, and remove a patient from, an ambulance.

59.0 INTEGRATE THE PRINCIPLES OF GENERAL INCIDENT MANAGEMENT AND MULTIPLE CASUALTY INCIDENT MANAGEMENT-- 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. At the completion of this unit, the paramedic student will be able to:

- 59.01 Explain the need for the incident management system (IMS)/incident command system (ICS) in managing emergency medical services incidents.
- 59.02 Define the term multiple casualty incident (MCI).
- 59.03 Define the term disaster management.
- 59.04 Describe essential elements of scene size-up when arriving at a potential MCI.
- 59.05 Describe the role of the paramedics and EMS systems in planning for MCIs and disasters.
- 59.06 Describe the functional components of the incident management system in terms of the following: command, finance, logistics, operations and planning.
- 59.07 Differentiate between singular and unified command and when each is most applicable.
- 59.08 Describe the role of command.
- 59.09 Describe the need for transfer of command and procedures for transferring it.
- 59.10 List and describe the functions of the following groups and leaders in ICS as it pertains to EMS incidents: safety, logistics, rehabilitation, staging, treatment, triage, transportation, extrication/rescue, morgue, and communications.
- 59.11 Describe the role of the physician at multiple casualty incidents.
- 59.12 Define triage and describe the principles of triage.
- 59.13 Describe the START (simple triage and rapid treatment) method of initial triage.
- 59.14 Define primary and secondary triage.
- 59.15 Describe techniques used to allocate patients to hospitals and track them.
- 59.16 List and describe the essential equipment to provide logistical support to MCI operations, including but not limited to: Airway, respiratory and hemorrhage control, Burn management, and Patient packaging/immobilization.
- 59.17 List the physical and psychological signs of critical incident stress.
- 59.18 Describe the role of critical incident stress management sessions in MCIs.
- 59.19 Explain the organizational benefits for having standard operating procedures (SOPs) for using the incident management system or incident command system.
- 59.20 Demonstrate the use of local/regional triage tagging system used for primary and secondary triage.

- 59.21 Given a classroom simulation of a MCI with 5-10 patients, fulfill the role of triage group leader.
- 59.22 Given a classroom simulation of a MCI with 5-10 patients, fulfill the role of treatment group leader.
- 59.23 Given a classroom simulation of a MCI with 5-10 patients, fulfill the role of transportation group leader.

60.0 INTEGRATE THE PRINCIPLES OF RESCUE AWARENESS MANAGEMENT -- 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. At the completion of this unit, the paramedic student will be able to:

- 60.01 Explain the medical and mechanical aspects of rescue situations.
- 60.02 Explain the role of the paramedic in delivering care at the site of the injury, continuing through the rescue process and to definitive care.
- 60.03 Describe the phases of a rescue operation.
- 60.04 Explain the differences in risk between moving water and flat water rescue.
- 60.05 Explain the effects of immersion hypothermia on the ability to survive sudden immersion and self rescue.
- 60.06 Explain the phenomenon of the cold protective response in cold water drowning situations.
- 60.07 Explain the rescue techniques associated with reach-throw-row-go.
- 60.08 Given a list of rescue scenarios, identify the victim survivability profile and which are rescue versus body recovery situations.
- 60.09 Explain the self-rescue position if unexpectedly immersed in moving water.
- 60.10 Identify components necessary to ensure site safety prior to confined space rescue attempts.
- 60.11 Explain the hazard of cave-in during trench rescue operations.
- 60.12 Describe the effects of traffic flow on the highway rescue incident including limited access superhighways and regular access highways.
- 60.13 List and describe the hazards associated with the following auto/truck components: energy absorbing bumpers, air bag/supplemental restraint systems, catalytic converters and conventional fuel systems, stored energy, and alternate fuel systems.
- 60.14 Describe methods for emergency stabilization using rope, cribbing, jacks, spare tire, and come-a-longs for vehicles found on their:
- 60.15 Describe the electrical hazards commonly found at highway incidents (above and below ground).
- 60.16 Explain the difference between tempered and safety glass, identify its locations on a vehicle and how to break it safely.
- 60.17 Explain typical door anatomy and methods to access through stuck doors.
- 60.18 Explain SRS or "air bag" systems and methods to neutralize them.
- 60.19 Describe the procedure for stokes litter packaging for low angle evacuations.
- 60.20 Explain techniques to be used in non-technical litter carries over rough terrain.
- 60.21 Explain non-technical high angle rescue procedures using aerial apparatus.
- 60.22 Explain assessment procedures and modifications necessary when caring for entrapped patients.
- 60.23 List the equipment necessary for an "off road" medical pack.
- 60.24 Explain specific methods of improvisation for assessment, spinal immobilization and extremity splinting.
- 60.25 Explain the indications, contraindications and methods of pain control for entrapped patients.

- 60.26 Explain the need for and techniques of thermal control for entrapped patients.
 - 60.27 Develop proficiency in patient packaging and evacuation techniques that pertain to hazardous or rescue environments.
 - 60.28 Demonstrate methods of "stokes" packaging for patients being vertically lifted (high angle), horizontally lifted (low angle), and carried over rough terrain.
 - 60.29 Demonstrate methods of packaging for patients being vertically lifted without stokes litter stretcher packaging.
 - 60.30 Demonstrate litter securing techniques for patients being evacuated by aerial apparatus.
 - 60.31 Demonstrate in-water spinal immobilization techniques.
 - 60.32 Demonstrate donning and properly adjusting a PFD.
- 61.0 INTEGRATE THE PRINCIPLES OF HUMAN HAZARD AWARENESS-- 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. At the completion of this unit, the paramedic student will be able to:
- 61.01 Explain specific techniques for risk reduction when approaching the following types of routine EMS scenes: highway encounters, violent street incidents, and residences and "dark houses".
 - 61.02 Describe warning signs of potentially violent situations.
 - 61.03 Describe police evidence considerations and techniques to assist in evidence preservation.
 - 61.04 Demonstrate field contact and cover procedures during assessment and care, evasive tactics, and concealment techniques.
- 62.0 INTEGRATE THE PRINCIPLES OF GENERAL INCIDENT MANAGEMENT OF HAZARDOUS MATERIALS EMERGENCIES-- 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. At the completion of this unit, the paramedic student will be able to:
- 62.01 Identify resources for substance identification, decontamination and treatment information, including but not limited to the following: poison control center, medical control, material safety data sheets (MSDS), reference textbooks, computer databases (CAMEO), CHEMTREC, technical specialists and agency for toxic substances and disease registry.
 - 62.02 Explain primary and secondary contamination risk.
 - 62.03 List and describe the following routes of exposure: topical, respiratory, gastrointestinal, and parenteral.
 - 62.04 Explain how the substance and route of contamination alters triage and decontamination methods.
 - 62.05 Explain the limitations of field decontamination procedures.
 - 62.06 Explain the use and limitations of personal protective equipment (PPE) in hazardous material situations.
 - 62.07 List and explain the common signs, symptoms and treatment for the following substances: corrosives (acids/alkalis), pesticides (carbamates/organophosphates), chemical asphyxiants (cyanide/carbon monoxide), and hydrocarbon solvents (xylene, methylene chloride).
 - 62.08 Identify local facilities and resources capable of treating patients exposed to hazardous materials.
 - 62.09 Define the following terms and explain their importance to the risk assessment process: boiling point, flammable/explosive limits, flash point, ignition temperature, specific gravity, vapor density, vapor pressure, water solubility, and alpha , beta, and gamma radiation.

- 62.10 Define the following toxicologic terms and their use in the risk assessment process: threshold limit value (TLV), lethal concentration and doses (LD), parts per million/billion (ppm/ppb), immediately dangerous to life and health (IDLH), permissible exposure limit (PEL), permissible exposure limit (PEL), short term exposure limit (TLV-STEL), and ceiling level (TLV-C).
- 62.11 Determine the appropriate level of PPE to include: types, application, use and limitations, and use of chemical compatibility chart.
- 62.12 Explain decontamination procedures when functioning in the following modes: critical patient rapid two step decontamination process and non-critical patient eight step decontamination process.
- 62.13 Explain specific decontamination procedures.
- 62.14 Explain the documentation necessary for Haz-Mat medical monitoring and rehabilitation operations, including the substance, the toxicity and danger of secondary contamination, appropriate PPE and suit breakthrough time, appropriate level of decontamination, appropriate antidote and medical treatment and transportation method.
- 62.15 Given a simulated hazardous substance, use reference material to determine the appropriate actions.
- 62.16 Demonstrate the donning and doffing of appropriate PPE.
- 62.17 Set up and demonstrate an emergency two-step decontamination process.