

Florida Department of Education  
Curriculum Framework

**Program Title:** Paramedic  
**Program Type:** ATD (Applied Technology Diploma)  
**Career Cluster:** Health Science

	College Credit	Career Certificate Program
Program Number	N/A	H170212
CIP Number	0351090417	0351090418
Grade Level	College Credit	30, 31
Standard Length	42 credit hours	1100 clock hours
CTSO	HOSA: Future Health Professionals	HOSA: Future Health Professionals
SOC Codes (all applicable)	29-2041 Emergency Medical Technicians and Paramedics	29-2041 Emergency Medical Technicians and Paramedics
CTE Program Resources	<a href="http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml">http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml</a>	
Basic Skills Level:	N/A	Reading: 10 Mathematics 10 Language: 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 the 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 an Applied Technology Diploma (ATD) program that is part of a technical degree program, is less than 60 credit hours, and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit. A public school district may offer an ATD program only as clock hour, with college credit awarded to a student upon articulation to a state college.

**Career Certificate Program**

When offered at the district level, this program is a planned sequence of instruction consisting of 1 occupational completion point and the courses as shown below.

OCP	Course Number	Course Title	Length	SOC Code
A	EMS0210	Paramedic I	248 hours	29-2041
	EMS0211	Paramedic II	426 hours	
	EMS0212	Paramedic III	426 hours	

**College Credit**

When offered at the college credit level, this ATD program is part of the Emergency Medical Services (AS – 1351090402) and has a program length of 42 credits.

**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.**

This program meets the Department of Health trauma score card methodologies and Sudden Unexpected Infant Death Syndrome (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.

Florida Statute 401.2701 requires that the instructor-student ratio should not exceed 1:6.

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.

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.

It is strongly recommended this program be accredited by Commission on Accreditation of Allied Health Education Programs (CAAHEP). 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 Student Performance Standards for Paramedic were adapted and condensed from the most current US Department of Transportation, National EMS Educational Standards for the Paramedic. Administrators and instructors should refer to these materials for additional detail.

## Standards

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

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

- 29.0 Demonstrate a complex depth, comprehensive breadth of knowledge of assessment and management of a patient who may have an infectious disease across the life span.
- 30.0 Demonstrate a complex depth, comprehensive breadth of knowledge in endocrine disorders/emergencies across the life span.
- 31.0 Demonstrate a complex depth, comprehensive breadth of knowledge regarding the assessment and management of psychiatric disorders/emergencies across the life span.
- 32.0 Demonstrate a complex depth, comprehensive breadth of knowledge of cardiovascular disorders/ emergencies across the life span.
- 33.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of toxicology emergencies across the life span.
- 34.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of respiratory disorders/emergencies across the life span.
- 35.0 Demonstrate a complex depth, foundational breadth of knowledge of the assessment and management of hematology disorders/emergencies across the life span.
- 36.0 Demonstrate a complex depth, comprehensive breadth of knowledge of genitourinary and renal emergencies across the life span.
- 37.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment findings and the management of gynecology disorders/emergencies across the life span.
- 38.0 Demonstrate a fundamental depth, foundation breadth of knowledge of the assessment and management of non-traumatic fractures across the life span.
- 39.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of common or major diseases of the eyes, ears, nose, and throat across the life span.
- 40.0 Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of shock and respiratory failure.
- 41.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment and management of the trauma patient across the life span.
- 42.0 Demonstrate a complex depth, comprehension breadth of knowledge of pathophysiology, assessment and management of bleeding across the life span.
- 43.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of chest trauma across the life span.
- 44.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of abdominal and genitourinary trauma across the life span.
- 45.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma across the life span.
- 46.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma across the life span.
- 47.0 Demonstrate a fundamental depth, foundational breadth of knowledge of head, face, neck, and spine trauma across the life span.
- 48.0 Demonstrate a fundamental depth, foundational breadth of knowledge of nervous system trauma across the life span.
- 49.0 Demonstrate a complex depth, comprehensive breadth of knowledge of special considerations in trauma across the life span.
- 50.0 Demonstrate a complex depth, comprehensive breadth of knowledge of environmental emergencies across the life span.
- 51.0 Demonstrate a complex depth, comprehensive breadth of knowledge of multi-system trauma and blast injuries.

- 52.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the obstetric patient within the scope of practice of the paramedic.
- 53.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the neonatal patient within the scope of practice of the paramedic.
- 54.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the pediatric patient within the scope of practice of the paramedic.
- 55.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the geriatric patient within the scope of practice of the paramedic.
- 56.0 Demonstrate a complex depth, comprehensive breadth of knowledge of management of the patient with special challenges within the scope of practice of the paramedic across the life span.
- 57.0 Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport.
- 58.0 Demonstrate a complex depth, comprehensive breadth of knowledge of establishing and working within the incident management system.
- 59.0 Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident.
- 60.0 Demonstrate a complex depth, comprehensive breadth of knowledge of air Medical transport risks, needs, and advantages.
- 61.0 Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools.
- 62.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident.
- 63.0 Demonstrate a simple depth, simple breadth of knowledge 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 - ATD  
Career Certificate Program Number: H170212

When this program is offered at the Career Certificate Program level, the following organization of courses, standards, and benchmarks apply.

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

<b>Course Number: EMS0210</b>	
<b>Occupational Completion Point: A</b>	
<b>Paramedic I – 248 hours – SOC Code 29-2041</b>	
01.0	<b>EMS Systems:</b> Demonstrate a fundamental depth, foundational breadth of knowledge of the History of EMS and a complex depth, comprehensive breadth of knowledge 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 Florida.
01.04	Explain 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 certification 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 and demonstrate 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 role of the EMS physician in providing medical direction.
01.12	Discuss examples of local protocols.

01.13	Describe the relationship between a physician on the scene, the paramedic on the scene, and the EMS physician providing on-line medical direction.
01.14	Describe the role of the paramedic relative to the safety of the crew, the patient, and bystanders.
01.15	Assess personal practices relative to the responsibility for personal safety, the safety of the crew, the patient, and bystanders.
01.16	Advocate the need for injury prevention.
01.17	Discuss the diverse types of EMS services and differences in their provision of care.
02.0	<b>Research:</b> Demonstrate a fundamental depth, foundational breath of knowledge of research principles to interpret literature and advocate evidence-based practice. – The student will be able to:
02.01	Interpret results and reach conclusions.
02.02	Discuss the importance of evidenced based medicine and medical research and its role in refining EMS practices.
03.0	<b>Workforce Safety and Wellness:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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 the role of risk assessments and warning signs in cancer and cardiovascular disease.
03.05	Differentiate between 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 and resources 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	Discuss the need to treat each patient as an individual, with respect and dignity.

03.15	Discuss the need to respect the emotional needs of dying patients and their families.
03.16	Discuss the paramedics' role in performing community risk assessment.
04.0	<b>Documentation:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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	Demonstrate proper use of medical terminology.
04.03	Record 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 PCR (patient care record).
05.0	<b>EMS Communication:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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 for an emergency response and transport.
05.03	Discuss the importance of proper terminology when communicating during an emergency.
05.04	Discuss factors that impede or enhance effective verbal and written communications.
05.05	Discuss the legal implications of written communications.
05.06	Identify the components of the local EMS communications system and describe their function and use.
05.07	Identify and differentiate among the following communications systems: simplex, multiplex, duplex, trunked, digital communications, and cellular telephone.

05.08	Describe the functions and responsibilities of the Federal Communications Commission.
05.09	Describe how emergency medical dispatch (EMD) functions as an integral part of the EMS system.
05.10	List appropriate information to be gathered by the telecommunicator.
05.11	Demonstrate an organized and concise radio transmission
05.12	Demonstrate an organized and concise patient report upon transfer of care.
<b>06.0</b>	<b>Therapeutic Communication:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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 difficult patients.
06.05	Summarize developmental considerations across the life span 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.
<b>07.0</b>	<b>Medical/Legal and Ethics:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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	Discuss State of Florida and Federal special reporting situations including:
07.02.01	abuse
07.02.02	sexual assault
07.02.03	gunshot and knife wounds
07.02.04	communicable disease
07.02.05	animal bites
07.03	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.
07.04	Differentiate between the scope of practice and the standard of care for paramedic practice.
07.05	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.
07.06	Review the four elements that must be present in order to prove negligence.

07.07	Review the legal concept and limitations of immunity, including Good Samaritan statutes and governmental immunity, as it applies to the paramedic.
07.08	Review the importance and necessity of patient confidentiality and the standards for maintaining patient confidentiality that apply to the paramedic.
07.09	Review consent to include expressed, informed, implied, and involuntary.
07.10	Demonstrate appropriate patient management techniques in a refusal of care situation.
07.11	Discuss the issues of abandonment, negligence, false imprisonment, and battery and their implications to the paramedic.
07.12	Describe the actions that the paramedic should take to preserve evidence at a crime or accident scene.
07.13	Describe the importance of providing accurate communication (oral and written) in substantiating an incident.
07.14	Describe the criteria necessary to honor an advance directive in Florida.
08.0	<b>Anatomy and Physiology:</b> Integrate a complex depth, comprehensive breadth of knowledge 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.
08.02	Demonstrate comprehensive knowledge of anatomy and physiology as it applies to paramedic practice.
09.0	<b>Medical Terminology:</b> Integrate a comprehensive knowledge in the use of 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 medical terminology.
09.02	Demonstrate a comprehensive knowledge of medical terminology as it applies to paramedic practice.
10.0	<b>Pathophysiology:</b> Demonstrate a complex 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	Define and discuss the pathogenesis, signs, and symptoms of distributive, obstructive, neurogenic, anaphylactic, and septic shock.
10.04	Discuss multiple organ dysfunction syndrome (MODS).
10.05	Describe alterations in cells and tissues including cellular adaptation, cellular injury, manifestation of cellular injury, and cellular death/necrosis.
10.06	Describe genetics and familial diseases and the role they play in pathophysiology.
10.07	Describe the self–defense mechanisms of inflammation and immune responses and their relationships to pathophysiology.
11.0	<b>Life Span Development:</b> Integrate the 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 across the life span.
12.0	<b>Public Health:</b> Demonstrate a 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.
12.02	Apply a fundamental knowledge of the principles of public health, epidemiology, health promotion, and illness and injury prevention.
13.0	<b>Principles of Pharmacology:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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 practice pertinent to the administration of medications.
13.10	List and describe available drug forms.
13.11	List and differentiate all methods and routes of medication administration covered in the current National EMS Scope of Practice Model.
13.12	Describe the process of:
13.12.01	pharmacokinetics
13.12.02	pharmacodynamics
13.12.03	theories of drug action
13.12.04	drug-response relationship
13.12.05	factors altering drug responses
13.12.06	predictable drug responses
13.12.07	iatrogenic drug responses
13.12.08	unpredictable adverse drug responses
13.13	Discuss the prevention, recognition and management of adverse medication reactions.

13.14	Select the optimal medication and method of medication administration for patients with a particular clinical condition or situation.
14.0	<b>Medication Administration:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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 practice pertinent to the administration of medications.
14.03	Review mathematical principles and demonstrate equations necessary 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	Review 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	Describe the indications, equipment needed, techniques used, precautions, and general principles of administering medications by the following routes:
14.11.01	inhalation route
14.11.02	gastric tube
14.11.03	rectal route
14.12	Differentiate among the different percutaneous routes of medication administration.
14.13	Describe the purpose, equipment needed, techniques used, complications, and general principles for obtaining a blood sample.
14.14	Obtain venous and capillary blood for testing and discuss blood chemistry and normal values.
14.15	Demonstrate principles of medical asepsis in the administration of medications.
14.16	Demonstrate the procedure for disposal of contaminated items and supplies.
14.17	Demonstrate cannulation of peripheral, intravenous and/or external jugular veins.
14.18	Demonstrate intraosseous access.
14.19	Demonstrate administration of medications by the following routes:
14.19.01	oral

14.19.02	sublingual
14.19.03	buccal
14.19.04	auto-injector
14.19.05	inhalation route
14.19.06	intranasal route
14.19.07	subcutaneous route
14.19.08	intramuscular route
14.19.09	intravenous route
14.19.10	intraosseous route
15.0	<b>Emergency Medications:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of emergency medications within the scope of practice for the paramedic. – The student will be able to:
15.01	Discuss 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	<b>Airway Management:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of airway management within the scope of practice of the paramedic across the life span. –The student will be able to:
16.01	Explain the primary objective of airway maintenance.
16.02	Explain the differences in airway anatomy.
16.03	Define, identify and describe a tracheostomy, laryngectomy, stoma, and tracheostomy tube.
16.04	Describe the special considerations in airway management and ventilation for the pediatric patient.
16.05	Describe the indications, contraindications, advantages, disadvantages, complications and equipment for rapid sequence intubation with neuromuscular blockade.
16.06	Identify neuromuscular blocking drugs and other agents used in rapid sequence intubation.
16.07	Describe the indications, contraindications, advantages, disadvantages, complications and equipment for sedation during intubation.
16.08	Describe the indications, contraindications, advantages, disadvantages and complications for performing cricothyrotomy.
16.09	Demonstrate the procedure for percutaneous cricothyrotomy.
16.10	Review the function of the structures located in the upper and lower airway.
16.11	Demonstrate effective techniques of advanced airway management of the following:
16.11.01	orotracheal,

	16.11.02	nasotracheal,
	16.11.03	subglottic,
	16.11.04	supraglottic,
	79.22.05	digital intubation
	16.12	Describe and demonstrate methods of assessment for confirming correct placement of any airway device.
	16.13	Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for extubation.
17.0	<b>Respiration:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of respiration within the scope of practice of the paramedic across the life span. –The student will be able to:	
	17.01	List the concentration of gases that comprise atmospheric air.
	17.02	Describe the measurement of oxygen in the blood.
	17.03	Describe the measurement of carbon dioxide in the blood.
	17.04	Describe peak expiratory flow.
	17.05	Describe factors that cause decreased oxygen concentrations in the blood.
	17.06	Describe the factors that increase and decrease carbon dioxide production in the body.
	17.07	Define pulsus paradoxus.
	17.08	Describe the indications, contraindications, advantages, disadvantages, complications, liter flow range, and concentration of delivered oxygen for supplemental oxygen delivery devices.
	17.09	Review the physiology of ventilation and respiration.
18.0	<b>Ventilation:</b> Demonstrate a complex breadth, comprehensive breadth of knowledge of ventilatory assessment and management across the life span. –The student will be able to:	
	18.01	Perform and interpret pulse oximetry and capnography.
	18.02	Describe indications, contraindications, advantages, disadvantages, complications, and technique for ventilating a patient with an automatic transport ventilator (ATV), BIPAP/CPAP, AND PEEP devices.
19.0	<b>Scene Size-Up:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of scene management. –The student will be able to:	
	19.01	Describe common hazards found at the scene of a trauma and a medical patient.
	19.02	Discuss common mechanisms of injury/ nature of illness.
	19.03	Explain the rationale for crew members to evaluate scene safety prior to entering.
	19.04	Demonstrate the scene-size-up.

20.0	<b>Primary Assessment:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the primary assessment for all patient situations. –The student will be able to:
20.01	Summarize the elements of a general impression of the patient.
20.02	Explain the reason for performing a primary assessment.
20.03	Discuss and demonstrate methods of assessing levels of responsiveness using AVPU.
20.04	Discuss and demonstrate methods of assessing the airway across the life span.
20.05	Describe and demonstrate methods used for assessing if a patient is breathing across the life span.
20.06	Differentiate between a patient with adequate and inadequate breathing.
20.07	Describe and demonstrate the methods used to obtain a pulse across the life span.
20.08	Discuss and demonstrate assessing the patient for external bleeding.
20.09	Describe and demonstrate the assessment and interruption of skin color, temperature, moisture, and capillary refill across the life span.
20.10	Explain the reasons for prioritizing a patient for care and transport.
20.11	Describe when it is appropriate to expose the patient completely.
20.12	Differentiate between critical life-threatening, potentially life-threatening, and non-life-threatening patient presentations.
21.0	<b>History Taking:</b> Demonstrate a complex depth, comprehensive breath of knowledge of the components of history taking. –The student will be able to:
21.01	Determine and investigate the chief complaint.
21.02	Describe the components of the patient history.
21.03	Explain the importance of obtaining a SAMPLE and OPQRST history.
21.04	Acknowledge the feelings patients experience during assessment.
21.05	Discuss the value of obtaining a family and social history.
21.06	Describe examples of different techniques the paramedic may use to obtain information from patients, family, or bystanders during the history taking process.
22.0	<b>Secondary Assessment:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of techniques used for a secondary assessment across the life span. –The student will be able to:
22.01	Review EMT standards and benchmarks for secondary assessment.
22.02	Describe the techniques of inspection, palpation, percussion, and auscultation.

22.03	Discuss the limitations of conducting a physical exam in the out-of-hospital environment.
22.04	Demonstrate the examination of the patient including all major body systems and anatomical regions.
22.05	Distinguish the importance of abnormal assessment findings in all the major body systems and anatomical regions.
22.06	Describe the evaluation of patient's perfusion status based on findings in the initial assessment.
22.07	State the reasons for performing a rapid trauma assessment.
22.08	Discuss the reason for performing a focused history and physical exam.
22.09	Discuss appropriate gender and cultural considerations regarding assessment.
22.10	Discuss medical identification devices/ systems.
23.0	<b>Monitoring Devices:</b> Demonstrate a fundamental depth, foundational breadth of knowledge of monitoring devices within the scope of practice of the paramedic. –The student will be able to:
23.01	Describe the purpose, indications, procedure, normal findings, and limitations of the following patient monitoring technologies, including but not limited to:
23.01.01	continuous ECG monitoring
23.01.02	12-Lead ECG
23.01.03	capnography (wave form)
23.01.04	co-oximetry
23.01.05	methemoglobin monitoring
23.01.06	total hemoglobin
23.01.07	basic blood chemistry
23.01.08	ultrasound
23.01.09	other devices identified at the EMT level
23.02	Demonstrate the use of the following patient monitoring technologies, including but not limited to:
23.02.01	continuous ECG monitoring
23.02.02	12-Lead ECG
23.02.03	capnography (wave form)
23.02.04	other devices identified at the EMT level

**Course Number: EMS0211**  
**Occupational Completion Point: A**  
**Paramedic II – 426 hours – SOC Code 29-2041**

24.0	<b>Reassessment:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of how and when to perform a reassessment for all patient situations. –The student will be able to:
24.01	Describe the components of reassessment and demonstrate the skills involved.
24.02	Discuss the reasons for repeating the primary assessment as part of the reassessment.
24.03	Explain trending assessment components and its value to other health professionals who assume care of the patient.
24.04	Demonstrate reassessment of patients across the life span.
25.0	<b>Medical Overview:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of medical complaints. –The student will be able to:
25.01	Identify factors that complicate patient assessment including:
25.01.01	scene safety
25.01.02	environmental factors
25.01.03	chief complaint
25.01.04	paramedic preconceptions
25.01.05	distracting injuries
25.01.06	tunnel vision
25.01.07	patient cooperation
25.01.08	paramedic attitude
25.02	Discuss forming a field impression and utilizing available information to determine a different diagnosis.
26.0	<b>Neurology:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of neurologic disorders/emergencies across the life span. – The student will be able to:
26.01	Identify the risk factors associated with nervous system dysfunction.
26.02	Review the anatomy and physiology of the organs and structures related to nervous system.
26.03	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with the following neurological conditions, including but not limited to:
26.03.01	coma
26.03.02	altered mental status
26.03.03	seizures
26.03.04	syncope
26.03.05	transient ischemic attack
26.03.06	stroke and intracranial hemorrhage
26.03.07	degenerative neurologic diseases
26.03.08	chronic alcoholism
26.03.09	back disorders

26.04	Describe and differentiate the major types of seizures.
26.05	Describe the types of stroke.
26.06	Describe the significance of the prevalence of neurologic disorders in the United States.
26.07	Discuss screen tools for assessment of stroke and large vessel occlusion.
26.08	Demonstrate the use of stroke screening tools and appropriate decision making regarding transport destination for a stroke patient.
27.0	<b>Abdominal and Gastrointestinal Disorders:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of abdominal and gastrointestinal disorders/emergencies across the life span. – The student will be able to:
27.01	Review the anatomy and physiology of the organs and structures related to gastrointestinal diseases.
27.02	Differentiate between hemorrhagic and non-hemorrhagic causes of abdominal pain.
27.03	Describe the technique for performing a comprehensive physical examination on a patient complaining of abdominal pain.
27.04	Discuss the pathophysiology, signs, and symptoms, and demonstrate the assessment, and management of patients with the following abdominal and gastrointestinal disorders, including but not limited to:
27.04.01	both upper and lower gastrointestinal bleeding
27.04.02	acute gastroenteritis.
27.04.03	colitis.
27.04.04	diverticulitis.
27.04.05	appendicitis.
27.04.06	peptic ulcer disease.
27.04.07	bowel obstruction.
27.04.08	Crohn's disease.
27.04.09	pancreatitis.
27.04.10	esophageal varices.
27.04.11	hemorrhoids.
27.04.12	cholecystitis.
27.04.13	acute hepatitis.
27.05	Identify patients at risk for gastrointestinal emergencies.
27.06	Demonstrate how to auscultate the abdomen to assess for diminished, absent or abnormal bowel sounds.
28.0	<b>Immunology:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of immunology disorders/emergencies across the life span. – The student will be able to:
28.01	Define and differentiate:
28.01.01	allergic reaction.
28.01.02	anaphylaxis
28.01.03	antigens
28.01.04	antibodies

28.01.05	anaphylactoid reaction
28.02	Review the anatomy and physiology of the organs and structures related to anaphylaxis.
28.03	Describe the prevention of anaphylaxis and appropriate patient education.
28.04	Review the pathophysiology of allergy and anaphylaxis.
28.05	Describe the common methods of entry of allergens into the body.
28.06	Review common antigens most frequently associated with anaphylaxis.
28.07	Differentiate among the various treatment and pharmacological interventions used in the management of anaphylaxis and allergic reaction.
29.0	<b>Infectious Diseases:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of assessment and management of a patient who may have an infectious disease across the life span – The student will be able to:
29.01	Review EMT standards and benchmarks for infectious disease.
29.02	Review the specific anatomy and physiology pertinent to infectious and communicable diseases.
29.03	Describe the steps of an infectious process.
29.04	Describe and differentiate infectious agents, including bacteria, viruses, fungi, protozoans, and helminths (worms).
29.05	Review characteristics of the immune system.
29.06	Perform an assessment of a patient with an infectious/communicable disease.
29.07	Effectively and safely manage a patient with an infectious/communicable disease.
29.08	Review public health principles related to infectious disease.
29.09	Review the roles of local, state, and federal agencies involved in infectious disease surveillance and outbreaks.
29.10	Describe the interactions of the agent, host, and environment as determining factors in disease transmission.
29.11	Describes the EMS professional's responsibilities as well as their rights under the Ryan White Act.
29.12	Discuss the pathophysiology, signs, symptoms, assessment, and management and risk factors of significant health concerns.
29.13	Discuss the characteristics of, and organisms associated with, febrile and afebrile respiratory disease.
29.14	Describe the EMS provider's role in patient education and preventing disease transmission.
29.15	Review the pathophysiology, risk factors, assessment, and prehospital management of sepsis/systemic inflammatory response syndrome (SIRS).

30.0	<b>Endocrine Disorders:</b> Demonstrate a complex depth, comprehensive breadth of knowledge in endocrine disorders/emergencies across the life span. – The student will be able to:
30.01	Identify the risk factors related to disorders of the endocrine system.
30.02	Review the anatomy and physiology of organs and structures related to endocrinologic diseases.
30.03	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following endocrinologic emergencies:
30.03.01	hypoglycemia
30.03.02	hyperglycemia
30.03.03	diabetic ketoacidosis
30.03.04	Cushing's syndrome
30.03.05	adrenal insufficiency
30.03.06	pituitary disorders
30.03.07	thyroid disorders
31.0	<b>Psychiatric:</b> Demonstrate a complex depth, comprehensive breadth of knowledge regarding the assessment and management of psychiatric disorders/emergencies across the life span. – The student will be able to:
31.01	Differentiate among behavior, psychiatric disorders, and behavioral emergencies.
31.02	Discuss the pathophysiology of common psychiatric disorders and behavioral emergencies.
31.03	Discuss the general factors that may cause an alteration in a patient's behavior.
31.04	Discuss the factors/signs or symptoms of various psychiatric emergencies to include suicide.
31.05	Manage a behavioral emergency scenario applying knowledge of medical/legal Florida Statutes.
31.06	Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency.
31.07	Describe the biological, psychosocial, and sociocultural influences on psychiatric disorders.
31.08	Describe the special considerations for the safety of the EMS provider, and EMS crew, the patient and bystanders when dealing with behavioral and psychiatric emergencies.
31.09	Explain the importance of provider behavior and communication in the care of a patient with a behavioral emergency.
31.10	Describe and demonstrate methods of restraint that may be used in the management of a patient with a behavioral emergency and possible legal implication.
31.11	List the risk factors (including behaviors) for suicide.
32.0	<b>Cardiovascular:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of cardiovascular disorders/emergencies across the life span. – The student will be able to:
32.01	Describe the epidemiology, incidence, morbidity and mortality of cardiovascular disease.

32.02	Identify the risk factors of coronary artery disease.
32.03	Review the anatomy and physiology of the heart and circulatory system.
32.04	Discuss the electrophysiology of the heart.
32.05	Discuss and demonstrate ECG monitoring, 12 Lead placement, acquisition, and interpretation.
32.06	Define and give examples of positive and negative inotropes, chronotropes and dromotropes.
32.07	Identify the normal characteristics of the point of maximal impulse (PMI).
32.08	Discuss the normal and abnormal heart sounds and how they relate to hemodynamic events in the cardiac cycle.
32.09	Describe a systematic approach to the analysis and interpretation of cardiac dysrhythmias.
32.10	Describe the conditions of pulseless electrical activity.
32.11	Compare and contrast electrotherapy to include pacing.
32.12	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients following conditions including the development of a treatment plan, including but not limited to:
32.12.01	angina
32.12.02	myocardial infarction STEMI/Non-STEMI
32.12.03	congestive heart failure
32.12.04	cardiac tamponade
32.12.05	cardiogenic shock
32.12.06	hypertension and acute hypertensive states
32.12.07	cardiac arrest
32.12.08	vascular disorders
32.12.09	hypertrophic cardiomyopathies
32.12.10	infectious diseases of the heart
32.12.11	congenital abnormalities
32.13	List other clinical conditions that may mimic signs and symptoms of coronary artery disease and angina pectoris.
32.14	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.
32.15	List the characteristics of a patient eligible for thrombolytic therapy.
32.16	Define the term acute pulmonary edema and describe its relationship to left ventricular failure.
32.17	Discuss preload, afterload and left ventricular end-diastolic pressure and relate each to the pathophysiology of heart failure.
32.18	Identify non-cardiac causes of cardiac arrest.

32.19	Discuss the components of post resuscitation care including how to determine the return of spontaneous circulation (ROSC).
32.20	Identify circumstances and situations where resuscitation efforts would not be initiated or would be terminated.
32.21	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:
32.21.01	cardiopulmonary resuscitation
32.21.02	defibrillation
32.21.03	synchronized cardioversion
32.21.04	transcutaneous pacing
33.0	<b>Toxicology:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of toxicology emergencies across the life span. – The student will be able to:
33.01	Define and differentiate among toxicology, poisoning, and overdose.
33.02	Describe the pathophysiology and signs and symptoms of the following toxicological emergencies, including but not limited to:
33.02.01	food poisoning
33.02.02	carbon monoxide poisoning
33.02.03	cyanide poisoning
33.02.04	exposure to acid or alkaline substance
33.02.05	exposure to hydrocarbons
33.02.06	methanol ingestion
33.02.07	isopropanol ingestion
33.02.08	ethylene glycol ingestion
33.02.09	exposure to poisonous substances
33.02.10	drug withdrawal
33.02.11	alcoholic syndrome
33.02.12	withdrawal syndrome (including delirium tremens)
33.02.13	illicit drug use
33.02.14	Medication overdose
33.02.15	Opioid overdose
33.02.16	Organa phosphate overdose
33.03	Discuss the role of the Poison Control Center with the nationwide contact number 800-222-1222 in the United States.
33.04	Review various ways that toxins enter the body.
33.05	Discuss and demonstrate the assessment and management for the patient with a toxicological emergency.
33.06	Explain the rationale for contacting medical direction early in the prehospital management of a patient with a toxicological emergency.
33.07	Review the following for Narcan (naloxone):
33.07.01	generic and trade names
33.07.02	medication forms
33.07.03	dose

	33.07.04	administration
	33.07.05	contraindications
34.0	<b>Respiratory:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of respiratory disorders/emergencies across the life span. – The student will be able to:	
34.01	Discuss the epidemiology, morbidity, and mortality of respiratory illness in the United States.	
34.02	Review hypoventilation and hyperventilation, and outline the conditions with which they are often associated.	
34.03	Review the anatomy, physiology and functions of the respiratory system.	
34.04	Discuss those factors that contribute to the formation of a general impression and degree of respiratory distress.	
34.05	Identify breathing patterns that are associated with respiratory distress and neurologic insults and their correlation with the signs of increased work of breathing.	
34.06	Review between normal and abnormal breath/lung sounds and its physiologic significance.	
34.07	Explain the concepts of hypoxic drive and auto-PEEP as they relate to the COPD patient.	
34.08	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following respiratory conditions, including but not limited to:	
	34.08.01	pulmonary infections (upper and lower airway)
	34.08.02	atelectasis
	34.08.03	anatomic or foreign body obstruction
	34.08.04	aspiration
	34.08.05	asthma
	34.08.06	emphysema
	34.08.07	chronic bronchitis
	34.08.08	spontaneous pneumothorax
	34.08.09	pleural effusion
	34.08.10	pulmonary embolism
	34.08.11	cancer
	34.08.12	toxic inhalations
	34.08.13	pulmonary edema
	34.08.14	acute respiratory distress syndrome (ARDS)
	34.08.15	pneumonia
	34.08.16	neoplasms of the lung
	34.08.17	hyperventilation syndrome
35.0	<b>Hematology:</b> Demonstrate a complex depth, foundational breadth of knowledge of the assessment, and management of hematology disorders/emergencies across the life span – The student will be able to:	
35.01	Identify the role of heredity in the risk for hematologic disorders.	
35.02	Review the anatomy and physiology of the hematopoietic system.	

35.03	Describe volume and volume-control related to the hematopoietic system.
35.04	Explain the significance of the hematocrit with respect to red cell size and number.
35.05	Explain the correlation of the RBC count, hematocrit and hemoglobin values.
35.06	Recognize medications used to decrease the risk of thrombosis.
35.07	Identify blood groups.
35.08	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following conditions, including but not limited to:
35.08.01	anemia
35.08.02	leukemia
35.08.03	lymphomas
35.08.04	polycythemia
35.08.05	disseminated intravascular coagulopathy
35.08.06	hemophilia
35.08.07	sickle cell disease
35.08.08	multiple myeloma
35.08.09	leukopenia/neutropenia
35.08.10	leukocytosis
35.08.11	thrombocytosis
35.08.12	thrombocytopenia
35.08.13	transfusion complications
36.0	<b>Genitourinary/Renal:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of genitourinary and renal emergencies across the life span. – The student will be able to:
36.01	Describe the epidemiology, incidence, morbidity, mortality, and risk factors of urological emergencies.
36.02	Review the anatomy and physiology of the organs and structures related to urogenital diseases.
36.03	Discuss referred pain and visceral pain as it relates to urology.
36.04	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients of the following urologic and renal conditions, including but not limited to:
36.04.01	acute renal failure
36.04.02	chronic renal failure
36.04.03	complications related to hemodialysis and peritoneal dialysis.
36.04.04	renal calculi
36.04.05	priapism
36.04.06	testicular torsion
36.04.07	urinary tract infection

36.05	Review fluids, electrolytes, and acid based disturbances.
37.0	<b>Gynecology:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment findings and the management of gynecology disorders/emergencies across the life span. – The student will be able to:
37.01	Review anatomy and physiology of the female reproductive system.
37.02	Identify the normal events of the menstrual and ovarian cycle.
37.03	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with specific gynecological emergencies, including but not limited to:
37.03.01	infection (including pelvic inflammatory disease, Bartholin’s abscess, and vaginitis/ vulvovaginitis)
37.03.02	ovarian cyst and ruptured ovarian cyst
37.03.03	ovarian torsion
37.03.04	endometriosis
37.03.05	dysfunctional uterine bleeding
37.03.06	prolapsed uterus
37.03.07	vaginal foreign body
37.03.08	vaginal hemorrhage
37.04	Describe the importance of maintaining a patient’s modesty and privacy while still being able to obtain necessary information.
37.05	Discuss the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
38.0	<b>Non-Traumatic Musculoskeletal Disorders:</b> Demonstrate a fundamental depth, foundation breadth of knowledge of the assessment and management of non-traumatic fractures across the life span. – The student will be able to:
38.01	Review the anatomy and physiology of the musculoskeletal system
38.02	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with musculoskeletal emergencies, including but not limited to:
38.02.01	osteomyelitis and tumors
38.02.02	disc disorders, lower back pain (cauda equine syndrome, sprain, and strain.)
38.02.03	joint abnormalities
38.02.04	muscle abnormalities
38.02.05	overuse syndrome
38.02.06	soft tissue infections
39.0	<b>Diseases of the Eyes, Ears, Nose, and Throat:</b> Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of common or major diseases of the eyes, ears, nose and throat across the life span. – The student will be able to:
39.01	Review the anatomy and physiology of the eyes, ears, nose, and throat.
39.02	Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various eye diseases/injuries, including but not limited to:
39.02.01	burns of eye and adnexa
39.02.02	conjunctivitis
39.02.03	corneal abrasions

	39.02.04	foreign body
	39.02.05	inflammation of the eyelid
	39.02.06	glaucoma
	39.02.07	hyphemia
	39.02.08	iritis
	39.02.09	papilledema
	39.02.10	retinal detachment and defect
	39.02.11	cellulitis of orbit
39.03	Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various ear diseases/injuries including:	
	39.03.01	foreign body
	39.03.02	impacted cerumen
	39.03.03	labyrinthitis
	39.03.04	Meniere's disease
	39.03.05	otitis external and media
	39.03.06	perforated tympanic membrane
39.04	Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various nose diseases/injuries including:	
	39.04.01	epistaxis
	39.04.02	foreign body intrusion
	39.04.03	rhinitis
	39.04.04	sinusitis
39.05	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with oropharynx/throat diseases/injuries including:	
	39.05.01	dentalgia and dental abscess
	39.05.02	diseases of oral soft tissue/ Ludwig's angina
	39.05.03	foreign body intrusion
	39.05.04	epiglottitis
	39.05.05	laryngitis
	39.05.06	tracheitis
	39.05.07	oral candidiasis
	39.05.08	peritonsillar abscess
	39.05.09	pharyngitis/tonsillitis
	39.05.10	temporomandibular joint disorders
40.0	<b>Shock and Resuscitation:</b> 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:	
40.01	Describe the epidemiology, including: premorbid and comorbid conditions and prevention strategies, for shock and hemorrhage.	
40.02	Review the anatomy and physiology of the cardiovascular and respiratory systems.	
40.03	Contrast the physiology of blood flow during normal states, peri-arrest, cardiac arrest and shock.	

40.04	Discuss and demonstrate the assessment and management of shock.
40.05	Review the management of external hemorrhage.
40.06	Discuss appropriate fluid resuscitation.
40.07	Review the following for the cardiac arrest victim: 40.07.01 epidemiology 40.07.02 pathophysiology 40.07.03 physiology of blood flow during external chest compressions 40.07.04 resuscitation success/research
40.08	Review defibrillation and cardioversion to include manual techniques, automatic and semi-automated devices.
40.09	Discuss causes, pathophysiology, signs, and symptoms and management of special arrest and peri-arrest conditions, including but not limited to: 40.09.01 electrolyte disorders 40.09.02 toxic exposures 40.09.03 drowning 40.09.04 hypothermia 40.09.05 near-Fatal Asthma 40.09.06 anaphylaxis 40.09.07 trauma 40.09.08 pregnancy 40.09.09 electrical shock and lightning strikes
40.10	Review post resuscitative care include, temperature regulation, glucose/electrolyte management.
40.11	Discuss and demonstrate the assessment and management of internal hemorrhage.
40.12	Review the stages and classifications of hemorrhage.
40.13	Review the pathophysiology and demonstrate the assessment and management of the different types of shock.
40.14	Describe the effects of decreased perfusion at the capillary level.
40.15	Relate pulse pressure changes to perfusion status.
40.16	Relate orthostatic vital sign changes to perfusion status.
40.17	Define and differentiate between compensated and decompensated shock for all types of shock.
40.18	Discuss and differentiate the physiological manifestations of shock across the life span.
41.0	<b>Trauma Overview:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of the trauma patient across the life span. – The student will be able to:

41.01	Review the pathophysiology of the trauma patient.
41.02	Review the components of comprehensive trauma systems and levels of trauma centers.
41.03	Review the considerations for different transportation modes to a trauma center.
41.04	Discuss the kinematics of blunt and penetrating trauma.
41.05	Discuss and describe significant and non-significant mechanism of injury (MOI) and provide examples of each.
41.06	Discuss and demonstrate the application of State of Florida's trauma scorecard methodologies as required in Florida Statute and Florida Administrative Code.
41.07	Review the National Trauma Triage Protocol of Injured Patients.
41.08	Review forming a field impression and utilizing available information to determine a differential diagnosis.
41.09	Review the need for rapid intervention transport of the trauma patient.
42.0	<b>Bleeding:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment and management of bleeding across the life span. – The student will be able to:
42.01	Review the compensatory mechanism in hemorrhagic shock.
42.02	Review the administration of medications to assist in the maintenance of homeostasis.
42.03	Review the maintenance of tissue oxygenation in a bleeding patient.
42.04	Discuss appropriate fluid resuscitation for the patient in hemorrhagic shock.
42.05	Review the different methods/modalities of controlling bleeding.
43.0	<b>Chest Trauma:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of chest trauma across the life span. – The student will be able to:
43.01	Review the anatomy and physiology of the organs and structures related to thoracic injuries.
43.02	Review the pathophysiology, signs and symptoms and mechanism of injury (MOI) of the following injuries, including but not limited to:
43.02.01	myocardial injuries
43.02.01.1	pericardial tamponade
43.02.01.2	myocardial contusion
43.02.01.3	myocardial rupture
43.02.02	vascular injury
43.02.02.1.1	aortic dissection
43.02.02.1.2	pulmonary contusion
43.02.03	hemothorax
43.02.04	pneumothorax

43.02.05	hemopneumothorax
43.02.06	cardiac Tamponade
43.02.07	commotio cordis
43.02.08	tracheobronchial disruption
43.02.09	diaphragmatic rupture and injury
43.02.10	traumatic asphyxia
43.02.11	rib fracture
43.02.12	flail segment
43.02.13	sternal fracture
43.02.14	vascular injuries
43.02.15	impaled objects
43.02.16	evisceration/shock
43.03	Discuss monitoring of chest tubes.
43.04	Demonstrate the following techniques of management for thoracic injuries: needle decompression, elective intubation, ECG monitoring, oxygenation, and ventilation
44.0	<b>Abdominal and Genitourinary Trauma:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of abdominal and genitourinary trauma across the life span. – The student will be able to:
44.01	Review the anatomy and physiology of organs and structures related to abdominal injuries.
44.02	Describe the mechanism of injury for and types of open and closed abdominal and retroperitoneal injuries involving seat belts, penetrating, blunt and evisceration.
44.03	Describe and demonstrate the pathophysiology, signs and symptoms and the assessment and management for, including but not limited to:
44.03.01	pelvic fractures.
44.03.02	solid organ injuries
44.03.03	hollow organ injuries
44.03.04	abdominal vascular injuries
44.03.05	retroperitoneal space (kidneys)
44.03.06	genitourinary system
44.04	Review the psychological considerations associated with genitourinary injuries.
45.0	<b>Orthopedic Trauma:</b> Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma across the life span. – The student will be able to:
45.01	Review the anatomy and physiology of the musculoskeletal system, include the healing process.
45.02	Discuss pathophysiology, signs and symptoms, and MOI for orthopedic trauma.
45.03	Define the different types of orthopedic trauma including fracture classifications.
45.04	List the 6 “P” orthopedic injury assessment.

45.05	Discuss the following management techniques: 45.05.01 heat therapy 45.05.02 cold therapy 45.05.03 splinting
45.06	Describe and demonstrate the assessment and management of a patient with a suspected orthopedic trauma including medication administration (analgesics and anxiolytics).
45.07	Discuss the need for assessment of distal pulses, motor, and sensation before and after splinting.
45.08	Review age-associated changes in bones.
45.09	Define luxation and subluxation.
45.10	Explain the rationale for splinting at the scene versus load and go.
45.11	Demonstrate the proper use various splinting materials and devices to include improvised and traction splints.
45.12	Discuss and demonstrate the assessment and management of compartment and crush syndrome: 45.12.01 destination decision 45.12.02 rhabdomyolysis
45.13	Discuss the pathophysiology, and demonstrate the assessment and management of a tendon injury to the knee (patellar), shoulder, and Achilles.
45.14	Discuss the proper procedure to package an amputated body part for replantation.
46.0	<b>Soft Tissue Trauma:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma across the life span. – The student will be able to:
46.01	Review anatomy and physiology and identify the major functions of the integumentary system.
46.02	Discuss the pathophysiology of soft tissue injuries and the healing process including: 46.02.01 inflammation 46.02.02 epithelialization 46.02.03 neovascularization 46.02.04 collagen Synthesis 46.02.05 alterations in wound healing 46.02.06 abnormal scar formation
46.03	Describe and demonstrate the assessment and management of various soft tissue injuries.
46.04	Identify types of burn injuries including: 46.04.01 thermal burn 46.04.02 chemical burn 46.04.03 electrical burn 46.04.04 radiation burn

46.05	Describe the depth classification of burn injuries including:
46.05.01	superficial burn
46.05.02	partial-thickness burn
46.05.03	full-thickness burn
46.05.04	other depth classification
46.06	Describe and demonstrate methods for determining body surface area percentage of a burn injury including the “rule of nines”, the “rule of palms”, and other methods.
46.07	Explain how the seriousness of a burn is related to its depth and percentage of body surface area (BSA) involved.
46.08	Review the various management techniques for hemorrhage control.
46.09	Differentiate among the types of injuries requiring the use of occlusive versus non-occlusive dressing.
46.10	Demonstrate the proper use of any Morgan□ type lens for irrigation of the eye.
46.11	Demonstrate the assessment and management of specific burn injuries including:
46.11.01	thermal
46.11.02	inhalation
46.11.03	chemical
46.11.04	electrical
46.11.05	radiation
46.12	Describe the pathophysiologic complications and systemic complications of a burn injury.
46.13	Discuss comorbidities in burn patients.
46.14	Describe the management of a burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management.
46.15	Describe the types of chemicals and their burning processes and a chemical burn injury to the eye.
46.16	Discuss appropriate fluid resuscitation for burn patients.
47.0	<b>Head, Face, Neck, and Spine:</b> Demonstrate a fundamental depth, foundational breadth of knowledge of head, face, neck, and spine trauma across the life span. – The student will be able to:
47.01	Discuss types of and potential complications of facial injuries.
47.02	Discuss pathophysiology, signs and symptoms, assessment and management, and a field impression for injuries to the following areas:
47.02.01	eye(s)
47.02.02	nose
47.02.03	throat/neck
47.02.04	face
47.02.05	mouth

47.02.06	ear(s)
47.03	Distinguish between an open and closed head injury.
47.04	Define and explain the process involved with increasing ICP.
47.05	Describe and demonstrate the assessment and general management of the head/ brain injury patient, including pharmacological and non-pharmacological treatment.
47.06	Discuss the pathophysiology, signs and symptoms, and assessment and management for a patient for each of the following conditions:
47.06.01	skull fracture
47.06.02	cerebral contusion
47.06.03	intracranial hemorrhage
47.06.04	epidural, subdural, intracerebral, and subarachnoid
47.06.05	perforated tympanic membranes
47.06.06	orbital fracture
47.06.07	mandibular fracture
47.07	Review various methods for stabilization and removal of a helmet.
48.0	<b>Nervous System Trauma:</b> Demonstrate a fundamental depth, foundational breadth of knowledge of nervous system trauma across the life span. – The student will be able to:
48.01	Review the anatomy and physiology of the central nervous system, brain, spinal cord, skull and spinal column.
48.02	Discuss pathophysiology, signs and symptoms, assessment, and management of the following nervous system injury including:
48.02.01	Cauda Equine syndrome
48.02.02	peripheral nerve injuries
48.02.03	intracerebral hemorrhage
48.02.04	cranial fractures
48.02.05	brain tissue injuries
48.02.06	spinal cord injuries
48.02.07	Brown-Sequard Syndrome
48.02.08	anterior cord syndrome
48.02.09	central cord syndrome
48.02.10	spinal shock
48.03	Discuss the mechanism of injury which would result in a nervous system injury.
48.04	Review the rationale for and potential for motion restriction for the entire spine when a cervical spine injury is suspected
48.05	Discuss the research involving the management of nervous system injuries and patient management.
49.0	<b>Special Considerations in Trauma:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of special considerations in trauma across the life span. – The student will be able to:

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| 49.01    | Integrate the assessment and management differences associated with the following special populations: |
| 49.01.01 | pregnancy  |
| 49.01.02 | pediatric  |
| 49.01.03 | geriatric  |

**Course Number: EMS0212**  
**Occupational Completion Point: A**  
**Paramedic III – 426 hours – SOC Code 29-2041**

**50.0 Environmental Emergencies:** Demonstrate a complex depth, comprehensive breadth of knowledge of environmental emergencies across the life span. – The student will be able to:

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| 50.01    | Discuss the pathophysiology, signs and symptoms, assessment and management and MOI of the following: |
| 50.01.01 | drowning and water related incidents   |
| 50.01.02 | temperature-related illness  |
| 50.01.03 | bites and envenomation   |
| 50.01.04 | diving injuries  |
| 50.01.05 | lightning (electrical) injury  |
| 50.01.06 | high altitude illness  |

50.02 Identify environmental factors that may cause illness, exacerbate preexisting illness and complicate treatment or transport decisions.

50.03 Review several methods of temperature monitoring.

50.04 Describe the general process of thermal regulation, including substances used and wastes generated.

50.05 Define fever and discuss its pathophysiologic mechanism.

50.06 Discuss the role of fluid therapy in the treatment of temperature related emergencies.

50.07 Review the gas laws related to the pathophysiology of injury in a submersion emergency.

50.08 Describe the function of the Divers Alert Network (DAN) and how its members may aid in the management of diving related illnesses.

50.09 Differentiate among the various treatments and interventions for the management of diving accidents.

50.10 Describe the specific function and benefit of hyperbaric oxygen therapy for the management of diving accidents.

**51.0 Multi-Systems Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of multi-system trauma and blast injuries. – The student will be able to:

51.01 Review the priority of care in the multisystem trauma patient.

51.02 Explain which ALS interventions should occur prior to a transport decision and during transport.

52.0	<b>Obstetrics:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the obstetric patient within the scope of practice of the paramedic. – The student will be able to:
52.01	Review the anatomy and physiology of the reproductive system.
52.02	Define the stages of labor and discuss how to assess them.
52.03	Differentiate between cephalic and abnormal delivery.
52.04	Describe the management of a patient with pre-delivery emergencies.
52.05	Discuss and demonstrate the patient care for all stages of labor in a cephalic delivery for the mother and the newborn.
52.06	Describe the procedures for handling complications of delivery.
52.07	Describe the management of the mother post-delivery.
52.08	Demonstrate the procedures for handling complications of pregnancy including per-eclampsia and high risk.
52.09	Describe the management of the mother post-delivery.
52.10	Discuss and demonstrate the patient care measures for all stages of labor in abnormal deliveries for the mother and the newborn.
52.11	Describe special considerations when meconium is present in amniotic fluid or during delivery.
53.0	<b>Neonatal Care:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the neonatal patient within the scope of practice of the paramedic. – The student will be able to:
53.01	Review the term neonate.
53.02	Identify antepartum and intrapartum factors that can affect the neonate.
53.03	Discuss pulmonary perfusion and asphyxia.
53.04	Calculate the Apgar score given various neonate situations.
53.05	Review resuscitation equipment and procedures for the neonate
53.06	Determine when an orogastric tube should be inserted during positive-pressure ventilation.
53.07	Discuss the pathophysiology, signs and symptoms, assessment and management of the following, including but not limited to:
53.07.01	apnea
53.07.02	bradycardia
53.07.03	acidosis
53.07.04	pneumothorax
53.07.05	meconium-stained
53.07.06	low blood volume

53.07.07	dysphemistic hernia
53.07.08	respiratory distress
53.07.09	respiratory depression secondary to narcotics
53.07.10	low birth weight
53.07.11	seizures
53.07.12	hypoglycemia
53.07.13	diarrhea
53.07.14	jaundice
53.07.15	fever
53.07.16	hypothermia
53.07.17	birth injuries
53.07.18	cardiac conditions
53.08	Discuss post arrest management of the neonate.
53.09	Discuss vascular access cannulation techniques for a newborn including umbilical vein/artery access.
54.0	<b>Pediatrics:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the pediatric patient within the scope of practice of the paramedic. – The student will be able to:
54.01	Discuss key anatomical, physiological, and developmental characteristics of infants and children and their implications.
54.02	Review and demonstrate techniques for successful assessment and treatment of infants and children.
54.03	Review airway and ventilatory considerations and procedures for pediatric patients.
54.04	Discuss the indications and methods for gastric decompression for infants and children.
54.05	Discuss the pathophysiology, signs and symptoms, assessment and management of the following, including but not limited to:
54.05.01	altered level of consciousness
54.05.02	trauma
54.05.03	hypo-perfusion
54.05.04	respiratory distress/failure
54.05.05	cardiac dysrhythmia
54.05.06	neurological emergency
54.05.07	abuse/neglect
54.05.08	SUIDS
54.05.09	FABO
54.05.10	respiratory emergencies
54.05.11	congenital heart disease
54.05.12	hydrocephalus/VP shunts
54.06	Discuss the appropriate procedure and equipment for vascular and intraosseous access.
54.07	Review basic cardiac life support (CPR) guidelines for infants and children.

54.08	Integrate advanced life support skills with basic cardiac life support for infants and children.
54.09	Discuss the indications, dosage, route of administration and special considerations for medication administration in infants and children.
54.10	Describe Sudden Unexplained Infant Death Syndrome (SUIDS), current theories, assessment and management, and the immediate needs of the family.
54.11	Discuss the parent/caregiver responses to the death of an infant or child.
54.12	Discuss and demonstrate the use of a length-based resuscitation tape and other methods for determining equipment sizes, drug doses, and other pertinent information for a pediatric patient.
54.13	Discuss proper placement of a gastric tube in infants and children.
54.14	Review appropriate routes and techniques for medication administration.
54.15	Demonstrate appropriate parent/caregiver interviewing techniques for infant and child death situations.
55.0	<b>Geriatrics:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the geriatric patient within the scope of practice of the paramedic. – The student will be able to:
55.01	Review and discuss the term geriatrics
55.02	Review the anatomy, physiology, and pathophysiology of the geriatric patient.
55.03	Discuss common emotional and psychological concerns and conditions of the geriatric patient.
55.04	Discuss the importance of fall prevention with the geriatric patient.
55.05	Describe principles that should be employed when assessing and communicating with the geriatric patient.
55.06	Describe the common causes, assessment and management of the geriatric patient with a medical, trauma, or psychosocial complaint.
55.07	Discuss the impact of polypharmacy and medication non-compliance on patient assessment and management.
55.08	Discuss medication issues of the elderly including polypharmacy, dosing errors and increased drug sensitivity and toxicology.
56.0	<b>Patients with Special Challenges:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of management of the patient with special challenges within the scope of practice of the paramedic across the life span. – The student will be able to:
56.01	Discuss the special considerations required when providing emergency care to patients with:
56.01.01	abuse/neglect of vulnerable populations
56.01.02	homelessness
56.01.03	poverty
56.01.04	bariatrics
56.01.05	tech dependent
56.01.06	hospice/terminally ill
56.01.07	tracheostomy

56.01.08	home care
56.01.09	sensory deficit/loss
56.01.10	developmental disability
56.02	Discuss special considerations regarding common medical devices used in the home care of patients with special challenges including:
56.02.01	respiratory devices
56.02.02	cardiac devices
56.02.03	gastro-urinary devices
56.02.04	central & peripheral IV catheters
56.03	Describe home care and the types of patients it serves and the services it encompasses.
56.04	Describe the characteristics associated with the profile of the typical abuser of:
56.04.01	domestic abuser
56.04.02	elder abuser
56.04.03	child abuser
56.05	Discuss the role of the Paramedic as a patient advocate for vulnerable populations.
56.06	Differentiate between hospice/palliative care and curative care.
56.07	Describe paraplegia/quadruplegia.
56.08	Describe the various etiologies of mental illness.
56.09	Recognize the presenting signs of the following:
56.09.01	autism spectrum
56.09.02	developmental disability
56.09.03	down's syndrome
56.10	Describe the following diseases/illnesses and identify each of their possible presenting signs, including but not limited to:
56.10.01	arthritis
56.10.02	cancer
56.10.03	cerebral palsy
56.10.04	cystic fibrosis
56.10.05	multiple sclerosis
56.10.06	muscular dystrophy
56.10.07	myasthenia gravis
56.10.08	poliomyelitis
56.10.09	spina bifida,
56.10.10	patients with a previous head injury
56.10.11	mental illness
56.11	Review hospice care, comfort care and DNR/DNAR as they relate to local practice, law and policy.
56.12	Describe the access and discuss indwelling catheters, implanted central IV ports and central line monitoring.

56.13	Describe complications of assessing each of the airway, vascular access, and GI/GU devices.
56.14	Identify and describe the failure of wound drains.
56.15	Review the rights of the terminally ill.
56.16	Demonstrate proper tracheotomy care.
56.17	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.
57.0	<b>Principles of Safely Operating a Ground Ambulance:</b> Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport. – The student will be able to:
57.01	Review the EMT standards and benchmarks for the Principles of Safely Operating a Ground Ambulance.
58.0	<b>Incident Management:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of establishing and working within the incident management system. – The student will be able to:
58.01	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.
59.0	<b>Multiple Casualty Incidents:</b> Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident. – The student will be able to:
59.01	Review the EMT standards and benchmarks for Multiple Casualty Incidents.
60.0	<b>Air Medical:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of air medical transport risks, needs and advantages. – The student will be able to:
60.01	Describe the advantages and disadvantages of air medical transport.
60.02	Identify appropriate reasons for the use of air medical for emergency patient transport.
60.03	Describe the risks involved with the use of air medical transport.
60.04	Demonstrate the actions needed to ensure effective and safe ground operations involving air medical response.
60.05	Demonstrate appropriate communication of information needed for safe and effective interaction between the air medical crew and ground personnel.
61.0	<b>Vehicle Extrication:</b> Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools. – The student will be able to:
61.01	Review the EMT standards and benchmarks for Vehicle Extrication.
62.0	<b>Hazardous Materials Awareness:</b> Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident. – The student will be able to:
62.01	Review the EMT standards and benchmarks for Hazardous Materials Awareness.
63.0	<b>Mass Casualty Incidents due to Terrorism and Disasters:</b> Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man- made disaster. – The student will be able to:

63.01 Review the EMT standards and benchmarks for Mass Casualty Incidents.

Florida Department of Education  
Student Performance Standards

Program Title: Paramedic - ATD  
 ATD CIP Number: 0351090417  
 SOC Code(s): 29-2041

When this program is offered at the college level, the following standards and benchmarks apply:

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.

**This certificate program is part of the Emergency Medical Services AS degree program (1351090402). At the completion of this program, the student will be able to:**

01.0	<b>EMS Systems:</b> Demonstrate a fundamental depth, foundational breadth of knowledge of the History of EMS and a complex depth, comprehensive breadth of knowledge 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 Florida.
01.04	Explain 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 certification 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 and demonstrate 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 role of the EMS physician in providing medical direction.
01.12	Discuss examples of local protocols.

01.13	Describe the relationship between a physician on the scene, the paramedic on the scene, and the EMS physician providing on-line medical direction.
01.14	Describe the role of the paramedic relative to the safety of the crew, the patient, and bystanders.
01.15	Assess personal practices relative to the responsibility for personal safety, the safety of the crew, the patient, and bystanders.
01.16	Advocate the need for injury prevention.
01.17	Discuss the diverse types of EMS services and differences in their provision of care.
02.0	<b>Research:</b> Demonstrate a fundamental depth, foundational breath of knowledge of research principles to interpret literature and advocate evidence-based practice. – The student will be able to:
02.01	Interpret results and reach conclusions.
02.02	Discuss the importance of evidenced based medicine and medical research and its role in refining EMS practices.
03.0	<b>Workforce Safety and Wellness:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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 the role of risk assessments and warning signs in cancer and cardiovascular disease.
03.05	Differentiate between 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 and resources 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	Discuss the need to treat each patient as an individual, with respect and dignity.

03.15	Discuss the need to respect the emotional needs of dying patients and their families.
03.16	Discuss the paramedics' role in performing community risk assessment.
04.0	<b>Documentation:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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	Demonstrate proper use of medical terminology.
04.03	Record 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 PCR (patient care record).
05.0	<b>EMS Communication:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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 for an emergency response and transport.
05.03	Discuss the importance of proper terminology when communicating during an emergency.
05.04	Discuss factors that impede or enhance effective verbal and written communications.
05.05	Discuss the legal implications of written communications.
05.06	Identify the components of the local EMS communications system and describe their function and use.
05.07	Identify and differentiate among the following communications systems: simplex, multiplex, duplex, trunked, digital communications, and cellular telephone.

05.08	Describe the functions and responsibilities of the Federal Communications Commission.
05.09	Describe how emergency medical dispatch (EMD) functions as an integral part of the EMS system.
05.10	List appropriate information to be gathered by the telecommunicator.
05.11	Demonstrate an organized and concise radio transmission
05.12	Demonstrate an organized and concise patient report upon transfer of care.
06.0	<b>Therapeutic Communication:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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 difficult patients.
06.05	Summarize developmental considerations across the life span 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	<b>Medical/Legal and Ethics:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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	Discuss State of Florida and Federal special reporting situations including: 07.02.01 abuse 07.02.02 sexual assault 07.02.03 gunshot and knife wounds 07.02.04 communicable disease 70.01.05 animal bites
07.03	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.
07.04	Differentiate between the scope of practice and the standard of care for paramedic practice.
07.05	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.
07.06	Review the four elements that must be present in order to prove negligence.

07.07	Review the legal concept and limitations of immunity, including Good Samaritan statutes and governmental immunity, as it applies to the paramedic.
07.08	Review the importance and necessity of patient confidentiality and the standards for maintaining patient confidentiality that apply to the paramedic.
07.09	Review consent to include expressed, informed, implied, and involuntary.
07.10	Demonstrate appropriate patient management techniques in a refusal of care situation.
07.11	Discuss the issues of abandonment, negligence, false imprisonment, and battery and their implications to the paramedic.
07.12	Describe the actions that the paramedic should take to preserve evidence at a crime or accident scene.
07.13	Describe the importance of providing accurate communication (oral and written) in substantiating an incident.
07.14	Describe the criteria necessary to honor an advance directive in Florida.
08.0	<b>Anatomy and Physiology:</b> Integrate a complex depth, comprehensive breadth of knowledge 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.
08.02	Demonstrate comprehensive knowledge of anatomy and physiology as it applies to paramedic practice.
09.0	<b>Medical Terminology:</b> Integrate a comprehensive knowledge in the use of 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 medical terminology.
09.02	Demonstrate a comprehensive knowledge of medical terminology as it applies to paramedic practice.
10.0	<b>Pathophysiology:</b> Demonstrate a complex 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	Define and discuss the pathogenesis, signs, and symptoms of distributive, obstructive, neurogenic, anaphylactic, and septic shock.
10.04	Discuss multiple organ dysfunction syndrome (MODS).
10.05	Describe alterations in cells and tissues including cellular adaptation, cellular injury, manifestation of cellular injury, and cellular death/necrosis.
10.06	Describe genetics and familial diseases and the role they play in pathophysiology.
10.07	Describe the self–defense mechanisms of inflammation and immune responses and their relationships to pathophysiology.

11.0	<b>Life Span Development:</b> Integrate the 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 across the life span.
12.0	<b>Public Health:</b> Demonstrate a 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.
12.02	Apply a fundamental knowledge of the principles of public health, epidemiology, health promotion, and illness and injury prevention.
13.0	<b>Principles of Pharmacology:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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 practice pertinent to the administration of medications.
13.10	List and describe available drug forms.
13.11	List and differentiate all methods and routes of medication administration covered in the current National EMS Scope of Practice Model.
13.12	Describe the process of: <ul style="list-style-type: none"> <li>13.12.01 pharmacokinetics</li> <li>13.12.02 pharmacodynamics</li> <li>13.12.03 theories of drug action</li> <li>13.12.04 drug-response relationship</li> <li>13.12.05 factors altering drug responses</li> <li>13.12.06 predictable drug responses</li> <li>13.12.07 iatrogenic drug responses</li> <li>13.12.08 unpredictable adverse drug responses</li> </ul>
13.13	Discuss the prevention, recognition and management of adverse medication reactions.

13.14	Select the optimal medication and method of medication administration for patients with a particular clinical condition or situation.
14.0	<b>Medication Administration:</b> Demonstrate a complex depth, comprehensive breadth of knowledge 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 practice pertinent to the administration of medications.
14.03	Review mathematical principles and demonstrate equations necessary 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	Review 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	Describe the indications, equipment needed, techniques used, precautions, and general principles of administering medications by the following routes: 14.11.01      inhalation route 14.11.02      gastric tube 14.11.03      rectal route
14.12	Differentiate among the different percutaneous routes of medication administration.
14.13	Describe the purpose, equipment needed, techniques used, complications, and general principles for obtaining a blood sample.
14.14	Obtain venous and capillary blood for testing and discuss blood chemistry and normal values.
14.15	Demonstrate principles of medical asepsis in the administration of medications.
14.16	Demonstrate the procedure for disposal of contaminated items and supplies.
14.17	Demonstrate cannulation of peripheral, intravenous and/or external jugular veins.
14.18	Demonstrate intraosseous access.

14.19	Demonstrate administration of medications by the following routes:
14.19.01	oral
14.19.02	sublingual
14.19.03	buccal
14.19.04	auto-injector
14.19.05	inhalation route
14.19.06	intranasal route
14.19.07	subcutaneous route
14.19.08	intramuscular route
14.19.09	intravenous route
14.19.10	intraosseous route
15.0	<b>Emergency Medications:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of emergency medications within the scope of practice for the paramedic. – The student will be able to:
15.01	Discuss 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	<b>Airway Management:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of airway management within the scope of practice of the paramedic across the life span. –The student will be able to:
16.01	Explain the primary objective of airway maintenance.
16.02	Explain the differences in airway anatomy.
16.03	Define, identify and describe a tracheostomy, laryngectomy, stoma, and tracheostomy tube.
16.04	Describe the special considerations in airway management and ventilation for the pediatric patient.
16.05	Describe the indications, contraindications, advantages, disadvantages, complications and equipment for rapid sequence intubation with neuromuscular blockade.
16.06	Identify neuromuscular blocking drugs and other agents used in rapid sequence intubation.
16.07	Describe the indications, contraindications, advantages, disadvantages, complications and equipment for sedation during intubation.
16.08	Describe the indications, contraindications, advantages, disadvantages and complications for performing cricothyrotomy.
16.09	Demonstrate the procedure for percutaneous cricothyrotomy.
16.10	Review the function of the structures located in the upper and lower airway.

16.11	Demonstrate effective techniques of advanced airway management of the following:
16.11.01	orotracheal,
16.11.02	nasotracheal,
16.11.03	subglottic,
16.11.04	supraglottic,
79.22.05	digital intubation
16.12	Describe and demonstrate methods of assessment for confirming correct placement of any airway device.
16.13	Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for extubation.
17.0	<b>Respiration:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of respiration within the scope of practice of the paramedic across the life span. –The student will be able to:
17.01	List the concentration of gases that comprise atmospheric air.
17.02	Describe the measurement of oxygen in the blood.
17.03	Describe the measurement of carbon dioxide in the blood.
17.04	Describe peak expiratory flow.
17.05	Describe factors that cause decreased oxygen concentrations in the blood.
17.06	Describe the factors that increase and decrease carbon dioxide production in the body.
17.07	Define pulsus paradoxus.
17.08	Describe the indications, contraindications, advantages, disadvantages, complications, liter flow range, and concentration of delivered oxygen for supplemental oxygen delivery devices.
17.09	Review the physiology of ventilation and respiration.
18.0	<b>Ventilation:</b> Demonstrate a complex breadth, comprehensive breadth of knowledge of ventilatory assessment and management across the life span. –The student will be able to:
18.01	Perform and interpret pulse oximetry and capnography.
18.02	Describe indications, contraindications, advantages, disadvantages, complications, and technique for ventilating a patient with an automatic transport ventilator (ATV), BIPAP/CPAP, AND PEEP devices.
19.0	<b>Scene Size-Up:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of scene management. –The student will be able to:
19.01	Describe common hazards found at the scene of a trauma and a medical patient.
19.02	Discuss common mechanisms of injury/ nature of illness.
19.03	Explain the rationale for crew members to evaluate scene safety prior to entering.

19.04	Demonstrate the scene-size-up.
20.0	<b>Primary Assessment:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the primary assessment for all patient situations. –The student will be able to:
20.01	Summarize the elements of a general impression of the patient.
20.02	Explain the reason for performing a primary assessment.
20.03	Discuss and demonstrate methods of assessing levels of responsiveness using AVPU.
20.04	Discuss and demonstrate methods of assessing the airway across the life span.
20.05	Describe and demonstrate methods used for assessing if a patient is breathing across the life span.
20.06	Differentiate between a patient with adequate and inadequate breathing.
20.07	Describe and demonstrate the methods used to obtain a pulse across the life span.
20.08	Discuss and demonstrate assessing the patient for external bleeding.
20.09	Describe and demonstrate the assessment and interruption of skin color, temperature, moisture, and capillary refill across the life span.
20.10	Explain the reasons for prioritizing a patient for care and transport.
20.11	Describe when it is appropriate to expose the patient completely.
20.12	Differentiate between critical life-threatening, potentially life-threatening, and non-life-threatening patient presentations.
21.0	<b>History Taking:</b> Demonstrate a complex depth, comprehensive breath of knowledge of the components of history taking. –The student will be able to:
21.01	Determine and investigate the chief complaint.
21.02	Describe the components of the patient history.
21.03	Explain the importance of obtaining a SAMPLE and OPQRST history.
21.04	Acknowledge the feelings patients experience during assessment.
21.05	Discuss the value of obtaining a family and social history.
21.06	Describe examples of different techniques the paramedic may use to obtain information from patients, family, or bystanders during the history taking process.
22.0	<b>Secondary Assessment:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of techniques used for a secondary assessment across the life span. –The student will be able to:
22.01	Review EMT standards and benchmarks for secondary assessment.

22.02	Describe the techniques of inspection, palpation, percussion, and auscultation.
22.03	Discuss the limitations of conducting a physical exam in the out-of-hospital environment.
22.04	Demonstrate the examination of the patient including all major body systems and anatomical regions.
22.05	Distinguish the importance of abnormal assessment findings in all the major body systems and anatomical regions.
22.06	Describe the evaluation of patient's perfusion status based on findings in the initial assessment.
22.07	State the reasons for performing a rapid trauma assessment.
22.08	Discuss the reason for performing a focused history and physical exam.
22.09	Discuss appropriate gender and cultural considerations regarding assessment.
22.10	Discuss medical identification devices/ systems.
23.0	<b>Monitoring Devices:</b> Demonstrate a fundamental depth, foundational breadth of knowledge of monitoring devices within the scope of practice of the paramedic. –The student will be able to:
23.01	Describe the purpose, indications, procedure, normal findings, and limitations of the following patient monitoring technologies, including but not limited to:
23.01.01	continuous ECG monitoring
23.01.02	12-Lead ECG
23.01.03	capnography (wave form)
23.01.04	co-oximetry
23.01.05	methemoglobin monitoring
23.01.06	total hemoglobin
23.01.07	basic blood chemistry
23.01.08	ultrasound
23.01.09	other devices identified at the EMT level
23.02	Demonstrate the use of the following patient monitoring technologies, including but not limited to:
23.02.01	continuous ECG monitoring
23.02.02	12-Lead ECG
23.02.03	capnography (wave form)
23.02.04	other devices identified at the EMT level
24.0	<b>Reassessment:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of how and when to perform a reassessment for all patient situations. –The student will be able to:
24.01	Describe the components of reassessment and demonstrate the skills involved.
24.02	Discuss the reasons for repeating the primary assessment as part of the reassessment.
24.03	Explain trending assessment components and its value to other health professionals who assume care of the patient.

24.04	Demonstrate reassessment of patients across the life span.
25.0	<b>Medical Overview:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of medical complaints. –The student will be able to:
25.01	Identify factors that complicate patient assessment including:
25.01.01	scene safety
25.01.02	environmental factors
25.01.03	chief complaint
25.01.04	paramedic preconceptions
25.01.05	distracting injuries
25.01.06	tunnel vision
25.01.07	patient cooperation
25.01.08	paramedic attitude
25.02	Discuss forming a field impression and utilizing available information to determine a different diagnosis.
26.0	<b>Neurology:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of neurologic disorders/emergencies across the life span. – The student will be able to:
26.01	Identify the risk factors associated with nervous system dysfunction.
26.02	Review the anatomy and physiology of the organs and structures related to nervous system.
26.03	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with the following neurological conditions, including but not limited to:
26.03.01	coma
26.03.02	altered mental status
26.03.03	seizures
26.03.04	syncope
26.03.05	transient ischemic attack
26.03.06	stroke and intracranial hemorrhage
26.03.07	degenerative neurologic diseases
26.03.08	chronic alcoholism
26.03.09	back disorders
26.04	Describe and differentiate the major types of seizures.
26.05	Describe the types of stroke.
26.06	Describe the significance of the prevalence of neurologic disorders in the United States.
26.07	Discuss screen tools for assessment of stroke and large vessel occlusion.
26.08	Demonstrate the use of stroke screening tools and appropriate decision making regarding transport destination for a stroke patient.

27.0	<b>Abdominal and Gastrointestinal Disorders:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of abdominal and gastrointestinal disorders/emergencies across the life span. – The student will be able to:
27.01	Review the anatomy and physiology of the organs and structures related to gastrointestinal diseases.
27.02	Differentiate between hemorrhagic and non-hemorrhagic causes of abdominal pain.
27.03	Describe the technique for performing a comprehensive physical examination on a patient complaining of abdominal pain.
27.04	Discuss the pathophysiology, signs, and symptoms, and demonstrate the assessment, and management of patients with the following abdominal and gastrointestinal disorders, including but not limited to:
27.04.01	both upper and lower gastrointestinal bleeding
27.04.02	acute gastroenteritis.
27.04.03	colitis.
27.04.04	diverticulitis.
27.04.05	appendicitis.
27.04.06	peptic ulcer disease.
27.04.07	bowel obstruction.
27.04.08	Crohn's disease.
27.04.09	pancreatitis.
27.04.10	esophageal varices.
27.04.11	hemorrhoids.
27.04.12	cholecystitis.
27.04.13	acute hepatitis.
27.05	Identify patients at risk for gastrointestinal emergencies.
27.06	Demonstrate how to auscultate the abdomen to assess for diminished, absent or abnormal bowel sounds.
28.0	<b>Immunology:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of immunology disorders/emergencies across the life span. – The student will be able to:
28.01	Define and differentiate:
28.01.01	allergic reaction.
28.01.02	anaphylaxis
28.01.03	antigens
28.01.04	antibodies
28.01.05	anaphylactoid reaction
28.02	Review the anatomy and physiology of the organs and structures related to anaphylaxis.
28.03	Describe the prevention of anaphylaxis and appropriate patient education.
28.04	Review the pathophysiology of allergy and anaphylaxis.
28.05	Describe the common methods of entry of allergens into the body.

28.06	Review common antigens most frequently associated with anaphylaxis.
28.07	Differentiate among the various treatment and pharmacological interventions used in the management of anaphylaxis and allergic reaction.
29.0	<b>Infectious Diseases:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of assessment and management of a patient who may have an infectious disease across the life span – The student will be able to:
29.01	Review EMT standards and benchmarks for infectious disease.
29.02	Review the specific anatomy and physiology pertinent to infectious and communicable diseases.
29.03	Describe the steps of an infectious process.
29.04	Describe and differentiate infectious agents, including bacteria, viruses, fungi, protozoans, and helminths (worms).
29.05	Review characteristics of the immune system.
29.06	Perform an assessment of a patient with an infectious/communicable disease.
29.07	Effectively and safely manage a patient with an infectious/communicable disease.
29.08	Review public health principles related to infectious disease.
29.09	Review the roles of local, state, and federal agencies involved in infectious disease surveillance and outbreaks.
29.10	Describe the interactions of the agent, host, and environment as determining factors in disease transmission.
29.11	Describes the EMS professional's responsibilities as well as their rights under the Ryan White Act.
29.12	Discuss the pathophysiology, signs, symptoms, assessment, and management and risk factors of significant health concerns.
29.13	Discuss the characteristics of, and organisms associated with, febrile and afebrile respiratory disease.
29.14	Describe the EMS provider's role in patient education and preventing disease transmission.
29.15	Review the pathophysiology, risk factors, assessment, and prehospital management of sepsis/systemic inflammatory response syndrome (SIRS).
30.0	<b>Endocrine Disorders:</b> Demonstrate a complex depth, comprehensive breadth of knowledge in endocrine disorders/emergencies across the life span. – The student will be able to:
30.01	Identify the risk factors related to disorders of the endocrine system.
30.02	Review the anatomy and physiology of organs and structures related to endocrinologic diseases.

30.03	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following endocrinologic emergencies:
30.03.01	hypoglycemia
30.03.02	hyperglycemia
30.03.03	diabetic ketoacidosis
30.03.04	Cushing's syndrome
30.03.05	adrenal insufficiency
30.03.06	pituitary disorders
30.03.07	thyroid disorders
31.0	<b>Psychiatric:</b> Demonstrate a complex depth, comprehensive breadth of knowledge regarding the assessment and management of psychiatric disorders/emergencies across the life span. – The student will be able to:
31.01	Differentiate among behavior, psychiatric disorders, and behavioral emergencies.
31.02	Discuss the pathophysiology of common psychiatric disorders and behavioral emergencies.
31.03	Discuss the general factors that may cause an alteration in a patient's behavior.
31.04	Discuss the factors/signs or symptoms of various psychiatric emergencies to include suicide.
31.05	Manage a behavioral emergency scenario applying knowledge of medical/legal Florida Statutes.
31.06	Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency.
31.07	Describe the biological, psychosocial, and sociocultural influences on psychiatric disorders.
31.08	Describe the special considerations for the safety of the EMS provider, and EMS crew, the patient and bystanders when dealing with behavioral and psychiatric emergencies.
31.09	Explain the importance of provider behavior and communication in the care of a patient with a behavioral emergency.
31.10	Describe and demonstrate methods of restraint that may be used in the management of a patient with a behavioral emergency and possible legal implication.
31.11	List the risk factors (including behaviors) for suicide.
32.0	<b>Cardiovascular:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of cardiovascular disorders/emergencies across the life span. – The student will be able to:
32.01	Describe the epidemiology, incidence, morbidity and mortality of cardiovascular disease.
32.02	Identify the risk factors of coronary artery disease.
32.03	Review the anatomy and physiology of the heart and circulatory system.
32.04	Discuss the electrophysiology of the heart.
32.05	Discuss and demonstrate ECG monitoring, 12 Lead placement, acquisition, and interpretation.

32.06	Define and give examples of positive and negative inotropes, chronotropes and dromotropes.
32.07	Identify the normal characteristics of the point of maximal impulse (PMI).
32.08	Discuss the normal and abnormal heart sounds and how they relate to hemodynamic events in the cardiac cycle.
32.09	Describe a systematic approach to the analysis and interpretation of cardiac dysrhythmias.
32.10	Describe the conditions of pulseless electrical activity.
32.11	Compare and contrast electrotherapy to include pacing.
32.12	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients following conditions including the development of a treatment plan, including but not limited to:
32.12.01	angina
32.12.02	myocardial infarction STEMI/Non-STEMI
32.12.03	congestive heart failure
32.12.04	cardiac tamponade
32.12.05	cardiogenic shock
32.12.06	hypertension and acute hypertensive states
32.12.07	cardiac arrest
32.12.08	vascular disorders
32.12.09	hypertrophic cardiomyopathies
32.12.10	infectious diseases of the heart
32.12.11	congenital abnormalities
32.13	List other clinical conditions that may mimic signs and symptoms of coronary artery disease and angina pectoris.
32.14	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.
32.15	List the characteristics of a patient eligible for thrombolytic therapy.
32.16	Define the term acute pulmonary edema and describe its relationship to left ventricular failure.
32.17	Discuss preload, afterload and left ventricular end-diastolic pressure and relate each to the pathophysiology of heart failure.
32.18	Identify non-cardiac causes of cardiac arrest.
32.19	Discuss the components of post resuscitation care including how to determine the return of spontaneous circulation (ROSC).
32.20	Identify circumstances and situations where resuscitation efforts would not be initiated or would be terminated.

32.21	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:
32.21.01	cardiopulmonary resuscitation
32.21.02	defibrillation
32.21.03	synchronized cardioversion
32.21.04	transcutaneous pacing
33.0	<b>Toxicology:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of toxicology emergencies across the life span. – The student will be able to:
33.01	Define and differentiate among toxicology, poisoning, and overdose.
33.02	Describe the pathophysiology and signs and symptoms of the following toxicological emergencies, including but not limited to:
33.02.01	food poisoning
33.02.02	carbon monoxide poisoning
33.02.03	cyanide poisoning
33.02.04	exposure to acid or alkaline substance
33.02.05	exposure to hydrocarbons
33.02.06	methanol ingestion
33.02.07	isopropanol ingestion
33.02.08	ethylene glycol ingestion
33.02.09	exposure to poisonous substances
33.02.10	drug withdrawal
33.02.11	alcoholic syndrome
33.02.12	withdrawal syndrome (including delirium tremens)
33.02.13	illicit drug use
33.02.14	Medication overdose
33.02.15	Opioid overdose
33.02.16	Organophosphate overdose
33.03	Discuss the role of the Poison Control Center with the nationwide contact number 800-222-1222 in the United States.
33.04	Review various ways that toxins enter the body.
33.05	Discuss and demonstrate the assessment and management for the patient with a toxicological emergency.
33.06	Explain the rationale for contacting medical direction early in the prehospital management of a patient with a toxicological emergency.
33.07	Review the following for Narcan (naloxone):
33.07.01	generic and trade names
33.07.02	medication forms
33.07.03	dose
33.07.04	administration
33.07.05	contraindications

34.0	<b>Respiratory:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of respiratory disorders/emergencies across the life span. – The student will be able to:
34.01	Discuss the epidemiology, morbidity, and mortality of respiratory illness in the United States.
34.02	Review hypoventilation and hyperventilation, and outline the conditions with which they are often associated.
34.03	Review the anatomy, physiology and functions of the respiratory system.
34.04	Discuss those factors that contribute to the formation of a general impression and degree of respiratory distress.
34.05	Identify breathing patterns that are associated with respiratory distress and neurologic insults and their correlation with the signs of increased work of breathing.
34.06	Review between normal and abnormal breath/lung sounds and its physiologic significance.
34.07	Explain the concepts of hypoxic drive and auto-PEEP as they relate to the COPD patient.
34.08	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following respiratory conditions, including but not limited to:
34.08.01	pulmonary infections (upper and lower airway)
34.08.02	atelectasis
34.08.03	anatomic or foreign body obstruction
34.08.04	aspiration
34.08.05	asthma
34.08.06	emphysema
34.08.07	chronic bronchitis
34.08.08	spontaneous pneumothorax
34.08.09	pleural effusion
34.08.10	pulmonary embolism
34.08.11	cancer
34.08.12	toxic inhalations
34.08.13	pulmonary edema
34.08.14	acute respiratory distress syndrome (ARDS)
34.08.15	pneumonia
34.08.16	neoplasms of the lung
34.08.17	hyperventilation syndrome
35.0	<b>Hematology:</b> Demonstrate a complex depth, foundational breadth of knowledge of the assessment, and management of hematology disorders/emergencies across the life span – The student will be able to:
35.01	Identify the role of heredity in the risk for hematologic disorders.
35.02	Review the anatomy and physiology of the hematopoietic system.
35.03	Describe volume and volume-control related to the hematopoietic system.

35.04	Explain the significance of the hematocrit with respect to red cell size and number.
35.05	Explain the correlation of the RBC count, hematocrit and hemoglobin values.
35.06	Recognize medications used to decrease the risk of thrombosis.
35.07	Identify blood groups.
35.08	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following conditions, including but not limited to:
35.08.01	anemia
35.08.02	leukemia
35.08.03	lymphomas
35.08.04	polycythemia
35.08.05	disseminated intravascular coagulopathy
35.08.06	hemophilia
35.08.07	sickle cell disease
35.08.08	multiple myeloma
35.08.09	leukopenia/neutropenia
35.08.10	leukocytosis
35.08.11	thrombocytosis
35.08.12	thrombocytopenia
35.08.13	transfusion complications
36.0	<b>Genitourinary/Renal:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of genitourinary and renal emergencies across the life span. – The student will be able to:
36.01	Describe the epidemiology, incidence, morbidity, mortality, and risk factors of urological emergencies.
36.02	Review the anatomy and physiology of the organs and structures related to urogenital diseases.
36.03	Discuss referred pain and visceral pain as it relates to urology.
36.04	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients of the following urologic and renal conditions, including but not limited to:
36.04.01	acute renal failure
36.04.02	chronic renal failure
36.04.03	complications related to hemodialysis and peritoneal dialysis.
36.04.04	renal calculi
36.04.05	priapism
36.04.06	testicular torsion
36.04.07	urinary tract infection
36.05	Review fluids, electrolytes, and acid based disturbances.

37.0	<b>Gynecology:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment findings and the management of gynecology disorders/emergencies across the life span. – The student will be able to:
37.01	Review anatomy and physiology of the female reproductive system.
37.02	Identify the normal events of the menstrual and ovarian cycle.
37.03	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with specific gynecological emergencies, including but not limited to:
37.03.01	infection (including pelvic inflammatory disease, Bartholin’s abscess, and vaginitis/ vulvovaginitis)
37.03.02	ovarian cyst and ruptured ovarian cyst
37.03.03	ovarian torsion
37.03.04	endometriosis
37.03.05	dysfunctional uterine bleeding
37.03.06	prolapsed uterus
37.03.07	vaginal foreign body
37.03.08	vaginal hemorrhage
37.04	Describe the importance of maintaining a patient’s modesty and privacy while still being able to obtain necessary information.
37.05	Discuss the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
38.0	<b>Non-Traumatic Musculoskeletal Disorders:</b> Demonstrate a fundamental depth, foundation breadth of knowledge of the assessment and management of non-traumatic fractures across the life span. – The student will be able to:
38.01	Review the anatomy and physiology of the musculoskeletal system
38.02	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with musculoskeletal emergencies, including but not limited to:
38.02.01	osteomyelitis and tumors
38.02.02	disc disorders, lower back pain (cauda equine syndrome, sprain, and strain.)
38.02.03	joint abnormalities
38.02.04	muscle abnormalities
38.02.05	overuse syndrome
38.02.06	soft tissue infections
39.0	<b>Diseases of the Eyes, Ears, Nose, and Throat:</b> Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of common or major diseases of the eyes, ears, nose and throat across the life span. – The student will be able to:
39.01	Review the anatomy and physiology of the eyes, ears, nose, and throat.

39.02	<p>Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various eye diseases/injuries, including but not limited to:</p> <ul style="list-style-type: none"> <li>39.02.01 burns of eye and adnexa</li> <li>39.02.02 conjunctivitis</li> <li>39.02.03 corneal abrasions</li> <li>39.02.04 foreign body</li> <li>39.02.05 inflammation of the eyelid</li> <li>39.02.06 glaucoma</li> <li>39.02.07 hyphemia</li> <li>39.02.08 iritis</li> <li>39.02.09 papilledema</li> <li>39.02.10 retinal detachment and defect</li> <li>39.02.11 cellulitis of orbit</li> </ul>
39.03	<p>Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various ear diseases/injuries including:</p> <ul style="list-style-type: none"> <li>39.03.01 foreign body</li> <li>39.03.02 impacted cerumen</li> <li>39.03.03 labyrinthitis</li> <li>39.03.04 Meniere's disease</li> <li>39.03.05 otitis external and media</li> <li>39.03.06 perforated tympanic membrane</li> </ul>
39.04	<p>Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various nose diseases/injuries including:</p> <ul style="list-style-type: none"> <li>39.04.01 epistaxis</li> <li>39.04.02 foreign body intrusion</li> <li>39.04.03 rhinitis</li> <li>39.04.04 sinusitis</li> </ul>
39.05	<p>Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with oropharynx/throat diseases/injuries including:</p> <ul style="list-style-type: none"> <li>39.05.01 dentalgia and dental abscess</li> <li>39.05.02 diseases of oral soft tissue/ Ludwig's angina</li> <li>39.05.03 foreign body intrusion</li> <li>39.05.04 epiglottitis</li> <li>39.05.05 laryngitis</li> <li>39.05.06 tracheitis</li> <li>39.05.07 oral candidiasis</li> <li>39.05.08 peritonsillar abscess</li> <li>39.05.09 pharyngitis/tonsillitis</li> <li>39.05.10 temporomandibular joint disorders</li> </ul>
40.0	<p><b>Shock and Resuscitation:</b> 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:</p>

40.01	Describe the epidemiology, including: premorbid and comorbid conditions and prevention strategies, for shock and hemorrhage.
40.02	Review the anatomy and physiology of the cardiovascular and respiratory systems.
40.03	Contrast the physiology of blood flow during normal states, peri-arrest, cardiac arrest and shock.
40.04	Discuss and demonstrate the assessment and management of shock.
40.05	Review the management of external hemorrhage.
40.06	Discuss appropriate fluid resuscitation.
40.07	Review the following for the cardiac arrest victim:
40.07.01	epidemiology
40.07.02	pathophysiology
40.07.03	physiology of blood flow during external chest compressions
40.07.04	resuscitation success/research
40.08	Review defibrillation and cardioversion to include manual techniques, automatic and semi-automated devices.
40.09	Discuss causes, pathophysiology, signs, and symptoms and management of special arrest and peri-arrest conditions, including but not limited to:
40.09.01	electrolyte disorders
40.09.02	toxic exposures
40.09.03	drowning
40.09.04	hypothermia
40.09.05	near-Fatal Asthma
40.09.06	anaphylaxis
40.09.07	trauma
40.09.08	pregnancy
40.09.09	electrical shock and lightning strikes
40.10	Review post resuscitative care include, temperature regulation, glucose/electrolyte management.
40.11	Discuss and demonstrate the assessment and management of internal hemorrhage.
40.12	Review the stages and classifications of hemorrhage.
40.13	Review the pathophysiology and demonstrate the assessment and management of the different types of shock.
40.14	Describe the effects of decreased perfusion at the capillary level.
40.15	Relate pulse pressure changes to perfusion status.
40.16	Relate orthostatic vital sign changes to perfusion status.

40.17	Define and differentiate between compensated and decompensated shock for all types of shock.
40.18	Discuss and differentiate the physiological manifestations of shock across the life span.
41.0	<b>Trauma Overview:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of the trauma patient across the life span. – The student will be able to:
41.01	Review the pathophysiology of the trauma patient.
41.02	Review the components of comprehensive trauma systems and levels of trauma centers.
41.03	Review the considerations for different transportation modes to a trauma center.
41.04	Discuss the kinematics of blunt and penetrating trauma.
41.05	Discuss and describe significant and non-significant mechanism of injury (MOI) and provide examples of each.
41.06	Discuss and demonstrate the application of State of Florida's trauma scorecard methodologies as required in Florida Statute and Florida Administrative Code.
41.07	Review the National Trauma Triage Protocol of Injured Patients.
41.08	Review forming a field impression and utilizing available information to determine a differential diagnosis.
41.09	Review the need for rapid intervention transport of the trauma patient.
42.0	<b>Bleeding:</b> Demonstrate a complex depth, comprehension breadth of knowledge of pathophysiology, assessment and management of bleeding across the life span. – The student will be able to:
42.01	Review the compensatory mechanism in hemorrhagic shock.
42.02	Review the administration of medications to assist in the maintenance of homeostasis.
42.03	Review the maintenance of tissue oxygenation in a bleeding patient.
42.04	Discuss appropriate fluid resuscitation for the patient in hemorrhagic shock.
42.05	Review the different methods/modalities of controlling bleeding.
43.0	<b>Chest Trauma:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of chest trauma across the life span. – The student will be able to:
43.01	Review the anatomy and physiology of the organs and structures related to thoracic injuries.

43.02	Review the pathophysiology, signs and symptoms and mechanism of injury (MOI) of the following injuries, including but not limited to:
43.02.01	myocardial injuries
43.02.01.1	pericardial tamponade
43.02.01.2	myocardial contusion
43.02.01.3	myocardial rupture
43.02.02	vascular injury
43.02.02.1.1	aortic dissection
43.02.02.1.2	pulmonary contusion
43.02.03	hemothorax
43.02.04	pneumothorax
43.02.05	hemopneumothorax
43.02.06	cardiac Tamponade
43.02.07	commotio cordis
43.02.08	tracheobronchial disruption
43.02.09	diaphragmatic rupture and injury
43.02.10	traumatic asphyxia
43.02.11	rib fracture
43.02.12	flail segment
43.02.13	sternal fracture
43.02.14	vascular injuries
43.02.15	impaled objects
43.02.16	evisceration/shock
43.03	Discuss monitoring of chest tubes.
43.04	Demonstrate the following techniques of management for thoracic injuries: needle decompression, elective intubation, ECG monitoring, oxygenation, and ventilation
44.0	<b>Abdominal and Genitourinary Trauma:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of abdominal and genitourinary trauma across the life span. – The student will be able to:
44.01	Review the anatomy and physiology of organs and structures related to abdominal injuries.
44.02	Describe the mechanism of injury for and types of open and closed abdominal and retroperitoneal injuries involving seat belts, penetrating, blunt and evisceration.
44.03	Describe and demonstrate the pathophysiology, signs and symptoms and the assessment and management for, including but not limited to:
44.03.01	pelvic fractures.
44.03.02	solid organ injuries
44.03.03	hollow organ injuries
44.03.04	abdominal vascular injuries
44.03.05	retroperitoneal space (kidneys)
44.03.06	genitourinary system

44.04	Review the psychological considerations associated with genitourinary injuries.
45.0	<b>Orthopedic Trauma:</b> Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma across the life span. – The student will be able to:
45.01	Review the anatomy and physiology of the musculoskeletal system, include the healing process.
45.02	Discuss pathophysiology, signs and symptoms, and MOI for orthopedic trauma.
45.03	Define the different types of orthopedic trauma including fracture classifications.
45.04	List the 6 “P” orthopedic injury assessment.
45.05	Discuss the following management techniques: 45.05.01 heat therapy 45.05.02 cold therapy 45.05.03 splinting
45.06	Describe and demonstrate the assessment and management of a patient with a suspected orthopedic trauma including medication administration (analgesics and anxiolytics).
45.07	Discuss the need for assessment of distal pulses, motor, and sensation before and after splinting.
45.08	Review age-associated changes in bones.
45.09	Define luxation and subluxation.
45.10	Explain the rationale for splinting at the scene versus load and go.
45.11	Demonstrate the proper use various splinting materials and devices to include improvised and traction splints.
45.12	Discuss and demonstrate the assessment and management of compartment and crush syndrome: 45.12.01 destination decision 45.12.02 rhabdomyolysis
45.13	Discuss the pathophysiology, and demonstrate the assessment and management of a tendon injury to the knee (patellar), shoulder, and Achilles.
45.14	Discuss the proper procedure to package an amputated body part for replantation.
46.0	<b>Soft Tissue Trauma:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma across the life span. – The student will be able to:
46.01	Review anatomy and physiology and identify the major functions of the integumentary system.

46.02	Discuss the pathophysiology of soft tissue injuries and the healing process including:
46.02.01	inflammation
46.02.02	epithelialization
46.02.03	neovascularization
46.02.04	collagen Synthesis
46.02.05	alterations in wound healing
46.02.06	abnormal scar formation
46.03	Describe and demonstrate the assessment and management of various soft tissue injuries.
46.04	Identify types of burn injuries including:
46.04.01	thermal burn
46.04.02	chemical burn
46.04.03	electrical burn
46.04.04	radiation burn
46.05	Describe the depth classification of burn injuries including:
46.05.01	superficial burn
46.05.02	partial-thickness burn
46.05.03	full-thickness burn
46.05.04	other depth classification
46.06	Describe and demonstrate methods for determining body surface area percentage of a burn injury including the “rule of nines”, the “rule of palms”, and other methods.
46.07	Explain how the seriousness of a burn is related to its depth and percentage of body surface area (BSA) involved.
46.08	Review the various management techniques for hemorrhage control.
46.09	Differentiate among the types of injuries requiring the use of occlusive versus non-occlusive dressing.
46.10	Demonstrate the proper use of any Morgan□ type lens for irrigation of the eye.
46.11	Demonstrate the assessment and management of specific burn injuries including:
46.11.01	thermal
46.11.02	inhalation
46.11.03	chemical
46.11.04	electrical
46.11.05	radiation
46.12	Describe the pathophysiologic complications and systemic complications of a burn injury.
46.13	Discuss comorbidities in burn patients.
46.14	Describe the management of a burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management.
46.15	Describe the types of chemicals and their burning processes and a chemical burn injury to the eye.

46.16	Discuss appropriate fluid resuscitation for burn patients.
47.0	<b>Head, Face, Neck, and Spine:</b> Demonstrate a fundamental depth, foundational breadth of knowledge of head, face, neck, and spine trauma across the life span. – The student will be able to:
47.01	Discuss types of and potential complications of facial injuries.
47.02	Discuss pathophysiology, signs and symptoms, assessment and management, and a field impression for injuries to the following areas:
47.02.01	eye(s)
47.02.02	nose
47.02.03	throat/neck
47.02.04	face
47.02.05	mouth
47.02.06	ear(s)
47.03	Distinguish between an open and closed head injury.
47.04	Define and explain the process involved with increasing ICP.
47.05	Describe and demonstrate the assessment and general management of the head/ brain injury patient, including pharmacological and non-pharmacological treatment.
47.06	Discuss the pathophysiology, signs and symptoms, and assessment and management for a patient for each of the following conditions:
47.06.01	skull fracture
47.06.02	cerebral contusion
47.06.03	intracranial hemorrhage
47.06.04	epidural, subdural, intracerebral, and subarachnoid
47.06.05	perforated tympanic membranes
47.06.06	orbital fracture
47.06.07	mandibular fracture
47.07	Review various methods for stabilization and removal of a helmet.
48.0	<b>Nervous System Trauma:</b> Demonstrate a fundamental depth, foundational breadth of knowledge of nervous system trauma across the life span. – The student will be able to:
48.01	Review the anatomy and physiology of the central nervous system, brain, spinal cord, skull and spinal column.

48.02	Discuss pathophysiology, signs and symptoms, assessment, and management of the following nervous system injury including:
48.02.01	Cauda Equine syndrome
48.02.02	peripheral nerve injuries
48.02.03	intracerebral hemorrhage
48.02.04	cranial fractures
48.02.05	brain tissue injuries
48.02.06	spinal cord injuries
48.02.07	Brown-Sequard Syndrome
48.02.08	anterior cord syndrome
48.02.09	central cord syndrome
48.02.10	spinal shock
48.03	Discuss the mechanism of injury which would result in a nervous system injury.
48.04	Review the rationale for and potential for motion restriction for the entire spine when a cervical spine injury is suspected
48.05	Discuss the research involving the management of nervous system injuries and patient management.
49.0	<b>Special Considerations in Trauma:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of special considerations in trauma across the life span. – The student will be able to:
49.01	Integrate the assessment and management differences associated with the following special populations:
49.01.01	pregnancy
49.01.02	pediatric
49.01.03	geriatric
50.0	<b>Environmental Emergencies:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of environmental emergencies across the life span. – The student will be able to:
50.01	Discuss the pathophysiology, signs and symptoms, assessment and management and MOI of the following:
50.01.01	drowning and water related incidents
50.01.02	temperature-related illness
50.01.03	bites and envenomation
50.01.04	diving injuries
50.01.05	lightning (electrical) injury
50.01.06	high altitude illness
50.02	Identify environmental factors that may cause illness, exacerbate preexisting illness and complicate treatment or transport decisions.
50.03	Review several methods of temperature monitoring.
50.04	Describe the general process of thermal regulation, including substances used and wastes generated.
50.05	Define fever and discuss its pathophysiologic mechanism.
50.06	Discuss the role of fluid therapy in the treatment of temperature related emergencies.

50.07	Review the gas laws related to the pathophysiology of injury in a submersion emergency.
50.08	Describe the function of the Divers Alert Network (DAN) and how its members may aid in the management of diving related illnesses.
50.09	Differentiate among the various treatments and interventions for the management of diving accidents.
50.10	Describe the specific function and benefit of hyperbaric oxygen therapy for the management of diving accidents.
51.0	<b>Multi-Systems Trauma:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of multi-system trauma and blast injuries. – The student will be able to:
51.01	Review the priority of care in the multisystem trauma patient.
51.02	Explain which ALS interventions should occur prior to a transport decision and during transport.
52.0	<b>Obstetrics:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the obstetric patient within the scope of practice of the paramedic. – The student will be able to:
52.01	Review the anatomy and physiology of the reproductive system.
52.02	Define the stages of labor and discuss how to assess them.
52.03	Differentiate between cephalic and abnormal delivery.
52.04	Describe the management of a patient with pre-delivery emergencies.
52.05	Discuss and demonstrate the patient care for all stages of labor in a cephalic delivery for the mother and the newborn.
52.06	Describe the procedures for handling complications of delivery.
52.07	Describe the management of the mother post-delivery.
52.08	Demonstrate the procedures for handling complications of pregnancy including per-eclampsia and high risk.
52.09	Describe the management of the mother post-delivery.
52.10	Discuss and demonstrate the patient care measures for all stages of labor in abnormal deliveries for the mother and the newborn.
52.11	Describe special considerations when meconium is present in amniotic fluid or during delivery.
53.0	<b>Neonatal Care:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the neonatal patient within the scope of practice of the paramedic. – The student will be able to:
53.01	Review the term neonate.
53.02	Identify antepartum and intrapartum factors that can affect the neonate.
53.03	Discuss pulmonary perfusion and asphyxia.

53.04	Calculate the Apgar score given various neonate situations.
53.05	Review resuscitation equipment and procedures for the neonate
53.06	Determine when an orogastric tube should be inserted during positive-pressure ventilation.
53.07	Discuss the pathophysiology, signs and symptoms, assessment and management of the following, including but not limited to:
53.07.01	apnea
53.07.02	bradycardia
53.07.03	acidosis
53.07.04	pneumothorax
53.07.05	meconium-stained
53.07.06	low blood volume
53.07.07	dysphemistic hernia
53.07.08	respiratory distress
53.07.09	respiratory depression secondary to narcotics
53.07.10	low birth weight
53.07.11	seizures
53.07.12	hypoglycemia
53.07.13	diarrhea
53.07.14	jaundice
53.07.15	fever
53.07.16	hypothermia
53.07.17	birth injuries
53.07.18	cardiac conditions
53.08	Discuss post arrest management of the neonate.
53.09	Discuss vascular access cannulation techniques for a newborn including umbilical vein/artery access.
54.0	<b>Pediatrics:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the pediatric patient within the scope of practice of the paramedic. – The student will be able to:
54.01	Discuss key anatomical, physiological, and developmental characteristics of infants and children and their implications.
54.02	Review and demonstrate techniques for successful assessment and treatment of infants and children.
54.03	Review airway and ventilatory considerations and procedures for pediatric patients.
54.04	Discuss the indications and methods for gastric decompression for infants and children.

54.05	Discuss the pathophysiology, signs and symptoms, assessment and management of the following, including but not limited to:
54.05.01	altered level of consciousness
54.05.02	trauma
54.05.03	hypo-perfusion
54.05.04	respiratory distress/failure
54.05.05	cardiac dysrhythmia
54.05.06	neurological emergency
54.05.07	abuse/neglect
54.05.08	SUIDS
54.05.09	FABO
54.05.10	respiratory emergencies
54.05.11	congenital heart disease
54.05.12	hydrocephalus/VP shunts
54.06	Discuss the appropriate procedure and equipment for vascular and intraosseous access.
54.07	Review basic cardiac life support (CPR) guidelines for infants and children.
54.08	Integrate advanced life support skills with basic cardiac life support for infants and children.
54.09	Discuss the indications, dosage, route of administration and special considerations for medication administration in infants and children.
54.10	Describe Sudden Unexplained Infant Death Syndrome (SUIDS), current theories, assessment and management, and the immediate needs of the family.
54.11	Discuss the parent/caregiver responses to the death of an infant or child.
54.12	Discuss and demonstrate the use of a length-based resuscitation tape and other methods for determining equipment sizes, drug doses, and other pertinent information for a pediatric patient.
54.13	Discuss proper placement of a gastric tube in infants and children.
54.14	Review appropriate routes and techniques for medication administration.
54.15	Demonstrate appropriate parent/caregiver interviewing techniques for infant and child death situations.
55.0	<b>Geriatrics:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the geriatric patient within the scope of practice of the paramedic. – The student will be able to:
55.01	Review and discuss the term geriatrics
55.02	Review the anatomy, physiology, and pathophysiology of the geriatric patient.
55.03	Discuss common emotional and psychological concerns and conditions of the geriatric patient.
55.04	Discuss the importance of fall prevention with the geriatric patient.

55.05	Describe principles that should be employed when assessing and communicating with the geriatric patient.
55.06	Describe the common causes, assessment and management of the geriatric patient with a medical, trauma, or psychosocial complaint.
55.07	Discuss the impact of polypharmacy and medication non-compliance on patient assessment and management.
55.08	Discuss medication issues of the elderly including polypharmacy, dosing errors and increased drug sensitivity and toxicology.
56.0	<b>Patients with Special Challenges:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of management of the patient with special challenges within the scope of practice of the paramedic across the life span. – The student will be able to:
56.01	Discuss the special considerations required when providing emergency care to patients with:
56.01.01	abuse/neglect of vulnerable populations
56.01.02	homelessness
56.01.03	poverty
56.01.04	bariatrics
56.01.05	tech dependent
56.01.06	hospice/terminally ill
56.01.07	tracheostomy
56.01.08	home care
56.01.09	sensory deficit/loss
56.01.10	developmental disability
56.02	Discuss special considerations regarding common medical devices used in the home care of patients with special challenges including:
56.02.01	respiratory devices
56.02.02	cardiac devices
56.02.03	gastro-urinary devices
56.02.04	central & peripheral IV catheters
56.03	Describe home care and the types of patients it serves and the services it encompasses.
56.04	Describe the characteristics associated with the profile of the typical abuser of:
56.04.01	domestic abuser
56.04.02	elder abuser
56.04.03	child abuser
56.05	Discuss the role of the Paramedic as a patient advocate for vulnerable populations.
56.06	Differentiate between hospice/palliative care and curative care.
56.07	Describe paraplegia/quadriplegia.
56.08	Describe the various etiologies of mental illness.

56.09	Recognize the presenting signs of the following:
56.09.01	autism spectrum
56.09.02	developmental disability
56.09.03	down's syndrome
56.10	Describe the following diseases/illnesses and identify each of their possible presenting signs, including but not limited to:
56.10.01	arthritis
56.10.02	cancer
56.10.03	cerebral palsy
56.10.04	cystic fibrosis
56.10.05	multiple sclerosis
56.10.06	muscular dystrophy
56.10.07	myasthenia gravis
56.10.08	poliomyelitis
56.10.09	spina bifida,
56.10.10	patients with a previous head injury
56.10.11	mental illness
56.11	Review hospice care, comfort care and DNR/DNAR as they relate to local practice, law and policy.
56.12	Describe the access and discuss indwelling catheters, implanted central IV ports and central line monitoring.
56.13	Describe complications of assessing each of the airway, vascular access, and GI/GU devices.
56.14	Identify and describe the failure of wound drains.
56.15	Review the rights of the terminally ill.
56.16	Demonstrate proper tracheotomy care.
56.17	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.
57.0	<b>Principles of Safely Operating a Ground Ambulance:</b> Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport. – The student will be able to:
57.01	Review the EMT standards and benchmarks for the Principles of Safely Operating a Ground Ambulance.
58.0	<b>Incident Management:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of establishing and working within the incident management system. – The student will be able to:
58.01	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.
59.0	<b>Multiple Casualty Incidents:</b> Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident. – The student will be able to:
59.01	Review the EMT standards and benchmarks for Multiple Casualty Incidents.

60.0	<b>Air Medical:</b> Demonstrate a complex depth, comprehensive breadth of knowledge of air medical transport risks, needs and advantages. – The student will be able to:
60.01	Describe the advantages and disadvantages of air medical transport.
60.02	Identify appropriate reasons for the use of air medical for emergency patient transport.
60.03	Describe the risks involved with the use of air medical transport.
60.04	Demonstrate the actions needed to ensure effective and safe ground operations involving air medical response.
60.05	Demonstrate appropriate communication of information needed for safe and effective interaction between the air medical crew and ground personnel.
61.0	<b>Vehicle Extrication:</b> Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools. – The student will be able to:
61.01	Review the EMT standards and benchmarks for Vehicle Extrication.
62.0	<b>Hazardous Materials Awareness:</b> Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident. – The student will be able to:
62.01	Review the EMT standards and benchmarks for Hazardous Materials Awareness.
63.0	<b>Mass Casualty Incidents due to Terrorism and Disasters:</b> Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster. – The student will be able to:
63.01	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.

### **Special Notes**

**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 Objectives.” Please refer to the EMT curriculum framework for specific objectives.**

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.

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](http://www.mycareershines.org).

### **Career and Technical Student Organization (CTSO)**

HOSA: Future Health Professional is the intercurricular career and technical student organization(s) 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.

### **Basic Skills**

In a Career Certificate Program 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.

### **Program Length**

In accordance with Rule 6A-10.024, F.A.C. an ATD program consists of a course of study that is part of an AS or AAS degree program, is less than 60 credit hours, is approximately 50% of the technical component (non-general education), and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit.

Students must have a high school diploma, a GED, or a certificate of completion to be admitted to an ATD program. Within six weeks of entry, students in ATD programs of 450 or more hours must be tested pursuant to Rule 6A-10.040, F.A.C. and if below minimum standards for completion from the program, must receive remedial instruction. The minimum standards must be at least the equivalent of a score of ten (10) on all sections of basic skills test approved in Rule 6A-10.040, F.A.C. Students must successfully complete all remedial instruction before completing the ATD.

Community Colleges may offer either college or career credit toward the ATD. A Career Center in a public school district may offer an ATD program only as technical credit, with college credit awarded to a student upon articulation to a community college (Section 1004.02, F.S.)

When offered at a community college the standard length of this program is 42 credits. When offered at a technical center the standard length of this program is 1100 clock hours.

In accordance with Rule 6A-10.024, F.A.C. all faculty providing instruction must have at least a baccalaureate degree or an associate degree with demonstrated competencies in the specific instructional program as defined by the Southern Association of Colleges and Schools.

### **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>