Florida Department of Education
Curriculum Framework

Program Title: **Paramedic**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

This program is ONLY authorized to be offered by the following districts: Lake, Manatee, St. Johns, and Sarasota.

PSAV	
Program Number	W170211 (This program is for use by Grandfathered Districts ONLY)
CIP Number	0351090416
Grade Level	30,31
Standard Length	1100 clock hours
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA: Future Health Professionals
SOC Codes (all applicable)	31-9099 Healthcare Support Workers, All Other 29-2041 Emergency Medical Technicians and Paramedics
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	Mathematics: 10 Language: 10 Reading: 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This is an instructional program that prepares students for employment as paramedics 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 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.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 1 occupational completion point.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code
A	EMS0210	Paramedic I	PARAMEDIC @7 7G # REG NURSE 7 G #PRAC NURSE @7 %7%G *(Must be a Registered Nurse)	248 hours	29-2041
	EMS0211	Paramedic II		426 hours	
	EMS0212	Paramedic III		426 hours	

 # A registered Nurse (REG NURSE 7 G) can only be used as adjunct faculty. Please refer to 64J-1.201 F.A.C. for the EMS instructor qualifications.

Regulated Programs

The Paramedic standards and benchmarks in this framework include all of the content, knowledge and skills at the EMT level in addition to the Paramedic objectives. For those standards that state "Review EMT standards and benchmarks", please refer to the EMT curriculum framework for specific objectives.

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), National EMS Educational Standards for Paramedic. This is the second level for a career in emergency medical services. Completion of this program should prepare the student for the certification examination approved for the state of Florida.

This program meets the Department of Health trauma score card methodologies and SUIDS training education requirements. Upon completion of this program, the instructor will provide a certificate to the student verifying that these requirements have been met. This program also meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor may provide a certificate for renewal purposes to the student verifying these requirements have been met.

A Paramedic program must be taught by faculty meeting the qualifications as set forth in 64J-1.020 F. A. C.

Pursuant F.S.401.2701 to Paramedic programs must be available only to Florida-certified emergency medical technicians or an emergency medical technician applicant who will obtain Florida certification prior to completion of phase one of the paramedic program and EMT certification must be maintained through the program.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.

2. Apply appropriate academic and technical skills.

3. Attend to personal health and financial well-being.

4. Communicate clearly, effectively and with reason.

5. Consider the environmental, social and economic impacts of decisions.

6. Demonstrate creativity and innovation.

7. Employ valid and reliable research strategies.

8. Utilize critical thinking to make sense of problems and persevere in solving them.

9. Model integrity, ethical leadership and effective management.

10. Plan education and career path aligned to personal goals.

11. Use technology to enhance productivity.

12. Work productively in teams while using cultural/global competence.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate a fundamental depth and foundational breadth of the History of EMS and a complex depth and comprehensive breadth of EMS Systems.
02.0 Demonstrate a fundamental depth, foundational breath of research principles to interpret literature and advocate evidence-based practice.
03.0 Demonstrate a complex depth, comprehensive breadth of workforce safety and wellness.
04.0 Demonstrate a complex depth, comprehensive breadth of the principles of medical documentation and report writing.
05.0 Demonstrate a complex depth, comprehensive breadth of EMS communication system.
06.0 Demonstrate a complex depth and comprehensive breadth of the therapeutic communication principles.
07.0 Demonstrate a complex depth, comprehensive breadth of medical legal and ethical concepts related to EMS.
08.0 Demonstrate a complex depth and comprehensive breadth of anatomy and physiology of all human systems.
09.0 Demonstrate the integration of comprehensive anatomical and medical terminology and abbreviations into written and oral communication with health care professionals.
10.0 Demonstrate a comprehensive knowledge of pathophysiology of major systems.
11.0 Apply the integration of knowledge of the physiological, psychological, and sociological changes throughout human development.
12.0 Demonstrate the application of fundamental knowledge of principles of public health.
13.0 Demonstrate a complex depth, comprehensive breadth in the principles of pharmacology.
14.0 Demonstrate a complex depth, comprehensive breadth of medication administration within the scope of practice of the paramedic.
15.0 Demonstrate a complex depth, comprehensive breadth of emergency medications within the scope of practice for the paramedic.
16.0 Demonstrate a complex depth, comprehensive breadth of airway management and respiration within the scope of practice of the paramedic.
17.0 Demonstrate a complex breadth, comprehensive breadth of assessment and management utilizing artificial ventilation.
18.0 Demonstrate a complex depth, comprehensive breadth of scene management.
19.0 Demonstrate a complex depth, comprehensive breadth of the primary assessment for all patient situations.
20.0 Demonstrate a complex depth, comprehensive breath of the components of history taking.
21.0 Demonstrate a complex depth, comprehensive breadth of techniques used for a secondary assessment.
22.0 Demonstrate a fundamental depth, foundational breadth of monitoring devices within the scope of practice of the paramedic.
23.0 Demonstrate a complex depth, comprehensive breadth of how and when to perform a reassessment for all patient situations.
24.0 Demonstrate a complex depth and comprehensive breadth of pathophysiology, assessment, and management of medical complaints.
25.0 Demonstrate a complex depth and comprehensive breadth of neurologic disorders/emergencies for all age groups.
26.0 Demonstrate a complex depth and comprehensive breadth of abdominal and gastrointestinal disorders/emergencies for all age groups.
27.0 Demonstrate a complex depth, comprehensive breadth of immunology disorders/emergencies for all age groups.
28.0 Demonstrate a complex depth, comprehensive breadth of assessment and management of a patient who may have an infectious diseases for all age groups.
29.0 Demonstrate a complex depth, comprehensive breadth in endocrine disorders/emergencies for all age groups.
30.0 Demonstrate a complex depth, comprehensive breadth regarding the assessment and management of psychiatric disorders/emergencies for all age groups.
31.0 Demonstrate a complex depth, comprehensive breadth of cardiovascular disorders/ emergencies for all age groups.

32.0 Demonstrate a complex depth, comprehensive breadth of the assessment and management of toxicology emergencies for all age groups.
33.0 Demonstrate a complex depth, comprehensive breadth of the assessment and management of respiratory disorders/emergencies for all age groups.
34.0 Demonstrate a complex depth, foundational breadth of the assessment, and management of hematology disorders/ emergencies for all age groups.
35.0 Demonstrate a complex depth, comprehensive breadth of genitourinary and renal emergencies all age groups.
36.0 Demonstrate a complex depth, comprehensive breadth of the assessment findings and the management of gynecology disorders/emergencies for all age groups.
37.0 Demonstrate a fundamental depth, foundation breadth of the assessment and management of non-traumatic fractures for all age groups.
38.0 Demonstrate a fundamental depth, foundational breadth of the assessment and management of common or major diseases of the eyes, ears, nose and throat for all age groups.
39.0 Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of shock and respiratory failure.
40.0 Demonstrate a complex depth, comprehensive breadth of pathophysiology, assessment and management of the trauma patient for all age groups.
41.0 Demonstrate a complex depth, comprehension breadth of pathophysiology, assessment and management of bleeding for all age groups.
42.0 Demonstrate a complex depth, comprehensive breadth of pathophysiology, assessment, and management of chest trauma for all age groups.
43.0 Demonstrate a complex depth, comprehensive breadth of pathophysiology, assessment, and management of abdominal and genitourinary trauma for all age groups.
44.0 Demonstrate a fundamental depth, foundational breadth of pathophysiology, assessment, and management of orthopedic trauma for all age groups.
45.0 Demonstrate a complex depth, comprehensive breadth of pathophysiology, assessment, and management of soft tissue trauma for all age groups.
46.0 Demonstrate a fundamental depth, foundational breadth of head, face, neck and spine trauma for all age groups.
47.0 Demonstrate a fundamental depth, foundational breadth of nervous system trauma for all age groups.
48.0 Demonstrate a complex depth, comprehensive breadth of special considerations in trauma for all age groups.
49.0 Demonstrate a complex depth, comprehensive breadth of environmental emergencies for all age groups.
50.0 Demonstrate a complex depth, comprehensive breadth of multi-system trauma and blast injuries.
51.0 Demonstrate a complex depth, comprehensive breadth of the management of the obstetric patient within the scope of practice of the paramedic.
52.0 Demonstrate a complex depth, comprehensive breadth of the management of the neonatal patient within the scope of practice of the paramedic.
53.0 Demonstrate a complex depth, comprehensive breadth of the management of the pediatric patient within the scope of practice of the paramedic.
54.0 Demonstrate a complex depth, comprehensive breadth of the management of the geriatric patient within the scope of practice of the paramedic.

55.0 Demonstrate a complex depth, comprehensive breadth of management of the patient with special challenges within the scope of practice of the paramedic.
56.0 Demonstrate a simple depth, foundational breadth of risks and responsibilities of transport.
57.0 Demonstrate a complex depth, comprehensive breadth of establishing and working within the incident management system.
58.0 Demonstrate a simple depth, foundational breadth of responding to an emergency during a multiple casualty incident.
59.0 Demonstrate a complex depth, comprehensive breadth of air Medical transport risks, needs and advantages.
60.0 Demonstrate a simple depth, simple breadth for safe vehicle extrication and use of simple hand tools.
61.0 Demonstrate a simple depth, simple breadth of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident.
62.0 Demonstrate a simple depth, simple breadth of risks and responsibilities of operating on the scene of a natural or man- made disaster.

Florida Department of Education
Student Performance Standards

Program Title: **Paramedic**
PSAV Number: **W170211**

The Paramedic standards and benchmarks in this framework include all of the content, knowledge and skills at the EMT level in addition to the Paramedic objectives. For those standards that state "Review EMT standards and benchmarks", please refer to the EMT curriculum framework for specific objectives.

Course Number: EMS0210 **Occupational Completion Point: A** **Paramedic I – 248 hours – SOC Code 29-2041**	
01.0	**EMS Systems:** Demonstrate a fundamental depth and foundational breadth of the History of EMS and a complex depth and comprehensive breadth of EMS Systems. –The student will be able to:
01.01	Define terms, including but not limited to: EMS systems, licensure, registration, profession, professionalism, health care professional, ethics, peer review, medical direction and protocols.
01.02	Describe the attributes of a paramedic as a health care professional.
01.03	Explain paramedic licensure/ certification, recertification, and reciprocity requirements in his or her state.
01.04	Evaluate the importance of maintaining one's paramedic license/ certification.
01.05	Describe the benefits of paramedic continuing education.
01.06	Discuss the role of national associations and of a national registry agency.
01.07	Discuss Chapter 401, Florida Statutes, and Chapter 64-E, Florida Administrative Code
01.08	Discuss the roles of various EMS standard setting agencies.
01.09	Identify the standards (components) of an EMS System as defined by the National Highway Traffic Safety Administration.
01.10	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.
01.11	Describe the importance of quality EMS research to the future of EMS.
01.12	Describe the role of the EMS physician in providing medical direction.
01.13	Provide examples of local protocols.

	01.14 Describe the relationship between a physician on the scene, the paramedic on the scene, and the EMS physician providing on-line medical direction.
	01.15 Define the role of the paramedic relative to the safety of the crew, the patient, and bystanders.
	01.16 Assess personal practices relative to the responsibility for personal safety, the safety of the crew, the patient, and bystanders.
	01.17 Advocate the need for injury prevention, including abusive situations.
	01.18 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.
	01.19 Discuss the diverse types of EMS services and how they affect the delivery of advanced pre-hospital care
02.0	**Research:** Demonstrate a fundamental depth, foundational breath of research principles to interpret literature and advocate evidence-based practice. –The student will be able to:
	02.01 Interpret results, reach conclusions, and generate new ideas based on results
	02.02 Discuss the importance of evidenced based medicine and medical research and its role in refining EMS practices.
03.0	**Workforce Safety and Wellness:** Demonstrate a complex depth, comprehensive breadth of workforce safety and wellness. –The student will be able to:
	03.01 Discuss the concept of wellness and its benefits.
	03.02 Discuss how cardiovascular endurance, muscle strength, and flexibility contribute to physical fitness.
	03.03 Describe the impact of shift work on circadian rhythms.
	03.04 Discuss how periodic risk assessments and knowledge of warning signs contribute to cancer and cardiovascular disease prevention.
	03.05 Differentiate proper from improper body mechanics for lifting and moving patients in emergency and non-emergency situations.
	03.06 Describe the problems that a paramedic might encounter in a hostile situation and the techniques used to manage the situation.
	03.07 Describe the equipment available for self-protection when confronted with a variety of adverse situations.
	03.08 Describe the three phases and factors that trigger the stress response.
	03.09 Differentiate between normal/ healthy and detrimental reactions to anxiety and stress.
	03.10 Identify and describe the defense mechanisms and management techniques commonly used to deal with stress.
	03.11 Describe the components of critical incident stress management (CISM).
	03.12 Describe the needs of the paramedic when dealing with death and dying.

	03.13 Discuss the importance of standard precautions and body substance isolation practices.
	03.14 Defend the need to treat each patient as an individual, with respect and dignity.
	03.15 Defend the need to respect the emotional needs of dying patients and their families.
	03.16 Identify the human, environmental, and socioeconomic impact of unintentional and alleged unintentional events.
	03.17 Identify health hazards and potential crime areas within the community.
	03.18 Describe the importance of effective documentation as one justification for funding of prevention programs.
04.0	**Documentation:** Demonstrate a complex depth, comprehensive breadth of the principles of medical documentation and report writing. – The student will be able to:
	04.01 Identify the general principles regarding the importance of EMS documentation and ways in which documents are used.
	04.02 Identify and use medical terminology correctly.
	04.03 Record all pertinent administrative information to a given standard
	04.04 Analyze the documentation for accuracy and completeness, including spelling.
	04.05 Describe the differences between subjective and objective elements of documentation.
	04.06 Describe the potential consequences of illegible, incomplete, or inaccurate documentation.
	04.07 Describe the special considerations concerning patient refusal of transport.
	04.08 Explain how to properly record direct patient or bystander comments.
	04.09 Describe the special considerations concerning mass casualty incident documentation.
	04.10 Identify and record the pertinent, reportable clinical data of each patient interaction.
	04.11 Note and record pertinent negative clinical findings.
	04.12 Demonstrate proper completion of an EMS event record used locally.
05.0	**EMS Communication:** Demonstrate a complex depth, comprehensive breadth of EMS communication system. –The student will be able to:
	05.01 Identify the role of verbal, written, and electronic communications in the provision of EMS.
	05.02 Describe the phases of communications necessary to complete a typical emergency.
	05.03 Identify the importance of proper terminology when communicating during an emergency.

	05.04	List factors that impede effective verbal and written communications.
	05.05	List factors which enhance verbal and written communications.
	05.06	Recognize the legal status of written communications related to an emergency.
	05.07	Identify the components of the local EMS communications system and describe their function and use.
	05.08	Identify and differentiate among the following communications systems: simplex, multiplex, duplex, trunked, digital communications, and cellular telephone.
	05.09	Describe the functions and responsibilities of the Federal Communications Commission.
	05.10	Describe how an emergency medical dispatcher (EMD) functions as an integral part of the EMS team.
	05.11	List appropriate information to be gathered by the Emergency Medical Dispatcher.
	05.12	Describe and organize a list of patient assessment information in the correct order for electronic transmission to medical direction according to the format used locally.
	05.13	State the proper procedures and sequence for delivery of patient information to other healthcare professionals.
06.0	**Therapeutic Communication:** Demonstrate a complex depth and comprehensive breadth of the therapeutic communication principles. – The student will be able to:	
	06.01	Identify internal and external factors that affect a patient/ bystander interview conducted by a paramedic.
	06.02	Review the strategies for developing patient rapport.
	06.03	Summarize the methods to assess mental status based on interview techniques.
	06.04	Discuss the strategies for interviewing a patient who is unmotivated to talk.
	06.05	Summarize developmental considerations of various age groups that influence patient interviewing.
	06.06	Review unique interviewing techniques necessary to employ with patients who have special needs.
	06.07	Discuss interviewing considerations used by paramedics in cross-cultural communications.
07.0	**Medical/Legal and Ethics:** Demonstrate a complex depth, comprehensive breadth of medical legal and ethical concepts related to EMS. –The student will be able to:	
	07.01	Differentiate between legal and ethical responsibilities.
	07.02	Differentiate between licensure and certification as they apply to the paramedic.
	07.03	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.

	07.04	Review 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.
	07.05	Differentiate between the scope of practice and the standard of care for paramedic practice.
	07.06	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.
	07.07	Review the four elements that must be present in order to prove negligence.
	07.08	Review the legal concept of immunity, including Good Samaritan statutes and governmental immunity, as it applies to the paramedic.
	07.09	Review the importance and necessity of patient confidentiality and the standards for maintaining patient confidentiality that apply to the paramedic.
	07.10	Review consent to include expressed, informed, implied, and involuntary.
	07.11	Given a scenario, demonstrate appropriate patient management and care techniques in a refusal of care situation.
	07.12	Differentiate between assault and battery and describe how to avoid each.
	07.13	Describe the actions that the paramedic should take to preserve evidence at a crime or accident scene.
	07.14	Describe the importance of providing accurate documentation (oral and written) in substantiating an incident.
	07.15	Describe the characteristics of a patient care report required to make it an effective legal document.
	07.16	Describe the criteria necessary to honor an advance directive in Florida.
	07.17	Demonstrate an understanding of the Paramedic's role in mandatory reporting associated with abused, neglected and/or assaulted patient.
08.0	**Anatomy and Physiology:** Demonstrate a complex depth and comprehensive breadth of anatomy and physiology of all human systems. – The student will be able to:	
	08.01	Review the EMT standards and benchmarks for the Anatomy & Physiology and apply an integration of a complex depth and comprehensive breath of knowledge of the anatomy and physiology of all human body systems.
09.0	**Medical Terminology:** Demonstrate the integration of comprehensive anatomical and medical terminology and abbreviations into written and oral communication with health care professionals. –The student will be able to:	
	09.01	Review the EMT standards and benchmarks for the medical terminology and apply an integration of comprehensive anatomical and medical terminology and abbreviations with colleagues and other health care professionals.
10.0	**Pathophysiology:** Demonstrate a comprehensive knowledge of pathophysiology of major systems. –The student will be able to:	
	10.01	Describe the factors that precipitate disease in the human body including familial diseases and risk factors.
	10.02	Describe environmental risk factors.

10.03	Review terms including but not limited to: cardiogenic, hypovolemic, neurogenic, anaphylactic and septic shock.
10.04	Describe multiple organ dysfunction syndrome (MODS)
10.05	Discuss the correlation of pathophysiology with disease processes.
10.06	Identify the Major classes of cells.
10.07	Describe and discuss the cellular structure, function and components.
10.08	Define the types of body tissues.
10.09	Describe alterations in cells and tissues including cellular adaptation, cellular injury, manifestation of cellular injury and cellular death/necrosis.
10.10	Discuss the cellular environment including distribution of body fluids, aging and distribution of body fluids, water movement between ICF and ECF, water movement between plasma and interstitial fluid, alterations in water movement - edema, water balance and the role of electrolytes, and acid-base balances.
10.11	Describe genetics and familial diseases including factors causing disease, analyzing risk, combined effects and interaction among risk factors, and common familial disease and associated risk factors.
10.12	Define hypoperfusion and discuss pathogenesis, types of shock, multiple organ dysfunction syndrome, and cellular metabolism impairment.
10.13	Describe the self –defense mechanisms including the lines of defense, characteristics of the immune response, introduction of the immune response, humoral immune response, cell-mediated immune response, cellular interactions in the immune response, fetal and neonatal immune function and aging and the immune response in the elderly.
10.14	Describe the inflammation process including the acute inflammatory response, mast cells plasma protein systems, cellular components of inflammation, cellular products, systemic response of acute inflammation, chronic inflammation responses, local inflammation responses, phases of resolution and repair, and aging and self defense mechanisms.
10.15	Discuss variances in immunity and inflammation including hypersensitivity, allergy, autoimmunity and isoimmunity, and immunity and inflammation deficiencies.
10.16	Discuss blood volume circulation disturbances
10.17	Describe the buffer system
11.0	**Life Span Development:** Apply the integration of knowledge of the physiological, psychological, and sociological changes throughout human development. –The student will be able to:
11.01	Compare, contrast and analyze the physiological and psychosocial characteristics of the following age groups to an early adult: 11.01.01 an infant 11.01.02 a toddler 11.01.03 pre-school child 11.01.04 school aged child 11.01.05 adolescent 11.01.06 middle aged adult

12.0	**Public Health:** Demonstrate the application of fundamental knowledge of principles of public health. –The student will be able to:
12.01	Review the EMT standards and benchmarks for the public health and apply a fundamental knowledge of the principles of public health, epidemiology, health promotion and illness and injury prevention.
13.0	**Principles of Pharmacology:** Demonstrate a complex depth, comprehensive breadth in the principles of pharmacology. –The student will be able to:
13.01	Differentiate among the chemical, generic (nonproprietary), and trade (proprietary) names of a drug.
13.02	List the four main sources of drug products.
13.03	Describe how drugs are classified.
13.04	List legislative acts controlling drug use and abuse in the United States.
13.05	Differentiate among Schedule I, II, III, IV, and V substances.
13.06	Use reference materials to research medications.
13.07	Discuss standardization of drugs.
13.08	Discuss investigational drugs, including the Food and Drug Administration (FDA) approval process and the FDA classifications for newly approved drugs.
13.09	Discuss the paramedic's responsibilities and scope of management pertinent to the administration of medications.
13.10	List and describe general properties of drugs.
13.11	List and describe liquid and solid drug forms.
13.12	List and differentiate all methods and routes of medication administration covered in the current National EMS Scope of Practice Model.
13.13	Describe the process called pharmacokinetics, and pharmacodynamics, including theories of drug action, drug-response relationship, factors altering drug responses, predictable drug responses, iatrogenic drug responses, and unpredictable adverse drug responses.
13.14	Describe specific medications used by rescuers in the prehospital setting.
13.15	Describe common unintended adverse effects of medication administration.
13.16	Discuss the prevention, recognition and management of adverse medication reactions.
13.17	Anticipate how various factors, such as age, body mass, and others, can alter drug responses.
13.18	Select the optimal medication and method of medication administration for patients with a particular clinical condition or situation.
14.0	**Medication Administration:** Demonstrate a complex depth, comprehensive breadth of medication administration within the scope of practice of the paramedic. –The student will be able to:

14.01	Review the specific anatomy and physiology pertinent to medication administration.
14.02	Discuss the paramedic's responsibilities and scope of management pertinent to the administration of medications.
14.03	Review mathematical principles and discuss equations as a basis for performing drug calculations.
14.04	Describe the indications, contraindications, procedure, equipment and risks associated with peripheral intravenous or external jugular access.
14.05	Describe the indications, equipment needed, technique used, precautions, and general principles of intraosseous needle placement and infusion.
14.06	Describe complications that can occur as a result of IV therapy.
14.07	Discuss the "six rights" of drug administration and correlate these with the principles of medication administration.
14.08	Describe the use of standard precautions and body substance isolation (BSI) procedures when administering a medication.
14.09	Prepare medications for administration from a variety of types of packaging, including vials, non-constituted vials, ampules, prefilled syringes, and packaging for intravenous solutions.
14.10	Describe the role of medical direction in medication administration and describe the difference between direct orders (online) and standing orders (off-line).
14.11	Explain why determining what medications (prescribed / OTC) a patient is taking is a critical aspect of patient assessment.
14.12	Describe the equipment needed and general principles of administering oral medications.
14.13	Describe the indications, equipment needed, techniques used, precautions, and general principles of administering medications by the following routes: 14.13.01 inhalation route 14.13.02 gastric tube 14.13.03 rectal route
14.14	Differentiate among the different percutaneous routes of medication administration.
14.15	Describe the purpose, equipment needed, techniques used, complications, and general principles for obtaining a blood sample.
14.16	Obtain venous and capillary blood for testing and discuss blood chemistry and normal values as referenced in the National EMS educational guidelines: Paramedic Instructional Guidelines.
14.17	Demonstrate principles of medical asepsis in the administration of medications.
14.18	Synthesize a pharmacologic management plan including medication administration.
14.19	Demonstrate the procedure for disposal of contaminated items and supplies.
14.20	Demonstrate cannulation of peripheral or external jugular veins.
14.21	Demonstrate intraosseous needle placement and infusion.

	14.22 Demonstrate administration of medications by the following routes: 14.22.01 oral 14.22.02 Sublingual 14.22.03 Auto-injector 14.22.04 inhalation route 14.22.05 intranasal route. 14.22.06 subcutaneous route. 14.22.07 intramuscular route. 14.22.08 intravenous route. 14.22.09 intraosseous route.
15.0	**Emergency Medications:** Demonstrate a complex depth, comprehensive breadth of emergency medications within the scope of practice for the paramedic. –The student will be able to:
	15.01 Identify medications used by the paramedic, including indications, contraindications, dosages, adverse reactions, side effects, and interactions for the following:
	15.01.01 Airway management
	15.01.02 Respiratory
	15.01.03 Cardiovascular
	15.01.04 Neurologic conditions
	15.01.05 Gastrointestinal
	15.01.06 Miscellaneous medications
16.0	**Airway Management and Respiration:** Demonstrate a complex depth, comprehensive breadth of airway management and respiration within the scope of practice of the paramedic. –The student will be able to:
	16.01 Explain the primary objective of airway maintenance.
	16.02 Explain the differences between pediatric, adult and geriatric airway anatomy.
	16.03 List the concentration of gases that comprise atmospheric air.
	16.04 Describe the measurement of oxygen in the blood.
	16.05 Describe the measurement of carbon dioxide in the blood.
	16.06 Describe peak expiratory flow.
	16.07 List factors that cause decreased oxygen concentrations in the blood.
	16.08 List the factors that increase and decrease carbon dioxide production in the body.

	16.09	Define pulses paradoxes.
	16.10	Describe indications, contraindications, advantages, disadvantages, complications, and technique for ventilating a patient with an automatic transport ventilator (ATV).
	16.11	Describe the indications, contraindications, advantages, disadvantages, complications, liter flow range, and concentration of delivered oxygen for supplemental oxygen delivery devices.
	16.12	Define, identify and describe a tracheostomy, stoma, and tracheostomy tube.
	16.13	Define, identify, and describe a laryngectomy.
	16.14	Describe the special considerations in airway management and ventilation for the pediatric patient.
	16.15	Describe the indications, contraindications, advantages, disadvantages, complications and equipment for rapid sequence intubation with neuromuscular blockade.
	16.16	Identify neuromuscular blocking drugs and other agents used in rapid sequence intubation.
	16.17	Describe the indications, contraindications, advantages, disadvantages, complications and equipment for sedation during intubation.
	16.18	Describe the indications, contraindications, advantages, disadvantages and complications for performing an open cricothyrotomy.
	16.19	Demonstrate the procedure for percutaneous cricothyrotomy.
	16.20	Identify and describe the function of the structures located in the upper and lower airway.
	16.21	Discuss the physiology of ventilation and respiration.
17.0	**Artificial Ventilation:** Demonstrate a complex breadth, comprehensive breadth of assessment and management utilizing artificial ventilation. –The student will be able to:	
	17.01	Perform pulse oximetry.
	17.02	Perform and interpret wave form capnography and colormetric in all age groups.
	17.03	Demonstrate proper use of airway and ventilation devices including administration of BIPAP/CPAP and PEEP devices.
	17.04	Demonstrate effective techniques of advanced airway management of the following: 17.04.01 orotracheal, 17.04.02 nasotracheal, 17.04.03 subglottic, 17.04.04 supraglottic, 17.04.05 digital intubation
	17.05	Describe and demonstrate methods of assessment for confirming correct placement of Any airway device
	17.06	Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for extubation.

	17.07 Describe methods of endotracheal intubation in the pediatric patient.
	17.08 Demonstrate proper use of airway and ventilation devices.
	17.09 Demonstrate the procedure for the following : 17.09.01 lighted stylet 17.09.02 fiber optic
18.0	**Scene Size-Up:** Demonstrate a complex depth, comprehensive breadth of scene management. –The student will be able to:
	18.01 Describe common hazards found at the scene of a trauma and a medical patient.
	18.02 Discuss common mechanisms of injury/ nature of illness.
	18.03 Explain the rationale for crew members to evaluate scene safety prior to entering.
	18.04 Observe various scenarios and identify potential hazards.
	18.05 Demonstrate the scene-size-up.
19.0	**Primary Assessment:** Demonstrate a complex depth, comprehensive breadth of the primary assessment for all patient situations. –The student will be able to:
	19.01 Summarize the reasons for forming a general impression of the patient.
	19.02 Discuss and demonstrate methods of evaluating and assessing mental status.
	19.03 Categorize levels of consciousness in the pediatric, adult and geriatric patient.
	19.04 Discuss and demonstrate methods of assessing the airway in the pediatric, adult and geriatric patient.
	19.05 Describe and demonstrate methods used for assessing if a patient is breathing.
	19.06 Differentiate between the methods of assessing breathing and providing airway care to the pediatric, adult and geriatric patient.
	19.07 Differentiate between locating and assessing a pulse in the pediatric, adult and geriatric patient.
	19.08 Discuss the need for assessing the patient for external bleeding.
	19.09 Demonstrate the techniques for assessing the patient for external bleeding.
	19.10 Describe normal and abnormal findings when assessing skin color, temperature, and condition.
	19.11 Demonstrate the techniques for assessing if the patient has a pulse.
	19.12 Demonstrate the techniques for assessing the patient's skin color, temperature, and condition.
	19.13 Discuss and demonstrate prioritizing a patient for care and transport.

	19.14 Perform a detailed physical examination.
20.0	**History Taking:** Demonstrate a complex depth, comprehensive breath of the components of history taking. –The student will be able to:
	20.01 Describe the components and demonstrate techniques of patient history taking.
	20.02 Demonstrate the importance of empathy when obtaining a health history.
	20.03 Adapt communication strategies to communicate effectively with the following types of patients: patients of all ages; patients of various cultures; patients with sensory impairments; angry, hostile, uncooperative, silent or overly talkative patients; patients who are anxious , crying or depressed; patients who offer multiple complaints or symptoms; intoxicated patients
21.0	**Secondary Assessment:** Demonstrate a complex depth, comprehensive breadth of techniques used for a secondary assessment. –The student will be able to:
	21.01 Describe the techniques of inspection, palpation, percussion, and auscultation for patients of all ages
	21.02 Distinguish the importance of abnormal findings of the assessment of the skin.
	21.03 Differentiate normal and abnormal assessment findings of the mouth and pharynx.
	21.04 Appreciate the limitations of conducting a physical exam in the out-of-hospital environment.
	21.05 Demonstrate the examination of the patient including the following: 21.05.01 skin, hair and nails. 21.05.02 head and neck 21.05.03 eyes, ears and nose 21.05.04 mouth and pharynx 21.05.05 thorax and ventilation 21.05.06 peripheral vascular system 21.05.07 musculoskeletal system 21.05.08 nervous system
	21.06 Demonstrate the examination of the posterior chest including auscultation and percussion of the chest.
	21.07 Demonstrate the examination of the arterial pulse including location, rate, rhythm, and amplitude.
	21.08 Demonstrate special examination techniques of the cardiovascular examination.
	21.09 Demonstrate the examination of the abdomen including auscultation of the abdomen.
	21.10 Describe the evaluation of patient’s perfusion status based on findings in the initial assessment.
	21.11 State the reasons for performing a rapid trauma assessment.
	21.12 Discuss the reason for performing a focused history and physical exam.

	21.13 Discuss the components of the detailed physical exam in relation to the techniques of examination.
	21.14 Demonstrate the external visual examination of the female genitalia.
	21.15 Demonstrate the examination of the male genitalia.
	21.16 Explain the reasons for identifying the need for additional help or assistance.
	21.17 State reasons for management of the cervical spine once the patient has been determined to be a trauma patient.
	21.18 Discuss the reasons for repeating the initial assessment as part of the on-going assessment.
	21.19 Describe the components of the on-going assessment.
	21.20 Discuss medical identification devices/ systems.
22.0	**Monitoring Devices:** Demonstrate a fundamental depth, foundational breadth of monitoring devices within the scope of practice of the paramedic. –The student will be able to:
	22.01 Describe the purpose, indications, procedure, normal findings, and limitations of the following patient monitoring technologies. 22.01.01 Continuous ECG monitoring 22.01.02 12-Lead ECG 22.01.03 Capnography (wave form) 22.01.04 Capnometry (colorimetric) 22.01.05 CO-oximetry 22.01.06 Methaglobin monitoring 22.01.07 Total hemoglobin 22.01.08 Basic blood chemistry 22.01.09 Ultrasound 22.01.10 other devices identified at the EMT level
	22.02 Demonstrate the use of the following patient monitoring technologies. 22.02.01 Continuous ECG monitoring 22.02.02 12-Lead ECG 22.02.03 Capnography (wave form) 22.02.04 Capnometry (colorimetric) 22.02.05 other devices identified at the EMT level
23.0	**Reassessment:** Demonstrate a complex depth, comprehensive breadth of how and when to perform a reassessment for all patient situations. –The student will be able to:
	23.01 Review the EMT standards and benchmarks for the reassessment section and demonstrate a complex depth and comprehensive breadth of how and when to perform a reassessment for all patient situations.

Course Number: EMS0211 **Occupational Completion Point: A** **Paramedic II – 426 hours – SOC Code 29-2041**	
24.0	**Medical Overview:** Demonstrate a complex depth and comprehensive breadth of pathophysiology, assessment, and management of medical complaints. –The student will be able to:
	24.01 Review the EMT standards and benchmarks for medical overview and demonstrate a complex depth and comprehensive breadth of pathophysiology, assessment and management of medical complaints.
25.0	**Neurology:** Demonstrate a complex depth and comprehensive breadth of neurologic disorders/emergencies for all age groups. –The student will be able to:
	25.01 Identify the risk factors associated with nervous system dysfunction.
	25.02 Review the anatomy and physiology of the organs and structures related to nervous system.
	25.03 Discuss the pathophysiology and demonstrate the assessment, and management of patients with the following conditions: : 25.03.01 coma 25.03.02 altered mental status 25.03.03 seizures 25.03.04 syncope 25.03.05 transient ischemic attack 25.03.06 stroke and intracranial hemorrhage 25.03.07 degenerative neurologic diseases 25.03.08 chronic alchoholism 25.03.09 back pain and non-traumatic spinal disorders
	25.04 Describe and differentiate the major types of seizures.
	25.05 Describe the types of stroke and intracranial hemorrhage.
	25.06 Describe the significance of the prevalence of neurologic disorders in the United States.
	25.07 Adapt the scene size-up, primary assessment, patient history, secondary assessment, and use of monitoring technology to meet the needs of patients with complaints and presentations related to neurologic disorders.
26.0	**Abdominal and Gastrointestinal Disorders:** Demonstrate a complex depth and comprehensive breadth of abdominal and gastrointestinal disorders/emergencies for all age groups. –The student will be able to:
	26.01 Review the anatomy and physiology of the organs and structures related to gastrointestinal diseases.
	26.02 Discuss the pathophysiology of inflammation and its relationship to acute abdominal pain.
	26.03 Differentiate between hemorrhagic and non-hemorrhagic abdominal pain.
	26.04 Describe the technique for performing a comprehensive physical examination on a patient complaining of abdominal pain.

	26.05 Discuss the pathophysiology and demonstrate the assessment, and management of patients with the following abdominal and gastrointestinal disorders: 26.05.01 Both Upper and lower gastrointestinal bleeding 26.05.02 Acute gastroenteritis. 26.05.03 Colitis. 26.05.04 Diverticulitis. 26.05.05 Appendicitis. 26.05.06 Peptic ulcer disease. 26.05.07 Bowel obstruction. 26.05.08 Crohn's disease. 26.05.09 Pancreatitis. 26.05.10 Esophageal varices. 26.05.11 Hemorrhoids. 26.05.12 Cholecystitis. 26.05.13 Acute hepatitis.
	26.06 Identify patients with risk factors for gastrointestinal emergencies.
	26.07 Adapt the scene size-up, primary assessment, patient history, secondary assessment, and use of monitoring technology to meet the needs of patients with complaints and presentations related to gastrointestinal disorders.
	26.08 Demonstrate how to auscultate the abdomen to assess for diminished, absent or abnormal bowel sounds.
27.0	**Immunology:** Demonstrate a complex depth, comprehensive breadth of immunology disorders/emergencies for all age groups. –The student will be able to:
	27.01 Define: 27.01.01 Allergic reaction. 27.01.02 Anaphylaxis 27.01.03 Antigens 27.01.04 Antibodies
	27.02 Review the anatomy and physiology of the organs and structures related to anaphylaxis.
	27.03 Describe the prevention of anaphylaxis and appropriate patient education.
	27.04 Discuss the pathophysiology of allergy and anaphylaxis.
	27.05 Describe the common methods of entry of substances into the body.
	27.06 List common antigens most frequently associated with anaphylaxis.
	27.07 Describe physical manifestations in anaphylaxis.
	27.08 Differentiate manifestations of an allergic reaction from anaphylaxis.
	27.09 Recognize the signs and symptoms related to anaphylaxis.

	27.10	Differentiate among the various treatment and pharmacological interventions used in the management of anaphylaxis.
	27.11	Develop a treatment plan based on field impression in the patient with allergic reaction and anaphylaxis.
28.0	**Infectious Diseases:** Demonstrate a complex depth, comprehensive breadth of assessment and management of a patient who may have an infectious diseases for all age groups. –The student will be able to:	
	28.01	Review the specific anatomy and physiology pertinent to infectious and communicable diseases.
	28.02	List and describe the steps of an infectious process.
	28.03	List and describe infectious agents, including bacteria, viruses, fungi, protozoans, and helminths (worms).
	28.04	Describe characteristics of the immune system, including the categories of white blood cells, the reticuloendothelial system (RES), and the complement system.
	28.05	Describe and discuss the rationale for the various types of PPE.
	28.06	Discuss the proper disposal of contaminated supplies (sharps, gauze sponges, tourniquets, etc.).
	28.07	Discuss disinfection of patient care equipment, and areas in which care of the patient occurred.
	28.08	Consistently demonstrate the proper use of body substance isolation.
	28.09	Perform an assessment of a patient with an infectious/communicable disease.
	28.10	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.
	28.11	Explain public health principles related to infectious disease.
	28.12	Describe the roles of local, state, and federal agencies involved in infectious disease surveillance and outbreaks.
	28.13	Describe the interactions of the agent, host, and environment as determining factors in disease transmission.
	28.14	Explain the principles and practices of infection control in prehospital care.
	28.15	Describes the EMS professional’s responsibilities as well as their rights under the Ryan White Act.

	28.16 Discuss the causative agent, body systems affected and potential secondary complications, routes of transmission, susceptibility and resistance, signs and symptoms and demonstrate the patient management and protective/control measures, and immunization for the following infectious diseases: 28.16.01 HIV 28.16.02 Hepatitis A, B, C, D, E 28.16.03 Tuberculosis 28.16.04 Meningococcal meningitis (spinal meningitis) 28.16.05 Pneumonia 28.16.06 Tetanus 28.16.07 Varicella (chickenpox) 28.16.08 Mumps 28.16.09 Rubella (German measles) 28.16.10 Measles (rubeola, hard measles) 28.16.11 Influenza 28.16.12 Mononucleosis 28.16.13 gastroenteritis
	28.17 Discuss the characteristics of, and organisms associated with, febrile and afebrile respiratory disease, to include bronchiolitis, bronchitis, laryngitis, croup, epiglottitis, and the common cold.
	28.18 Describe the pathophysiology of infectious diseases of immediate concern to EMS providers.
	28.19 Describe the EMS provider's role in patient education and preventing disease transmission.
	28.20 Explain the pathophysiology, risk factors, assessment, and prehospital management of sepsis/systemic inflammatory response syndrome (SIRS).
29.0	**Endocrine Disorders:** Demonstrate a complex depth, comprehensive breadth in endocrine disorders/emergencies for all age groups. – The student will be able to:
	29.01 Identify the risk factors related to disorders of the endocrine system.
	29.02 Review the anatomy and physiology of organs and structures related to endocrinologic diseases.
	29.03 Discuss the pathophysiology and demonstrate the assessment, and management of patients with the following endocrinologic emergencies: 29.03.01 30.03.01 hypoglycemia (responsive and unresponsive) 29.03.02 30.03.02 hyperglycemia 29.03.03 30.03.03 diabetic ketoacidosis 29.03.04 30.03.04 Cushing's syndrome 29.03.05 30.03.05 Adrenal insufficiency 29.03.06 30.03.06 Pituitary disorders 29.03.07 30.03.07 Thyroid disorders
	29.04 Describe the mechanism of ketone body formation and its relationship to ketoacidosis.
	29.05 Describe the compensatory mechanisms utilized by the body to promote homeostasis relative to hypoglycemia.

	29.06 Develop a patient management plan based on field impression in the patient with an endocrinologic emergency.
	29.07 Demonstrate how to administer glucagon to a hypoglycemic patient.
30.0	**Psychiatric:** Demonstrate a complex depth, comprehensive breadth regarding the assessment and management of psychiatric disorders/emergencies for all age groups. –The student will be able to:
	30.01 Define behavior and distinguish between normal and abnormal behavior.
	30.02 Discuss the prevalence of behavior and psychiatric disorders.
	30.03 Discuss the factors that may alter the behavior or emotional status of an ill or injured individual.
	30.04 Describe the medical legal considerations for management of emotionally disturbed patients.
	30.05 Discuss the pathophysiology of behavioral and psychiatric disorders.
	30.06 Define the following terms: 30.06.01 Affect 30.06.02 Anger 30.06.03 Anxiety 30.06.04 Confusion 30.06.05 Depression 30.06.06 Fear 30.06.07 Mental status 30.06.08 Open-ended questions 30.06.09 Posture
	30.07 Describe the verbal techniques useful in managing the emotionally disturbed patient.
	30.08 Describe the circumstances when relatives, bystanders and others should be removed from the scene.
	30.09 Describe the techniques that facilitate the systematic gathering of information from the disturbed patient.
	30.10 Identify techniques for physical assessment in a patient with behavioral problems.
	30.11 Describe methods of restraint that may be necessary in managing the emotionally disturbed patient.
	30.12 List the risk factors (including behaviors) for suicide.
	30.13 Differentiate between the various behavioral and psychiatric disorders based on the assessment and history.
	30.14 Develop a patient management plan based on the field impressions.
	30.15 Demonstrate safe techniques for managing and restraining a violent patient.

31.0	**Cardiovascular:** Demonstrate a complex depth, comprehensive breadth of cardiovascular disorders/ emergencies for all age groups. –The student will be able to:
31.01	Describe the epidemiology, incidence, morbidity and mortality of cardiovascular disease.
31.02	Identify the risk factors of coronary artery disease.
31.03	Review the anatomy and physiology of the cardiovascular system.
31.04	Describe the blood flow pathway through the vascular system including the arteries, veins and associated structures.
31.05	Explain how the heart functions as a pump; including the concepts of cardiac output, stroke volume, heart rate, and ejection fraction.
31.06	Discuss the physiology of the cardiac cycle and the fluid dynamics associated with the cardiovascular system including Starling's Law, systole and diastole.
31.07	Identify the four properties that aid in the function of the heart including excitability, conductivity, automaticity, and contractility.
31.08	Define the terms: 31.08.01 depolarization 31.08.02 repolarization 31.08.03 pulse deficit 31.08.04 pulsus paradoxus 31.08.05 pulsus alternans 31.08.06 hypertensive emergency 31.08.07 cardiac tamponade 31.08.08 cardiogenic shock 31.08.09 cardiac arrest
31.09	List the ions involved in myocardial action potential and their primary and their primary function in this process.
31.10	Describe the events involved in the steps from excitation to contraction of the cardiac muscle fibers.
31.11	Identify the structure and course of all divisions and subdivisions of the cardiac conduction system.
31.12	Identify and describe how the heart's pacemaking control, rate, and rhythm are determined.
31.13	Compare and contrast the coronary artery distribution to the major portions of the cardiac conduction systems.
31.14	Identify the structures of the autonomic nervous system (ANS).
31.15	Identify the effect of the ANS on heart rate, rhythm and contractility.
31.16	Define and give examples of positive and negative inotropes, chronotropes and dromotropes.
31.17	Identify and describe the components of the focused history as it relates to the patient with cardiovascular compromise.

31.18	Explain the assessment and management of the following cardiovascular conditions:
31.19	Identify the normal characteristics of the point of maximal impulse (PMI).
31.20	Identify and define the normal and abnormal heart sounds.
31.21	Relate heart sounds to hemodynamic events in the cardiac cycle.
31.22	Explain the purpose of ECG monitoring and how ECG wave forms are produced.
31.23	Identify the components of the ECG rhythm strip and list any limitations.
31.24	Identify how heart rates, durations, and amplitudes may be determined from ECG tracings.
31.25	Describe the placement of leads and electrodes in 3 lead and 12 lead ECG monitoring..
31.26	Differentiate among the primary mechanisms responsible for producing cardiac dysrhythmias.
31.27	Describe a systematic approach to the analysis and interpretation of cardiac dysrhythmias.
31.28	Describe the dysrhythmias originating or sustained in the in the following areas: 31.28.01 sinus node 31.28.02 the AV junction 31.28.03 bundle branch system 31.28.04 atria 31.28.05 ventricles
31.29	Describe the process and the pitfalls of differentiation of wideQRS complex tachycardias.
31.30	Describe the conditions of pulseless electrical activity.
31.31	Describe the phenomena of reentry, aberration and accessory pathways.
31.32	Identify the ECG changes characteristically produced by electrolyte imbalances and specify the clinical implications.
31.33	Identify patient situations where ECG rhythm analysis is indicated.
31.34	Recognize the changes and any limitations on the ECG that may reflect evidence of myocardial ischemia and injury.
31.35	Compare manual defibrillation from cardioversion and synchronized cardioversion.
31.36	Describe the components of a transcutaneous pacer, its application and setting adjustments as well as the clinical indications and techniques for use.
31.37	Based on field impressions, identify the need for rapid intervention for the patient in cardiovascular compromise.

31.38	Discuss the pathophysiology and demonstrate the assessment, and management of patients following conditions including the development of a treatment plan: 31.38.01 Angina 31.38.02 Myocardial infarction STEMI/Non-STEMI 31.38.03 Congestive heart failure 31.38.04 Cardiac tamponade 31.38.05 Cardiogenic shock 31.38.06 Hypertension and acute hypertensive states 31.38.07 Cardiac arrest 31.38.08 Vascular disorders 31.38.09 Hypertrophic cardiomyopathies 31.38.10 Infectious diseases of the heart
31.39	Identify the drugs of choice, the rationale for use, clinical precautions and disadvantages and/or complications for the following conditions: 31.39.01 Angina 31.39.02 Myocardial infarction STEMI/Non-STEMI 31.39.03 Congestive heart failure 31.39.04 Cardiac tamponade 31.39.05 Cardiogenic shock 31.39.06 Hypertension and acute hypertensive states 31.39.07 Cardiac arrest 31.39.08 Vascular disorders 31.39.09 Hypertrophic cardiomyopathies 31.39.10 Infectious diseases of the heart
31.40	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.
31.41	List other clinical conditions that may mimic signs and symptoms of coronary artery disease and angina pectoris.
31.42	Compare fibrinolysis from percutaneous intervention as reperfusion techniques used in patients with AMI or suspected AMI and describe the "window of opportunity" as it pertains to reperfusion of a Myocardial infarction.
31.43	List the characteristics of a patient eligible for thrombolytic therapy.
31.44	Define the term "acute pulmonary edema" and describe its relationship to left ventricular failure.
31.45	Define preload, afterload and left ventricular end-diastolic pressure and relate each to the pathophysiology of heart failure.
31.46	Differentiate between early and late signs and symptoms of left ventricular failure and those of right ventricular failure.
31.47	Explain the clinical significance of paroxysmal nocturnal dyspnea.
31.48	Explain clinical significance of edema of the extremities and sacrum.

31.49	Describe how to determine if pulses paradoxus, pulses alternans, or electrical alternans is present.
31.50	Identify non-cardiac causes of cardiac arrest.
31.51	Identify the clinical significance of claudication and presence of arterial bruits in a patient with peripheral vascular disorders.
31.52	Describe the clinical significance of unequal arterial blood pressure readings in the arms.
31.53	Discuss the components of post resuscitation care including how to determine the return of spontaneous circulation (ROSC).
31.54	Explain how to confirm asystole using 3 lead ECG.
31.55	Identify circumstances and situations where resuscitation efforts would not be initiated.
31.56	Identify and list inclusion and exclusion criteria for termination of resuscitative efforts.
31.57	Identify communication and documentation protocols with medical direction and law enforcement used for termination of resuscitation efforts.
31.58	Apply knowledge of the epidemiology of cardiovascular disease to develop prevention strategies.
31.59	Defend the urgency in rapid determination of and rapid intervention of patients in cardiac arrest.
31.60	Defend the possibility of termination of resuscitative efforts in the out-of-hospital setting.
31.61	Demonstrate how to set and adjust the ECG monitor settings to varying patient situations.
31.62	Demonstrate how to record a 3, 4, 10 and 12 lead ECG.
31.63	Given the model of a patient with signs and symptoms of heart failure, position the patient to afford them comfort or relief.
31.64	Demonstrate how to determine if pulsus paradoxus, pulsus alternans, or electrical alternans is present.
31.65	Set up and apply a transcutaneous pacing system.
31.66	List the possible complications of pacing.
31.67	Demonstrate how to perform post-resuscitative care.
31.68	Demonstrate satisfactory performance of psychomotor skills of basic and advanced life support techniques according to the current American Heart Association Guidelines or its equivalent, including: 31.68.01 cardiopulmonary resuscitation 31.68.02 defibrillation 31.68.03 synchronized cardioversion 31.68.04 transcutaneous pacing
32.0	**Toxicology:** Demonstrate a complex depth, comprehensive breadth of the assessment and management of toxicology emergencies for all age groups. –The student will be able to:

32.01	Describe the epidemiology, incidence, morbidity and mortality of toxic emergencies.
32.02	Identify the risk factors of toxic emergencies.
32.03	Discuss the role of the Poison Control Center in the United States.
32.04	List the most common poisonings by ingestion.
32.05	Recognize the signs and symptoms related to the most common poisonings by ingestion.
32.06	Discuss the factors affecting the decision to induce vomiting in a patient with ingested poison.
32.07	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.
32.08	Define poisoning by inhalation.
32.09	List the most common poisonings by inhalation.
32.10	Describe the pathophysiology of poisoning by inhalation.
32.11	Recognize the signs and symptoms related to the most common poisonings by inhalation.
32.12	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.
32.13	Define poisoning by injection.
32.14	List the most common poisonings by injection.
32.15	Recognize the signs and symptoms related to the most common poisonings by injection.
32.16	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 injection.
32.17	Define poisoning by surface absorption.
32.18	List the most common poisonings by surface absorption.
32.19	Describe the pathophysiology of poisoning by surface absorption.
32.20	Recognize the signs and symptoms related to the most common poisonings by surface absorption.
32.21	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.
32.22	Define poisoning by overdose.
32.23	List the most common poisonings by overdose.

32.24	Describe the pathophysiology of poisoning by overdose.
32.25	Recognize the signs and symptoms related to the most common poisonings by overdose.
32.26	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.
32.27	Define drug abuse.
32.28	Define the following terms: 32.28.01 Substance or drug abuse 32.28.02 Substance or drug dependence 32.28.03 Tolerance 32.28.04 Withdrawal 32.28.05 Addiction
32.29	List the most commonly abused drugs (both by chemical name and street names).
32.30	Recognize the signs and symptoms related to the most commonly abused drugs.
32.31	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.
32.32	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

	32.33 Discuss the specific differences and considerations in the pathophysiology, assessment findings and treatment associated with a patient suffering from the following toxins and toxidromes: 32.33.01 Carbon Monoxide. 32.33.02 Cyanide. 32.33.03 Cardiac Medications 32.33.04 Organophosphates. 32.33.05 Caustic Substances. 32.33.06 Hydrocarbons. 32.33.07 Hydrofluoric Acid 32.33.08 Prescription Medications (pain relievers, psychiatric medications). 32.33.09 Alcohol, Alcoholism and withdrawal. 32.33.10 Tricyclic Antidepressants 32.33.11 Monoamine Oxidase Inhibitors 32.33.12 Newer Antidepressants and Serotonin Syndrome 32.33.13 Lithium 32.33.14 Salicylates 32.33.15 Acetaminophens. 32.33.16 NSAIDs 32.33.17 Theophylline 32.33.18 Metals (iron, lead, mercury). 32.33.19 Contaminated Food. 32.33.20 Poisonous plants and Mushrooms 32.33.21 Animal bites, Insect Stings 32.33.22 Commonly Abused Drugs
	32.34 Discuss common causative agents, pharmacology, assessment findings and management for a patient with food poisoning.
	32.35 Discuss common offending organisms, pharmacology, assessment findings and management for a patient with a bite or sting.
	32.36 Develop a patient management plan based on field impression in the patient exposed to a toxic substance.
	32.37 Describe the epidemiology of toxicologic disorders and substance abuse.
	32.38 Explain the proper procedures for transporting a patient exposed to a toxic chemical to a receiving facility.
	32.39 Demonstrate the steps for assessment and management of the suspected poisoning or overdose patient.
33.0	**Respiratory:** Demonstrate a complex depth, comprehensive breadth of the assessment and management of respiratory disorders/emergencies for all age groups. –The student will be able to:
	33.01 Discuss the epidemiology, morbidity, and mortality of respiratory illness in the United States
	33.02 Define hypoventilation and hyperventilation, and outline the conditions with which they are often associated
	33.03 Review the anatomy, physiology and functions of the respiratory system.

33.04	Explain how gas exchange occurs at the interface of the alveoli and the pulmonary capillary bed.
33.05	Describe the physiology of respiration including nervous, cardiovascular, muscular, chemical, renal respiratory control mechanisms and ventilation-perfusion mismatch.
33.06	Discuss those factors that contribute to the formation of a general impression and degree of respiratory distress.
33.07	Identify breathing patterns that are associated with respiratory distress and neurologic insults and their correlation with the signs of increased work of breathing.
33.08	Differentiate between normal and abnormal breath sounds and its physiologic significance.
33.09	Discuss abnormal assessment findings associated with pulmonary diseases and conditions.
33.10	Explain how to access the adequacy of the circulation of a patient with dyspnea.
33.11	Discuss the way transport decisions are made for patients with respiratory distress.
33.12	Describe the interventions available for treating patients with respiratory emergencies.
33.13	Describe those devices used to monitor patients with respiratory complaints.
33.14	Discuss those complications which cause the COPD patient to decompensate.
33.15	Explain the concepts of hypoxic drive and auto-PEEP as they relate to the COPD patient.
33.16	Discuss the pathophysiology and demonstrate the assessment, and management of patients with the following respiratory conditions: 33.16.01 pulmonary infections (upper and lower airway) 33.16.02 atelectasis 33.16.03 anatomic or foreign body obstruction 33.16.04 aspiration 33.16.05 asthma 33.16.06 emphysema 33.16.07 chronic bronchitis 33.16.08 spontaneous pneumothorax 33.16.09 pleural effusion 33.16.10 pulmonary embolism 33.16.11 cancer 33.16.12 toxic inhalations 33.16.13 pulmonary edema 33.16.14 acute respiratory distress syndrome (ARDS) 33.16.15 Pneumonia 33.16.16 Neoplasms of the lung 33.16.17 Hyperventilation syndrome

	33.17 Compare various airway and ventilation techniques used in the management of pulmonary diseases.
	33.18 Review the pharmacological preparations that paramedics use for management of respiratory diseases and conditions.
	33.19 Review the use of equipment used during the physical examination of patients with complaints associated with respiratory diseases and conditions.
	33.20 Describe the variations of respiratory anatomy and the pathophysiology of respiratory disease across the life spans.
34.0	**Hematology:** Demonstrate a complex depth, foundational breadth of the assessment, and management of hematology disorders/ emergencies for all age groups. –The student will be able to:
	34.01 Identify the role of heredity in the risk for hematologic disorders.
	34.02 Review the anatomy of the hematopoietic system.
	34.03 Describe volume and volume-control related to the hematopoietic system.
	34.04 Describe normal red blood cell (RBC) production, function and destruction.
	34.05 Explain the significance of the hematocrit with respect to red cell size and number.
	34.06 Explain the correlation of the RBC count, hematocrit and hemoglobin values.
	34.07 Define anemia.
	34.08 Recognize medications used to decrease the risk of thrombosis.
	34.09 Describe normal white blood cell (WBC) production, function and destruction.
	34.10 Identify alterations in immunologic response.
	34.11 List the leukocyte disorders.
	34.12 Describe platelets with respect to normal function, life span and numbers.
	34.13 Describe the components of the hemostatic mechanism.
	34.14 Describe the function of coagulation factors, platelets and blood vessels necessary for normal coagulation.
	34.15 Identify blood groups.
	34.16 Identify the components of physical assessment as they relate to the hematologic system.

	34.17 Discuss the pathophysiology and demonstrate the assessment, and management of patients with the following conditions: 34.17.01 Anemia 34.17.02 Leukemia 34.17.03 Lymphomas 34.17.04 Polycythemia 34.17.05 Disseminated intravascular coagulopathy 34.17.06 Hemophilia 34.17.07 Sickle cell disease 34.17.08 Multiple myeloma 34.17.09 Leukopenia/neutropenia 34.17.10 Leukocytosis 34.17.11 Thrombocytosis 34.17.12 Thrombocytopenia
	34.18 Integrate pathophysiological principles into the assessment of a patient with hematologic disease.
35.0	**Genitourinary/Renal:** Demonstrate a complex depth, comprehensive breadth of genitourinary and renal emergencies all age groups. –The student will be able to:
	35.01 Describe the epidemiology, incidence, morbidity, mortality, and risk factors of urological emergencies.
	35.02 Review the anatomy and physiology of the organs and structures related to urogenital diseases.
	35.03 Define referred pain and visceral pain as it relates to urology.
	35.04 Describe the technique for performing a comprehensive physical examination of a patient complaining of abdominal pain.
	35.05 Discuss the pathophysiology and demonstrate the assessment, and management of patients of the following urologic and renal conditions: 35.05.01 Acute renal failure 35.05.02 Chronic renal failure 35.05.03 Complications related to hemodialysis and peritoneal dialysis. 35.05.04 Renal Calculi 35.05.05 Priapism 35.05.06 Testicular torsion 35.05.07 Urinary tract infection
	35.06 Apply the epidemiology to develop prevention strategies for urological emergencies.
	35.07 Integrate pathophysiological principles to the assessment of a patient with abdominal pain.
	35.08 Synthesize assessment findings and patient history information to accurately differentiate between pain of a urogenital emergency and that of other origins.
	35.09 Develop, execute, and evaluate a treatment plan based on the field impression made in the assessment.

	35.10 Adapt the scene size-up, primary assessment, patient history, secondary assessment, and use of monitoring technology to meet the needs of patients with complaints and presentations related to urologic and renal disorders.
36.0	**Gynecology:** Demonstrate a complex depth, comprehensive breadth of the assessment findings and the management of gynecology disorders/emergencies for all age groups. –The student will be able to:
	36.01 Review the anatomic structures and physiology of the female reproductive system.
	36.02 Identify the normal events of the menstrual and ovarian cycle including: 36.02.01 Proliferative phase 36.02.02 Secretory phase 36.02.03 Menstrual phase 36.02.04 Menopause
	36.03 Explain how to recognize a gynecological emergency.
	36.04 Discuss the pathophysiology and demonstrate the assessment, and management of patients with specific gynecological emergencies: 36.04.01 Infection (including Pelvic inflammatory disease, Bartholin's abscess, and vaginitis/ vulvovaginitis) 36.04.02 Ovarian cyst and ruptured ovarian cyst 36.04.03 Ovarian torsion 36.04.04 Endometriosis 36.04.05 Dysfunctional uterine bleeding 36.04.06 Prolapsed uterus 36.04.07 Vaginal foreign body 36.04.08 Vaginal Hemorrhage 36.04.09 Ectopic Pregnancy
	36.05 Describe the importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information.
	36.06 Defend the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
	36.07 Demonstrate how to assess a patient with a gynecological complaint.
	36.08 Demonstrate how to provide care for a patient with: 36.08.01 Excessive vaginal bleeding 36.08.02 Abdominal pain 36.08.03 Sexual assault.
37.0	**Non-Traumatic Musculoskeletal Disorders:** Demonstrate a fundamental depth, foundation breadth of the assessment and management of non-traumatic fractures for all age groups. –The student will be able to:
	37.01 Discuss the epidemiology of non-traumatic musculoskeletal disorders.

	37.02	Discuss various non-traumatic musculoskeletal disorders such as:
		37.02.01 osteomyelitis and tumors
		37.02.02 disc disorders, lower back pain (cauda equine syndrome, sprain, strain.)
		37.02.03 joint abnormalities
		37.02.04 muscle abnormalities
		37.02.05 overuse syndrome
		37.02.06 soft tissue infections
38.0	**Diseases of the Eyes, Ears, Nose , and Throat :** Demonstrate a fundamental depth, foundational breadth of the assessment and management of common or major diseases of the eyes, ears, nose and throat for all age groups. –The student will be able to:	
	38.01	Relate the anatomy and physiology of the eyes, ears, nose, and throat to the pathophysiology and assessment of patients with diseases of the eyes, ears, nose, and throat.
	38.02	Discuss the pathophysiology and demonstrate the assessment, and management of patients with various eye diseases/injuries including:
		38.02.01 Burns of eye and adnexa
		38.02.02 Conjunctivitis
		38.02.03 Corneal abrasions
		38.02.04 Foreign body
		38.02.05 Inflammation of the eyelid
		38.02.06 Glaucoma
		38.02.07 Hyphema
		38.02.08 Iritis
		38.02.09 Papilledema
		38.02.10 Retinal detachment and defect
		38.02.11 Cellulitis of orbit
	38.03	Discuss the pathophysiology and demonstrate the assessment, and management of patients with various ear diseases/injuries including:
		38.03.01 Foreign body
		38.03.02 Impacted cerumen
		38.03.03 Labyrinthitis
		38.03.04 Meniere's disease
		38.03.05 Otitis external and media
		38.03.06 Perforated tympanic membrane
	38.04	Discuss the pathophysiology and demonstrate the assessment, and management of patients with various nose diseases/injuries including:
		38.04.01 Epistaxis
		38.04.02 Foreign body intrusion
		38.04.03 Rhinitis
		38.04.04 Sinusitis

	38.05 Discuss the pathophysiology and demonstrate the assessment, and management of patients with oropharynx/throat diseases/injuries including: 38.05.01 Dentalgia and dental abscess 38.05.02 Diseases of oral soft tissue/ Ludwig's angina 38.05.03 Foreign body intrusion 38.05.04 Epiglottitis 38.05.05 Laryngitis 38.05.06 Tracheitis 38.05.07 Oral candidiasis 38.05.08 Peritonsillar abscess 38.05.09 Pharyngitis/tonsillitis 38.05.10 Temporomandibular joint disorders
39.0	**Shock and Resuscitation:** Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of shock and respiratory failure. –The student will be able to:
	39.01 Describe the epidemiology, including: premorbid and comorbid conditions and prevention strategies, for shock and hemorrhage.
	39.02 Review the anatomy and physiology of the cardiovascular and respiratory systems.
	39.03 Discuss the physiology of blood flow during normal states, peri-arrest, cardiac arrest and shock.
	39.04 Discuss and demonstrate the assessment and management of shock.
	39.05 Review and demonstrate the management of external hemorrhage.
	39.06 Differentiate between the administration rate and amount of IV fluid in a patient with controlled versus uncontrolled hemorrhage.
	39.07 Relate internal hemorrhage to the assessment findings of compensated and decompensated hemorrhagic shock.
	39.08 Review the following for the cardiac arrest victim: 39.08.01 Epidemiology 39.08.02 Pathophysiology 39.08.03 Physiology of blood flow during external chest compressions 39.08.04 Resuscitation success/research
	39.09 Review defibrillation and cardioversion to include manual techniques, automatic and semi-automated devices.

	39.10 Discuss causes, pathophysiology and management of special arrest and peri-arrest conditions: 39.10.01 Electrolyte disorders 39.10.02 Toxic exposures 39.10.03 Drowning 39.10.04 Hypothermia 39.10.05 Near-Fatal Asthma 39.10.06 Anaphylaxis 39.10.07 Trauma 39.10.08 Pregnancy 39.10.09 Electrical Shock and lightning strikes
	39.11 Review post resuscitative care include, temperature regulation, glucose/electrolyte management.
	39.12 Discuss and demonstrate the assessment and management of internal hemorrhage.
	39.13 Discuss the stages and classifications of hemorrhage
	39.14 Discuss the pathophysiology and demonstrate the assessment and management of the different types of shock
	39.15 Describe the effects of decreased perfusion at the capillary level.
	39.16 Relate pulse pressure changes to perfusion status.
	39.17 Relate orthostatic vital sign changes to perfusion status.
	39.18 Define and differentiate between compensated and decompensated shock for all types of shock.
	39.19 Discuss the complications of shock
	39.20 Discuss and differentiate the physiological manifestations of shock across the age continuum.
	39.21 Differentiate between the normotensive, hypotensive, or profoundly hypotensive patient.
	39.22 Differentiate between the administration of fluid in the normotensive, hypotensive, or profoundly hypotensive patient.
	39.23 Develop, execute and evaluate a treatment plan based on the field impression for the hemorrhage or shock patient.
	39.24 Discuss the destination decision for patients in varying types of shock.
	39.25 Demonstrate how to manage a patient suffering from an abnormal heart rate or rhythm.
40.0	**Trauma Overview:** Demonstrate a complex depth, comprehensive breadth of pathophysiology, assessment and management of the trauma patient for all age groups. –The student will be able to:
	40.01 Discuss the incidence, morbidity, and mortality of blast injuries.
	40.02 Predict blast injuries based on mechanism of injury, including primary, secondary and tertiary.

	40.03 Discuss the effects of an explosion within an enclosed space on a patient.
	40.04 Defend the components of a comprehensive trauma system and the levels of trauma centers.
	40.05 Describe the criteria for transport to a trauma center.
	40.06 Explain the rational for utilizing air medical transport in the trauma patient.
	40.07 Review energy and force as they relate to trauma.
	40.08 Explain laws of motion and energy and apply the kinetic energy equation.
	40.09 Describe the pathophysiology of the head, spine, thorax, and abdomen that result from the above forces.
	40.10 List suspected injuries from the different causes of trauma: 40.10.01 Motor vehicles (restrained and un-restrained) 40.10.02 Frontal/head on 40.10.03 Lateral or side impacts 40.10.04 Rear impacts 40.10.05 Rotational impacts 40.10.06 Rollovers 40.10.07 Motorcycles 40.10.08 Pedestrian (include the differences for pediatric patient) 40.10.09 Falls from heights 40.10.10 Penetrating 40.10.11 Blasts
	40.11 Discuss and demonstrate the State of Florida's trauma scorecard methodologies as required by Florida Administrative Code and Florida Statute
	40.12 Explain the National Trauma Triage Protocol of Injured Patients
41.0	**Bleeding:** Demonstrate a complex depth, comprehension breadth of pathophysiology, assessment and management of bleeding for all age groups. –The student will be able to:
	41.01 Discuss the compensatory mechanism in hemorrhagic shock.
	41.02 Discuss the administration of medications to assist in the maintenance of homeostasis.
	41.03 Discuss the maintenance of tissue oxygenation in a bleeding patient.
	41.04 Defend and differentiate the type and use of IV fluids for fluid resuscitation in hemorrhagic shock.
	41.05 Demonstrate the different methods/modalities of controlling bleeding.
42.0	**Chest Trauma:** Demonstrate a complex depth, comprehensive breadth of pathophysiology, assessment, and management of chest trauma for all age groups. –The student will be able to:

42.01 Review the anatomy and physiology of the organs and structures related to thoracic injuries.

42.02 Review the pathophysiology and Mechanism of Injury (MOI) of the following injuries, including:

- 42.02.01 Myocardial injuries
  - 42.02.01.1 pericardial tamponade
  - 42.02.01.2 myocardial contusion
  - 42.02.01.3 myocardial rupture
- 42.02.02 Vascular injury
  - 42.02.02.1.1 Aortic Dissection
  - 42.02.02.1.2 Pulmonary contusion
- 42.02.03 Hemothorax
- 42.02.04 Pneumothorax
- 42.02.05 Hemopneumothorax
- 42.02.06 Cardiac Tamponade
- 42.02.07 Commotio Cordis
- 42.02.08 Tracheobronchial disruption
- 42.02.09 Diaphragmatic rupture and injury
- 42.02.10 Tramatic asphyxia
- 42.02.11 Rib fracture
- 42.02.12 Flail segment
- 42.02.13 Sternal fracture

42.03 Discuss and demonstrate the assessment and management of the patient for each the following:

- 42.03.01 thoracic injuries.
- 42.03.02 chest wall injuries.
- 42.03.03 lung injuries.
- 42.03.04 myocardial injuries.
- 42.03.05 vascular injuries.
- 42.03.06 diaphragmatic injuries.
- 42.03.07 tracheo-bronchial injuries
- 42.03.08 traumatic asphyxia.

42.04 Identify the need for rapid intervention and transport of the patient for each of the following:

- 42.04.01 thoracic injuries.
- 42.04.02 chest wall injuries.
- 42.04.03 lung injuries.
- 42.04.04 myocardial injuries.
- 42.04.05 vascular injuries.
- 42.04.06 diaphragmatic injuries.
- 42.04.07 esophageal injuries
- 42.04.08 tracheo-bronchial injuries
- 42.04.09 traumatic asphyxia.

42.05 Assist with the insertion of a chest tube and when in place monitor and manage chest tube patency.

	42.06 Discuss and demonstrate the assessment and management of a patient with a thoracic injury.
	42.07 Integrate the pathophysiological principles to the assessment of a patient with a thoracic injury.
	42.08 Develop a patient management plan based on the field impression.
	42.09 Recognize the need for the use of a thorough assessment to determine a differential diagnosis and treatment plan for thoracic trauma.
	42.10 Demonstrate a clinical assessment for a patient with suspected thoracic trauma.
	42.11 Demonstrate the following techniques of management for thoracic injuries: Needle decompression, Fracture stabilization, Elective intubation, ECG monitoring , Oxygenation and ventilation
43.0	**Abdominal and Genitourinary Trauma:** Demonstrate a complex depth, comprehensive breadth of pathophysiology, assessment, and management of abdominal and genitourinary trauma for all age groups. –The student will be able to:
	43.01 Review the anatomy and physiology of organs and structures related to abdominal injuries.
	43.02 Discuss the abdominal vascular structures
	43.03 Describe the mechanism of injury for and types of open and closed abdominal and retroperitoneal injuries involving seat belts, penetrating, blunt and evisceration.
	43.04 Discuss and explain the pathophysiology for: 43.04.01 Pelvic fractures. 43.04.02 Solid organ injuries 43.04.03 Hollow organ injuries 43.04.04 Abdominal vascular injuries 43.04.05 Retroperitoneal space (kidneys) 43.04.06 Genitourinary system
	43.05 Describe and demonstrate the assessment and management for: 43.05.01 Pelvic fractures. 43.05.02 Solid organ injuries 43.05.03 Hollow organ injuries 43.05.04 Abdominal vascular injuries 43.05.05 Retroperitoneal space (kidneys) 43.05.06 Genitourinary system
	43.06 Develop a patient management plan for a patient with abdominal injuries, based upon field impression.
	43.07 Describe the epidemiology, including the morbidity/mortality and prevention strategies for abdominal vascular injuries.
	43.08 Integrate the pathophysiological principles to the assessment of a patient with abdominal injuries
	43.09 Develop and demonstrate the management of a patient with an impaled object, evisceration and shock.

	43.10 Discuss the variations in symptoms, signs and treatment of patients across the ages
	43.11 Discuss the emotional treatment associated with abdominal and genitourinary injuries.
44.0	**Orthopedic Trauma:** Demonstrate a fundamental depth, foundational breadth of pathophysiology, assessment, and management of orthopedic trauma for all age groups. –The student will be able to:
	44.01 Review the anatomy and physiology of the musculoskeletal system, include the healing process.
	44.02 Discuss types of musculoskeletal injuries: 44.02.01 fracture (open and closed – epiphyseal, greenstick, and torus), 44.02.02 dislocation/fracture, 44.02.03 sprain 44.02.04 strain
	44.03 Discuss the pathophysiology and potential complications of orthopedic injuries.
	44.04 Discuss and demonstrate the patient assessment techniques and findings for orthopedic injuries.
	44.05 Explain the 6 “P” orthopedic injury assessment
	44.06 Discuss the general guidelines for management of orthopedic injuries: 44.06.01 Heat therapy 44.06.02 Cold therapy 44.06.03 Splinting 44.06.04 Medication administration (analgesics and anxiolytics)
	44.07 Discuss the pathophysiology of open and closed fractures.
	44.08 Discuss and demonstrate the assessment and management of specific orthopedic injuries: 44.08.01 Shoulder girdle 44.08.02 Humeral fractures 44.08.03 Elbow 44.08.04 Forearm 44.08.05 Wrist and Hand 44.08.06 Pelvis 44.08.07 Hip 44.08.08 Femoral shaft 44.08.09 Knee 44.08.10 Tibia and Fibula 44.08.11 Ankle 44.08.12 Calcaneus

	44.09 Discuss the pathophysiology and management of dislocations: 44.09.01 Shoulder girdle 44.09.02 Elbow 44.09.03 Wrist and hand 44.09.04 Hand 44.09.05 Hip 44.09.06 Knee
	44.10 Discuss the out-of-hospital management of dislocation/fractures, including splinting and realignment.
	44.11 Explain the importance of manipulating a knee dislocation/fracture with an absent distal pulse.
	44.12 Define luxation and subluxation
	44.13 Discuss and demonstrate the assessment and management of sprains and strains
	44.14 Review the pathophysiology and mechanism of injury for compartment and crush syndrome
	44.15 Discuss and demonstrate the assessment and management of compartment and crush syndrome: 44.15.01 Destination decision 44.15.02 Rhabodomylysis
	44.16 Discuss the pathophysiology, and demonstrate the assessment and management of a tendon injury to the knee (patellar), shoulder and Achilles.
	44.17 Develop a patient management plan for the musculoskeletal injury based on the field impression.
	44.18 Recognize the use of pain management in the treatment of musculoskeletal injuries.
45.0	**Soft Tissue Trauma:** Demonstrate a complex depth, comprehensive breadth of pathophysiology, assessment, and management of soft tissue trauma for all age groups. –The student will be able to:
	45.01 Review anatomy and physiology and identify the major functions of the integumentary system.
	45.02 Discuss the pathophysiology of soft tissue injuries and the healing process including: 45.02.01 Inflammation 45.02.02 Epithelialization 45.02.03 Neurovascularization 45.02.04 Collagen Synthesis 45.02.05 Alterations in would healing 45.02.06 Abnormal scar formation
	45.03 Differentiate between the following types of closed soft tissue injuries: contusions, hematoma and crush injuries.
	45.04 Review the assessment findings and management associated with closed soft tissue injuries.
	45.05 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.

45.06	Review the pathophysiology of open wounds.
45.07	Review between the various management techniques for hemorrhage control of open soft tissue injuries, including but not limited to: direct pressure, pressure dressing, and tourniquet application.
45.08	Integrate pathophysiological principles to the assessment of a patient with a soft tissue injury and synthesize and demonstrate a treatment plan
45.09	Formulate treatment priorities for patients with soft tissue injuries in conjunction with airway/face/neck trauma, thoracic trauma (open/closed), and abdominal trauma.
45.10	Defend the rationale explaining why immediate life-threats must take priority over wound closure.
45.11	Demonstrate the proper use of any Morgan□ type lens for irrigation of the eye.
45.12	Describe the epidemiology, including incidence, mortality/ morbidity, risk factors, and prevention strategies for the patient with a burn injury.
45.13	Describe the pathophysiologic complications and systemic complications of a burn injury.
45.14	Review and describe types of burn injuries, including a thermal burn, an inhalation burn, a chemical burn, an electrical burn, and a radiation exposure.
45.15	Review 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.
45.16	Demonstrate the 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.
45.17	Review 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.
45.18	Describe special considerations for a pediatric patient with a burn injury.
45.19	Discuss conditions associated with burn injuries, including: 45.19.01 Trauma 45.19.02 blast injuries 45.19.03 airway compromise 45.19.04 respiratory compromise 45.19.05 child abuse
45.20	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.
45.21	Describe the pathophysiology of a thermal burn injury.
45.22	Describe the pathophysiology and assessment findings of a burn from the following causes: 45.22.01 Inhalation 45.22.02 Chemicals 45.22.03 electricity

	45.23 Describe and demonstrate the assessment and management of a thermal, inhalation, electrical and chemical burn injury and radiation exposure, including: 45.23.01 airway and ventilation 45.23.02 circulation 45.23.03 pharmacological, non-pharmacological 45.23.04 transport considerations 45.23.05 psychological support/ communication strategies
	45.24 Describe the types of chemicals and their burning processes and a chemical burn injury to the eye.
	45.25 Describe the pathophysiology of a radiation exposure, including the types and characteristics of ionizing radiation.
	45.26 Identify and describe the severity of a radiation exposure.
	45.27 Develop, execute and evaluate a management plan based on the field impression for the patient with thermal, inhalation, chemical, electrical, and radiation burn injuries.
46.0	**Head, Face, Neck, and Spine:** Demonstrate a fundamental depth, foundational breadth of head, face, neck and spine trauma for all age groups. –The student will be able to:
	46.01 Differentiate between facial injuries based on the assessment and history.
	46.02 Relate assessment findings associated with head, facial and neck injuries to pathophysiology.
	46.03 Develop a patient management plan based on patient assessment and a field impression for injuries to the following areas: 46.03.01 Eye(s) 46.03.02 Nose 46.03.03 Throat/neck 46.03.04 Face 46.03.05 Mouth 46.03.06 Ear(s)
	46.04 Formulate a field impression for a patient with an injury for the following areas based on the assessment findings: 46.04.01 Eye(s) 46.04.02 Nose 46.04.03 Throat/neck 46.04.04 Face 46.04.05 Mouth 46.04.06 Ear(s)
	46.05 Distinguish between head injury and brain injury.
	46.06 Define and explain the process involved with each of the levels of increasing ICP.
	46.07 Identify the need for rapid intervention and transport of the patient with a head/brain injury.
	46.08 Describe and demonstrate the assessment and general management of the head/ brain injury patient, including pharmacological and non-pharmacological treatment.

46.09	Explain the pathophysiology of skull fracture and intracranial hemorrhage, including epidural, subdural, intracerebral, and subarachnoid.
46.10	Develop a management plan for a patient for each of the following conditions: 46.10.01 skull fracture 46.10.02 cerebral contusion 46.10.03 intracranial hemorrhage 46.10.04 epidural, subdural, intracerebral, and subarachnoid
46.11	Differentiate between traumatic and non-traumatic spinal injuries based on the assessment and history.
46.12	Describe the pathophysiology of non-traumatic spinal injury, including but not limited to, low back pain, herniated intervertebral disk and spinal cord tumors.
46.13	Describe and demonstrate the assessment and management of non- traumatic spinal injuries.
46.14	Describe the pathophysiology of traumatic spinal injury related to: 46.14.01 spinal shock 46.14.02 spinal neurogenic shock 46.14.03 quadriplegia/paraplegia, 46.14.04 Incomplete cord injury/cord syndromes, including central cord syndrome, anterior cord syndrome and Brown-Sequard syndrome.
46.15	Discuss and demonstrate the assessment and management of spine trauma including dislocations/subluxations, fractures, and sprains/strains.
46.16	Develop a management plan for a patient with spine trauma including dislocations/subluxations, fractures, and sprains/strains.
46.17	Develop a patient management plan for both a traumatic and a non-traumatic spinal injury based on the field impression.
46.18	Demonstrate a clinical assessment to determine the proper management modality for a patient for both a suspected traumatic spinal injury and a non-traumatic spinal injury.
46.19	Demonstrate spinal motion restriction of the urgent and non-urgent patient with assessment findings of spinal injury from the following presentations: Supine, Prone, Semi-prone, Sitting, Standing
	46.19.01 Given a scenario, defend whether or not to remove a helmet prior to transport of a patient.
46.20	Demonstrate various methods for stabilization and removal of a helmet.
46.21	Discuss and demonstrate the assessment and management of each of the following: 46.21.01 Perforated tympanic membranes. 46.21.02 orbital fracture 46.21.03 mandibular fractures
46.22	Develop a management plan for a patient for each of the following: 46.22.01 Perforated tympanic membranes. 46.22.02 orbital fracture 46.22.03 mandibular fractures

47.0	**Nervous System Trauma:** Demonstrate a fundamental depth, foundational breadth of nervous system trauma for all age groups. –The student will be able to:
	47.01 Review the anatomy and physiology of the central nervous system, brain, spinal cord, skull and spinal column.
	47.02 Discuss pathophysiology of the following nervous system injury including: 47.02.01 Cauda Equine syndrome 47.02.02 Peripheral nerve injuries 47.02.03 Intracerebral hemorrhages 47.02.04 Cranial fractures 47.02.05 Brain tissue injuries 47.02.06 Spinal cord injuries
	47.03 Discuss the mechanism of injury which would result in a nervous system injury.
	47.04 Discuss the specific assessment (s) for nervous system injuries including: 47.04.01 Brown-Sequard syndrome 47.04.02 Cauda Equine syndrome 47.04.03 Anterior cord syndrome 47.04.04 Central cord syndrome 47.04.05 Intracerebral hemorrhage
	47.05 Discuss the pathophysiology of a traumatic brain injury and spinal shock.
	47.06 Develop a management plan for a patient with traumatic brain injury and spinal shock
	47.07 Synthesize and demonstrate the spinal motion restriction technique for the different spinal cord injuries.
	47.08 Discuss the research involving the management of nervous system injuries and patient management.
48.0	**Special Considerations in Trauma:** Demonstrate a complex depth, comprehensive breadth of special considerations in trauma for all age groups. –The student will be able to:
	48.01 All trauma objectives should integrate the assessment and management differences associated with the following special populations: 48.01.01 Pregnancy 48.01.02 Pediatric 48.01.03 Geriatric 48.01.04 Cognitively impaired
49.0	**Environmental Emergencies:** Demonstrate a complex depth, comprehensive breadth of environmental emergencies for all age groups. – The student will be able to:
	49.01 Define "environmental emergency."

49.02	Discuss the pathophysiology and MOI of the following: 49.02.01 Drowning and water related incidents 49.02.02 temperature-related illness 49.02.03 bites and envenomation 49.02.04 dysbarism such as high-altitude edema 49.02.05 diving injuries 49.02.06 lightning (electrical) injury 49.02.07 high altitude illness
49.03	Identify environmental factors that may cause illness, exacerbate preexisting illness and complicate treatment or transport decisions.
49.04	Describe several methods of temperature monitoring.
49.05	Identify the components of the body's thermoregulatory mechanism.
49.06	Describe the general process of thermal regulation, including substances used and wastes generated.
49.07	Describe the body's compensatory process for overheating.
49.08	Discuss and list the common forms of heat and cold disorders.
49.09	Discuss the pathophysiology of temperature related illness
49.10	Relate symptomatic findings to the commonly used terms: heat cramps, heat exhaustion, and heatstroke.
49.11	Describe the contribution of dehydration to the development of heat disorders.
49.12	Describe the differences between classical and exertional heatstroke.
49.13	Define fever and discuss its pathophysiologic mechanism.
49.14	Discuss the role of fluid therapy in the treatment of temperature related emergencies
49.15	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.
49.16	Identify differences between mild, severe, chronic and acute hypothermia
49.17	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.
49.18	Define frostbite and superficial frostbite (frostnip).
49.19	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.
49.20	Define submersion

49.21	List signs and symptoms of submersion
49.22	Describe the lack of significance of fresh versus saltwater immersion, as it relates to submersion
49.23	Discuss the incidence of "wet" versus "dry" drownings and the differences in their management.
49.24	Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the submersion patient.
49.25	Define self-contained underwater breathing apparatus (SCUBA).
49.26	Discuss the pathophysiology of diving emergencies including: 49.26.01 decompression illness/sickness 49.26.02 Altitude Illnesses 49.26.03 Pulmonary Over Pressurization Syndrome (POPS) 49.26.04 Arterial Gas Embolism
49.27	Relate the gas laws to the pathology of injury in a submersion emergency
49.28	List signs and symptoms of diving emergencies.
49.29	Describe the function of the Divers Alert Network (DAN) and how its members may aid in the management of diving related illnesses.
49.30	Differentiate among the various treatments and interventions for the management of diving accidents.
49.31	Describe the specific function and benefit of hyperbaric oxygen therapy for the management of diving accidents.
49.32	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.
49.33	Develop a patient management plan based on the field impression of the patient affected by an environmental emergency.
49.34	Discuss the pathophysiology of bites and envenomation including: 49.34.01 Hymenoptera 49.34.02 Snake bites 49.34.03 Spider Bites 49.34.04 Scorpion stings 49.34.05 Tick Bites
49.35	Discuss and demonstrate the assessment and management of: 49.35.01 Hymenoptera 49.35.02 Snake bites 49.35.03 Spider Bites 49.35.04 Scorpion stings 49.35.05 Tick Bites
49.36	Relate the assessment of bites and envenomation to the immune response and shock

Course Number: EMS0212 **Occupational Completion Point: A** **Paramedic III – 426 hours – SOC Code 29-2041**	
50.0	**Multi-Systems Trauma:** Demonstrate a complex depth, comprehensive breadth of multi-system trauma and blast injuries. –The student will be able to:
	50.01 Demonstrate the priority of care in the multisystem trauma patient
	50.02 Explain which ALS interventions should occur prior to a transport decision and during transport
51.0	**Obstetrics:** Demonstrate a complex depth, comprehensive breadth of the management of the obstetric patient within the scope of practice of the paramedic. –The student will be able to:
	51.01 Review the anatomic structures and physiology of the reproductive system.
	51.02 Identify and describe the normal events of pregnancy.
	51.03 Describe and demonstrate how to assess an obstetrical patient.
	51.04 Identify and describe the stages of labor and the paramedic's role in each stage.
	51.05 Differentiate between normal and abnormal delivery.
	51.06 Identify and describe complications associated with pregnancy and delivery.
	51.07 State indications of an imminent delivery.
	51.08 Differentiate the management of a patient with predelivery emergencies from a normal delivery.
	51.09 State the steps to assist in the delivery of a neonate including preparation of the mother.
	51.10 Describe and demonstrate how to care for the neonate.
	51.11 Describe how and when to cut the umbilical cord.
	51.12 Discuss the steps in the delivery of the placenta.
	51.13 Demonstrate how to prepare the obstetric patient for delivery.
	51.14 Demonstrate how to assist in the normal cephalic delivery of the fetus.
	51.15 Demonstrate how to deliver the placenta.
	51.16 Describe and demonstrate the management of the mother post-delivery.

	51.17 Describe and demonstrate the procedures for handling abnormal deliveries.
	51.18 Describe and demonstrate the procedures for handling complications of pregnancy including excessive vaginal bleeding, abdominal pain and hypertensive crisis
	51.19 Describe and demonstrate the procedures for handling maternal complications of labor.
	51.20 Describe special considerations when meconium is present in amniotic fluid or during delivery.
	51.21 Describe special considerations of a premature baby.
52.0	**Neonatal Care:** Demonstrate a complex depth, comprehensive breadth of the management of the neonatal patient within the scope of practice of the paramedic. –The student will be able to:
	52.01 Define the term neonate.
	52.02 Identify antepartum factors that can affect childbirth.
	52.03 Identify intrapartum factors that can term the neonate “high risk”.
	52.04 Identify the factors that lead to premature birth and low birth weight neonates.
	52.05 Discuss pulmonary perfusion and asphyxia.
	52.06 Calculate the APGAR score given various neonate situations.
	52.07 Demonstrate appropriate assessment technique for examining a neonate.
	52.08 Determine when ventilatory assistance is appropriate for a neonate.
	52.09 Prepare appropriate ventilation equipment, adjuncts and technique for a neonate.
	52.10 Determine when chest compressions are appropriate for a neonate.
	52.11 Discuss and demonstrate appropriate chest compression techniques for a neonate.
	52.12 Determine when endotracheal intubation is appropriate for a neonate.
	52.13 Discuss and demonstrate appropriate endotracheal intubation techniques for a neonate.
	52.14 Identify complications related to endotracheal intubation for a neonate.
	52.15 Determine when vascular access is indicated for a neonate.
	52.16 Discuss the routes of medication administration for a neonate.
	52.17 Determine when blow-by oxygen delivery is appropriate for a neonate.

52.18	Demonstrate blow-by oxygen delivery for a neonate.
52.19	Determine when an orogastric tube should be inserted during positive-pressure ventilation.
52.20	Demonstrate insertion of an orogastric tube in a neonate.
52.21	Discuss the signs of hypovolemia in a neonate.
52.22	Demonstrate preparation of a neonate resuscitation area.
52.23	Discuss and demonstrate the initial steps in resuscitation of a neonate.
52.24	Demonstrate appropriate assisted ventilations for a neonate.
52.25	Demonstrate appropriate endotracheal intubation technique for a neonate.
52.26	Demonstrate appropriate chest compression and ventilation technique for a neonate.
52.27	Discuss the effects maternal narcotic usage has on the neonate.
52.28	Discuss appropriate transport guidelines for a neonate.
52.29	Determine appropriate receiving facilities for low and high risk neonates.
52.30	Describe the epidemiology, including the incidence, morbidity/ mortality, risk factors and prevention strategies for meconium aspiration.
52.31	Discuss and demonstrate the assessment and management of meconium aspiration.
52.32	Discuss the pathophysiology of apnea in the neonate.
52.33	Discuss and demonstrate the assessment and management for apnea in the neonate.
52.34	Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for bradycardia in the neonate.
52.35	Discuss and demonstrate the assessment and management for bradycardia in the neonate.
52.36	Discuss the pathophysiology of premature infants.
52.37	Discuss and demonstrate the assessment and management for premature infants.
52.38	Discuss the pathophysiology of respiratory distress/ cyanosis in the neonate.
52.39	Discuss and demonstrate the assessment and management for respiratory distress/ cyanosis in the neonate.
52.40	Discuss the pathophysiology of seizures in the neonate.

	52.41 Discuss and demonstrate the assessment and management for seizures in the neonate.
	52.42 Discuss the pathophysiology of fever in the neonate.
	52.43 Discuss and demonstrate the assessment and management for fever in the neonate.
	52.44 Discuss the pathophysiology of hypothermia in the neonate.
	52.45 Discuss and demonstrate the assessment and management for hypothermia in the neonate.
	52.46 Discuss the pathophysiology of hypoglycemia in the neonate.
	52.47 Discuss and demonstrate the assessment and management plan for hypoglycemia in the neonate.
	52.48 Discuss the pathophysiology of vomiting in the neonate.
	52.49 Discuss and demonstrate the assessment and management for vomiting in the neonate.
	52.50 Discuss the pathophysiology of common birth injuries in the neonate.
	52.51 Discuss and demonstrate the assessment and management for common birth injuries in the neonate.
	52.52 Discuss the pathophysiology of cardiac arrest in the neonate.
	52.53 Discuss and demonstrate the assessment and management/treatment plan for cardiac arrest in the neonate.
	52.54 Discuss the pathophysiology of post arrest management of the neonate.
	52.55 Discuss and demonstrate the management to stabilize the post arrest neonate.
	52.56 Demonstrate vascular access cannulation techniques for a newborn except umbilical vein/artery access.
53.0	**Pediatrics:** Demonstrate a complex depth, comprehensive breadth of the management of the pediatric patient within the scope of practice of the paramedic. –The student will be able to:
	53.01 Review key growth and developmental characteristics of infants and children and their implications.
	53.02 Identify key anatomical and physiological characteristics of infants and children and their implications.
	53.03 Describe and demonstrate techniques for successful assessment and treatment of infants and children.
	53.04 Outline differences in adult and childhood anatomy and physiology.
	53.05 Identify "normal" age group related vital signs.
	53.06 Determine appropriate airway adjuncts for infants and children.

53.07	Discuss complications of improper utilization of airway adjuncts with infants and children.
53.08	Discuss and demonstrate appropriate ventilation devices for infants and children.
53.09	Discuss complications of improper utilization of ventilation devices with infants and children.
53.10	Identify complications of improper endotracheal intubation procedure in infants and children.
53.11	List the indications and methods for gastric decompression for infants and children.
53.12	Differentiate between upper airway obstruction and lower airway disease.
53.13	Describe the general approach to the treatment of children with respiratory distress, failure, or arrest from upper airway obstruction or lower airway disease.
53.14	Discuss the common causes of hypoperfusion in infants and children.
53.15	Identify the major causes of abnormal cardiac rhythms in infants and pediatric.
53.16	Discuss the primary etiologies of cardiopulmonary arrest in infants and children.
53.17	Discuss the appropriate equipment for vascular access in infants and children.
53.18	Identify complications of vascular access for infants and children.
53.19	Describe the primary etiologies of altered level of consciousness in infants and children.
53.20	Identify common lethal mechanisms of injury in infants and children.
53.21	Identify infant and child trauma patients who require spinal immobilization.
53.22	Discuss and demonstrate fluid management and shock treatment for infant and child trauma patient.
53.23	Determine when pain management and sedation are appropriate for infants and children.
53.24	Define child abuse and child neglect
53.25	Review mandatory reporting requirements for child abuse/neglect
53.26	Define children with special health care needs.
53.27	Review basic cardiac life support (CPR) guidelines for infants and children.
53.28	Integrate advanced life support skills with basic cardiac life support for infants and children.
53.29	Discuss the indications, dosage, route of administration and special considerations for medication administration in infants and children.

53.30	Discuss the pathophysiology of respiratory distress/failure in infants and children.
53.31	Discuss and demonstrate the assessment and management for respiratory distress/failure in infants and children.
53.32	Discuss the pathophysiology of hypoperfusion in infants and children.
53.33	Discuss and demonstrate the assessment and management for hypoperfusion in infants and children.
53.34	Discuss the pathophysiology of cardiac dysrhythmias in infants and children.
53.35	Discuss and demonstrate the assessment and management for cardiac dysrhythmias in infants and children.
53.36	Discuss the pathophysiology of neurological emergencies in infants and children.
53.37	Discuss and demonstrate the assessment and management for neurological emergencies in infants and children.
53.38	Discuss the pathophysiology of trauma in infants and children.
53.39	Discuss and demonstrate the assessment and management for trauma in infants and children.
53.40	Discuss the pathophysiology of abuse and neglect in infants and children.
53.41	Discuss and demonstrate the assessment and management for abuse and neglect in infants and children, including documentation and reporting.
53.42	Discuss the pathophysiology of children with special health care needs including technology assisted children.
53.43	Discuss and demonstrate the assessment and management for children with special health care needs including technology assisted children.
53.44	Describe Sudden Unexplained Infant Death Syndrome (SUIDS), current theories, assessment and management, and the immediate needs of the family.
53.45	Discuss the parent/caregiver responses to the death of an infant or child.
53.46	Discuss the pathophysiology of SUIDS in infants.
53.47	Discuss the assessment findings associated with SUIDS infants.
53.48	Discuss the management/treatment plan for SUIDS in infants.
53.49	Discuss and demonstrate the use of a length-based resuscitation device for determining equipment sizes, drug doses and other pertinent information for a pediatric patient.
53.50	Demonstrate appropriate treatment/management of intubation complications for infants and children.
53.51	Demonstrate appropriate needle cricothyrootomy in infants and children.
53.52	Demonstrate proper placement of a gastric tube in infants and children.

	53.53 Demonstrate an appropriate technique for insertion of peripheral intravenous catheters for infants and children.
	53.54 Demonstrate an appropriate technique for administration of intramuscular, inhalation, subcutaneous, rectal, endotracheal and oral medication for infants and children.
	53.55 Demonstrate an appropriate technique for insertion of an intraosseous line for infants and children.
	53.56 Demonstrate proper technique for direct larnyngoscopy and foreign body retrieval in infants and children with a completely obstructed airway.
	53.57 Demonstrate appropriate spinal motion restriction techniques for infant and child trauma patients.
	53.58 Demonstrate treatment of infants and children with the following injuries: 53.58.01 head injuries. 53.58.02 Chest injuries 53.58.03 Abdominal injuries 53.58.04 Extremity injuries 53.58.05 Burns
	53.59 Demonstrate appropriate parent/caregiver interviewing techniques for infant and child death situations.
	53.60 Demonstrate proper infant and child CPR integrating ALS as appropriate
	53.61 Demonstrate proper techniques for performing infant and child defibrillation and synchronized cardioversion.
54.0	**Geriatrics:** Demonstrate a complex depth, comprehensive breadth of the management of the geriatric patient within the scope of practice of the paramedic. –The student will be able to:
	54.01 Discuss common emotional and psychological reactions to aging to include causes and manifestations.
	54.02 Discuss the problems with mobility in the elderly and develop strategies to prevent falls.
	54.03 Discuss factors that may complicate the assessment of the elderly patient.
	54.04 Describe principles that should be employed when assessing and communicating with the elderly.
	54.05 Discuss common complaints of elderly patients.
	54.06 Discuss the impact of polypharmacy and medication non-compliance on patient assessment and management.
	54.07 Discuss medication issues of the elderly including polypharmacy, dosing errors and increased drug sensitivity and toxicology.
	54.08 Discuss and demonstrate the assessment and management of the elderly patient with pulmonary complaints, including: 54.08.01 pneumonia 54.08.02 chronic obstructive pulmonary diseases 54.08.03 pulmonary embolism.
	54.09 Identify the need for intervention and transport of the elderly patient with pulmonary complaints.

	54.10	Discuss and demonstrate the assessment and management of the elderly patient with complaints related to the cardiovascular system, including: 54.10.01 myocardial infarction 54.10.02 heart failure 54.10.03 dysrhythmias 54.10.04 aneurism 54.10.05 hypertension.
	54.11	Discuss and demonstrate the assessment and management of the elderly patient with complaints related to the nervous system, including: 54.11.01 cerebral vascular disease 54.11.02 delirium 54.11.03 dementia 54.11.04 Alzheimer's disease 54.11.05 Parkinson's disease.
	54.12	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.
	54.13	Discuss and demonstrate the assessment and management of the elderly patient with complaints related to the endocrine system, including diabetes and thyroid diseases.
	54.14	Discuss and demonstrate the assessment and management of the elderly patient with the following: 54.14.01 gastrointestinal problems. 54.14.02 toxicological problems 54.14.03 orthopedic injuries, burns and head injuries 54.14.04 drug and alcohol abuse 54.14.05 environmental considerations 54.14.06 depression or suicide risk factors
	54.15	Demonstrate the ability to adjust assessment to a geriatric patient.
	54.16	Discuss the epidemiology of herpes zoster and inflammatory arthritis in the elderly
55.0	**Patients with Special Challenges:** Demonstrate a complex depth, comprehensive breadth of management of the patient with special challenges within the scope of practice of the paramedic. –The student will be able to:	
	55.01	Discuss the incidence of abuse and assault.
	55.02	Describe the categories of abuse.
	55.03	Discuss examples of each of the following: 55.03.01 Domestic partner abuse 55.03.02 elder abuse 55.03.03 child abuse 55.03.04 sexual assault

55.04	Describe the characteristics associated with the profile of the typical abuser of: 55.04.01 domestic abuser 55.04.02 elder abuser 55.04.03 child abuser
55.05	Describe the characteristics associated with the profile of the typical assailant of sexual assault.
55.06	Identify the profile of the "at-risk" domestic partner, "at-risk" elder and "at-risk" child.
55.07	Discuss the legal aspects associated with abuse situations including mandatory reporting.
55.08	Discuss the documentation associated with abused and assaulted patient.
55.09	Demonstrate the ability to assess and manage a domestic partner, elder or child abused patient.
55.10	Demonstrate the ability to assess and manage a sexually assaulted patient.
55.11	Recognize the patient with a hearing impairment.
55.12	Anticipate accommodations that may be needed in order to properly manage the patient with a hearing impairment.
55.13	Recognize the patient with a visual impairment.
55.14	Anticipate accommodations that may be needed in order to properly manage the patient with a visual impairment
55.15	Describe the various etiologies and types of speech impairments.
55.16	Recognize the patient with a speech impairment.
55.17	Describe paraplegia/quadriplegia.
55.18	Describe the various etiologies of mental illness.
55.19	Recognize the presenting signs of the following: 55.19.01 mental illnesses 55.19.02 Developmental disability 55.19.03 Down’s syndrome
55.20	Describe the various etiologies of emotional impairment.
55.21	Recognize the patient with an emotional impairment.

55.22	Describe the following diseases/illnesses and identify each of their possible presenting signs: 55.22.01 Arthritis, 55.22.02 Cancer, 55.22.03 Cerebral palsy, 55.22.04 Cystic fibrosis 55.22.05 Multiple sclerosis, 55.22.06 Muscular dystrophy, 55.22.07 Myasthenia gravis, 55.22.08 Poliomyelitis, 55.22.09 Spina bifida, 55.22.10 patients with a previous head injury
55.23	Identify a patient that is terminally ill.
55.24	Recognize sign(s) of financial impairments.
55.25	Identify the importance of home health care medicine as related to the ALS level of care.
55.26	Differentiate between the role of EMS provider and the role of the home care provider.
55.27	Discuss the aspects of home care that result in enhanced quality of care for a given patient.
55.28	Discuss the aspects of home care that have a potential to become a detriment to the quality of care for a given patient.
55.29	List complications commonly seen in the home care patients, which result in their hospitalization.
55.30	Review hospice care, comfort care and DNR/DNAR as they relate to local practice, law and policy.
55.31	List the stages of the grief process and relate them to an individual in hospice care.
55.32	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.
55.33	Describe airway maintenance devices typically found in the home care environment.
55.34	Describe devices that provide or enhance alveolar ventilation in the home care setting.
55.35	Describe and access indwelling catheters, implanted central IV ports and central line monitoring.
55.36	Describe complications of assessing each of the airway, vascular access, and GI/GU devices described above.
55.37	Describe the indications and contraindications for urinary catheter insertion in an out-of-hospital setting.
55.38	Identify failure of GI/GU devices found in the home care setting.
55.39	Identify failure of ventilatory devices found in the home care setting.

	55.40 Identify failure of vascular access devices found in the home care setting.
	55.41 Identify and describe the failure of wound drains.
	55.42 Discuss the rights of the terminally ill.
	55.43 Observe for an infected or otherwise complicated venous access point.
	55.44 Demonstrate proper tracheotomy care.
	55.45 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.
	55.46 Demonstrate how to replace an ostomy tube.
56.0	**Principles of Safely Operating a Ground Ambulance:** Demonstrate a simple depth, foundational breadth of risks and responsibilities of transport. –The student will be able to:
	56.01 Review the EMT standards and benchmarks for the Principles of Safely Operating a Ground Ambulance.
57.0	**Incident Management:** Demonstrate a complex depth, comprehensive breadth of establishing and working within the incident management system. –The student will be able to:
	57.01 Review the EMT standards and benchmarks for Incident Management and apply a complex depth and comprehensive breadth of establishing and working within the incident management system.
58.0	**Multiple Casualty Incidents:** Demonstrate a simple depth, foundational breadth of responding to an emergency during a multiple casualty incident. –The student will be able to:
	58.01 Review the EMT standards and benchmarks for Multiple Casualty Incidents.
59.0	**Air Medical:** Demonstrate a complex depth, comprehensive breadth of air medical transport risks, needs and advantages. –The student will be able to:
	59.01 Describe the advantages and disadvantages of air medical transport.
	59.02 Identify appropriate reasons for the use of air medical for emergency patient transport.
	59.03 Describe the risks involved with the use of air medical transport
	59.04 Demonstrate the actions needed to ensure effective and safe ground operations involving air medical response
	59.05 Demonstrate appropriate communication of information needed for safe and effective interaction between the air medical crew and ground personnel
60.0	**Vehicle Extrication:** Demonstrate a simple depth, simple breadth for safe vehicle extrication and use of simple hand tools. –The student will be able to:
	60.01 Review the EMT standards and benchmarks for Vehicle Extrication.
61.0	**Hazardous Materials Awareness:** Demonstrate a simple depth, simple breadth of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident. –The student will be able to:

	61.01 Review the EMT standards and benchmarks for Hazardous Materials Awareness.
62.0	**Mass Casualty Incidents due to Terrorism and Disasters:** Demonstrate a simple depth, simple breadth of risks and responsibilities of operating on the scene of a natural or man- made disaster. –The student will be able to:
	62.01 Review the EMT standards and benchmarks for Mass Casualty Incidents.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

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 EMS agency or ALS fire department. Refer to 64J-1/20 for additional requirements of the field internship inside of the paramedic program.

Special Notes

This program is ONLY authorized to be offered by the following districts: Lake, Manatee, St. Johns, and Sarasota.

It is strongly recommended this program be accredited by CAAHEP (Commission on Accreditation of Allied Health Education Programs). Beginning January 1, 2013, National Registry for Emergency Medical Technicians (NREMT) will require students applying for Paramedic National certification to be from a CAAHEP/CoAEMSP accredited program.

The standard length of this program is 1100 clock hours or. This includes the Health Science Core (90 clock hours). The Student Performance Standards for Paramedic were adapted and condensed from the most current U S Department of Transportation, National EMS Educational Standards for the Paramedic. Administrators and instructors should refer to these materials for additional detail.

This program W170206 has a statewide articulation agreement approved by the Florida State Board of Education:

Emergency Medical Services AS (1351090402) – 42 credit hours

Students who have completed a Paramedic program at one of the grandfathered technical centers can enroll in a community college Emergency Medical Services-Associates Degree or PSV-C program within five years of their completion date. Students seeking credit after five years must show proof of current EMT or Paramedic licensure. Students entering the community college will receive the same credit as native PSV-C completers in these programs. Such students, however, must first meet the college's entry, residency, and academic requirements.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student. Access MyCareerShines by visiting: www.mycareershines.org.

Career and Technical Student Organization (CTSO)

HOSA: Future Health Professionals is the intercurricular career and technical student organization providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In PSAV programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 10, Language 10, and Reading 10. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. 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.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Additional Resources

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:
http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml