EMERGENCY MEDICAL SERVICES TECHNOLOGY
MISSISSIPPI CURRICULUM FRAMEWORK

Emergency Medical Technician & Paramedic - CIP: 51.0904-(Emergency Medical Technology/Technician EMT Paramedic)

2025

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The Office of Curriculum and Instruction (OCI) was founded in 2013 under the Division of Workforce, Career, and Technical Education at the Mississippi Community College Board (MCCB). The office is funded through a partnership with The Mississippi Department of Education (MDE), who serves as Mississippi's fiscal agent for state and federal Career and Technical Education (CTE) Funds. The OCI is tasked with developing statewide CTE curriculum, programming, and professional development designed to meet the local and statewide economic demand.

NATIONAL CERTIFICATION & STANDARDS

National Emergency Medical Services Education Standards
The National EMS Education Standards represent another step toward realizing the vision of the 1996 EMS Agenda for the Future, as articulated in the 2000 EMS Education Agenda for the Future: A Systems Approach.

The National EMS Education Standards outline the minimal terminal objectives for entry-level EMS personnel to achieve within the parameters outlined in the National EMS Scope of Practice Model. Although educational programs must adhere to the Standards, its format will allow diverse implementation methods to meet local needs and evolving educational practices. The less prescriptive format of the Standards will also allow for ongoing revision of content consistent with scientific evidence and community standards of care.

In implementing the Standards, EMS instructors and educational programs will have the freedom to develop their own curricula or use any of the wide variety of publishers' lesson plans and instructional resources that are available at each licensure level. Consistent with the EMS Education Agenda, EMS accreditation authorities will use the Standards as the framework for evaluation of program curricula.

The National EMS Education Standards are not a stand-alone document. EMS education programs will incorporate each element of the education system proposed in the Education Agenda. These elements include:
- National EMS Core Content
- National EMS Scope of Practice
- National EMS Education Standards
- National EMS Certification
- National EMS Program Accreditation

This integrated system is essential to achieving the goals of program efficiency, consistency of instructional quality, and student competence as outlined in the Education Agenda.

For more information related to the National EMS Education Standards, please visit www.ems.gov.

For more information related to the National Registry of Emergency Medical Technicians-Paramedic Exam, please visit www.nremt.org.

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For more information related to the National Registry of Emergency Medical Technicians-Paramedic Exam, please visit www.nremt.org.

Mississippi Bureau of Emergency Medical Services
This framework is in compliance with the Mississippi EMS Laws, Rules and Regulations-.

For more information related to the Mississippi Bureau of Emergency Medical Services, please visit www.msdh.ms.gov.

Industry Job Projection Data

The Emergency Medical Technician and Paramedic require a postsecondary career and technical award. There is expected to be a 25.06% increase in occupational demand at the regional level and state level and 29.49% increase at the national level. Median annual income for this occupation is $30, 160.00 at the state level. A summary of occupational data from www.swib.ms.gov/DataCenter/ is displayed below: Table 1: Education Level

Program Occupations	Education Level
EMERGENCY MEDICAL TECHNICIANS AND PARAMEDICS	POSTSECONDARY CAREER AND TECHNICAL AWARD

Table 2: Occupational Overview

	Region	State	United States
2014 Occupational Jobs	2099	2099	224025
2024 Occupational Jobs	2625	2625	290079
Total Change	526	526	66054
Total % Change	25.06%	25.06%	29.49%
2014 Median Hourly Earnings	$14.50	$14.50	$15.24
2014 Median Annual Earnings	$30,160.00	$30,160.00	$31,699.20
Annual Openings	52	52	6605

Table 3: Occupational Breakdown

Description	2014 Jobs	2024 Jobs	Annual Openings	2014 Hourly Earnings	2014 Annual Earnings 2,080 Work Hours
EMERGENCY MEDICAL TECHNICIANS AND PARAMEDICS	2099	2625	52	$14.50	$30,160.00

Table 4: Occupational Change

Description	Regional Change	Regional % Change	State % Change	National % Change
EMERGENCY MEDICAL TECHNICIANS AND PARAMEDICS	526	25.06%	25.06%	29.49%

Articulation

There are no state-wide articulation agreements for this program.

TECHNICAL SKILLS ASSESSMENT

Colleges should report the following for students who complete the program with a career certificate, technical certificate, or an Associate of Applied Science Degrees for technical skills attainment. To use the approved Alternate Assessment for the following programs of study, colleges should provide a letter of Notification to the Director of Career Technical Education at the MS Community College Board. Please see the following link for further instructions: http://www.mccb.edu/wkfEdu/CTDefault.aspx.

CIP Code	Program of Study	
51.0904	Emergency Medical Technology/Technician	
Level	Standard Assessment	Alternate Assessment
	National Registry of Emergency Medical Technicians- Paramedic Exam National Registry of Emergency Medical Technicians- EMT Exam	

ONLINE AND BLENDED LEARNING OPPORTUNITIES

Course content includes lecture and laboratory semester credit hours. Faculty members are encouraged to present lecture related content to students in an online or blended learning environment. Training related to online and blended learning will be available to faculty members through the MS Community College Board.

INSTRUCTIONAL STRATEGIES

Instructional strategies for faculty members implementing the curriculum can be found through the Office of Curriculum and Instruction's professional development.

ASSESSMENT STRATEGIES

The Office of Curriculum and Instruction's professional development offer assessment strategies to faculty members implementing the curriculum. Additionally, standards were included in course content when appropriate.

Research Abstract

In the spring of 2017, the Office of Curriculum and Instruction (OCI) met with the different industry members who made up the advisory committees for the Emergency Medical Technology program. An industry questionnaire was used to gather feedback concerning the trends and needs, both current and future, of their field. Program faculty, administrators, and industry members were consulted regarding industry workforce needs and trends.

Industry advisory team members from the college involved with this program were asked to give input related to changes to be made to the curriculum framework. Specific comments related to soft skills needed in this program include having a positive attitude, being at work every day and on time, and having reading and writing skills to complete work orders and other forms. Occupation-specific skills stated include knowing how to communicate with the customers, basic math skills, troubleshooting with customer concerns, and understanding the importance of confidentiality.

The curriculum was restructured to mirror System-based Learning. There are two (2) options for the Emergency Medical Technician (EMT) and Paramedic programs. Both options are equal in learning content.

Emergency Medical Technician (EMT)

	Semester Credit Hours	Didactic/Lab	Clinical/Field	Total
Option 1 (Traditional)	7	120	45	165
Option 2 (System-based Learning)	7	120	45	165

Paramedic

	Semester Credit Hours	Didactic/Lab	Clinical/Field	Total
Option 1 (Lecture/Lab Split)	55	795	675	1,470
Option 2 (Lecture & Lab Combined)	55	795	675	1,470

In the fall of 2021, the Office of Curriculum and Instruction (OCI) met with the different industry members who made up the advisory committees for the Emergency Medical Technology program to update student learning out comes to meet the scope of practice for Emergency Medical Technology.

Revision History

2010, Revised, Research and Curriculum Unit, Mississippi State University (EMT)
2011, Revised, Research and Curriculum Unit, Mississippi State University (Paramedic)
2017, Revised, Office of Curriculum and Instruction, Mississippi Community College Board
2021, Revised, Office of Curriculum and Instruction, Mississippi Community College Board
2024, Revised, Office of Curriculum and Instruction, Mississippi Community College Board

Program Description

Emergency Medical Technician

Emergency Medical Technician is a one-semester instructional program that prepares individuals to provide basic emergency medical care and transportation for critical and emergent patients who access the emergency medical system. Emergency Medical Technicians function as part of a comprehensive EMS response, under medical oversight, trained in airway management, communications, documentation, general pharmacology, hemorrhage control, ambulance operations, and splinting of adult, pediatric, and infant patients; and special care of patients exposed to heat, cold, radiation, or contagious disease. Students who complete the program are eligible to take the National Registry of Emergency Medical Technicians Exam and become state certified.

Industry standards are based on the National EMS Education Standards and the Emergency Medical Technician Instructional Guidelines.

Paramedic

The paramedic is an allied health professional whose primary focus is to provide advanced emergency medical care for critical and emergent patients who access the emergency medical system. This individual possesses the complex knowledge and skills necessary to provide patient care and transportation. Paramedics function as part of a comprehensive EMS response, under medical oversight. Paramedics perform interventions with the basic and advanced equipment typically found on an ambulance. The paramedic is a link from the scene into the health-care system.

Paramedics possess the knowledge, skills, and attitudes consistent with the expectations of the public and the profession. Paramedics recognize that they are an essential component of the continuum of care and serve as links among health resources.

Paramedics strive to maintain high quality, reasonable cost health care by delivering patients directly to appropriate facilities. As an advocate for patients, paramedics seek to be proactive in affecting long-term health care by working in conjunction with other provider agencies, networks, and organizations. The emerging roles and responsibilities of the paramedic include public education, health promotion, and participation in injury and illness prevention programs. As the scope of service continues to expand, the paramedic will function as a facilitator of access to care, as well as an initial treatment provider.

Paramedics are responsible and accountable to medical direction, the public, and their peers. Paramedics recognize the importance of research and actively participate in the design, development, evaluation, and publication of research. Paramedics seek to take part in life-long professional development and peer evaluation, and they assume an active role in professional and community organizations.

The paramedic training program is a postsecondary program drawing its students from individuals who already possess a valid EMT national certification.

Classroom instruction is comprehensive including a working knowledge of all anatomy, physiology, and pathophysiological processes as well as competency-based instruction in assessment and management skills required for treatment of life-threatening problems in the adult, pediatric, and geriatric patient. Clinical internship requires participation in care of patients in a hospital emergency department that provides medical control to ALS providers in the field and, according to availability, CCU, ICU, labor and delivery suite, operating room, psychiatric ward, pediatric ward, and geriatric ward. Field internship is done with an ambulance service and/or rescue service providing advanced life support services to the community. This training program is sanctioned by the Mississippi State Board of Health. The course meets or exceeds those standards established by the National Highway Traffic Safety Administration/U.S. Department of Transportation.

EMERGENCY MEDICAL TECHNOLOGY COURSES

Emergency Medical Technician Courses (Option 1)

Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Hours	Clinical/ Field	Total Contact Hours	Total Contact Hours	Program Certification
EMS 1117	Emergency Medical Technician (EMT)	7	4	4	120	3	45	165	National Registry of Emergency Medical Technicians Exam
	TOTAL	7	Didactic/ Lab Total		120	Clinical/ Field Total	45	165	

**

Module System of Study**

Module 1: Introduction to EMS Systems and Operations

Module 2: Medical Terminology, Lifespan Development, Anatomy/Physiology

Module 3: Airway

Module 4: Pathophysiology, Shock and Resuscitation

Module 5: Patient Assessment

Module 6: Pharmacology, Medical Module

7: Trauma

Module 8: Special Patient Populations

Emergency Medical Technician Courses (Option 2)

Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Hours	Clinical/ Field	Total Contact Hours	Total Contact Hours	Program Certification
EMS 1163	Emergency Medical Technician I (EMT)	3	2	2	60	0	0	60	National Registry of Emergency Medical Technicians Exam
EMS 1174	Emergency Medical Technician II	4	2	2	60	3	45	105	
	TOTAL	7	Didactic/lab Total		120	Clinical/ Field Total	45	165	

Emergency Medical Technician Courses (Option 3)

Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Hours	Clinical/ Field	Total Contact Hours	Total Contact Hours	Program Certification
EMS 1163	Emergency Medical Technician I (EMT)	3	2	2	60	0	0	60	National Registry of Emergency Medical Technicians Exam
EMS 1174	Emergency Medical Technician II	4	2	2	60	3	45	105	
OR EMS 1117	Emergency Medical Technician (EMT)	7	4	4	120	3	45	165	
	Instructor approved electives per local community college	8							
	TOTAL	22	Didactic/lab Total		120	Clinical/ Field Total	45	165	

Paramedic Courses – Lecture / Lab split option (Option 1)

National registered EMT certification is a prerequisite (by state law and national standards) for testing at the Paramedic level. Students must obtain state EMT certification before or after admission into the program.

Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Hours	Clinical	Field	Total Hours	Total Contact Hours	Program Certifications
EMS 1142	Foundations of Paramedicine - Lecture	2	2	0	30	0	0	0	30	

EMS 1151	Foundations of Paramedicine Lab	1	0	2	30	0	0	0	30	
EMS 1242	Concepts of Airway and Respiratory Medicine - Lecture	2	2	0	30	0	0	0	30	
EMS 1251	Concepts of Airway and Respiratory Medicine - Lab	1	0	2	30	0	0	0	30	
EMS 1343	Concepts of Cardiovascular Medicine - Lecture	3	3	0	45	0	0	0	45	
EMS 1352	Concepts of Cardiovascular Medicine- Lab	2	0	4	60	0	0	0	60	
EMS 1514	Practicum I	4	0	0	0	12		180	180	National Registry of Emergency Medical Technicians Paramedic Exam
EMS 1742	Concepts of Neurological Medicine - Lecture	2	2	0	30	0	0	0	30	
EMS 1751	Concepts of Neurological Medicine- Lab	1	0	2	30	0	0	0	30	
EMS 1942	Concepts of Reproductive Medicine - Lecture	2	2	0	30	0	0	0	30	
EMS 1951	Concepts of Reproductive Medicine- Lab	1	0	2	30	0	0	0	30	
EMS 2343	Medical Emergencies of the Secondary Assessment - Lecture	3	3	0	45	0	0	0	45	
EMS 2351	Medical	1	0	2	30	0	0	0	30	

	Emergencies of the Secondary Assessment- Lab									
EMS 2743	Concepts of Traumatic Medicine - Lecture	3	3	0	45	0	0	0	45	
EMS 2752	Concepts of Traumatic Medicine - Lab	2	0	4	60	0	0	0	60	
EMS 1525	Practicum II	5	0	0	0	9	6	225	225	
EMS 2912	Concepts of EMS Operations	2	2	0	30	0	0	0	30	
EMS 2942	Paramedic Capstone - Lecture	2	2	0	30	0	0	0	30	
EMS 2952	Paramedic Capstone - Lab	2	0	4	60	0	0	0	60	
EMS 2566	Practicum III	6	0	0	0	9	9	270	270	
	Total	55	Didactic/Lab Total		795	Clinical/Field Total		675	1,470	

Paramedic Courses – Lecture and Lab Combined option (Option 2)

Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Hours	Clinical	Field	Total Hours	Total Contact Hours	Program Certifications
EMS 1133	Foundations of Paramedicine – Lecture and Lab	3	2	2	60	0	0	0	60	National Registry of Emergency Medical Technicians Paramedic Exam
EMS 1213	Concepts of Airway and Respiratory Medicine – Lecture and Lab	3	2	2	60	0	0	0	60	
EMS 1325	Concepts of Cardiovascular Medicine – Lecture and Lab	5	3	4	105	0	0	0	105	
EMS 1514	Practicum I	4	0	0	0	12		180	180	
EMS 1713	Concepts of Neurological Medicine – Lecture and Lab	3	2	2	60	0	0	0	60	
EMS 1913	Concepts of Reproductive Medicine – Lecture and Lab	3	2	2	60	0	0	0	60	
EMS 2314	Medical Emergencies of the Secondary Assessment – Lecture and Lab	4	3	2	75	0	0	0	75	
EMS 2715	Concepts of Traumatic Medicine – Lecture and Lab	5	3	4	105	0	0	0	105	
EMS 1525	Practicum II	5	0	0	0	9	6	225	225	
EMS 2912	Concepts of EMS Operations	2	2	0	30	0	0	0	30	
EMS 2934	Paramedic Capstone – Lecture and Lab	4	2	4	90	0	0	0	90	
EMS 2566	Practicum III	6	0	0	0	9	9	270	270	
	Total	55	Didactic/Lab Total		795	Clinical/Field Total		675	1,470	

General Education Core Courses

To receive the Associate of Applied Science Degree, a student must complete all of the required coursework found in the Career Certificate option, Technical Certificate option and a minimum of 15 semester hours of General Education Core. The courses in the General Education Core may be spaced out over the entire length of the program so that students complete some academic and Career Technical courses each semester or provided primarily within the last semester. Each community college will specify the actual courses that are required to meet the General Education Core
Requirements for the Associate of Applied Science Degree at their college. The Southern Association of Colleges and Schools (SACS) Commission on Colleges Standard 2.7.3 from the Principles of Accreditation: Foundations for Quality Enhancement1 describes the general education core.

Section 2.7.3 In each undergraduate degree program, the institution requires the successful completion of a general education component at the collegiate level that (1) is substantial component of each undergraduate degree, (2) ensures breadth of knowledge, and (3) is based on a coherent rationale. For degree completion in associate programs, the component constitutes a minimum of 15 semester hours or the equivalent. These credit hours are to be drawn from and include at least one course from the following areas: humanities/fine arts, social/behavioral sciences, and natural science/mathematics. The courses do not narrowly focus on those skills, techniques, and procedures specific to a particular occupation or profession.

			SCH Breakdown			Program Certifications
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Contact Hours	
	Humanities/Fine Arts	3				
	Social/Behavioral Sciences	3				
	Math/Science*	3				
	Other academic courses per local community college requirements for AAS degree	6				
	TOTAL	15				

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1 Southern Association of Colleges and Schools Commission on Colleges. (2012). The principles of accreditation: Foundations for quality enhancement. Retrieved from http://www.sacscoc.org/pdf/2012PrinciplesOfAcreditation.pdf

EMERGENCY MEDICAL TECHNICIAN COURSE DESCRIPTIONS

Course Number and Name: EMS 1117 Emergency Medical Technician (EMT)

Description: This course includes responsibilities of the EMT during each phase of an ambulance run, patient assessment, emergency medical conditions, appropriate emergency care, and appropriate procedures for transporting patient.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Clinical	Contact Hours
7	4	4	3	165

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Acquire a professional knowledge and skills of Emergency Medical Services (EMS) systems to include the roles and responsibilities of an EMT. a. Define EMS systems.
   b. Differentiate between the roles and responsibilities of the EMT and the roles and responsibilities of other out-of-hospital care providers.
   c. Describe the roles and responsibilities related to personal safety.
   d. Discuss the roles and responsibilities of the EMT toward the safety of the crew, the patient, and bystanders.
   e. Define quality improvement, and discuss the EMT's role in the process.
   f. Define medical direction, and discuss the EMT's role in the process.
   g. State the specific statutes and regulations in your state regarding the EMS system.
   h. Assess areas of personal attitude and conduct of the EMT.
   i. Characterize the various methods used to access the EMS system in your community.
   j. Describe evidence-based decision making.
   k. Use simple knowledge of the principles of illness and injury prevention in emergency care.
2. Recognize factors associated with wellness and personal safety.
   a. List possible emotional reactions that the EMT may experience when faced with trauma, illness, death, and dying.
   b. Discuss the possible reactions that a family member may exhibit when confronted with death and dying.
   c. State the steps in the EMT's approach to the family confronted with death and dying.
   d. State the possible reactions that the family members of the EMT may exhibit due to their outside involvement in EMS.
   e. Recognize the signs and symptoms of critical incident stress.
   f. State possible steps that the EMT may take to help reduce/alleviate stress.
   g. Explain the need to determine scene safety.
   h. Discuss the importance of body substance isolation.
   i. Describe the steps the EMT should take for personal protection from airborne and bloodborne pathogens.
   j. List the personal protective equipment necessary for each of the following situations:
      - Hazardous materials
      - Rescue operations
      - Violent scenes
      - Crime scenes
      - Exposure to bloodborne pathogens
      - Exposure to airborne pathogens
   k. Describe infectious pathogens including HIV, MRSA, hepatitis, meningitis, and tuberculosis.
   l. Explain the rationale for serving as an advocate for the use of appropriate protective equipment.
   m. Given a scenario with potential infectious exposure, use appropriate personal protective equipment; at the completion of the scenario, properly remove and discard the protective garments.
   n. Given the above scenario, complete disinfection/cleaning and all reporting documentation.
   o. Demonstrate proper techniques for lifting and moving patients.
   p. Explain the rationale for crew members to evaluate scene safety prior to entering the scene.
3. Explain medical, legal, and ethical implications that impact the functioning of an EMT.
   a. Define the EMT scope of practice.

b. Discuss the importance of Do Not Resuscitate [DNR] (advance directives) and local or state provisions regarding EMS application.
c. Define consent, and discuss the methods of obtaining consent.
d. Differentiate between expressed and implied consent.
e. Explain the role of consent of minors in providing care.
f. Discuss the implications for the EMT in patient refusal of transport.
g. Discuss the issues of abandonment, negligence, and battery and their implications to the EMT.
h. State the conditions necessary for the EMT to have a duty to act.
i. Explain the importance, necessity, and legality of patient confidentiality, including HIPAA.
j. Discuss the considerations of the EMT in issues of organ retrieval.
k. Differentiate the actions that an EMT should take to assist in the preservation of a crime scene.
l. State conditions that require an EMT to notify local law enforcement officials.
m. Explain the role of EMS and the EMT regarding patients with DNR orders.
n. Explain the rationale for the needs, benefits, and usage of advance directives.
o. Explain the rationale for the concept of varying degrees of DNR.

4. Apply fundamental knowledge of the anatomy and function of all human systems to the practice of EMS.
   a. Describe anatomy and body functions.
   b. Discuss the life support chain.
   c. Identify age-related variations.
5. Use foundational anatomical and medical terms and abbreviations in written and oral communication with colleagues and other health-care professionals.
6. Demonstrate the appropriate methods and equipment utilized for cardiopulmonary resuscitation of the adult and pediatric patient, and obtain a health-care provider CPR card. [1]
   a. Demonstrate skills associated with maintaining an open airway for the adult, child, and infant.
   b. Demonstrate the appropriate methods for assessing ventilation and the adequacy of artificial ventilation.
   c. Demonstrate techniques for assessing circulation.
   d. Demonstrate techniques for appropriate CPR for the adult, child, and infant, including the use of an automated external defibrillator.
   e. Demonstrate the ability to recognize foreign body airway obstruction in the adult, child, and infant.
   f. Demonstrate the ability to manage foreign body airway obstruction in the adult, child, and infant.
7. Apply fundamental knowledge of therapeutic communication to the provision of emergency care.
8. Demonstrate the proper procedure and skills for effective radio communications.
   a. List the proper methods of initiating and terminating a radio call.
   b. State the proper sequence for delivery of patient information.
   c. Explain the importance of effective communication of patient information in the verbal report.
   d. Identify the essential components of the verbal report.
   e. Describe the attributes for increasing effectiveness and efficiency of verbal communications.
   f. State legal aspects to consider in verbal communication.
   g. Discuss the communication skills that should be used to interact with the patient.
   h. Discuss the communication skills that should be used to interact with the family, bystanders, and individuals from other agencies while providing patient care and the difference between skills used to interact with the patient and those used to interact with others.
   i. List the correct radio procedures in the following phases of a typical call:
      - To the scene
      - At the scene
      - To the facility
      - At the facility
      - To the station
      - At the station
   j. Explain the rationale for providing efficient and effective radio communications and patient reports.
   k. Perform a simulated, organized, concise radio transmission.
   l. Perform an organized, concise patient report that would be given to the staff at a receiving facility.

m. Perform a brief, organized report that would be given to an ALS provider arriving at an incident scene at which the EMT was already providing care.

9. Develop appropriate documentation that adheres to state and local requirements.
   a. Explain the components of the written report, and list the information that should be included in the written report.
   b. Identify the various sections of the written report.
   c. Describe what information is required in each section of the out-of-hospital care report and how it should be entered.
   d. Define the special considerations concerning patient refusal.
   e. Describe the legal implications associated with the written report.
   f. Discuss all state and local record and reporting requirements.
   g. Explain the rationale for patient care documentation.
   h. Explain the rationale for the EMS system gathering data.
   i. Explain the rationale for using medical terminology correctly.
   j. Explain the rationale for using an accurate and synchronous clock so that information can be used in trending.
   k. Complete an out-of-hospital care report.
10. Discuss the respiratory system and appropriate airway and ventilatory management.
   a. Label the major structures of the respiratory system on a diagram.
   b. Describe the pathophysiology of the respiratory system.
   c. List the signs of adequate breathing.
   d. List the signs of inadequate breathing.
   e. Describe the steps in performing the head-tilt chin lift.
   f. Relate mechanism of injury to opening the airway.
   g. Describe the steps in performing the jaw thrust.
   h. State the importance of having a suction unit ready for immediate use when providing emergency care.
   i. Describe the techniques of suctioning.
   j. Describe how to artificially ventilate a patient with a pocket mask.
   k. Describe the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask while using the jaw thrust.
   l. List the parts of a bag-valve-mask system.
   m. Describe the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask for one, two, and three rescuers.
   n. Describe the signs of adequate artificial ventilation using the bag-valve-mask.
   o. Describe the signs of inadequate artificial ventilation using the bag-valve-mask.
   p. Describe the steps in artificially ventilating a patient with a flow-restricted, oxygen-powered ventilation device.
   q. List the steps in performing the actions taken when providing mouth-to-mask and BVM-to-stoma artificial ventilation.
   r. Describe how to measure and insert an oropharyngeal (oral) airway.
   s. Describe how to measure and insert a nasopharyngeal (nasal) airway.
   t. Explain the components of an oxygen delivery system including pulse oximetry.
   u. Identify a nonrebreather face mask, and state the oxygen flow requirements needed for its use.
   v. Describe the indications for using a nasal cannula versus a nonrebreather face mask.
   w. Identify a nasal cannula, and state the flow requirements needed for its use.
   x. Explain the rationale for basic life support, artificial ventilation, and airway protective skills taking priority over most other basic life support skills.
   y. Explain the rationale for providing adequate oxygenation through high inspired oxygen concentrations to patients who, in the past, may have received low concentrations.
   z. Explain the rationale for providing proper ventilations to neurological patients.
   aa. Demonstrate the steps in performing the head-tilt chin lift. bb. Demonstrate the steps in performing the jaw thrust. cc. Demonstrate the techniques of suctioning.
   dd. Demonstrate the steps in providing mouth-to-mask artificial ventilation with body substance isolation.
   ee. Demonstrate how to use a pocket mask to artificially ventilate an adult patient.
   ff. Demonstrate the assembly of a bag-valve-mask unit.
   gg. Demonstrate the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask for one, two, and three rescuers.
   hh. Demonstrate the steps in performing the skill of artificially ventilating a patient with a bag-valve-mask while using the jaw thrust.

ii. Demonstrate artificial ventilation of a patient with a flow-restricted, oxygen-powered ventilation device.
jj. Demonstrate how to artificially ventilate a patient with a stoma. kk. Demonstrate how to insert an oropharyngeal (oral) airway. ll. Demonstrate how to insert a nasopharyngeal (nasal) airway. mm.Demonstrate the correct operation of oxygen tanks and regulators.
nn. Demonstrate the use of a nonrebreather face mask, and state the oxygen flow requirements needed for its use.
oo. Demonstrate the use of a nasal cannula, and state the flow requirements needed for its use.
pp. Demonstrate how to artificially ventilate the infant and child patient. qq. Demonstrate oxygen administration for the infant and child patient.
rr. Demonstrate the use of a pulse oximeter. ss.
Demonstrate the use of oxygen humidifiers.
tt. Demonstrate the use of partial rebreather masks.
uu. Demonstrate the use of Venturi masks.
vv. Demonstrate the use of automated transport ventilators.
ww. Describe indications for use of nebulized medication administration including the use of beta agonist and anticholinergic medications xx. Demonstrate the use of a nebulizer.

11. Apply patient assessment to the emergency care of medical and trauma patients throughout the different stages of the life span.
    a. Explain the components of scene size-up.
    b. Demonstrate the components of scene size-up.
    c. Explain the components of primary assessment.
    d. Demonstrate the components of primary assessment.
12. Explain the assessment of vital signs.
    a. Demonstrate the assessment of vital signs.
    b. Explain the components of history taking.
    c. Demonstrate the components of history taking.
13. Explain the components of secondary assessment.
14. Demonstrate the components of secondary assessment.
    a. Explain the use of monitoring devices.
    b. Demonstrate the use of monitoring devices.
    c. Explain the components of reassessment.
    d. Demonstrate the components of reassessment.
15. Discuss pharmacology relative to the EMT.
    a. Identify medications that may be utilized by the EMT.
    b. Discuss generic and trade names.
    c. Discuss medication forms.
    d. Explain the rationale for the administration of medications.
    e. Demonstrate medication administration.
    f. Read the labels, and inspect each type of medication.
    g. Discuss the six rights of medication administration.
16. Describe the assessment, care, and treatment of patients with respiratory emergencies. EMB 2,
    a. List the structure, function, and pathophysiology of the respiratory system.
    b. Identify the signs and symptoms of a patient with breathing difficulty.
    c. Describe the emergency medical care and management of the patient with breathing difficulty.
    d. Recognize the need for medical direction to assist in the emergency medical care of the patient with breathing difficulty.
    e. Describe the emergency medical care and management of the patient with breathing distress.
    f. Explain the relationship between airway management and the patient with breathing difficulty.
    g. Identify the signs of adequate air exchange.
    h. Assist the patient with a prescribed nebulized/aerosolized inhaler.
    i. Distinguish among the emergency medical care of the infant, child, and adult patient with breathing difficulty.
    j. Differentiate between upper airway obstruction and lower airway disease in the infant and child patient.
    k. Discuss EMT treatment regimens for various respiratory emergencies.
    l. Explain the rationale for administering an inhaler.
    m. Demonstrate the emergency medical care for breathing difficulty.
    n. Perform the steps in facilitating the use of an inhaler.
17. Demonstrate cardiac interventions and the management of the cardiac patient.

a. Describe the structure and function of the cardiovascular system.
b. Discuss the emergency medical care of the patient experiencing chest pain or discomfort, including application of the cardiac monitor.
c. List the indications for automated external defibrillation.
d. List the contraindications for automated external defibrillation.
e. Define the role of the EMT in the emergency cardiac care system.
f. Explain the impact of age and weight on defibrillation.
g. Discuss the position of comfort for patients with various cardiac emergencies.
h. Establish the relationship between airway management and the patient with cardiovascular compromise.
i. Predict the relationship between the patient experiencing cardiovascular compromise and basic life support.
j. Discuss the fundamentals of early defibrillation.
k. Explain the rationale for early defibrillation.
l. Explain that not all chest pain patients result in cardiac arrest and do not need to be attached to an automated external defibrillator.
m. Explain the importance of out-of-hospital Advanced Cardiac Life Support (ACLS) intervention if it is available.
n. Explain the importance of urgent transport to a facility with ACLS if it is not available in the out-of- hospital setting.
o. Discuss the various types of adult and pediatric automated external defibrillators.
p. Differentiate between the fully automated and the semiautomated defibrillator.
q. Discuss the procedures that must be taken into consideration for standard operations of the various types of automated external defibrillators.
r. State the reasons for assuring that the patient is pulseless and apneic when using the automated external defibrillator.
s. Discuss the circumstances that may result in inappropriate shocks.
t. Explain the considerations for interruption of CPR when using the automated external defibrillator.
u. Discuss the advantages and disadvantages of automated external defibrillators.
v. Discuss the use of CPR assist devices.
w. Summarize the speed of operation of automated external defibrillation.
x. Discuss the use of remote defibrillation through adhesive pads.
y. Discuss the special considerations for rhythm monitoring.
z. List the steps in the operation of the automated external defibrillator.
aa. Discuss the standard of care that should be used to provide care to a patient with persistent ventricular fibrillation and no available ACLS. bb. Discuss the standard of care that should be used to provide care to a patient with recurrent ventricular fibrillation and no available ACLS.
cc. Differentiate between single rescuer and multi-rescuer care with an automated external defibrillator. dd. Explain the reason for not checking pulses between shocks with an automated external defibrillator.
ee. Discuss the importance of coordinating ACLS trained providers with personnel using automated external defibrillators.
ff. Discuss the importance of post-resuscitation care. gg. List the components of post-resuscitation care.
hh. Explain the importance of frequent practice with the automated external defibrillator. ii. Discuss the need to complete the Automated Defibrillator: Operator's Shift Checklist. jj. Discuss the role of the American Heart Association (AHA) in the use of automated. kk. Explain the role medical direction plays in the use of automated external defibrillation.
ll. State the reasons that a case review should be completed following the use of the automated external defibrillator.
mm. Discuss the components that should be included in a case review.
nn. Discuss the goal of quality improvement in automated external defibrillation.
oo. Recognize the need for medical direction of protocols to assist in the emergency medical care of the patient with chest pain.
pp. List the indications for the use of nitroglycerin.
qq. State the contraindications and side effects for the use of nitroglycerin. rr. List the indications for the use of aspirin.
ss. State the contraindications and side effects for the use of aspirin.
tt. Define the function of all controls on an automated external defibrillator, and describe event documentation and battery defibrillator maintenance.

uu. Defend the reasons for obtaining initial training in automated external defibrillation and the importance of continuing education.

vv. Defend the reason for maintenance of automated external defibrillators.

ww. Explain the rationale for administering nitroglycerin to a patient with chest pain or discomfort. xx. Demonstrate the assessment and emergency medical care of a patient experiencing chest pain or discomfort.

yy. Demonstrate the application and operation of the automated external defibrillator.

zz. Demonstrate the maintenance of an automated external defibrillator.

aaa. Demonstrate the assessment and documentation of patient response to the automated external defibrillator. bbb. Demonstrate the skills necessary to complete the Automated Defibrillator: Operator's Shift Checklist.

ccc. Perform the steps in facilitating the use of nitroglycerin for chest pain or discomfort. ddd. Demonstrate the assessment and documentation of patient response to nitroglycerin. eee. Practice completing an out-of-hospital care report for patients with cardiac emergencies. fff.

Describe the anatomical, physiological, pathophysiological, assessment, and management considerations of the following:

- Sickle cell crisis
- Clotting disorders external defibrillation.

ggg. Demonstrate the acquisition and transmission of a 12 Lead EKG.

18. Apply fundamental knowledge to provide basic emergency care and transportation based on assessment findings for patients suffering from abdominal, gastrointestinal, or genitourinary disorders.
    a. Describe the anatomical, physiological, pathophysiological, assessment, and management considerations of the following:
        - Acute and chronic gastrointestinal hemorrhage
        - Peritonitis Ulcerative diseases
    b. Describe the anatomical, physiological, pathophysiological, assessment, and management considerations of the following:
        - Renal dialysis
        - Urinary catheter management (not insertion)
        - Kidney stones
19. Perform out-of-hospital interventions for a patient with a diabetic emergency.
    a. Identify the patient taking diabetic medications with altered mental status and the implications of a diabetes history.
    b. State the steps in the emergency medical care of the patient taking diabetic medicine with an altered mental status and a history of diabetes.
    c. Establish the relationship between airway management and the patient with altered mental status.
    d. State the generic and trade names, medication forms, dose, administration, action, and contraindications for oral glucose.
    e. Evaluate the need for medical direction in the emergency medical care of the diabetic patient.
    f. Explain the rationale for administering oral glucose.
    g. Demonstrate the steps in the emergency medical care for the patient taking diabetic medicine with an altered mental status and a history of diabetes.
    h. Demonstrate the steps in the administration of oral glucose.
    i. Demonstrate the assessment and documentation of patient response to oral glucose.
    j. Demonstrate how to complete an out-of-hospital care report for patients with diabetic emergencies.
20. Demonstrate the management of a patient with an allergic reaction.
    a. Recognize the patient experiencing an allergic reaction.
    b. Describe the emergency medical care of the patient with an allergic reaction.
    c. Establish the relationship between the patient with an allergic reaction and airway management.
    d. Describe the mechanisms of allergic response and the implications for airway management.
    e. State the generic and trade names, medication forms, dose, administration, action, and contraindications for the epinephrine auto-injector.
    f. Evaluate the need for medical direction in the emergency medical care of the patient with an allergic reaction.
    g. Differentiate between the general category of those patients having an allergic reaction and those patients having an allergic reaction and requiring immediate medical care, including immediate use of the epinephrine auto-injector.

h. Explain the rationale for administering epinephrine using an auto-injector.
i. Demonstrate the emergency medical care of the patient experiencing an allergic reaction.
j. Demonstrate the use of the epinephrine auto-injector.
k. Demonstrate the assessment and documentation of patient response to an epinephrine injection.
l. Demonstrate proper disposal of equipment including sharps.
m. Demonstrate completing an out-of-hospital care report for patients with allergic emergencies.
n. Describe the anatomical, physiological, pathophysiological, assessment, and management considerations related to hypersensitivity emergencies and/or anaphylactic reactions.

21. Discuss appropriate intervention methods for poisoning.
    a. List various ways that poisons enter the body.
    b. List signs and symptoms associated with poisoning.
    c. Discuss the emergency medical care for the patient with possible overdose.
    d. Describe the steps in the emergency medical care for the patient with suspected poisoning.
    e. Establish the relationship between the patient suffering from poisoning or overdose and airway management.
    f. Recognize the need for medical direction in caring for the patient with poisoning or overdose.
    g. Explain the rationale for contacting medical direction early in the out-of-hospital management of the poisoning or overdose patient.
    h. Demonstrate the steps in the emergency medical care for the patient with possible overdose.
    i. Demonstrate the steps in the emergency medical care for the patient with suspected poisoning.
    j. Demonstrate the assessment and documentation of patient response.
    k. Demonstrate completing an out-of-hospital care report for patients with a poisoning or overdose emergency.
22. Identify environmental conditions that pose a hazard to the body, and discuss appropriate management techniques.
    a. Describe the various ways that the body loses heat.
    b. List the signs and symptoms of exposure to cold.
    c. Explain the steps in providing emergency medical care to a patient exposed to cold.
    d. List the signs and symptoms of exposure to heat.
    e. Explain the steps in providing emergency care to a patient exposed to heat.
    f. Recognize the signs and symptoms of water-related emergencies.
    g. Describe the complications of near drowning.
    h. Discuss the emergency medical care of bites and stings.
    i. Demonstrate the assessment and emergency medical care of a patient with exposure to cold.
    j. Demonstrate the assessment and emergency medical care of a patient with exposure to heat.
    k. Demonstrate the assessment and emergency medical care of a near drowning patient.
    l. Demonstrate completing an out-of-hospital care report for patients with environmental emergencies.
23. Appraise behaviors relative to the potential for harm, and explain appropriate intervention.
    a. Define behavioral emergencies.
    b. Discuss the general factors that may cause an alteration in patient's behavior.
    c. State the various reasons for psychological crises.
    d. Discuss the characteristics of an individual's behavior that suggest that the patient is at risk for suicide.
    e. Discuss special medical and legal considerations for managing behavioral emergencies.
    f. Discuss the special considerations for assessing a patient with behavioral problems.
    g. Discuss the general principles of an individual's behavior that suggest that he or she is at risk for violence.
    h. Discuss methods to calm behavioral emergency patients.
    i. Explain the rationale for learning how to modify behavior toward the patient with a behavioral emergency.
    j. Demonstrate the assessment and emergency medical care of the patient experiencing a behavioral emergency.
    k. Demonstrate various techniques to safely restrain a patient with a behavioral problem.
    l. Demonstrate the proper assessment and management of the following:
        - Acute psychosis
        - Suicidal/risk
        - Agitated delirium
24. Manage an obstetrical emergency to include care for the neonate.
    a. Identify the following structures: uterus, vagina, fetus, placenta, umbilical cord, amniotic sac, and perineum.
    b. Identify and explain the use of the contents of an obstetrics kit.

c. Identify pre-delivery emergencies to include preeclampsia, eclampsia, and premature rupture of membranes.
d. State indications of an imminent delivery.
e. Differentiate between the emergency medical care provided to a patient with pre-delivery emergencies from a normal delivery.
f. State the steps in the pre-delivery preparation of the mother.
g. Establish the relationship between body substance isolation and childbirth.
h. State the steps to assist in the delivery.
i. Describe care of the baby as the head appears.
j. Describe how and when to cut the umbilical cord.
k. Discuss the steps in the delivery of the placenta.
l. List the steps in the emergency medical care of the mother post-delivery.
m. Summarize neonatal resuscitation procedures.
n. Describe the procedures for the following abnormal deliveries: breech birth, prolapsed cord, and limb presentation.
o. Differentiate between the special considerations for multiple births and considerations for single birth.
p. Describe special considerations of meconium.
q. Describe special considerations of a premature baby.
r. Discuss the emergency medical care of a patient with a gynecological emergency.
s. Discuss sexually transmitted diseases and pelvic inflammatory disease.
t. Explain the rationale for understanding the implications of treating two patients (mother and baby).
u. Demonstrate the steps to assist in the normal cephalic delivery.
v. Demonstrate necessary care procedures of the fetus as the head appears.
w. Demonstrate infant neonatal procedures.
x. Demonstrate post-delivery care of the infant.
y. Demonstrate how and when to cut the umbilical cord.
z. Attend to the steps in the delivery of the placenta. aa. Demonstrate the post-delivery care of the mother.
bb. Demonstrate the procedures for the following abnormal deliveries: vaginal bleeding, breech birth, prolapsed cord, and limb presentation.
cc. Demonstrate the steps in the emergency medical care of the mother with excessive bleeding.
dd. Demonstrate completing an out-of-hospital care report for patients with obstetrical and gynecological emergencies.

25. Describe the pathophysiology of hypoperfusion, and demonstrate emergency interventions.
    a. List the structure and function of the circulatory system.
    b. Differentiate among arterial, venous, and capillary bleeding.
    c. State methods of emergency medical care of external bleeding.
    d. Establish the relationship between body substance isolation and bleeding.
    e. Establish the relationship between airway management and the trauma patient.
    f. Establish the relationship between mechanism of injury and internal bleeding.
    g. List the signs of internal bleeding.
    h. List the steps in the emergency medical care of the patient with signs and symptoms of internal bleeding.
    i. List signs and symptoms of shock (hypoperfusion).
    j. List the steps in the emergency medical care of the patient with signs and symptoms of shock (hypoperfusion).
    k. Explain the sense of urgency to transport patients that are bleeding and show signs of shock (hypoperfusion).
    l. Demonstrate direct pressure as a method of emergency medical care of external bleeding.
    m. Demonstrate the use of diffuse pressure as a method of emergency medical care of external bleeding.
    n. Demonstrate timely and appropriate tourniquet use for refractory external bleeding.
    o. Demonstrate the care of the patient exhibiting signs and symptoms of internal bleeding.
    p. Demonstrate the care of the patient exhibiting signs and symptoms of shock (hypoperfusion).
    q. Demonstrate completing a out-of-hospital care report for the patient with bleeding or shock (hypoperfusion).
26. Explain soft tissue injuries, and perform the techniques used in the management of various soft tissue injuries.
    a. State the major functions of the skin.
    b. List the layers of the skin.
    c. Establish the relationship between body substance isolation (BSI) and soft tissue injuries.
    d. List the types of closed soft tissue injuries.
    e. Describe the emergency medical care of the patient with a closed soft tissue injury.

f. State the types of open soft tissue injuries.
g. Describe the emergency medical care of the patient with an open soft tissue injury.
h. Discuss the emergency medical care considerations for a patient with a penetrating chest injury.
i. State the emergency medical care considerations for a patient with an open wound to the abdomen.
j. Differentiate between the care of an open wound to the chest and the care of an open wound to the abdomen.
k. List the classifications of burns.
l. Define superficial burns.
m. List the characteristics of a superficial burn.
n. Define partial thickness burn.
o. List the characteristics of a partial thickness burn.
p. Define full thickness burn.
q. List the characteristics of a full thickness burn.
r. Describe the emergency medical care of the patient with a superficial burn.
s. Describe the emergency medical care of the patient with a partial thickness burn.
t. Describe the emergency medical care of the patient with a full thickness burn.
u. List the functions of dressing and bandaging.
v. Describe the purpose of a bandage.
w. Describe the steps in applying a pressure dressing.
x. Establish the relationship between airway management and the patient with chest injury, burns, and blunt and penetrating injuries.
y. Describe the effects of improperly applied dressings, splints, and tourniquets.
z. Describe the emergency medical care of a patient with an impaled object. aa. Describe the emergency medical care of a patient with an amputation.
bb. Describe the emergency medical care for a chemical burn. cc.
Describe the emergency medical care for an electrical burn.
dd. Demonstrate the steps in the emergency medical care of closed soft tissue injuries. ee. Demonstrate the steps in the emergency medical care of a patient with an open chest wound. ff. Demonstrate the steps in the emergency medical care of a patient with open abdominal wounds.
gg. Demonstrate the steps in the emergency medical care of a patient with an impaled object. hh.
Demonstrate the steps in the emergency medical care of a patient with an amputation.
ii. Demonstrate the steps in the emergency medical care of an amputated part.
jj. Demonstrate the steps in the emergency medical care of a patient with superficial burns.
kk. Demonstrate the steps in the emergency medical care of a patient with partial thickness burns. ll. Demonstrate the steps in the emergency medical care of a patient with full thickness burns. mm.Demonstrate the steps in the emergency medical care of a patient with a chemical burn. nn. Demonstrate completing a out-of-hospital care report for patients with soft tissue injuries.

27. Integrate the anatomy and physiology of the musculoskeletal system with the mechanisms of immobilization of the painful, swollen, deformed extremity. a. Describe the function of the muscular system.
b. Describe the function of the skeletal system.
c. List the major bones or bone groupings of the spinal column, the thorax, the upper extremities, and the lower extremities.
d. Differentiate between an open and a closed painful, swollen, deformed extremity.
e. State the reasons for splinting.
f. List the general rules of splinting.
g. List the complications of splinting.
h. List the emergency medical care for a patient with a painful, swollen, deformed extremity.
i. Explain the rationale for splinting at the scene versus load and go.
j. Explain the rationale for immobilization of the painful, swollen, deformed extremity.
k. Demonstrate the emergency medical care of a patient with a painful, swollen, deformed extremity.
l. Demonstrate completing an out-of-hospital care report for patients with musculoskeletal injuries.

28. Explain the anatomy and physiology of the nervous system, explain the pathophysiology of traumatic injuries, and demonstrate the out-of-hospital skills necessary for the neurological injured patient. a. State the components of the nervous system.
b. List the functions of the central nervous system.
c. Define the structure of the skeletal system as it relates to the nervous system.
d. Relate mechanism of injury to potential injuries of the head and spine.

e. Describe the implications of not properly caring for potential spine injuries.
f. State the signs and symptoms of a potential spine injury.
g. Describe the method of determining if a responsive patient may have a spine injury.
h. Relate the airway emergency medical care techniques to the patient with a suspected spine injury.
i. Describe how to stabilize the cervical spine.
j. Discuss indications for sizing and using a cervical spine immobilization device.
k. Establish the relationship between airway management and the patient with head and spine injuries.
l. Describe a method for sizing a cervical spine immobilization device.
m. Describe how to log roll a patient with a suspected spine injury.
n. Describe how to secure a patient to a long spine board.
o. List instances when a short spine board should be used.
p. Describe how to immobilize a patient using a short spine board.
q. Describe the indications for the use of rapid extrication.
r. List steps in performing rapid extrication.
s. State the circumstances when a helmet should be left on a patient.
t. Discuss the circumstances when a helmet should be removed.
u. Identify different types of helmets.
v. Describe the unique characteristics of sports helmets.
w. Explain the preferred methods to remove a helmet.
x. Discuss alternative methods for removal of a helmet.
y. Describe how the patient's head is stabilized to remove the helmet.
z. Differentiate between how the head is stabilized with a helmet compared to without a helmet. aa. Explain the rationale for immobilization of the entire spine when a cervical spine injury is suspected. bb. Explain the rationale for utilizing immobilization methods apart from the straps on the cots.

cc. Explain the rationale for utilizing a short spine immobilization device when moving a patient from the sitting to the supine position. dd. Explain the rationale for utilizing rapid extraction approaches only when they will make the difference between life and death.

ee. Defend the reasons for leaving a helmet in place for transport of a patient. ff. Defend the reasons for removal of a helmet prior to transport of a patient. gg. Demonstrate opening the airway in a patient with suspected spinal cord injury. hh. Demonstrate evaluating a responsive patient with a suspected spinal cord injury.

ii. Demonstrate stabilization of the cervical spine.
jj. Demonstrate the four person log roll for a patient with a suspected spinal cord injury. kk. Demonstrate how to log roll a patient with a suspected spinal injury using two people. ll.

Demonstrate securing a patient to a long spine board.

mm. Demonstrate using the short board immobilization technique. nn. Demonstrate the procedure for rapid extrication. oo. Demonstrate preferred methods for stabilization of a patient wearing a helmet. pp. Demonstrate helmet removal techniques.

qq. Demonstrate alternative methods for stabilization of a patient wearing a helmet.
rr. Demonstrate completing an out-of-hospital care report for patients with head and spinal injuries.

29. Contrast the care required for pediatric patients versus adult patients, and perform the skills necessary for out-of-hospital pediatric intervention.
    a. Identify the developmental considerations for the following age groups: infants, toddlers, preschool, school age, and adolescent.
    b. Describe differences in the anatomy and pathophysiology of the infant, child, and adult patient.
    c. Differentiate between the response of the ill or injured infant or child (age specific) and that of an adult.
    d. Indicate various causes of respiratory emergencies.
    e. Differentiate between respiratory distress and respiratory failure.
    f. List the steps in the management of foreign body airway obstruction.
    g. Summarize emergency medical care strategies for respiratory distress and respiratory failure.
    h. Identify the signs and symptoms of shock (hypoperfusion) in the infant and child patient.
    i. Describe the methods of determining end organ perfusion in the infant and child patient.
    j. State the usual cause of cardiac arrest in infants and children versus adults.
    k. List the common causes of seizures in the infant and child patient.

l. Describe the management of seizures in the infant and child patient.
m. Differentiate among the injury patterns in adults, infants, and children.
n. Discuss the field management of the infant and child trauma patient.
o. Summarize the indicators of possible child abuse and neglect.
p. Describe the medical legal responsibilities in suspected child abuse.
q. Recognize the need for EMT debriefing following a difficult infant or child transport.
r. Explain the rationale for having knowledge and skills appropriate for dealing with the infant and child patient.
s. Recognize the feelings of the family when dealing with an ill or injured infant or child.
t. Understand the provider's own response (emotional) to caring for infants or children.
u. Demonstrate the techniques of foreign body airway obstruction removal in the infant.
v. Demonstrate the techniques of foreign body airway obstruction removal in the child.
w. Demonstrate the assessment of the infant and child.
x. Demonstrate bag-valve-mask artificial ventilation for the infant.
y. Demonstrate bag-valve-mask artificial ventilation for the child.
z. Demonstrate oxygen delivery for the infant and child.
aa. Discuss specific pathophysiology, assessment, and management of the following:
    - SIDS
    - Gastrointestinal diseases

30. Describe the changes associated with aging, psychosocial aspects of aging, and age-related assessment and treatment modifications for the major or common geriatric diseases and/or emergencies including the following:
    - Cardiovascular diseases
    - Respiratory diseases
    - Neurological diseases
    - Endocrine diseases
    - Alzheimer's
    - Dementia
31. Describe the health care implications of the following:
    - Abuse
    - Neglect
    - Homelessness
    - Poverty
    - Bariatrics
    - Technology dependent
    - Hospice/ terminally ill
    - Tracheostomy care/dysfunction
    - Home care
    - Sensory deficit/loss
    - Developmental disability
32. Describe ambulance call procedures associated with vehicle and patient care.
    a. Discuss the medical and non-medical equipment needed to respond to a call.
    b. List the phases of an ambulance call.
    c. Describe the general provisions relating to the operation of the ambulance and privileges in any or all of the following categories:
        - Speed
        - Warning lights
        - Sirens
        - Right-of-way
        - Parking
        - Turning
    d. List contributing factors to unsafe driving conditions.
    e. Describe the considerations that should be given to the following:
        - Request for escorts
        - Following an escort vehicle

- Intersections

f. Discuss “Due Regard for Safety of All Others” while operating an emergency vehicle.
g. State what information is essential in order to respond to a call.
h. Discuss various situations that may affect response to a call.
i. Differentiate among the various methods of moving a patient to the unit based upon injury or illness.
j. Apply the components of the essential patient information in a written report.
k. Summarize the importance of preparing the unit for the next response.
l. Identify what is essential for completion of a call.
m. Distinguish among the terms cleaning, disinfection, high-level disinfection, and sterilization.
n. Describe how to clean or disinfect items following patient care.
o. Explain the rationale for appropriate report of patient information.
p. Explain the rationale for having the unit prepared to respond.

33. Explain the purpose and process of extrication.
    a. Describe the purpose of extrication.
    b. Discuss the role of the EMT in extrication.
    c. Identify what equipment for personal safety is required for the EMT.
    d. Define the fundamental components of extrication.
    e. State the steps that should be taken to protect the patient during extrication.
    f. Evaluate various methods of gaining access to the patient.
    g. Distinguish between simple and complex access.
34. Identify hazardous materials, and demonstrate knowledge of hazardous procedures.
    a. Explain the EMT’s role during a call involving hazardous materials.
    b. Describe what the EMT should do if there is a reason to believe that there is a hazard at the scene.
    c. Describe the actions that an EMT should take to ensure bystander safety.
    d. State the role the EMT should perform until appropriately trained personnel arrive at the scene of a hazardous materials situation.
    e. Break down the steps to approaching a hazardous situation.
    f. Discuss the various environmental hazards that affect EMS.
    g. Describe the criteria for a multiple-casualty situation.
    h. Evaluate the role of the EMT in the multiple-casualty situation.
    i. Summarize the components of basic triage.
        - Performing
        - Re-triage
        - Destination guidelines
        - Post traumatic and cumulative stress
    j. Define the role of the EMT in a disaster operation.
    k. Describe basic concepts of incident management.
    l. Explain the methods for preventing contamination of self, equipment, and facilities.
    m. Review the local mass casualty incident plan.
    n. Perform triage given a scenario of a mass casualty incident.

Course Number and Name: EMS 1163 Emergency Medical Technician I (EMT)

Description: An introductory course in the foundational concepts of the Emergency Medical Services. Lecture will include topics in the history of EMS, well-being of the EMT, medical-legal issues, communication, documentation, A&P, Pathophysiology, life-span development, patient assessment, and vital signs. Laboratory experience will include training in patient assessment and vital signs.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Clinical	Contact Hours
3	1	2	3	90

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Applies fundamental knowledge of the EMS system, safety/well-being of the EMT, and medical/legal and ethical issues to the provision of emergency care.
2. Applies fundamental knowledge of the anatomy and function of all human systems to the practice of EMS.
3. Uses foundational anatomical and medical terms and abbreviations in written and oral communication with colleagues and other health care professionals.
4. Applies fundamental knowledge of the pathophysiology of respiration and perfusion to patient assessment and management.
5. Applies fundamental knowledge of life span development to patient assessment and management.
6. Uses simple knowledge of the principles of illness and injury prevention in emergency care.
7. Applies fundamental knowledge of the medications that the EMT may assist/administer to a patient
8. during an emergency.
9. Applies knowledge (fundamental depth, foundational breadth) of anatomy and physiology to patient assessment and management in order to assure a patent airway, adequate mechanical ventilation, and respiration for patients of all ages.
10. Applies scene information and patient assessment findings (scene size-up, primary and secondary assessment, patient history, reassessment) to guide emergency management.

Course Number and Name: EMS 1174 Emergency Medical Technician II (EMT)

Description: A continuation of the content in EMS 1133 focusing on the incorporation of foundational concepts toward the recognition, stabilization, and transport of patients of all age ranges experiencing medical and traumatic emergencies. Ambulance operations and special considerations will also be discussed.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Clinical	Contact Hours
3	1	2	3	90

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Applies a fundamental knowledge of the causes, pathophysiology, and management of shock, respiratory failure or arrest, cardiac failure or arrest, and post-resuscitation management.
2. Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.
3. Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.
4. Applies a fundamental knowledge of growth, development, aging and assessment findings to provide basic emergency care and transportation for a patient with special needs.
5. Knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety

Course Number and Name: EMS 1133 Foundations of Paramedicine-Lecture & Lab

Description: This course consists includes a comprehensive review of the knowledge base and skill set of the Emergency Medical Technician. History of EMS, Well-Being of the EMT, medical legal issues, communication and documentation will be expanded to the role of the paramedic. This course includes the theory related to intravenous/intraosseous access, medication administration, patient assessment, and introductory pharmacological calculations. It also includes a laboratory experience designed to give psychomotor experience to the theoretical concepts developed in the lecture.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Compare and contrast the roles of each nationally recognized certification level of EMS.
2. Identify and describe the requirements that must be met for paramedics to practice out-of- state.
3. Describe the role of the paramedic in health care, public health, and public safety.
4. Identify the desirable characteristics of paramedics.
5. Explain how paramedicine has made strides toward greater recognition as a profession 6. Describe the various roles in which paramedics may work.
7. Describe the out-of-hospital and in-hospital components of the EMS systems.
8. Explain how EMS systems work to respond to out of hospital calls.
9. Outline the history of EMS and its impact on the modern EMS system.
10. Describe each component of the EMS system and how it impacts the different systems of care.
11. Discuss the documents that are guiding the vision of EMS into the future.
12. Discuss the problems identified in the document “EMS: At the Crossroads”.
13. Define the various types of EMS systems operating in the US.
14. Describe the purposes of the national documents guiding EMS education and practice.
15. Discuss typical components of local and state-level EMS systems.
16. Explain the purpose and responsibilities of physician medical directors.
17. Give examples of on-line medical direction and off-line medical oversight.
18. Describe the purposes of professional organizations in EMS.
19. Recognize professional journals related to the practice of EMS.
20. Categorize receiving hospitals facilities by their capabilities.
21. Explain the purpose and components of an effective continuous quality improvement system.
22. Describe how you can contribute to greater patient safety in emergency medical services.
23. Explain the role of research in EMS.
24. Discuss each of the primary responsibilities of the paramedic.
25. Integrate expected characteristics of professionalism into all facets of the practice as a paramedic.
26. Give examples of behaviors that demonstrate the expected professional attitudes and attributes of paramedics.
27. Advocate for high standards of professionalism in EMS.
28. Recognize potential threats to safety and wellness in various scenarios.
29. Explain the importance of preventing EMS workforce injuries and illness.
30. Describe the role and elements of basic physical fitness in EMS workplace safety and wellness.
31. Explain the consequences of addictions and unhealthy habits.
32. Identify professional and compassionate expectations of the paramedic.
33. Discuss various patient, family, and EMS provider responses to death and dying.
34. Explain the pathophysiology of stress, including types of stressors and the phases of stress.
35. Identify effective stress management strategies.
36. Discuss the effects of shift work on the body and the ability to function effectively.
37. Explain the relationship between EMS research and EMS practice.
38. Compare and contrast different types of research paradigms.
39. Give examples of various experimental designs and discuss how to determine the level of validity.

40. Describe the role of published research reports in EMS practice.
41. Recognize the three categories of public health law.
42. Describe the legal, ethical, and moral obligations of the paramedic.
43. Identify the four primary sources of law.
44. Differentiate between civil law and criminal law.
45. Explain the concept of tort law as it applies to paramedic practice.
46. Outline the events that occur in a civil lawsuit.
47. Identify and discuss common legal regulations that pertain to the practice of paramedics.
48. Describe the paramedic's protection against a claim of negligence.
49. Avoid written or spoken statements that could lead to a claim of defamation.
50. Discuss how to avoid claims of abandonment, assault, battery, false imprisonment, and excessive force.
51. Synthesize the concepts related to consent in the competent and incompetent patient across all ages of the life span.
52. Take measures to protect patient's confidentiality and privacy and comply with HIPPA.
53. Explain the basic concepts of epidemiology.
54. Give examples of how EMS providers can be involved in injury prevention.
55. Discuss situations involving advance directives, organ donation, and withholding or terminating resuscitation.
56. Describe the relationship between ethics, morals, laws, and religion and describe the different approaches to ethical decision making.
57. Apply the six rights of medication administration when administering patient medications.
58. Identify the boundaries of the scope of practice pertaining to medication administration.
59. Identify situations in which you should communicate directly with medical direction regarding drug administration.
60. Discuss principles of medical asepsis in the administration of medications.
61. Accurately and completely document the pertinent details of administering medication to a patient.
62. Identify the precautions, risks, equipment, and advantages/disadvantages for each route of med administration.
63. Discuss how to safely administer medications by all routes, within the paramedic's scope of practice.
64. Identify how to prepare medications for administration from common types of drug packaging found in EMS.
65. Describe the indications, contraindications, procedure, equipment, and risks associated with IV access.
66. Describe devices used for central venous access.
67. Describe the characteristics of intravenous fluids, including colloids, crystalloids, and O2 carrying solutions.
68. Describe the components of scene size up and identify potential hazards experienced during various EMS calls.
69. Describe the concepts of using therapeutic communication during a patient encounter.
70. Synthesize and explain the components of the primary assessment.
71. Synthesize and explain the components of history gathering.
72. Describe and adapt the various assessment techniques needed to perform the primary assessment.
73. Describe and adapt the assessment techniques to the ongoing exam.
74. Adapt the physical exam to patients of all ages.
75. Perform body substance isolation procedures as needed for calls.
76. Perform components of scene size up.
77. Identify how to recognize and manage hazards for the safety of crew and patient.
78. Perform primary assessment to include initial impression, mental status and finding chief complaint.
79. Demonstrate the use of mnemonic AVPU.
80. Perform airway, breathing and circulation assessment.
81. Identify priority conditions for patient transport using scene size up and primary assessment.
82. Obtain patient history from family, caregivers or bystanders.
83. Indicate communication techniques for patient interaction.
84. Demonstrate hospital reports to identify the patient and their condition and treatment.
85. Adapt reassuring measures when dealing with patient and family members.
86. Apply the techniques of inspection, palpation, percussion and auscultation to the patient assessment.
87. Measure, interpret and record vital signs.
88. Demonstrate aseptic techniques for IV therapy and medication administration.
89. Demonstrate intravenous therapy to include selecting and checking equipment, spiking bag and performing venipuncture.
90. Identify untoward effects that occur during or after venipuncture and intraosseous.
91. Identify the five (5) rights of medication administration while performing skill.
92. Administer medication by IV bolus and IV piggyback procedures.

93. Administer medications by intramuscular, intranasal and subcutaneous routes as directed by need.
94. Perform intraosseous puncture in appropriate sites.
95. Perform blood glucose testing.
96. Calculate drug dosages for various routes of medication.
97. Convert pounds to kilograms for use in medication administration.
98. Calculate intravenous infusion rates.

Course Number and Name: EMS 1142 Foundations of Paramedicine-Lecture

Description: This course consists includes a comprehensive review of the knowledge base and skill set of the Emergency Medical Technician. History of EMS, Well-Being of the EMT, medical legal issues, communication and documentation will be expanded to the role of the paramedic. This course includes the theory related to intravenous/intraosseous access, medication administration, patient assessment, and introductory pharmacological calculations.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	2	0	30

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Compare and contrast the roles of each nationally recognized certification level of EMS.
2. Identify and describe the requirements that must be met for paramedics to practice out-of- state.
3. Describe the role of the paramedic in health care, public health, and public safety.
4. Identify the desirable characteristics of paramedics.
5. Explain how paramedicine has made strides toward greater recognition as a profession 6. Describe the various roles in which paramedics may work.
7. Describe the out-of-hospital and in-hospital components of the EMS systems.
8. Explain how EMS systems work to respond to out of hospital calls.
9. Outline the history of EMS and its impact on the modern EMS system.
10. Describe each component of the EMS system and how it impacts the different systems of care.
11. Discuss the documents that are guiding the vision of EMS into the future.
12. Discuss the problems identified in the document “EMS: At the Crossroads”.
13. Define the various types of EMS systems operating in the US.
14. Describe the purposes of the national documents guiding EMS education and practice.
15. Discuss typical components of local and state-level EMS systems.
16. Explain the purpose and responsibilities of physician medical directors.
17. Give examples of on-line medical direction and off-line medical oversight.
18. Describe the purposes of professional organizations in EMS.
19. Recognize professional journals related to the practice of EMS.
20. Categorize receiving hospitals facilities by their capabilities.
21. Explain the purpose and components of an effective continuous quality improvement system.
22. Describe how you can contribute to greater patient safety in emergency medical services.
23. Explain the role of research in EMS.
24. Discuss each of the primary responsibilities of the paramedic.
25. Integrate expected characteristics of professionalism into all facets of the practice as a paramedic.
26. Give examples of behaviors that demonstrate the expected professional attitudes and attributes of paramedics.
27. Advocate for high standards of professionalism in EMS.
28. Recognize potential threats to safety and wellness in various scenarios.
29. Explain the importance of preventing EMS workforce injuries and illness.
30. Describe the role and elements of basic physical fitness in EMS workplace safety and wellness.
31. Explain the consequences of addictions and unhealthy habits.
32. Identify professional and compassionate expectations of the paramedic.
33. Discuss various patient, family, and EMS provider responses to death and dying.
34. Explain the pathophysiology of stress, including types of stressors and the phases of stress.
35. Identify effective stress management strategies.
36. Discuss the effects of shift work on the body and the ability to function effectively.
37. Explain the relationship between EMS research and EMS practice.
38. Compare and contrast different types of research paradigms.
39. Give examples of various experimental designs and discuss how to determine the level of validity.
40. Describe the role of published research reports in EMS practice.
41. Recognize the three categories of public health law.

42. Describe the legal, ethical, and moral obligations of the paramedic.
43. Identify the four primary sources of law.
44. Differentiate between civil law and criminal law.
45. Explain the concept of tort law as it applies to paramedic practice.
46. Outline the events that occur in a civil lawsuit.
47. Identify and discuss common legal regulations that pertain to the practice of paramedics.
48. Describe the paramedic's protection against a claim of negligence.
49. Avoid written or spoken statements that could lead to a claim of defamation.
50. Discuss how to avoid claims of abandonment, assault, battery, false imprisonment, and excessive force.
51. Synthesize the concepts related to consent in the competent and incompetent patient across all ages of the life span.
52. Take measures to protect patient's confidentiality and privacy and comply with HIPPA.
53. Explain the basic concepts of epidemiology.
54. Give examples of how EMS providers can be involved in injury prevention.
55. Discuss situations involving advance directives, organ donation, and withholding or terminating resuscitation.
56. Describe the relationship between ethics, morals, laws, and religion and describe the different approaches to ethical decision making.
57. Apply the six rights of medication administration when administering patient medications.
58. Identify the boundaries of the scope of practice pertaining to medication administration.
59. Identify situations in which you should communicate directly with medical direction regarding drug administration.
60. Discuss principles of medical asepsis in the administration of medications.
61. Accurately and completely document the pertinent details of administering medication to a patient.
62. Identify the precautions, risks, equipment, and advantages/disadvantages for each route of med administration.
63. Discuss how to safely administer medications by all routes, within the paramedic's scope of practice.
64. Identify how to prepare medications for administration from common types of drug packaging found in EMS.
65. Describe the indications, contraindications, procedure, equipment, and risks associated with IV access.
66. Describe devices used for central venous access.
67. Describe the characteristics of intravenous fluids, including colloids, crystalloids, and O2 carrying solutions.
68. Describe the components of scene size up and identify potential hazards experienced during various EMS calls.
69. Describe the concepts of using therapeutic communication during a patient encounter.
70. Synthesize and explain the components of the primary assessment.
71. Synthesize and explain the components of history gathering.
72. Describe and adapt the various assessment techniques needed to perform the primary assessment.
73. Describe and adapt the assessment techniques to the ongoing exam.
74. Adapt the physical exam to patients of all ages.

75.

Course Number and Name: EMS 1151 Foundations of Paramedicine-Lab

Description: A laboratory experience designed to give psychomotor experience to the theoretical concepts developed in the lecture.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
1	0	1	15

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Perform body substance isolation procedures as needed for calls.
2. Perform components of scene size up.
3. Identify how to recognize and manage hazards for the safety of crew and patient.
4. Perform primary assessment to include initial impression, mental status and finding chief complaint.
5. Demonstrate the use of mnemonic AVPU.
6. Perform airway, breathing and circulation assessment.
7. Identify priority conditions for patient transport using scene size up and primary assessment.
8. Obtain patient history from family, caregivers or bystanders.
9. Indicate communication techniques for patient interaction.
10. Demonstrate hospital reports to identify the patient and their condition and treatment.
11. Adapt reassuring measures when dealing with patient and family members.
12. Apply the techniques of inspection, palpation, percussion and auscultation to the patient assessment.
13. Measure, interpret and record vital signs.
14. Demonstrate aseptic techniques for IV therapy and medication administration.
15. Demonstrate intravenous therapy to include selecting and checking equipment, spiking bag and performing venipuncture.
16. Identify untoward effects that occur during or after venipuncture and intraosseous.
17. Identify the five (5) rights of medication administration while performing skill.
18. Administer medication by IV bolus and IV piggyback procedures.
19. Administer medications by intramuscular, intranasal and subcutaneous routes as directed by need.
20. Perform intraosseous puncture in appropriate sites.
21. Perform blood glucose testing.
22. Calculate drug dosages for various routes of medication.
23. Convert pounds to kilograms for use in medication administration.
24. Calculate intravenous infusion rates.

Course Number and Name: EMS 1213 Concepts of Airway and Respiratory Medicine-Lecture & Lab

Description: This course integrates complex knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patient airway, adequate mechanical ventilation, and respiration for patients of all ages. This course also includes a lab that will integrate comprehensive knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of ensuring a patent airway, adequate mechanical ventilation, and respirations for patients of all ages. 25.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Integrate patient assessment findings, patient history, and knowledge of anatomy, physiology, pathophysiology, and basic and advanced life support interventions to recognize and manage patients with pulmonary disorders.
    a. Define key medical terms as they relate to the respiratory system and pulmonary disorders.
    b. Identify risk factors associated with pulmonary disease.
    c. Review the anatomy and physiology of the pulmonary system.
    d. Discuss pathophysiological changes that contribute to the disruption of ventilation, diffusion, and perfusion in the pulmonary system
    e. Integrate all components of patient assessment and monitoring devices to form field impressions and differentials for pulmonary patients.
    f. Identify signs and symptoms of airway compromise, respiratory distress, and respiratory failure.
    g. Discuss pathophysiology of common pre-hospital respiratory disorders.
    h. Discuss the pharmacology of common pulmonary and airway management medications used in the pre-hospital environment.
2. Apply principles of basic and advanced airway management and ventilation techniques to the assessment findings and management plans of patients in the pre-hospital setting.
    a. Define key medical terms as they relate to airway management and ventilation.
    b. Discuss anatomy, physiology, and pathophysiology of the upper and lower airways as it relates to the respiratory cycle, gas exchange and transport.
    c. Identify the clinical differences between the adult and pediatric airway.
    d. Describe signs and symptoms of common airway emergencies.
    e. Discuss the steps of the primary survey as it relates to airway patency and adequate ventilation.
    f. Identify types, indications, contraindications, procedure for use and limitations of different basic and advanced airway devices including extraglotic and endotracheal airways.
    g. Identify multiple ways to confirm adequate ventilation regardless of device.
    h. Discuss management of post-intubation agitation and field extubation.
    i. Describe the pharmacology of medications and the procedures commonly used in medication assisted intubation.
    j. Recognize predictors of a difficulty airway and techniques for improving intubation success.
    k. Discuss the assessment and airway management of the patient with a stoma.
    l. Discuss proper suctioning techniques to include the nasopharynx, oropharynx and trachea of the intubated patient.
    m. Discuss the benefits of gastric decompression, to include equipment and procedure.
    n. Identify the role and function of transport ventilators.
    o. Describe the function, procedure of use, and benefits of noninvasive respiratory gas monitoring to identify adequate oxygenation and ventilation.
    p. Explain the need for critical thinking techniques when considering the difficult airway.
    q. Discuss optical and video laryngoscope options.

r. Identify alternative approach to traditional endotracheal intubation, including nasal intubation, retrograde intubation, digital intubation and lighted stylet techniques.
s. Discuss special considerations of anatomy, equipment, and procedure for the intubation of pediatric patients.

3. Apply principles of basic and advanced airway management and ventilation techniques to the assessment findings and management plans of patients in the pre-hospital setting.
    a. Demonstrate techniques of basic airway management, including positioning, administering supplemental oxygen, manual airway maneuvers, inserting basic airway adjuncts, and suctioning techniques.
    b. Demonstrate techniques of advanced airway management, including endotracheal intubation to include nasal, retrograde, digital and lighted stylet techniques.
    c. Demonstrate techniques of advanced airway management to include extraglotic airway devices.
    d. Demonstrate techniques for advanced airway management, including cricothyrotomy and medication assisted intubation.

Course Number and Name: EMS 1242 Concepts of Airway and Respiratory Medicine-Lecture

Description: This course integrates complex knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patient airway, adequate mechanical ventilation, and respiration for patients of all ages.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	2	0	30

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Integrate patient assessment findings, patient history, and knowledge of anatomy, physiology, pathophysiology, and basic and advanced life support interventions to recognize and manage patients with pulmonary disorders.
    a. Define key medical terms as they relate to the respiratory system and pulmonary disorders.
    b. Identify risk factors associated with pulmonary disease.
    c. Review the anatomy and physiology of the pulmonary system.
    d. Discuss pathophysiological changes that contribute to the disruption of ventilation, diffusion, and perfusion in the pulmonary system
    e. Integrate all components of patient assessment and monitoring devices to form field impressions and differentials for pulmonary patients.
    f. Identify signs and symptoms of airway compromise, respiratory distress, and respiratory failure.
    g. Discuss pathophysiology of common pre-hospital respiratory disorders.
    h. Discuss the pharmacology of common pulmonary and airway management medications used in the pre-hospital environment.
2. Apply principles of basic and advanced airway management and ventilation techniques to the assessment findings and management plans of patients in the pre-hospital setting.

a. Define key medical terms as they relate to airway management and ventilation.
b. Discuss anatomy, physiology, and pathophysiology of the upper and lower airways as it relates to the respiratory cycle, gas exchange and transport.
c. Identify the clinical differences between the adult and pediatric airway.
d. Describe signs and symptoms of common airway emergencies.
e. Discuss the steps of the primary survey as it relates to airway patency and adequate ventilation.
f. Identify types, indications, contraindications, procedure for use and limitations of different basic and advanced airway devices including extraglotic and endotracheal airways.
g. Identify multiple ways to confirm adequate ventilation regardless of device.
h. Discuss management of post-intubation agitation and field extubation.
i. Describe the pharmacology of medications and the procedures commonly used in medication assisted intubation.
j. Recognize predictors of a difficulty airway and techniques for improving intubation success.
k. Discuss the assessment and airway management of the patient with a stoma.
l. Discuss proper suctioning techniques to include the nasopharynx, oropharynx and trachea of the intubated patient.
m. Discuss the benefits of gastric decompression, to include equipment and procedure.
n. Identify the role and function of transport ventilators.
o. Describe the function, procedure of use, and benefits of noninvasive respiratory gas monitoring to identify adequate oxygenation and ventilation.
p. Explain the need for critical thinking techniques when considering the difficult airway.
q. Discuss optical and video laryngoscope options.
r. Identify alternative approach to traditional endotracheal intubation, including nasal intubation, retrograde intubation, digital intubation and lighted stylet techniques.
s. Discuss special considerations of anatomy, equipment, and procedure for the intubation of pediatric patients.

Course Number and Name: EMS 1251 Concepts of Airway and Respiratory Medicine-Lab

Description: This course in co-requisite with the lecture portion will integrate comprehensive knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of ensuring a patent airway, adequate mechanical ventilation, and respirations for patients of all ages.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical	Contact Hours
1	0	1	15

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Apply principles of basic and advanced airway management and ventilation techniques to the assessment findings and management plans of patients in the pre-hospital setting.
    a. Demonstrate techniques of basic airway management, including positioning, administering supplemental oxygen, manual airway maneuvers, inserting basic airway adjuncts, and suctioning techniques.
    b. Demonstrate techniques of advanced airway management, including endotracheal intubation to include nasal, retrograde, digital and lighted stylet techniques.
    c. Demonstrate techniques of advanced airway management to include extraglotic airway devices.
    d. Demonstrate techniques for advanced airway management, including cricothyrotomy and medication assisted intubation.

Course Number and Name: EMS 1325 Concepts of Cardiovascular Medicine-Lecture & Lab

Description: This course consists of the theory, anatomy, physiology, pathophysiology and treatments associated with the conditions of the cardiovascular system. This includes the theory of introductory, advanced, and multi-lead electrocardiogram interpretation. Changes in the lifespan will also be included. It is also a laboratory experience designed to give psychomotor experience to the theoretical concepts developed in the lecture.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical/Field	Contact Hours
5	3	4	105

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Explain the role of EMS in the 'chain of survival' from cardiac arrest.
2. Describe the significance of cardiovascular disease and its prevalence in the United States.
3. Define both modifiable and non-modifiable risk factors for cardiovascular disease.
4. Compare and contrast the normal anatomy and physiology of the cardiovascular system versus the abnormal dysrhythmias and the pathophysiology of cardiovascular disorders.
5. Explain the purpose and the process of electrocardiographic monitoring.
6. Analyze the waves and intervals of an ECG tracing to the electrical activity of the heart.
7. Summarize the significance of changes in ECG tracings from expected normal findings.
8. Explain the general mechanisms of cardiac dysrhythmias.
9. Apply a systematic approach to identify specific ECG dysrhythmias.
10. Define the causes of cardiac dysrhythmias.
11. Relate the clinical significance of specific cardiac dysrhythmias with a hemodynamic compromise.
12. Hypothesize the treatments generally proposed for specific cardiac dysrhythmias.
13. Justify the importance of ALS interventions in the pre-hospital management of patients with cardiac disorders to include the types of acute coronary syndromes (unstable angina, ST elevation myocardial infarction and non-ST elevation myocardial infarction).
14. Compare, contrast the differences in BLS and ALS assessment and management of cardiac arrest.
15. Recall and list the causes of 'chest pain'.
16. Describe the pathophysiology of specific cardiovascular diseases encountered in the pre-hospital environment.
17. Arrange the sequence of steps when assessing the patient with cardiac or vascular complaints.
18. Describe the diagnostic procedures used in the evaluation of myocardial infarctions, to include 12-lead electrocardiograms and laboratory analysis of blood markers.
19. Justify the reason for reperfusion therapy as well as pharmacologic agents used in the management of myocardial infarctions.
20. Employ post-resuscitation care of cardiac arrest patients who achieve a 'return of spontaneous circulation' (ROSC).
21. Defend considerations in withholding, and/or terminating resuscitation efforts in the pre-hospital environment.
22. Show and justify the process and purpose of acquiring a 12-lead electrocardiogram on a patient with cardiovascular compromise.
23. Interpret the findings of a 12-lead electrocardiogram.
24. Identify signs and symptoms associated with acute coronary syndromes (ACS) in a variety of 12-lead and 15-lead ECGs.

25. The student will learn the psychomotor and affective learning domains necessary to apply the topics covered in the co-requisite lecture course.
26. Reorganize or modify the assessment to meet the needs of a patient with a cardiac or vascular disorder.
27. Synthesize a process of clinical reasoning to guide the management of a patient with a cardiac or vascular disorder.
28. Develop a critical-thinking approach to evaluate patients for specific cardiac and vascular disorders. Be able to quickly adapt to austere conditions with an unstable cardiovascular patient.
29. Formulate treatment plans for patients with cardiac and vascular disorders throughout a variety of different cardiac and vascular lab scenarios.
30. Select the appropriate function on the cardiac monitor based on the type of cardiovascular emergency, to include 4-lead and multi-lead monitoring, waveform capnography, pulse oximetry, the use of transcutaneous pacing and synchronized versus unsynchronized cardioversion.
31. Recognize the need for using the cardiac monitor to identify certain cardiac conditions to include chamber enlargement, axis deviation and conduction disorders.
32. Use the cardiac monitor to identify certain electrolyte disturbances. Be able to defend the use of isotonic crystalloids or pharmacologic interventions in the treatment of electrolyte imbalances.

Course Number and Name: EMS 1343 Concepts of Cardiovascular Medicine-Lecture

Description: This course consists of the theory, anatomy, physiology, pathophysiology and treatments associated with the conditions of the cardiovascular system. This includes the theory of introductory, advanced, and multi-lead electrocardiogram interpretation. Changes in the lifespan will also be included.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	3	0	45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Explain the role of EMS in the 'chain of survival' from cardiac arrest.
2. Describe the significance of cardiovascular disease and its prevalence in the United States.
3. Define both modifiable and non-modifiable risk factors for cardiovascular disease.
4. Compare and contrast the normal anatomy and physiology of the cardiovascular system versus the abnormal dysrhythmias and the pathophysiology of cardiovascular disorders.
5. Explain the purpose and the process of electrocardiographic monitoring.
6. Analyze the waves and intervals of an ECG tracing to the electrical activity of the heart.
7. Summarize the significance of changes in ECG tracings from expected normal findings.
8. Explain the general mechanisms of cardiac dysrhythmias.
9. Apply a systematic approach to identify specific ECG dysrhythmias.
10. Define the causes of cardiac dysrhythmias.
11. Relate the clinical significance of specific cardiac dysrhythmias with a hemodynamic compromise.
12. Hypothesize the treatments generally proposed for specific cardiac dysrhythmias.
13. Justify the importance of ALS interventions in the pre-hospital management of patients with cardiac disorders to include the types of acute coronary syndromes (unstable angina, ST elevation myocardial infarction and non-ST elevation myocardial infarction).
14. Compare, contrast the differences in BLS and ALS assessment and management of cardiac arrest.
15. Recall and list the causes of 'chest pain'.
16. Describe the pathophysiology of specific cardiovascular diseases encountered in the pre-hospital environment.
17. Arrange the sequence of steps when assessing the patient with cardiac or vascular complaints.
18. Describe the diagnostic procedures used in the evaluation of myocardial infarctions, to include 12-lead electrocardiograms and laboratory analysis of blood markers.
19. Justify the reason for reperfusion therapy as well as pharmacologic agents used in the management of myocardial infarctions.
20. Employ post-resuscitation care of cardiac arrest patients who achieve a 'return of spontaneous circulation' (ROSC).
21. Defend considerations in withholding, and/or terminating resuscitation efforts in the pre-hospital environment.
22. Show and justify the process and purpose of acquiring a 12-lead electrocardiogram on a patient with cardiovascular compromise.
23. Interpret the findings of a 12-lead electrocardiogram.
24. Identify signs and symptoms associated with acute coronary syndromes (ACS) in a variety of 12-lead and 15-lead ECGs.

Course Number and Name: EMS 1352 Concepts of Cardiovascular Medicine-Lab

Description: A laboratory experience designed to give psychomotor experience to the theoretical concepts developed in the lecture.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	0	4	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. The student will learn the psychomotor and affective learning domains necessary to apply the topics covered in the co-requisite lecture course.
2. Reorganize or modify the assessment to meet the needs of a patient with a cardiac or vascular disorder.
3. Synthesize a process of clinical reasoning to guide the management of a patient with a cardiac or vascular disorder.
4. Develop a critical-thinking approach to evaluate patients for specific cardiac and vascular disorders. Be able to quickly adapt to austere conditions with an unstable cardiovascular patient.
5. Formulate treatment plans for patients with cardiac and vascular disorders throughout a variety of different cardiac and vascular lab scenarios.
6. Select the appropriate function on the cardiac monitor based on the type of cardiovascular emergency, to include 4-lead and multi-lead monitoring, waveform capnography, pulse oximetry, the use of transcutaneous pacing and synchronized versus unsynchronized cardioversion.
7. Recognize the need for using the cardiac monitor to identify certain cardiac conditions to include chamber enlargement, axis deviation and conduction disorders.
8. Use the cardiac monitor to identify certain electrolyte disturbances. Be able to defend the use of isotonic crystalloids or pharmacologic interventions in the treatment of electrolyte imbalances.

Course Number and Name: EMS 1514 Practicum I

Description:

Using supervised rotations in a definitive care setting, the students will apply the concepts developed in the didactic and laboratory courses to live patients. This will include, but not be limited to rotations in the emergency department, ICU, OR, respiratory therapy, and pediatrics.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical	Contact Hours
4	0	12	180

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Demonstrate professional behavior.
   a. Perform behaviors within the integrity of the profession.
   b. Perform the following behaviors with empathy as related to the profession: Self-motivation
      - Appearance and personal hygiene
      - Self-confidence
      - Communication
      - Time management
      - Team work with diplomacy
      - Respect
      - Patient advocacy
      - Careful delivery of service
2. Integration of EMT skills.
   a. Measure, interpret, and record vital signs.
   b. Perform patient assessment.
   c. Perform spinal immobilization.
   d. Utilize infection control techniques.
   e. Perform splinting.
   f. Perform airway placement.
   g. Perform suctioning.
   h. Perform patient handling/lifting.
   i. Perform hemorrhage control.
   j. Perform oxygen administration.
   k. Perform documentation.
   l. Transmit radio report.
   m. Perform CPR.
3. Integration of limited paramedic skills.
   a. Perform airway procedures.
   b. Perform comprehensive patient assessment.
   c. Perform vascular access, fluid administration, and blood draw
   d. Administer medication

Course Number and Name: EMS 1713 Concepts of Neurological Medicine-Lecture & Lab

Course Number and Name:

Description: This course consists of the theory, anatomy, physiology, pathophysiology, and treatments associated with conditions of the nervous system. This includes conditions related to structure and those associated with organic and non- organic brain disease. Changes in the lifespan will be included. It is also a laboratory experience designed to give psychomotor experience to the theoretical concepts developed in the lecture.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical/Field	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Describe the significance of the prevalence of neurologic disorders in the United States.
2. Define the medical terminology specific to neurological disorders.
3. Describe the process of performing a comprehensive physical assessment of the neurovascular systems to patients across the life span.
4. Use a process of clinical reasoning to determine the management process for patients with neurologic disorders across the life span.
5. Describe the multiple causes of altered mental status.
6. Describe the pathophysiology of specific neurologic presentations common to the pre-hospital environment.
7. Apply pre-hospital stroke scoring systems in the assessment of patients with suspected stroke.
8. Identify the pharmacological agents appropriate for treating various neurological disorders
9. Integrate the comprehensive knowledge of specific pharmacological agents in the management of acute neurological disorders.
10. Demonstrate the ability to perform a complex neurological exam.
11. Apply the knowledge of neurological disorders to a scenario and adapt the phases of assessment to meet the needs of a patient with a neurological emergency.
12. Apply the knowledge of neurological disorders to a scenario and develop treatment plans for patients with neurologic disorders.

Course Number and Name:

EMS 1742 Concepts of Neurological Medicine-Lecture

Description:

This course consists of the theory, anatomy, physiology, pathophysiology, and treatments associated with conditions of the nervous system. This includes conditions related to structure and those associated with organic and non- organic brain disease. Changes in the lifespan will be included.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	2	0	30

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Describe the significance of the prevalence of neurologic disorders in the United States.
2. Define the medical terminology specific to neurological disorders.
3. Describe the process of performing a comprehensive physical assessment of the neurovascular systems to patients across the life span.
4. Use a process of clinical reasoning to determine the management process for patients with neurologic disorders across the life span.
5. Describe the multiple causes of altered mental status.
6. Describe the pathophysiology of specific neurologic presentations common to the pre-hospital environment.
7. Apply pre-hospital stroke scoring systems in the assessment of patients with suspected stroke.
8. Identify the pharmacological agents appropriate for treating various neurological disorders
9. Integrate the comprehensive knowledge of specific pharmacological agents in the management of acute neurological disorders.

Course Number and Name: EMS 1751 Concepts of Neurological Medicine-Lab

Description:

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
1	0	2	30

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Demonstrate the ability to perform a complex neurological exam.
2. Apply the knowledge of neurological disorders to a scenario and adapt the phases of assessment to meet the needs of a patient with a neurological emergency.
3. Apply the knowledge of neurological disorders to a scenario and develop treatment plans for patients with neurologic disorders.

Course Number and Name: EMS 1913 Concepts of Reproductive Medicine-Lecture & Lab

Description: This course consists of the theory, anatomy, physiology, pathophysiology, and treatments associated with conditions of the reproductive system. The course includes care of the newborn as part of the concepts in reproductive medicine. Changes in the lifespan will be included. It is also a laboratory experience designed to give psychomotor experience to the theoretical concepts developed in the lecture.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Identify and discuss issues of scene safety and privacy when managing a reproductive emergency.
    a. Recognize the importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information.
    b. Recognize the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
2. Identify and discuss the pertinent anatomy, physiology and pathophysiology of the male and female reproductive systems as pertaining to the following: a. Discuss Concepts of Human Reproduction
        i. Identify the Phases of the Menstrual Cycle
        ii. Discuss the Concepts of Reproductive Biology
            1. Identify the Normal Events of Pregnancy
            2. Identify the Stages of Labor
    b. Identify and Discuss Sexually Transmitted Diseases
    c. Identify Concepts of Sexual Assault
    d. Discuss interactions of the reproductive system with other body systems

1. Identify and discuss the adaptations of the major patient assessment components for a patient with a gynecological and/or obstetrical emergency.
    a. Describe how to assess a patient with a gynecological emergency.
    b. Describe how to assess a patient with an obstetrical emergency.
2. Integrate the principles of pathophysiology, pharmacology and gynecology/obstetrics to develop an appropriate pharmacological regiment for a patient with gynecological and/or obstetrical emergency.
3. Discuss the integration of assessment and treatment guidelines in the management of a patient with a gynecological and/or obstetrical emergency.
    a. Recognize the importance of maintaining a patient's modesty and privacy during assessment and management.
    b. Recognize the need for treating two patients (mother and baby).
    c. Discuss the management of gynecological emergencies
        i. Explain how to recognize a gynecological emergency.
        ii. Describe the general care for any patient experiencing a gynecological emergency.
        iii. Describe the pathophysiology, assessment, and management of specific gynecological emergencies.
    d. Discuss the management of obstetrical emergencies
        i. Identify pre-delivery emergencies
        ii. Differentiate the management of a patient with pre-delivery emergencies from a normal delivery.
            1. Describe the procedures for managing complications of pregnancy

iii. Describe the paramedic's role in each of the stages of labor
    1. Explain the use of the contents in an obstetrical kit

2. State the steps in the predelivery preparation of the mother
3. State and discuss the steps in assisting with the delivery of the newborn
4. Describe the management of the mother post-delivery iv. Differentiate between normal and abnormal deliveries
1. State the indications of imminent delivery
2. Describe complications associated with pregnancy and delivery
3. Describe the procedures for managing abnormal deliveries
4. Describe the procedures for managing maternal complications of labor
5. Describe special considerations when meconium is present in amniotic fluid or during delivery.
6. Identify and discuss issues of scene safety regarding the neonate and/or newborn.

a. Recognize and appreciate the physical and emotional difficulties associated with separation of the parent/guardian and a newborn/neonate.
b. Recognize the emotional impact of newborn/neonate injuries/illnesses on parents/guardians.
c. Recognize the concerns expressed by parents/guardians.
d. Recognize the need for reassurance, empathy, and compassion for the parent/guardian.

7. Identify and discuss historical, anatomical, physiological and pathophysiological aspects of the newborn and/or neonate.
a. Demonstrate and advocate appropriate interaction with a newborn/neonate that conveys respect for the position in life.
b. Identify important antepartum factors that can affect childbirth.
c. Identify important intrapartum factors that can term the newborn high risk.
d. Identify the factors that lead to premature birth and low birth weight newborns.
e. Discuss the effects maternal narcotic usage has on the newborn.
f. Discuss fetal and neonatal immune function.
g. Distinguish between primary and secondary apnea.
h. Discuss pulmonary perfusion and asphyxia.
i. Describe the epidemiology, including the incidence, morbidity/mortality, risk factors, and prevention strategies for meconium aspiration.
j. Discuss the pathophysiology of meconium aspiration.
k. Describe the epidemiology, including the incidence, morbidity/mortality, risk factors, and prevention strategies for apnea in the neonate.
l. Describe the epidemiology, pathophysiology, assessment findings, and management/treatment plan for diaphragmatic hernia.
m. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for bradycardia in the neonate.
n. Discuss the pathophysiology of apnea in the neonate.
o. Discuss the pathophysiology of bradycardia in the neonate.
p. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for premature infants.
q. Discuss the pathophysiology of premature infants.
r. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for respiratory distress/cyanosis in the neonate.

s. Discuss the pathophysiology of respiratory distress/cyanosis in the neonate.
t. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for hypothermia in the neonate.
u. Discuss the pathophysiology of hypothermia in the neonate.
v. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for hypoglycemia in the neonate.
w. Discuss the pathophysiology of hypoglycemia in the neonate.
x. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for vomiting in the neonate.
y. Discuss the pathophysiology of vomiting in the neonate.
z. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for diarrhea in the neonate.
aa. Discuss the pathophysiology of diarrhea in the neonate.
bb. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for common birth injuries in the neonate.
cc. Discuss the pathophysiology of common birth injuries in the neonate.
dd. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for seizures in the neonate.
ee. Discuss the pathophysiology of seizures in the neonate.
ff. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for fever in the neonate.
gg. Discuss the pathophysiology of fever in the neonate.

8. Identify and discuss modifications to the assessment phases for the newborn and/or neonate.
   a. Identify the appropriate use of the APGAR score in caring for a newborn.
   b. Discuss the assessment findings associated with meconium aspiration.
   c. Discuss the assessment findings associated with premature infants.
   d. Discuss the assessment findings associated with respiratory distress/cyanosis in the neonate.
   e. Discuss the assessment findings associated with seizures in the neonate.
   f. Discuss the assessment findings associated with fever in the neonate.
   g. Discuss the assessment findings associated with hypothermia in the neonate.
   h. Discuss the assessment findings associated with hypoglycemia in the neonate.
   i. Discuss the assessment findings associated with vomiting in the neonate.
   j. Discuss the assessment findings associated with diarrhea in the neonate.
   k. Discuss the assessment findings associated with common birth injuries in the neonate.
9. Identify and discuss the management of assessment findings in the newborn and/or neonate.
   a. Describe how to care for the newborn.
   b. Describe special considerations of a premature baby.
   c. Discuss appropriate transport guidelines for a newborn.
   d. Discuss the management/treatment plan for meconium aspiration.
   e. Discuss the management/treatment plan for premature infants.
   f. Discuss the management/treatment plan for seizures in the neonate.
   g. Discuss the management/treatment plan for fever in the neonate.
   h. Discuss the management/treatment plan for hypothermia in the neonate.
   i. Discuss the management/treatment plan for hypoglycemia in the neonate.
   j. Discuss the management/treatment plan for vomiting in the neonate.
   k. Discuss the management/treatment plan for diarrhea in the neonate.
   l. Discuss the management/treatment plan for common birth injuries in the neonate.
   m. Discuss appropriate blow-by oxygen delivery devices and technique for a newborn.
   n. Discuss appropriate endotracheal intubation techniques for a newborn.

o. Identify complications related to endotracheal intubation for a newborn.

10. Identify and discuss the concepts of neonatal resuscitation.
    a. Identify the primary signs utilized for evaluating a newborn during resuscitation.
    b. Discuss the initial steps in resuscitation of a newborn.
    c. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for cardiac arrest in the neonate.
    d. Discuss the assessment findings associated with cardiac arrest in the neonate.
    e. Discuss the pathophysiology of cardiac arrest in the neonate.
    f. Discuss the management/treatment plan for cardiac arrest in the neonate.
    g. Discuss the assessment findings associated with post arrest situations in the neonate.
    h. Discuss the pathophysiology of post arrest management of the neonate.
    i. Discuss the management/treatment plan to stabilize the post arrest neonate.
    j. Discuss appropriate chest compression techniques for a newborn.
    k. Discuss the assessment findings associated with apnea in the neonate.
    l. Discuss the management/treatment plan for apnea in the neonate.
    m. Discuss the assessment findings associated with bradycardia in the neonate.
    n. Discuss the management/treatment plan for bradycardia in the neonate.
    o. Discuss the management/treatment plan for respiratory distress/cyanosis in the neonate.
    p. Discuss the signs of hypovolemia in a newborn.
    q. Discuss the routes of medication administration for a newborn.
    r. Discuss the pharmacology of neonatal resuscitation.
11. Demonstrate body substance isolation as it relates to childbirth.
12. Demonstrate serving as a role model for other EMS providers when discussing or performing the steps of childbirth.
13. Demonstrate how to assess an obstetric patient.
14. Demonstrate how to provide care for a patient with the following:
    - Excessive vaginal bleeding
    - Abdominal pain
    - Hypertensive crisis
15. Demonstrate how to prepare the obstetric patient for delivery.
16. Demonstrate how to assist in the normal cephalic delivery of the fetus.
17. Demonstrate how to deliver the placenta.
18. Demonstrate how to provide post-delivery care of the mother.
19. Demonstrate how to assist with abnormal deliveries.
20. Demonstrate how to care for the mother with delivery complications.
21. Calculate the APGAR score given various newborn situations.
22. Prepare appropriate ventilation equipment, adjuncts, and technique for a newborn.
23. Determine when chest compressions are appropriate for a newborn.
24. Determine when endotracheal intubation is appropriate for a newborn.
25. Assess patient improvement due to endotracheal intubation.
26. Determine when vascular access is indicated for a newborn.
27. Determine when blow-by oxygen delivery is appropriate for a newborn.
28. Assess patient improvement due to assisted ventilations.
29. Determine when an orogastric tube should be inserted during positive-pressure ventilation.
30. Assess patient improvement due to blow-by oxygen delivery.
31. Determine the appropriate treatment for the newborn with narcotic depression.
32. Determine appropriate receiving facilities for low and high risk newborns.
33. Demonstrate preparation of a newborn resuscitation.
34. Demonstrate appropriate assessment technique for examining a newborn.
35. Demonstrate appropriate assisted ventilations for a newborn.

36. Demonstrate appropriate endotracheal intubation technique for a newborn.
37. Demonstrate appropriate meconium aspiration suctioning technique for a newborn.
38. Demonstrate appropriate insertion of an orogastric tube.
39. Demonstrate needle chest decompression for a newborn or neonate.
40. Demonstrate appropriate chest compression and ventilation technique for a newborn.
41. Demonstrate appropriate techniques to improve or eliminate endotracheal intubation complications.
42. Demonstrate vascular access cannulation techniques for a newborn.
43. Demonstrate the initial steps in resuscitation of a newborn.
44. Demonstrate blow-by oxygen delivery for a newborn.

Course Number and Name: EMS 1942 Concepts of Reproductive Medicine-Lecture

Description: This course consists of the theory, anatomy, physiology, pathophysiology, and treatments associated with conditions of the reproductive system. The course includes care of the newborn as part of the concepts in reproductive medicine. Changes in the lifespan will be included.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	2	0	30

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Identify and discuss issues of scene safety and privacy when managing a reproductive emergency.
    a. Recognize the importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information.
    b. Recognize the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
2. Identify and discuss the pertinent anatomy, physiology and pathophysiology of the male and female reproductive systems as pertaining to the following: a. Discuss Concepts of Human Reproduction
        i. Identify the Phases of the Menstrual Cycle
        ii. Discuss the Concepts of Reproductive Biology
            1. Identify the Normal Events of Pregnancy
            2. Identify the Stages of Labor
    b. Identify and Discuss Sexually Transmitted Diseases
    c. Identify Concepts of Sexual Assault
    d. Discuss interactions of the reproductive system with other body systems

1. Identify and discuss the adaptations of the major patient assessment components for a patient with a gynecological and/or obstetrical emergency.
    a. Describe how to assess a patient with a gynecological emergency.
    b. Describe how to assess a patient with an obstetrical emergency.
2. Integrate the principles of pathophysiology, pharmacology and gynecology/obstetrics to develop an appropriate pharmacological regiment for a patient with gynecological and/or obstetrical emergency.
3. Discuss the integration of assessment and treatment guidelines in the management of a patient with a gynecological and/or obstetrical emergency.
    a. Recognize the importance of maintaining a patient's modesty and privacy during assessment and management.
    b. Recognize the need for treating two patients (mother and baby).
    c. Discuss the management of gynecological emergencies
        i. Explain how to recognize a gynecological emergency.
        ii. Describe the general care for any patient experiencing a gynecological emergency.
        iii. Describe the pathophysiology, assessment, and management of specific gynecological emergencies.
    d. Discuss the management of obstetrical emergencies
        i. Identify pre-delivery emergencies
        ii. Differentiate the management of a patient with pre-delivery emergencies from a normal delivery.
            1. Describe the procedures for managing complications of pregnancy

iii. Describe the paramedic's role in each of the stages of labor
        1. Explain the use of the contents in an obstetrical kit
        2. State the steps in the predelivery preparation of the mother
        3. State and discuss the steps in assisting with the delivery of the newborn
        4. Describe the management of the mother post-delivery iv. Differentiate between normal and abnormal deliveries
        1. State the indications of imminent delivery
        2. Describe complications associated with pregnancy and delivery
        3. Describe the procedures for managing abnormal deliveries
        4. Describe the procedures for managing maternal complications of labor

5. Describe special considerations when meconium is present in amniotic fluid or during delivery.
6. Identify and discuss issues of scene safety regarding the neonate and/or newborn.

a. Recognize and appreciate the physical and emotional difficulties associated with separation of the parent/guardian and a newborn/neonate.
b. Recognize the emotional impact of newborn/neonate injuries/illnesses on parents/guardians.
c. Recognize the concerns expressed by parents/guardians.
d. Recognize the need for reassurance, empathy, and compassion for the parent/guardian.

7. Identify and discuss historical, anatomical, physiological and pathophysiological aspects of the newborn and/or neonate.

a. Demonstrate and advocate appropriate interaction with a newborn/neonate that conveys respect for the position in life.
b. Identify important antepartum factors that can affect childbirth.
c. Identify important intrapartum factors that can term the newborn high risk.
d. Identify the factors that lead to premature birth and low birth weight newborns.
e. Discuss the effects maternal narcotic usage has on the newborn.
f. Discuss fetal and neonatal immune function.
g. Distinguish between primary and secondary apnea.
h. Discuss pulmonary perfusion and asphyxia.
i. Describe the epidemiology, including the incidence, morbidity/mortality, risk factors, and prevention strategies for meconium aspiration.
j. Discuss the pathophysiology of meconium aspiration.
k. Describe the epidemiology, including the incidence, morbidity/mortality, risk factors, and prevention strategies for apnea in the neonate.
l. Describe the epidemiology, pathophysiology, assessment findings, and management/treatment plan for diaphragmatic hernia.
m. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for bradycardia in the neonate.
n. Discuss the pathophysiology of apnea in the neonate.
o. Discuss the pathophysiology of bradycardia in the neonate.
p. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for premature infants.
q. Discuss the pathophysiology of premature infants.
r. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for respiratory distress/cyanosis in the neonate.
s. Discuss the pathophysiology of respiratory distress/cyanosis in the neonate.
t. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for hypothermia in the neonate.
u. Discuss the pathophysiology of hypothermia in the neonate.
v. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for hypoglycemia in the neonate.
w. Discuss the pathophysiology of hypoglycemia in the neonate.
x. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for vomiting in the neonate.
y. Discuss the pathophysiology of vomiting in the neonate.
z. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for diarrhea in the neonate.
aa. Discuss the pathophysiology of diarrhea in the neonate.
bb. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for common birth injuries in the neonate.
cc. Discuss the pathophysiology of common birth injuries in the neonate.

dd. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for seizures in the neonate.
ee. Discuss the pathophysiology of seizures in the neonate.
ff. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for fever in the neonate.
gg. Discuss the pathophysiology of fever in the neonate.

8. Identify and discuss modifications to the assessment phases for the newborn and/or neonate.
   a. Identify the appropriate use of the APGAR score in caring for a newborn.
   b. Discuss the assessment findings associated with meconium aspiration.
   c. Discuss the assessment findings associated with premature infants.
   d. Discuss the assessment findings associated with respiratory distress/cyanosis in the neonate.
   e. Discuss the assessment findings associated with seizures in the neonate.
   f. Discuss the assessment findings associated with fever in the neonate.
   g. Discuss the assessment findings associated with hypothermia in the neonate.
   h. Discuss the assessment findings associated with hypoglycemia in the neonate.
   i. Discuss the assessment findings associated with vomiting in the neonate.
   j. Discuss the assessment findings associated with diarrhea in the neonate.
   k. Discuss the assessment findings associated with common birth injuries in the neonate.
9. Identify and discuss the management of assessment findings in the newborn and/or neonate.
   a. Describe how to care for the newborn.
   b. Describe special considerations of a premature baby.
   c. Discuss appropriate transport guidelines for a newborn.
   d. Discuss the management/treatment plan for meconium aspiration.
   e. Discuss the management/treatment plan for premature infants.
   f. Discuss the management/treatment plan for seizures in the neonate.
   g. Discuss the management/treatment plan for fever in the neonate.
   h. Discuss the management/treatment plan for hypothermia in the neonate.
   i. Discuss the management/treatment plan for hypoglycemia in the neonate.
   j. Discuss the management/treatment plan for vomiting in the neonate.
   k. Discuss the management/treatment plan for diarrhea in the neonate.
   l. Discuss the management/treatment plan for common birth injuries in the neonate.
   m. Discuss appropriate blow-by oxygen delivery devices and technique for a newborn.
   n. Discuss appropriate endotracheal intubation techniques for a newborn.
   o. Identify complications related to endotracheal intubation for a newborn.
10. Identify and discuss the concepts of neonatal resuscitation.
   a. Identify the primary signs utilized for evaluating a newborn during resuscitation.
   b. Discuss the initial steps in resuscitation of a newborn.
   c. Describe the epidemiology, including the incidence, morbidity/mortality, and risk factors for cardiac arrest in the neonate.
   d. Discuss the assessment findings associated with cardiac arrest in the neonate.
   e. Discuss the pathophysiology of cardiac arrest in the neonate.
   f. Discuss the management/treatment plan for cardiac arrest in the neonate.
   g. Discuss the assessment findings associated with post arrest situations in the neonate.
   h. Discuss the pathophysiology of post arrest management of the neonate.
   i. Discuss the management/treatment plan to stabilize the post arrest neonate.
   j. Discuss appropriate chest compression techniques for a newborn.
   k. Discuss the assessment findings associated with apnea in the neonate.
   l. Discuss the management/treatment plan for apnea in the neonate.
   m. Discuss the assessment findings associated with bradycardia in the neonate.

n. Discuss the management/treatment plan for bradycardia in the neonate.
o. Discuss the management/treatment plan for respiratory distress/cyanosis in the neonate.
p. Discuss the signs of hypovolemia in a newborn.
q. Discuss the routes of medication administration for a newborn.
r. Discuss the pharmacology of neonatal resuscitation.

Course Number and Name: EMS 1951 Concepts of Reproductive Medicine-Lab

Description: A laboratory experience designed to give psychomotor experience to the theoretical concepts developed in the lecture.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
1	0	2	30

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Demonstrate body substance isolation as it relates to childbirth.
2. Demonstrate serving as a role model for other EMS providers when discussing or performing the steps of childbirth.
3. Demonstrate how to assess an obstetric patient.
4. Demonstrate how to provide care for a patient with the following:
    - Excessive vaginal bleeding
    - Abdominal pain
    - Hypertensive crisis
5. Demonstrate how to prepare the obstetric patient for delivery.
6. Demonstrate how to assist in the normal cephalic delivery of the fetus.
7. Demonstrate how to deliver the placenta.
8. Demonstrate how to provide post-delivery care of the mother.
9. Demonstrate how to assist with abnormal deliveries.
10. Demonstrate how to care for the mother with delivery complications.
11. Calculate the APGAR score given various newborn situations.
12. Prepare appropriate ventilation equipment, adjuncts, and technique for a newborn.
13. Determine when chest compressions are appropriate for a newborn.
14. Determine when endotracheal intubation is appropriate for a newborn.
15. Assess patient improvement due to endotracheal intubation.
16. Determine when vascular access is indicated for a newborn.
17. Determine when blow-by oxygen delivery is appropriate for a newborn.
18. Assess patient improvement due to assisted ventilations.
19. Determine when an orogastric tube should be inserted during positive-pressure ventilation.
20. Assess patient improvement due to blow-by oxygen delivery.
21. Determine the appropriate treatment for the newborn with narcotic depression.
22. Determine appropriate receiving facilities for low and high risk newborns.
23. Demonstrate preparation of a newborn resuscitation.
24. Demonstrate appropriate assessment technique for examining a newborn.
25. Demonstrate appropriate assisted ventilations for a newborn.
26. Demonstrate appropriate endotracheal intubation technique for a newborn.
27. Demonstrate appropriate meconium aspiration suctioning technique for a newborn.
28. Demonstrate appropriate insertion of an orogastric tube.
29. Demonstrate needle chest decompression for a newborn or neonate.
30. Demonstrate appropriate chest compression and ventilation technique for a newborn.
31. Demonstrate appropriate techniques to improve or eliminate endotracheal intubation complications.
32. Demonstrate vascular access cannulation techniques for a newborn.
33. Demonstrate the initial steps in resuscitation of a newborn.
34. Demonstrate blow-by oxygen delivery for a newborn.

Course Number and Name: EMS 2314 Medical Emergencies of the Secondary Assessment-Lecture & Lab

Description: This course will integrate patient assessment and assessment findings with principles of epidemiology and pathophysiology across the lifespan. At the conclusion of this course, the student will be able to formulate a field impression and implement a comprehensive treatment/disposition plan for a patient with a medical complaint.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	3	2	75

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with endocrine disorders.
    a. Explain the pathophysiological changes of endocrine emergencies and relate these changes to disturbances in normal physiology.
    b. Formulate a field impression and differential diagnosis using scene size-up, assessment, history, and monitoring technology.
    c. Interpret patient assessment findings to develop a field diagnosis and treatment plan.
    d. Describe the management guidelines of endocrine emergencies.
    e. Describe the characteristics of drugs used to treat the endocrine system
    f. Integrate knowledge of pharmacodynamics and pharmacokinetics with knowledge of differences across the lifespan, to include factors such as age, body mass, concurrent medications, and alterations in physiology.
    g. Discuss variations in disease presentation from infancy through late adulthood.
    h. Relate patients of different ages to adaptations in communication, assessment, and treatment of endocrine emergencies.
    i. Examine physiologic and psychosocial issues, related to endocrinology, from infancy through late adulthood.
    j. Identify and describe the physical assessment techniques used in the secondary assessment.
    k. Interpret the findings obtained through inspection, palpation, percussion and auscultation.
    l. Perform a physical assessment to identify and integrate findings from the anatomic region exam into the field diagnosis.
    m. Discuss strategies for completing the secondary assessment on a patient.
    n. Discuss alterations in the secondary assessment and physical exam when caring for pediatric and geriatric age groups.
    o. Manage patients across the lifespan when given oral scenarios.
2. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with allergic reactions and anaphylaxis.
    a. Explain the pathophysiologic changes due to immunological emergencies and relate these changes to disturbances in normal immune physiology.
    b. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnosis for immunological emergencies.
    c. Compare the presentation and treatment of allergies versus anaphylaxis.
    d. Describe the characteristics of drugs used to treat allergies and anaphylaxis.
    e. Integrate knowledge of pharmacodynamics and pharmacokinetics with knowledge of altered drug effects across the lifespan, to include factors such as: age, body mass, concurrent medications, and alterations in physiology.

f. Discuss variations in immunologic emergency presentations from infancy through late adulthood due to variations in physiology across the lifespan.
g. Relate patients of different ages to adaptations in communication, assessment, and treatment of anaphylactic and allergic reactions.
h. Examine physiologic and psychosocial issues related to immunology, from infancy through late adulthood.

3. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with gastrointestinal disorders.
   a. Explain the pathophysiological changes of gastrointestinal emergencies and relate these changes to disturbances in normal physiology.
   b. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for gastrointestinal emergencies.
   c. Interpret the patient assessment findings and develop a treatment plan for patients with gastrointestinal disorders in the pre-hospital environment.
   d. Describe the characteristics of drugs used to affect the gastrointestinal system.
   e. Integrate knowledge of pharmacodynamics and pharmacokinetics of drugs with knowledge of altered drug effects across the lifespan, to include: age, body mass, concurrent medications, and alterations in physiology.
   f. Discuss variations in presentation of gastrointestinal conditions from infancy through late adulthood due to variations in physiology across the lifespan.
   g. Relate patients of different ages to adaptations in communication, assessment, and treatment of gastrointestinal conditions.
   h. Examine physiologic and psychosocial issues related to gastrointestinal conditions from infancy through late adulthood.
4. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions to recognize and manage patients from infancy through late adulthood with urologic and renal disorders.
   a. Explain the pathophysiological changes of renal and urologic emergencies and relate these changes to disturbances in normal physiology.
   b. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for renal and urologic conditions.
   c. Interpret the patient assessment findings and develop a treatment plan for patients with renal and urologic disorders in the pre-hospital environment.
   d. Describe the characteristics of drugs used to affect the male and female reproductive system and those that affect sexual behavior.
   e. Discuss variations in presentation of renal and urologic conditions from infancy through late adulthood due to variations in physiology across the lifespan.
   f. Relate patients of different ages to adaptations in communication, assessment, and treatment of renal and urologic conditions.
   g. Examine physiologic and psychosocial issues related to renal and urologic conditions from infancy through late adulthood.
5. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with toxicologic emergencies including substance abuse.
   a. Explain the pathophysiological changes that would be consistent in specific toxins or toxidromes as seen pre-hospital.
   b. Describe the role of poison control centers in surveillance and management of toxicologic emergencies.
   c. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for the patient displaying a toxicologic emergency pre-hospital.

d. Interpret the patient assessment findings and develop a treatment plan for patients with a toxicologic emergency in the pre-hospital environment.
e. Identify the routes by which toxins can enter the body, and the fundamental management for each toxin, as applicable.
f. Describe the characteristics of drugs used for poisonings and overdoses.
g. Identify common medications taken by the elderly population that can cause toxicologic emergencies.
h. Integrate knowledge of pharmacodynamics and pharmacokinetics of drugs with knowledge of altered drug effects across the lifespan, to include: age, body mass, concurrent medications, and alterations in physiology.
i. Discuss epidemiology of toxicologic conditions with emphasis placed on pediatric population as well as geriatric population.
j. Relate patients of different ages to adaptations in communication, assessment, and treatment related to toxicology.
k. Examine physiologic and psychosocial issues related to toxicology and substance abuse.

6. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with hematological disorders.
   a. Explain the demographics and the role of heredity in the risk factors for hematological disorders.
   b. Explain the pathophysiological changes of hematological emergencies and relate these changes to disturbances in normal physiology.
   c. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for hematological emergencies.
   d. Interpret the patient assessment findings and develop a treatment plan for patients with hematological disorders in the pre-hospital environment.
   e. Discuss variations in presentation of hematological conditions from infancy through late adulthood due to variations in physiology across the lifespan.
   f. Relate patients of different ages to adaptations in communication, assessment, and treatment of hematological conditions.
   g. Examine physiologic and psychosocial issues related to hematological conditions from infancy through late adulthood.
7. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with infectious diseases, including sepsis.
   a. Explain public health principles related to infectious diseases, and the roles of local, state, and federal agencies involved in surveillance and outbreaks.
   b. Differentiate between the characteristics of bacteria, viruses, prions, fungi, protozoa, and parasites as causes of infectious diseases.
   c. Describe the interactions of the agent, host, and environment as determining factors in disease transmission.
   d. Restate the phases of the infectious process and the body's normal defenses.
   e. Explain the principles and practices of infection control in pre-hospital care, including your responsibilities and your rights under the Ryan White Act.
   f. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for patients with infectious disease emergencies.
   g. Interpret the patient assessment findings and develop a treatment plan for patients with infectious diseases in the pre-hospital environment.
   h. Describe the pathophysiology of infectious diseases of immediate concern to EMS providers.
   i. Review the actions you are to take if you are exposed to an infectious disease.
   j. Identify EMS provider's role in patient education and preventing disease transmission.

k. Discuss the pathophysiology, risk factors, assessment, and treatment for sepsis/systemic inflammatory response syndrome. (SIRS)
l. Discuss variations in presentation of infectious disease conditions from infancy through late adulthood due to variations in physiology across the lifespan.

8. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with psychiatric and behavioral disorders.
   a. Classify psychiatric and behavioral influences as sociocultural, biological, or psychosocial.
   b. Explain the pathophysiological changes of behavioral/psychiatric emergencies and relate these changes to disturbances in normal physiology.
   c. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for specific behavioral/psychiatric emergencies.
   d. Interpret the patient assessment findings and develop a treatment plan for patients displaying a behavioral emergency.
   e. Examine the epidemiology and risk factors for suicide.
   f. Describe special considerations for assessment and management of psychiatric and behavioral disorders in geriatric and pediatric populations.
   g. Explain the characteristics and management of excited delirium syndrome.
   h. Describe special considerations in the assessment and management of tasered patients.
   i. Review the indications, procedures, precautions, and necessary documentation associated with the use of physical and chemical restraints to manage violent patients.
9. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with disorders of the head, ears, eyes, nose, and throat. (HEENT) a. Explain the pathophysiological changes of HEENT emergencies and relate these changes to disturbances in normal physiology.
   b. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for HEENT emergencies.
   c. Interpret the patient assessment findings and develop a treatment plan for patients with HEENT disorders in the pre-hospital environment.
   d. Describe the characteristics of drugs used to affect the eyes and ears.
   e. Discuss variations in presentation of HEENT conditions from infancy through late adulthood due to variations in physiology across the lifespan.
   f. Relate patients of different ages to adaptations in communication, assessment, and treatment of HEENT conditions.
10. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with non-traumatic musculoskeletal disorders.
    a. Explain the pathophysiological changes of non-traumatic musculoskeletal conditions and relate these changes to disturbances in normal physiology.
    b. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for musculoskeletal emergencies.
    c. Interpret the patient assessment findings and develop a treatment plan for patients with non- traumatic musculoskeletal disorders in the pre-hospital environment.
    d. Describe the characteristics of drugs used to affect the musculoskeletal system.
11. Integrate Scene and patient assessment findings with knowledge of epidemiology and pathophysiology to perform a secondary assessment and formulate a treatment plan.
    a. Perform the physical assessment techniques used in the secondary assessment.
    b. Perform the techniques and interpret the findings obtained through inspection, palpation, percussion and auscultation.

c. Perform a physical assessment to identify and integrate findings from the anatomic region exam into the field diagnosis.
d. Devise strategies for performing the secondary assessment on a patient.
e. Perform a secondary assessment and physical exam on pediatric, adult, and geriatric age groups using a scenario based approach.
f. Perform pharmacologic calculations for various age groups accounting for differences in body mass and alterations in pharmacodynamics and pharmacokinetics.
g. Choose correct drug and implement pharmacologic intervention for endocrine emergencies.
h. Choose drug and implement pharmacologic intervention for anaphylaxis intervention.
i. Choose drug and implement pharmacologic intervention for patient with gastrointestinal emergencies.
j. Choose drug and implement pharmacologic intervention for patient with toxicologic emergency.
k. Discuss pharmacologic intervention for patient with behavioral emergency.
l. Determine a field diagnosis based on assessment findings.
m. Formulate a treatment plan relative to field diagnosis.
n. Evaluate patient response to proposed treatment plan.
o. Determine effectiveness of proposed treatment plan and revise process as needed.
p. Recommend appropriate disposition of patient according to patient acuity.

12. Integrate patient monitoring technology into the patient assessment process.
    a. Perform and discuss the purpose, applications, procedures, diagnostic information provided, and limitations for blood glucometry monitoring.
    b. Given blood chemistry reports, interpret patient implications and diagnostic information.
    c. Discuss the purpose, applications, procedures, diagnostic information, and limitations for arterial blood gases.
    d. Interpret the results of arterial blood gas monitoring.
    e. Discuss the purpose, applications, procedures, diagnostic information provided, and limitations for bedside ultrasonography and FAST exam.
    f. Discuss how the use of these tools can facilitate the determination of field impression and several differential diagnoses.
    g. Discuss the purpose, applications, procedures, diagnostic information provided, and limitations for hemoglobin monitoring.
    h. Apply pulse oximetry during assessment of various patients.
    i. Discuss the purpose, applications, procedures, diagnostic information provided, and limitations for pulse oximetry monitoring.
    j. Perform cardiac monitoring on patient during scenario based exercise.
    k. Discuss the purpose, applications, procedures, diagnostic information, and limitations for cardiac monitoring.
    l. Discuss the purpose, applications, procedures, diagnostic information, and limitations for 12 lead monitoring
    m. Demonstrate the application and procedure for end tidal capnography.
    n. Discuss how the use of these tools can facilitate the determination of field impression and several differential diagnoses.

Course Number and Name: EMS 2343 Medical Emergencies of the Secondary Assessment-Lecture

Description: This course will integrate patient assessment and assessment findings with principles of epidemiology and pathophysiology across the lifespan. At the conclusion of this course, the student will be able to formulate a field impression and implement a comprehensive treatment/disposition plan for a patient with a medical complaint.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	3	0	45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with endocrine disorders.
    a. Explain the pathophysiological changes of endocrine emergencies and relate these changes to disturbances in normal physiology.
    b. Formulate a field impression and differential diagnosis using scene size-up, assessment, history, and monitoring technology.
    c. Interpret patient assessment findings to develop a field diagnosis and treatment plan.
    d. Describe the management guidelines of endocrine emergencies.
    e. Describe the characteristics of drugs used to treat the endocrine system
    f. Integrate knowledge of pharmacodynamics and pharmacokinetics with knowledge of differences across the lifespan, to include factors such as age, body mass, concurrent medications, and alterations in physiology.
    g. Discuss variations in disease presentation from infancy through late adulthood.
    h. Relate patients of different ages to adaptations in communication, assessment, and treatment of endocrine emergencies.
    i. Examine physiologic and psychosocial issues, related to endocrinology, from infancy through late adulthood.
2. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with allergic reactions and anaphylaxis.
    a. Explain the pathophysiologic changes due to immunological emergencies and relate these changes to disturbances in normal immune physiology.
    b. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnosis for immunological emergencies.
    c. Compare the presentation and treatment of allergies versus anaphylaxis.
    d. Describe the characteristics of drugs used to treat allergies and anaphylaxis.
    e. Integrate knowledge of pharmacodynamics and pharmacokinetics with knowledge of altered drug effects across the lifespan, to include factors such as: age, body mass, concurrent medications, and alterations in physiology.
    f. Discuss variations in immunologic emergency presentations from infancy through late adulthood due to variations in physiology across the lifespan.
    g. Relate patients of different ages to adaptations in communication, assessment, and treatment of anaphylactic and allergic reactions.
    h. Examine physiologic and psychosocial issues related to immunology, from infancy through late adulthood.
3. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with gastrointestinal disorders.

a. Explain the pathophysiological changes of gastrointestinal emergencies and relate these changes to disturbances in normal physiology.
b. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for gastrointestinal emergencies.
c. Interpret the patient assessment findings and develop a treatment plan for patients with gastrointestinal disorders in the pre-hospital environment.
d. Describe the characteristics of drugs used to affect the gastrointestinal system.
e. Integrate knowledge of pharmacodynamics and pharmacokinetics of drugs with knowledge of altered drug effects across the lifespan, to include: age, body mass, concurrent medications, and alterations in physiology.
f. Discuss variations in presentation of gastrointestinal conditions from infancy through late adulthood due to variations in physiology across the lifespan.
g. Relate patients of different ages to adaptations in communication, assessment, and treatment of gastrointestinal conditions.
h. Examine physiologic and psychosocial issues related to gastrointestinal conditions from infancy through late adulthood.

4. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions to recognize and manage patients from infancy through late adulthood with urologic and renal disorders.
   a. Explain the pathophysiological changes of renal and urologic emergencies and relate these changes to disturbances in normal physiology.
   b. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for renal and urologic conditions.
   c. Interpret the patient assessment findings and develop a treatment plan for patients with renal and urologic disorders in the pre-hospital environment.
   d. Describe the characteristics of drugs used to affect the male and female reproductive system and those that affect sexual behavior.
   e. Discuss variations in presentation of renal and urologic conditions from infancy through late adulthood due to variations in physiology across the lifespan.
   f. Relate patients of different ages to adaptations in communication, assessment, and treatment of renal and urologic conditions.
   g. Examine physiologic and psychosocial issues related to renal and urologic conditions from infancy through late adulthood.
5. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with toxicologic emergencies including substance abuse.
   a. Explain the pathophysiological changes that would be consistent in specific toxins or toxidromes as seen pre-hospital.
   b. Describe the role of poison control centers in surveillance and management of toxicologic emergencies.
   c. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for the patient displaying a toxicologic emergency pre-hospital.
   d. Interpret the patient assessment findings and develop a treatment plan for patients with a toxicologic emergency in the pre-hospital environment.
   e. Identify the routes by which toxins can enter the body, and the fundamental management for each toxin, as applicable.
   f. Describe the characteristics of drugs used for poisonings and overdoses.
   g. Identify common medications taken by the elderly population that can cause toxicologic emergencies.
   h. Integrate knowledge of pharmacodynamics and pharmacokinetics of drugs with knowledge of altered drug effects across the lifespan, to include: age, body mass, concurrent medications, and alterations in physiology.

i. Discuss epidemiology of toxicologic conditions with emphasis placed on pediatric population as well as geriatric population.
j. Relate patients of different ages to adaptations in communication, assessment, and treatment related to toxicology.
k. Examine physiologic and psychosocial issues related to toxicology and substance abuse.

6. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with hematological disorders.
   a. Explain the demographics and the role of heredity in the risk factors for hematological disorders.
   b. Explain the pathophysiological changes of hematological emergencies and relate these changes to disturbances in normal physiology.
   c. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for hematological emergencies.
   d. Interpret the patient assessment findings and develop a treatment plan for patients with hematological disorders in the pre-hospital environment.
   e. Discuss variations in presentation of hematological conditions from infancy through late adulthood due to variations in physiology across the lifespan.
   f. Relate patients of different ages to adaptations in communication, assessment, and treatment of hematological conditions.
   g. Examine physiologic and psychosocial issues related to hematological conditions from infancy through late adulthood.
7. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with infectious diseases, including sepsis.
   a. Explain public health principles related to infectious diseases, and the roles of local, state, and federal agencies involved in surveillance and outbreaks.
   b. Differentiate between the characteristics of bacteria, viruses, prions, fungi, protozoa, and parasites as causes of infectious diseases.
   c. Describe the interactions of the agent, host, and environment as determining factors in disease transmission.
   d. Restate the phases of the infectious process and the body's normal defenses.
   e. Explain the principles and practices of infection control in pre-hospital care, including your responsibilities and your rights under the Ryan White Act.
   f. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for patients with infectious disease emergencies.
   g. Interpret the patient assessment findings and develop a treatment plan for patients with infectious diseases in the pre-hospital environment.
   h. Describe the pathophysiology of infectious diseases of immediate concern to EMS providers.
   i. Review the actions you are to take if you are exposed to an infectious disease.
   j. Identify EMS provider's role in patient education and preventing disease transmission.
   k. Discuss the pathophysiology, risk factors, assessment, and treatment for sepsis/systemic inflammatory response syndrome. (SIRS)
   l. Discuss variations in presentation of infectious disease conditions from infancy through late adulthood due to variations in physiology across the lifespan.
8. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with psychiatric and behavioral disorders.
   a. Classify psychiatric and behavioral influences as sociocultural, biological, or psychosocial.
   b. Explain the pathophysiological changes of behavioral/psychiatric emergencies and relate these changes to disturbances in normal physiology.

c. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for specific behavioral/psychiatric emergencies.
d. Interpret the patient assessment findings and develop a treatment plan for patients displaying a behavioral emergency.
e. Examine the epidemiology and risk factors for suicide.
f. Describe special considerations for assessment and management of psychiatric and behavioral disorders in geriatric and pediatric populations.
g. Explain the characteristics and management of excited delirium syndrome.
h. Describe special considerations in the assessment and management of tasered patients.
i. Review the indications, procedures, precautions, and necessary documentation associated with the use of physical and chemical restraints to manage violent patients.

9. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with disorders of the head, ears, eyes, nose, and throat. (HEENT) a. Explain the pathophysiological changes of HEENT emergencies and relate these changes to disturbances in normal physiology.
    b. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for HEENT emergencies.
    c. Interpret the patient assessment findings and develop a treatment plan for patients with HEENT disorders in the pre-hospital environment.
    d. Describe the characteristics of drugs used to affect the eyes and ears.
    e. Discuss variations in presentation of HEENT conditions from infancy through late adulthood due to variations in physiology across the lifespan.
    f. Relate patients of different ages to adaptations in communication, assessment, and treatment of HEENT conditions.
10. Review assessment and integrate assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, and advanced life support interventions, to recognize and manage patients, from infancy through late adulthood, with non-traumatic musculoskeletal disorders.
    a. Explain the pathophysiological changes of non-traumatic musculoskeletal conditions and relate these changes to disturbances in normal physiology.
    b. Adapt the scene size-up, assessment, history, and monitoring technology to arrive at a field impression and differential diagnoses for musculoskeletal emergencies.
    c. Interpret the patient assessment findings and develop a treatment plan for patients with non- traumatic musculoskeletal disorders in the pre-hospital environment.
    d. Describe the characteristics of drugs used to affect the musculoskeletal system.

Course Number and Name: EMS 2351 Medical Emergencies of the Secondary Assessment-Lab

Description: This course will integrate patient assessment and assessment findings with principles of epidemiology and pathophysiology across the lifespan. At the conclusion of this course, the student will be able to perform a secondary assessment in order to formulate a field impression and implement a comprehensive treatment/disposition plan for a patient with a medical complaint.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
1	0	2	30

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Integrate Scene and patient assessment findings with knowledge of epidemiology and pathophysiology to perform a secondary assessment and formulate a treatment plan.
    a. Perform the physical assessment techniques used in the secondary assessment.
    b. Perform the techniques and interpret the findings obtained through inspection, palpation, percussion and auscultation.
    c. Perform a physical assessment to identify and integrate findings from the anatomic region exam into the field diagnosis.
    d. Devise strategies for performing the secondary assessment on a patient.
    e. Perform a secondary assessment and physical exam on pediatric, adult, and geriatric age groups using a scenario based approach.
    f. Perform pharmacologic calculations for various age groups accounting for differences in body mass and alterations in pharmacodynamics and pharmacokinetics.
    g. Choose correct drug and implement pharmacologic intervention for endocrine emergencies.
    h. Choose drug and implement pharmacologic intervention for anaphylaxis intervention.
    i. Choose drug and implement pharmacologic intervention for patient with gastrointestinal emergencies.
    j. Choose drug and implement pharmacologic intervention for patient with toxicologic emergency.
    k. Discuss pharmacologic intervention for patient with behavioral emergency.
    l. Determine a field diagnosis based on assessment findings.
    m. Formulate a treatment plan relative to field diagnosis.
    n. Evaluate patient response to proposed treatment plan.
    o. Determine effectiveness of proposed treatment plan and revise process as needed.
    p. Recommend appropriate disposition of patient according to patient acuity.
2. Integrate patient monitoring technology into the patient assessment process.
    a. Perform and discuss the purpose, applications, procedures, diagnostic information provided, and limitations for blood glucometry monitoring.
    b. Given blood chemistry reports, interpret patient implications and diagnostic information.
    c. Discuss the purpose, applications, procedures, diagnostic information, and limitations for arterial blood gases.
    d. Interpret the results of arterial blood gas monitoring.
    e. Discuss the purpose, applications, procedures, diagnostic information provided, and limitations for bedside ultrasonography and FAST exam.
    f. Discuss how the use of these tools can facilitate the determination of field impression and several differential diagnoses.
    g. Discuss the purpose, applications, procedures, diagnostic information provided, and limitations for hemoglobin monitoring.

h. Apply pulse oximetry during assessment of various patients.
i. Discuss the purpose, applications, procedures, diagnostic information provided, and limitations for pulse oximetry monitoring.
j. Perform cardiac monitoring on patient during scenario based exercise.
k. Discuss the purpose, applications, procedures, diagnostic information, and limitations for cardiac monitoring.
l. Discuss the purpose, applications, procedures, diagnostic information, and limitations for 12 lead monitoring
m. Demonstrate the application and procedure for end tidal capnography.
n. Discuss how the use of these tools can facilitate the determination of field impression and several differential diagnoses.

Course Number and Name: EMS 2715 Concepts of Traumatic Medicine-Lecture & Lab

Description: This course will develop the basis for the pathophysiology, identification, and treatment of traumatic emergencies including coverage of concepts related to trauma systems and shock management. These concepts will be examined in patients across the life span. It also includes the trauma laboratory experience is designed to give psychomotor experience to the theoretical concepts developed in the lecture.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
5	3	4	105

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Describe the epidemiology of trauma, which results in requests for emergency medical care.
2. Describe and apply the five-step public health model to injury prevention.
3. Describe the capabilities of the various levels of designated trauma centers.
4. Conduct trauma assessments in a variety of scenarios that result in categorization and prioritize of patients as critical, unstable, potentially unstable, or stable (CUPS system).
5. Discuss the role of time to definitive care in the outcomes of trauma patients.
6. Apply trauma triage criteria to identify patients who should be transported to a trauma center.
7. Describe the importance of an organized system of trauma care to reducing trauma morbidity and mortality, and how EMS can participate in injury prevention programs.
8. Describe the key actions and decisions paramedics must be aware of during each phase of trauma assessment.
9. Briefly discuss the steps of the primary assessment as it relates to traumatically injured patients.
10. Briefly discuss the steps of the secondary assessment as it relates to traumatically injured patients.
11. Briefly discuss the steps of the reassessment phase as it relates to traumatically injured patients.
12. Understand and be able to apply numeric scoring systems for traumatized patients.
13. Given a variety of trauma patient scenarios, identify signs and symptoms of injury.
14. Given a variety of trauma patient scenarios, discuss assessment-based decision making, including treatment and transport decisions.
15. Discuss the laws of inertia, energy conservation, force, and kinetic energy as they relate to kinetics of Blunt force and penetrating trauma.
16. Associate the application of energy to various body tissues with the biomechanical forces produced to predict injury patterns.
17. Describe the events that occur in motor vehicle impacts and identify potential injuries based on events.
18. Discuss the various vehicular restraints and safety mechanism.
19. Discuss the collision analysis to account for the characteristics of motorcycle and off road vehicle collisions.
20. Describe the forces that cause injuries in patients who have fallen and the criteria that constitute a severe fall.
21. Describe the mechanisms of blast injury, blast-injury patterns, and special blast-injury care considerations.
22. Discuss the phases of the blast injury to include common injury patterns in each phase.
23. Describe basic injury patterns and assessment considerations for an injured patient participating in various sporting event.
24. Describe the considerations for the cause and assessment of crush injuries and compartment syndrome.
25. Apply principles of ballistics to the prediction of injury patterns, to include special weapon types.
26. Associate the application of low-, medium-,and high-velocity penetrating mechanisms to various body tissues with the biomechanical forces produced to predict injury patterns.

27. Describe special concerns for EMS provider safety that are associated with penetrating trauma.
28. Reconstruct penetrating events to gain additional information that can help predict injury patterns.
29. Describe the special considerations in assessment and management of penetrating trauma to the face and chest, and of impaled objects.
30. Review the anatomy and basic physiology of the cardiovascular system and determinants of blood pressure.
31. Describe the characteristics and concerns associated with venous, arterial, and capillary bleeding.
32. Discuss the disruption of homeostasis that occurs due to hemorrhage and the body's compensatory mechanisms attempting to maintain homeostasis.
33. Describe the process of hemostasis and factors that can affect it.
34. Define internal and external hemorrhage and discuss appropriate progressive measures for managing it, to include tourniquets, TXA administration, and topical hemostatic agents.
35. Describe the pathophysiology and findings associated with the four classes of hemorrhage.
36. Describe the effects of hemorrhage on categories of special patients, such as pregnant women, athletes, obese patients, children, and the elderly.
37. Define and discuss the compensated, decompensated, and irreversible stages of shock.
38. Identify and discuss the phases of assessment as they relate to a patient suffering from blood loss.
39. Briefly describe the underlying pathophysiology of hypovolemic, distributive, neurogenic, obstructive, cardiogenic and respiratory causes of shock.
40. Demonstrate assessments that can identify patients with hemorrhage and shock.
41. Discuss the management of patients with hemorrhage and shock to include the use of oxygen, intravenous therapy, pharmacology, and temperature regulation.
42. Describe the epidemiology of soft tissue injuries.
43. Describe the anatomy and physiology of the skin and associated soft tissues.
44. Discuss the pathophysiology of open and closed soft tissue injuries.
45. Describe the process and phases of wound healing.
46. Discuss soft tissue injury complications, including infection, impaired hemostasis, delayed healing, compartment syndrome, scarring, pressure injuries, crush syndrome, and injection injuries.
47. Describe and differentiate between the use of different dressings and bandaging materials, in regards to soft tissue injuries.
48. Discuss the phases and process of assessment as they relate to the assessment and management of a patient with a soft tissue injury.
49. Reassess patients with soft tissue injuries for complications of bandaging.
50. Describe special considerations in the management of the injuries such as amputations, impalements, crush and compartment syndromes, and injuries to the face, neck, thorax, and abdomen.
51. Describe considerations in decisions to transport or treat and release patients with soft tissue injuries.
52. Describe the epidemiology of burn injuries.
53. Describe the anatomy and physiology of the skin.
54. Describe the basic pathophysiology of thermal, electrical, chemical, radiation, and inhalation burns.
55. Identify basic assessment principles for burn injuries, including the determination of burn depth and extent of body surface area involved, including superficial, partial thickness and full thickness.
56. Discuss the systemic complications of burns and how these may be managed.
57. Identify and describe the phases of patient assessment for a patient with a burn injury.
58. Prioritize burns that are considered minor, moderate, and critical.
59. Develop management plans for patients with burns resulting from thermal, inhalation, electrical, chemical, and radiation burn mechanisms.
60. Identify the epidemiology of injuries to the head, neck, and spinal column.
61. Describe the anatomy and physiology of the head and face, neck, and spinal column.
62. Describe the various mechanisms of injury that could cause trauma to the head, neck, and spinal cord.

63. Identify and describe the various types of brain injuries that can occur after trauma.
64. Discuss intracranial pressure, auto-regulation, and the detrimental effects of increasing pressure on the brain in the adult and pediatric patient.
65. Identify the types and describe the pathophysiology of syndromes associated with spinal cord trauma.
66. Identify and discuss the types of injuries to the head, face, and neck.
67. Identify the steps and discuss the procedure for performing a comprehensive assessment of patients with head, face, neck, and spinal column injuries.
68. Develop treatment plans for patients with injuries to the head, face, neck, and spinal column
69. Discuss the epidemiology of chest trauma.
70. Describe the anatomy and physiology of the thorax.
71. Identify how blunt and penetrating mechanisms can result in thoracic trauma.
72. List and describe common pulmonary and chest wall injuries in the pre-hospital environment.
73. List and describe common cardiac and vascular injuries that may occur secondary to thoracic trauma.
74. Identify the phases and the steps of assessment for patients that have suffered chest wall trauma and present with various injuries.
75. Given a variety of scenarios, discuss the management of patients with thoracic injuries.
76. Discuss the epidemiology and trends observed in abdominal and pelvic trauma.
77. Describe the anatomy and physiology of the abdominal cavity and its contents.
78. Identify how blunt and penetrating mechanisms of injury can result in abdominal and pelvic trauma.
79. Discuss the pathophysiology of abdominal trauma pertaining to hollow, solid, and vascular injury patterns.
80. Identify the stages and discuss the steps necessary for assessment of patients with injuries sustained from trauma to the abdomen and pelvis.
81. Develop a management plan for patients with abdominal and pelvic injuries.
82. Discuss the basic epidemiology of orthopedic trauma.
83. Describe considerations in preventing orthopedic injuries.
84. Describe the anatomy and physiology of the musculoskeletal system.
85. Describe the pathophysiology of injuries as they occur to muscles, joints, and bones.
86. Describe special considerations in pediatric, geriatric, and sports-related orthopedic injuries.
86. Identify the phases of orthopedic injuries and discuss the steps of assessment for orthopedic injuries.
87. Discuss the types of and indications for, splinting equipment.
88. Identify and discuss any specific management for specific types of injuries such as pelvic, femur, knee, tibia/fibula, ankle, foot, shoulder, humerus, elbow, radius/ulna, wrist, and hand.
89. Identify and discuss the proper pre-hospital management of patients with musculoskeletal injuries.
90. Identify factors that place patients at particular risk for environmental emergencies.
91. Describe the homeostasis of body temperature, including discussion of the following:
    a. Mechanisms of heat loss and heat production
    b. Physiology of thermoregulation
    c. Factors that can interfere with thermoregulation
92. Describe the pathophysiology of heat-related illnesses and cold related disorders 93. Assess and manage patients with heat-related illnesses and cold related disorders.
94. Discuss measures to prevent heat-related and cold-related disorders.
95. Describe the pathophysiology of drowning.
96. Assess and manage patients who have drowned.
97. Describe the pathophysiology of diving emergencies, including the application of gas laws.
98. Assess and manage patients with diving injuries, including the following:
    - Surface injuries
    - Descent injuries
    - Bottom injuries
    - Ascent injuries

99. Describe the pathophysiology of high-altitude illness. 100.Discuss ways to prevent high-altitude illness.
101. Assess and manage patients with high-altitude illnesses.
102. Describe the importance of recognizing, preventing, and treating hypothermia in trauma patients.
103. Describe the differences in anatomy, physiology, pathophysiology, assessment, and management of special population patients.
104 Discuss the paramedic's role while interacting with other EMS and ED health care providers as it relates to traumatized patients.
105. Identify the purpose and describe the use of air medical transport in the traumatized patient.
106. Demonstrate psychomotor and affective skills necessary to apply the topics covered in the co-requisite lecture course.
107. Recognize, categorize and apply treatment in traumatically injured patients to include the following:
    - Critical
    - Unstable
    - Potentially unstable
    - Stable

Course Number and Name: EMS 2743 Concepts of Traumatic Medicine-Lecture

Description: This course will develop the basis for the pathophysiology, identification, and treatment of traumatic emergencies including coverage of concepts related to trauma systems and shock management. These concepts will be examined in patients across the life span.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	3	0	45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Describe the epidemiology of trauma, which results in requests for emergency medical care.
2. Describe and apply the five-step public health model to injury prevention.
3. Describe the capabilities of the various levels of designated trauma centers.
4. Conduct trauma assessments in a variety of scenarios that result in categorization and prioritize of patients as critical, unstable, potentially unstable, or stable (CUPS system).
5. Discuss the role of time to definitive care in the outcomes of trauma patients.
6. Apply trauma triage criteria to identify patients who should be transported to a trauma center.
7. Describe the importance of an organized system of trauma care to reducing trauma morbidity and mortality, and how EMS can participate in injury prevention programs.
8. Describe the key actions and decisions paramedics must be aware of during each phase of trauma assessment.
9. Briefly discuss the steps of the primary assessment as it relates to traumatically injured patients.
10. Briefly discuss the steps of the secondary assessment as it relates to traumatically injured patients.
11. Briefly discuss the steps of the reassessment phase as it relates to traumatically injured patients.
12. Understand and be able to apply numeric scoring systems for traumatized patients.
13. Given a variety of trauma patient scenarios, identify signs and symptoms of injury.
14. Given a variety of trauma patient scenarios, discuss assessment-based decision making, including treatment and transport decisions.
15. Discuss the laws of inertia, energy conservation, force, and kinetic energy as they relate to kinetics of Blunt force and penetrating trauma.
16. Associate the application of energy to various body tissues with the biomechanical forces produced to predict injury patterns.
17. Describe the events that occur in motor vehicle impacts and identify potential injuries based on events.
18. Discuss the various vehicular restraints and safety mechanism.
19. Discuss the collision analysis to account for the characteristics of motorcycle and off road vehicle collisions.
20. Describe the forces that cause injuries in patients who have fallen and the criteria that constitute a severe fall.
21. Describe the mechanisms of blast injury, blast-injury patterns, and special blast-injury care considerations.
22. Discuss the phases of the blast injury to include common injury patterns in each phase.
23. Describe basic injury patterns and assessment considerations for an injured patient participating in various sporting event.
24. Describe the considerations for the cause and assessment of crush injuries and compartment syndrome.
25. Apply principles of ballistics to the prediction of injury patterns, to include special weapon types.
26. Associate the application of low-, medium-,and high-velocity penetrating mechanisms to various body tissues with the biomechanical forces produced to predict injury patterns.
27. Describe special concerns for EMS provider safety that are associated with penetrating trauma.
28. Reconstruct penetrating events to gain additional information that can help predict injury patterns.

29. Describe the special considerations in assessment and management of penetrating trauma to the face and chest, and of impaled objects.
30. Review the anatomy and basic physiology of the cardiovascular system and determinants of blood pressure.
31. Describe the characteristics and concerns associated with venous, arterial, and capillary bleeding.
32. Discuss the disruption of homeostasis that occurs due to hemorrhage and the body's compensatory mechanisms attempting to maintain homeostasis.
33. Describe the process of hemostasis and factors that can affect it.
34. Define internal and external hemorrhage and discuss appropriate progressive measures for managing it, to include tourniquets, TXA administration, and topical hemostatic agents.
35. Describe the pathophysiology and findings associated with the four classes of hemorrhage.
36. Describe the effects of hemorrhage on categories of special patients, such as pregnant women, athletes, obese patients, children, and the elderly.
37. Define and discuss the compensated, decompensated, and irreversible stages of shock.
38. Identify and discuss the phases of assessment as they relate to a patient suffering from blood loss.
39. Briefly describe the underlying pathophysiology of hypovolemic, distributive, neurogenic, obstructive, cardiogenic and respiratory causes of shock.
40. Demonstrate assessments that can identify patients with hemorrhage and shock.
41. Discuss the management of patients with hemorrhage and shock to include the use of oxygen, intravenous therapy, pharmacology, and temperature regulation.
42. Describe the epidemiology of soft tissue injuries.
43. Describe the anatomy and physiology of the skin and associated soft tissues.
44. Discuss the pathophysiology of open and closed soft tissue injuries.
45. Describe the process and phases of wound healing.
46. Discuss soft tissue injury complications, including infection, impaired hemostasis, delayed healing, compartment syndrome, scarring, pressure injuries, crush syndrome, and injection injuries.
47. Describe and differentiate between the use of different dressings and bandaging materials, in regards to soft tissue injuries.
48. Discuss the phases and process of assessment as they relate to the assessment and management of a patient with a soft tissue injury.
49. Reassess patients with soft tissue injuries for complications of bandaging.
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77. Describe the anatomy and physiology of the abdominal cavity and its contents.
78. Identify how blunt and penetrating mechanisms of injury can result in abdominal and pelvic trauma.
79. Discuss the pathophysiology of abdominal trauma pertaining to hollow, solid, and vascular injury patterns.
80. Identify the stages and discuss the steps necessary for assessment of patients with injuries sustained from trauma to the abdomen and pelvis.
81. Develop a management plan for patients with abdominal and pelvic injuries.
82. Discuss the basic epidemiology of orthopedic trauma.
83. Describe considerations in preventing orthopedic injuries.
84. Describe the anatomy and physiology of the musculoskeletal system.
85. Describe the pathophysiology of injuries as they occur to muscles, joints, and bones.
86. Describe special considerations in pediatric, geriatric, and sports-related orthopedic injuries.
86. Identify the phases of orthopedic injuries and discuss the steps of assessment for orthopedic injuries.
87. Discuss the types of and indications for, splinting equipment.
88. Identify and discuss any specific management for specific types of injuries such as pelvic, femur, knee, tibia/fibula, ankle, foot, shoulder, humerus, elbow, radius/ulna, wrist, and hand.
89. Identify and discuss the proper pre-hospital management of patients with musculoskeletal injuries.
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98. Assess and manage patients with diving injuries, including the following:
    - Surface injuries
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    - Bottom injuries
    - Ascent injuries
99. Describe the pathophysiology of high-altitude illness. 100. Discuss ways to prevent high-altitude illness.
101. Assess and manage patients with high-altitude illnesses.
102. Describe the importance of recognizing, preventing, and treating hypothermia in trauma patients.

103. Describe the differences in anatomy, physiology, pathophysiology, assessment, and management of special population patients.
104. Discuss the paramedic's role while interacting with other EMS and ED health care providers as it relates to traumatized patients.
105. Identify the purpose and describe the use of air medical transport in the traumatized patient.

EMS 2752 Concepts of Traumatic Medicine-Lab

The trauma laboratory experience is designed to give psychomotor experience to the theoretical concepts developed in the lecture.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical	Contact Hours
2	0	4	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Demonstrate psychomotor and affective skills necessary to apply the topics covered in the co-requisite lecture course.
2. Recognize, categorize and apply treatment in traumatically injured patients to include the following:
    - Critical
    - Unstable
    - Potentially unstable
    - Stable

Course Number and Name: EMS 1525 Practicum II

Description: A continuation of EMS – 1514. Using supervised rotations in a definitive care setting, the students will continue to develop assessment and treatment skills. The student will transition to field experience upon achieving competencies in the definitive care setting.

Hour Breakdown:

Semester Credit Hours	Clinical	Field	Contact Hours
5	9	6	225

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Integration of paramedic skills
    a. Perform endotracheal intubation
    b. Perform cardiopulmonary arrest management, including CPR, airway management, electrical therapy, pharmacological therapy, and decision-making skills.
2. Practice ACLS skills in the clinical setting.
    a. Practice medication administration.
    b. Practice defibrillation.
    c. Perform comprehensive advanced level patient assessment throughout the life span.
3. Perform comprehensive advanced level patient assessment and management for the medical patient in the critical care units.
    a. Perform 12-cardiac montoring.
    b. Perform synchronized cardioversion.
    c. Perform transcutaneous pacing.
    d. Perform thrombolytic monitoring.
    e. Perform glucose determination.
4. Perform nasogastric tube.
    a. Perform CPAP/BiPAP.
    b. Access central venous devices.
    c. Perform pulse oximetry.
    d. Perform end tidal capnography.

Course Number and Name: EMS 2912 Concepts of EMS Operations

Description: Knowledge of operational roles and responsibilities to ensure safe patient, public, and personnel safety.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	2	0	30

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Practice work habits that minimize the risk of back injuries.
2. Take appropriate actions to avoid destroying evidence at potential crime scenes.
3. Describe the benefit of effective EMS system communication to patient care.
4. Discuss anticipated future trends in EMS system communication.
5. Explain how the basic communication model applies to EMS communications.
6. Describe the responsibilities of EMS dispatchers.
7. Describe effective communication skills with dispatch, medical direction, and hospital staff.
8. Describe typical equipment, frequencies, and the advantages of EMS communications.
9. Explain the purpose of the National EMS Information System (NEMSIS).
10. Explain the importance of spelling, terminology use, abbreviations, and acronyms in documentation.
11. Discuss the importance of accurate documentation of times and radio communications.
12. Describe the administrative rules and regulations on the design of ambulances. 13. Identify the types of ambulance design according to the General Services
14. Administration specs.
15. Describe the roles of the CAAS and the ACS Committee on Trauma.
16. Describe the role and responsibilities of the paramedic in checking the ambulance.
17. Describe considerations in ambulance deployment and staffing configurations.
18. Describe the intent of the KKK-A-1822 Federal Specifications for Ambulances.
19. Discuss the significance of ambulance collisions.
20. Identify strategies for reducing the risk of ambulance collisions and associated death and injury.

21. Describe the use of helicopters and fixed wing aircraft in the care of ill or injured patients.
22. Discuss the evolution of air medical transport.
23. Describe the characteristics and capabilities of fixed-wing and rotor-wing aircraft.
24. Analyze situations that can result in low-impact, high-impact, and disaster-related MCIs.

25. Describe the origins and purposes of incident command or incident management systems.
26. Describe the components of the National Incident Management System (NIMS).
27. Describe the roles of various personnel within each of the five functional areas of NIMS/ICS.
28. Describe and apply a system of triage to MCIs.
29. Discuss various functions expected of EMS personnel in the triage, treatment, and transport of an MCI.
30. Describe special considerations in the response and operating procedures in disasters.
31. Describe the importance of preplanning, drills, and critiques with regard to MCI response
32. Describe the concept of rescue awareness training with respect to the role of the paramedic in rescue situations.
33. Describe the protective equipment needed by rescue and EMS personnel for a variety of rescues.
34. Describe equipment and measures used to protect patients in rescue situations.
35. Describe considerations in safety procedures in the approach to rescue situations.
36. Describe the principles and practices related to surface water rescues.

37. Describe the principles and practices related to hazardous atmosphere rescues.
38. Describe the principles and practices related to highway operations and vehicle rescues.
39. Describe the principles and practices related to hazardous terrain rescues.
40. Describe considerations for extended care of patients in rescue situations.
41. Discuss importance of toxicological, MCI, and terrorism in response to hazardous materials.
42. Describe the need for specialized training at various levels to effectively manage haz-mat situations.
43. Describe the various control zones established at a haz-mat release site.
44. Discuss how to protect the crew, and others from exposure to a haz-mat.
45. Discuss how EMS personnel monitor and rehab those responding to haz-mat.
46. Discuss the demographics of violence.
47. Recognize indicators of violence on a call.
48. Discuss how to avoid danger when responding to calls on the roadside or highway.
49. Discuss how to avoid the types of dangers you may encounter when responding to violent street events. 50. Describe safety concerns related to responding to clandestine drug laboratories
51. Describe the special problems faced by rural EMS systems.
52. Recognize the particular hazards and considerations involved in agricultural emergencies.
53. Anticipate injuries associated with various recreational activities.
54. Identify likely targets of terrorist attacks.
55. Identify information and observations that can indicate a potential terrorist attack when responding to calls.
56. Describe characteristics of explosive, incendiary, nuclear, chemical, and biological weapons.
57. Be aware of the likelihood of secondary explosions when responding to reports of an explosion.
58. Predict injury patterns and patient problems associated with explosions.
59. Describe the precautions in responding to a nuclear incident.
60. Describe the specific treatment for chemical agent exposures.
61. Describe the keys to recognizing a biological terrorist attack.
62. Describe actions to be taken by responders for protection when responding to a biological terrorist attack.

Course Number and Name:

EMS 2934 Paramedic Capstone-Lecture & Lab

Description:

This course serves as a capstone experience course at the end of the Paramedic Program. This course will include the following topics: special needs patient populations, EMS research, principles of public health, integration of leadership, and emerging roles in EMS. It will also serve as a comprehensive review of the program. This course will provide the student with a final opportunity to incorporate their cognitive knowledge and psychomotor skills through cumulative practical skill evaluations and a comprehensive Final Examination.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	2	4	90

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Integrate assessment findings with principles of epidemiology and pathophysiology and knowledge of psychosocial needs to formulate a field impression for patients with special needs. a. Discuss epidemiology and demographics of aging
   b. Summarize the common medical and traumatic emergencies in the elderly population
   c. Perform assessment and management of emergency related to geriatric population
   d. Identify the demographics of abuse, assault, neglect, and hate crimes.
   e. Discuss how to report and document relevant observations and information regarding suspected abuse, assault, neglect, and hate crimes.
   f. Discuss how the paramedic should integrate assessment and management for emergencies related to abuse and assault, neglect, and hate crimes.
   g. Identify and discuss types of physical, mental, emotional, cognitive, and developmental challenges.
   h. Discuss cultural diversity and implications in pre-hospital care.
   i. Describe techniques for providing chronically ill patients with care in the home setting.
   j. Identify EMS role in the integration of pre-hospital care with other health care professionals.
   k. Discuss and identify home equipment utilized by chronic care patients.
2. Evaluate the need for research in EMS based on the relationship between current trends as well as the focus on evidence based practice.
   a. Discuss the National EMS Research Agenda and how it could improve future EMS research and practice.
   b. Describe the purpose and intended content of each section of a research paper.
   c. Integrate knowledge of research procedures and perform research.
   d. Develop a research plan and produce a research paper.
3. Identify fundamental principles of public health and epidemiology, including public health emergencies, health promotion, and illness and injury prevention.
4. Discuss the ongoing need for professionalism in EMS.
5. Explore emerging roles in EMS. Including, but not limited to:
   - Critical Care
   - Helicopter air ambulance
   - Tactical EMS Primary care
   - Industrial Medicine
   - Sports Medicine

    - Corrections
    - Hospital Emergency Departments
    - Mobile Integrated Health Care
6. Respond and appropriately manage simulated patients during final assessment of all practical skills.
7. Demonstrate competency on comprehensive cognitive examination that includes entire Paramedic Program.

Course Number and Name: EMS 2942 Paramedic Capstone-Lecture

Description:

This course serves as a capstone experience course at the end of the Paramedic Program. This course will include the following topics: special needs patient populations, EMS research, principles of public health, integration of leadership, and emerging roles in EMS.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	2	0	30

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Integrate assessment findings with principles of epidemiology and pathophysiology and knowledge of psychosocial needs to formulate a field impression for patients with special needs. a. Discuss epidemiology and demographics of aging
   b. Summarize the common medical and traumatic emergencies in the elderly population
   c. Perform assessment and management of emergency related to geriatric population
   d. Identify the demographics of abuse, assault, neglect, and hate crimes.
   e. Discuss how to report and document relevant observations and information regarding suspected abuse, assault, neglect, and hate crimes.
   f. Discuss how the paramedic should integrate assessment and management for emergencies related to abuse and assault, neglect, and hate crimes.
   g. Identify and discuss types of physical, mental, emotional, cognitive, and developmental challenges.
   h. Discuss cultural diversity and implications in pre-hospital care.
   i. Describe techniques for providing chronically ill patients with care in the home setting.
   j. Identify EMS role in the integration of pre-hospital care with other health care professionals.
   k. Discuss and identify home equipment utilized by chronic care patients.
2. Evaluate the need for research in EMS based on the relationship between current trends as well as the focus on evidence based practice.
   a. Discuss the National EMS Research Agenda and how it could improve future EMS research and practice.
   b. Describe the purpose and intended content of each section of a research paper.
   c. Integrate knowledge of research procedures and perform research.
   d. Develop a research plan and produce a research paper.
3. Identify fundamental principles of public health and epidemiology, including public health emergencies, health promotion, and illness and injury prevention.
4. Discuss the ongoing need for professionalism in EMS.
5. Explore emerging roles in EMS. Including, but not limited to:
   - Critical Care
   - Helicopter air ambulance
   - Tactical EMS Primary care
   - Industrial Medicine
   - Sports Medicine
   - Corrections
   - Hospital Emergency Departments
   - Mobile Integrated Health Care

Course Number and Name: EMS 2952 Paramedic Capstone - Lab

Description: This course will provide the student with a final opportunity to incorporate their cognitive knowledge and psychomotor skills through cumulative practical skill evaluations and a comprehensive Final Examination.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
2	0	4	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Respond and appropriately manage simulated patients during final assessment of all practical skills.
2. Demonstrate competency on comprehensive cognitive examination that includes entire Paramedic Program.

Course Number and Name: EMS 2566 Practicum III

Description: Under the supervision of an approved program preceptor, the student will continue to apply the concepts developed in the didactic, laboratory, and clinical settings to the care of patients in the environment of EMS.

Hour Breakdown:

Semester Credit Hours	Clinic	Field	Contact Hours
6	9	9	270

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Apply their didactic knowledge and psychomotor competencies acquired during the lecture and laboratory courses to the treatment of live patients in a clinical setting under the supervision of an approved preceptor.
2. Demonstrate the ability to perform all skills of practicum I and practicum II and finalize the comprehensive incorporation of all paramedic training toward the transition to paramedic practice.
3. Demonstrate a comprehensive affective, didactic and psychomotor understanding of patient care delivery while working with a team.

APPENDIX A: RECOMMENDED TOOLS AND EQUIPMENT

Capitalized Items

1. Anatomical Manikin w/removable organs (1 per program)
2. ACLS Training Manikin w/remote and recorder (1 per program)
3. Chair, stair (1 per program)
4. Cot, ambulance (1 per program)
5. Defibrillator, automated external, educational (1 per program)
6. ECG monitor, defibrillator, portable w/pacing, educational (1 per program)
7. Generator, arrhythmia (1 per program)
8. Heart model, external/internal (1 per program)
9. Intubation manikin, adult (1 per program)
10. Manikin, full body, CPR (1 per program)
11. Manikin, obstetrical (1 per program)
12. Manikin, trauma/burn, full body (1 per program)
13. Pulse oximeter [CO2 detector] (2 per program)
14. Radio transmitter/receiver, base station (1 per program)
15. Radio transmitter/receiver, 2-way portable (2 per program)
16. Skeleton, human (replica) (1 per program)
17. Ventilator, automatic transport (1 per program)
18. Pneumatic anti-shock garment (1 per program)
19. Computer w/monitor (1 per 4 students)
20. Printer, laser (1 per 2 computers)
21. Manikins, advanced (Adult, child, and neonate - code crisis manikins)
22. Quantitive CO2 monitor
23. 12-lead cardiac monitor/deffibulator with pacing
24. 12-lead simulator
25. IV pumps and poles
26. Neonatoal umbilical cannulation
27. Vascular access device
28. VAD needles
29. Naso/Oro gastric manikin
30. Cricoid manikin
31. CPAP/BiPAP
32. External jugular access device
33. Implanted ports/external and peripheral cath manikin
34. Multi-dooplex model (fetal and peripheral pulses)
35. Broselow pediatric resusitation system
36. Scalp-vein manikin
37. Multi-purpose manikins 38. T.V., color, 31 in.

Non-Capitalized Items

1. Arm sling (1 per 2 students)
2. Bag-Valve-Mask device (1 per 2 students)
3. Blanket (1 per stretcher/cot)
4. Blood glucose monitor (1 per program)
5. Blood pressure cuff (4 per program)
6. Cervical collar (4 per program)
7. Containers, assorted medication
8. Cravats (1 per 2 students)

9. Cricothyrotomy device (1 per program)

10. FROPVD Flow Restricted Oxygen Powered Ventilation Device
11. ECG monitoring cables (2)
12. ECG electrodes (1 per program)
13. Esophogeal gastric tube airway (2)
14. Esophageal obturator airway (2)
15. Head immobilizer (CID) (1 per program)
16. Restriction/extrication device (1 per program)
17. Intraosseus infusion simulator (1 per program)
18. IV training arm and hand, adult (2 per program)
19. IV training arm, pediatric (2 per program)
20. Laryngoscope intubation kit (1 per program)
21. Spine back board (2)
22. Manikin, child, CPR (1 per program)
23. Manikin, infant, CPR (1 per program)
24. Manikin, intubation, infant (1 per program)
25. Manikin, pneumothorax emergency training (1 per program)
26. Moulage kit (1 per program)
27. Nasal cannula (5)
28. Nasopharyngeal airway (2)
29. Non-rebreather masks (5)
30. Oropharyngeal airway, various sizes
31. Oxygen cylinder (2)
32. Oxygen regulator and flowmeter (1 per program)
33. Pen light (1 per 2 students)
34. Pillows (6 per program)
35. Pocket mask w/1-way valve and O2 port (2 per program)
36. Scissors, trauma (4 per program)
37. Sheets, ambulance Cot (2 per program)
38. Short spine board (2 per program)
39. Simulator, cricothyrotomy (1 per program)
40. Simulator, intramuscular injection (1 per program)
41. Splint, air, various sizes
42. Splint, ladder (1 per program)
43. Splint, traction, sager-hare (2)
44. Stethoscope (1 per 2 students)
45. Stethoscope, dual head (1 per program)
46. Straps, various sizes
47. Stretcher, scoop (1 per program)
48. Suction device, portable (1 per program)
49. Syringes, various cc volumes
50. Venturi mask (1 per program)
51. Lighted styletts
52. Ear thermometer
53. Opthalmic diagnostic trainer
54. Otic simulator trainer
55. Naso & orgastric tubes

RECOMMENDED INSTRUCTIONAL AIDS

It is recommended that instructors have access to the following items:

1. Screen, projection (1 per program)
2. LCD projector (1 per program)
3. VCR/DVD (1 per program)

4. Computer table (1 per computer)
5. ELMO opaque projector

APPENDIX B: CURRICULUM DEFINITIONS AND TERMS

- Course Name – A common name that will be used by all community colleges in reporting students

- Course Abbreviation – A common abbreviation that will be used by all community and junior colleges in reporting students

- Classification – Courses may be classified as the following: o Career Certificate Required Course – A required course for all students completing a career certificate.
    - Technical Certificate Required Course – A required course for all students completing a technical certificate.
    - Technical Elective – Elective courses that are available for colleges to offer to students.

- Description – A short narrative that includes the major purpose(s) of the course

- Prerequisites – A listing of any courses that must be taken prior to or on enrollment in the course

- Co-requisites – A listing of courses that may be taken while enrolled in the course

- Student Learning Outcomes – A listing of the student outcomes (major concepts and performances) that will enable students to demonstrate mastery of these competencies

The following guidelines were used in developing the program(s) in this document and should be considered in compiling and revising course syllabi and daily lesson plans at the local level:

- The content of the courses in this document reflects approximately 75% of the time allocated to each course. The remaining 25% of each course should be developed at the local district level and may reflect the following:
    - Additional competencies and objectives within the course related to topics not found in the state framework, including activities related to specific needs of industries in the community college district
    - Activities that develop a higher level of mastery on the existing competencies and suggested objectives
    - Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework was developed or revised
    - Activities that include integration of academic and career–technical skills and course work, school-to-work transition activities, and articulation of secondary and postsecondary career– technical programs
    - Individualized learning activities, including work-site learning activities, to better prepare individuals in the courses for their chosen occupational areas

- Sequencing of the course within a program is left to the discretion of the local college. Naturally, foundation courses related to topics such as safety, tool and equipment usage, and other fundamental skills should be taught first. Other courses related to specific skill areas and related academics, however, may be sequenced to take advantage of seasonal and climatic conditions, resources located outside of the school, and other factors. Programs that offer an Associate of Applied Science Degree must include all of the required Career Certificate courses, Technical Certificate courses AND a minimum of 15 semester hours of General Education Core Courses. The courses in the General Education Core may be spaced out over the entire length of the program so that students complete some academic and Career Technical courses each semester. Each community college specifies the actual courses that are required to meet the General Education Core Requirements for the Associate of Applied Science Degree at their college.
- In order to provide flexibility within the districts, individual courses within a framework may be customized by doing the following:

    - Adding new student learning outcomes to complement the existing competencies and suggested objectives in the program framework
    - Revising or extending the student learning outcomes o Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the Mississippi Community College Board [MCCB] of the change)

APPENDIX C: COURSE CROSSWALK

Course Crosswalk Paramedic Technology CIP: 51.0904- Emergency Medical Technology/Technician					
Note: Courses that have been added or changed in the 2017 curriculum are highlighted.					
Existing			Revised		
2011 MS Curriculum Framework			2017 MS Curriculum Framework		
Course Number	Course Title	Hours	Course Number	Course Title	Hours
EMS 1142	Foundations of Paramedicine - Lecture				
EMS 1151	Foundations of Paramedicine Lab				
EMS 1242	Concepts of Airway and Respiratory Medicine - Lecture				
EMS 1251	Concepts of Airway and Respiratory Medicine - Lab				
EMS 1343	Concepts of Cardiovascular Medicine - Lecture				
EMS 1352	Concepts of Cardiovascular Medicine- Lab				
EMS 1514	Practicum I				
EMS 1742	Concepts of Neurological Medicine - Lecture				
EMS 1751	Concepts of Neurological Medicine- Lab				
EMS 1942	Concepts of Reproductive Medicine - Lecture				
EMS 1951	Concepts of Reproductive Medicine- Lab				
EMS 2343	Medical Emergencies of the Secondary Assessment - Lecture				
EMS 1251	Concepts of Airway and Respiratory Medicine - Lab				
EMS 1343	Concepts of Cardiovascular Medicine - Lecture				

EMS 1352	Concepts of Cardiovascular Medicine-Lab				
EMS 1514	Practicum I				
EMS 1742	Concepts of Neurological Medicine - Lecture				
EMS 1751	Concepts of Neurological Medicine- Lab				
EMS 1942	Concepts of Reproductive Medicine - Lecture				
EMS 1951	Concepts of Reproductive Medicine-Lab				
EMS 2343	Medical Emergencies of the Secondary Assessment - Lecture				
EMS 2351	Medical Emergencies of the Secondary Assessment-Lab				
EMS 2743	Concepts of Traumatic Medicine - Lecture				
EMS 2752	Concepts of Traumatic Medicine - Lab				
EMS 1525	Practicum II				
EMS 2912	Concepts of EMS Operations				
EMS 2942	Paramedic Capstone - Lecture				
EMS 2952	Paramedic Capstone - Lab				
EMS 2566	Practicum III				
BIO 2514	Anatomy & Physiology I				
BIO 2524	Anatomy & Physiology II				
EMS 1133	Foundations of Paramedicine – Lecture and Lab				
EMS 1213	Concepts of Airway and Respiratory Medicine – Lecture and Lab				
EMS 1325	Concepts of Cardiovascular Medicine – Lecture and Lab				
EMS 1514	Practicum I				
EMS 1713	Concepts of Neurological Medicine – Lecture and Lab				

EMS 1913	Concepts of Reproductive Medicine – Lecture and Lab				
EMS 2314	Medical Emergencies of the Secondary Assessment – Lecture and Lab				
EMS 2715	Concepts of Traumatic Medicine – Lecture and				

	Lab				
EMS 1525	Practicum II				
EMS 2912	Concepts of EMS Operations				
EMS 2934	Paramedic Capstone – Lecture and Lab				
EMS 2566	Practicum III				
BIO 2514	Anatomy & Physiology I				
BIO 2524	Anatomy & Physiology II				
EMS 1133	Foundations of Paramedicine – Lecture and Lab				
EMS 1213	Concepts of Airway and Respiratory Medicine – Lecture and Lab				
EMS 1325	Concepts of Cardiovascular Medicine – Lecture and Lab				
EMS 1514	Practicum I				
EMS 1713	Concepts of Neurological Medicine – Lecture and Lab				
EMS 1913	Concepts of Reproductive Medicine – Lecture and Lab				
EMS 2314	Medical Emergencies of the Secondary Assessment – Lecture and Lab				
EMS 2715	Concepts of Traumatic Medicine – Lecture and Lab				