

**RCOE EMERGENCY MEDICAL TECHNICIAN (PUB - 288)**

**DATE:**

**INDUSTRY SECTOR:** Public Services Sector

**PATHWAY:** Emergency Response

**CALPADS TITLE:** Advanced Emergency Response (Capstone)

**CALPADS CODE:** 8422

**HOURS:**

Total	Classroom	Laboratory/CC/CVE
288	240	48

JOB TITLE	O*NET CODE	JOB TITLE	O*NET CODE
Emergency Medical Technicians	29-2042.00	Paramedics	29-2043.00
Ambulance Drivers and Attendants, Except Emergency Medical Technicians	53-3011.00	Firefighters	33-2011.00

**COURSE DESCRIPTION:**

RCOE Emergency Medical Technician (EMT) (PUB 288) is a year-long academically challenging course that is designed to prepare students for entry-level positions in the pre-hospital healthcare industry. This course takes students on a fascinating journey beginning with history, future, and components of the emergency system, the well-being of the EMT, legal and ethical issues, and medical terminology. This course provides students with a comprehensive understanding of anatomy, physiology, and pathophysiology of the human body. These concepts are solidifying the foundational knowledge for specific medical emergencies. This course also gives students a genuine context for the application of the knowledge used to help critically ill and injured patients in the field. The course begins with basic knowledge of anatomy and physiology, first aid, CPR, safety practices and ends with a thorough understanding of medical emergencies. The course presents the tools for students to understand the importance of pre-hospital care and delivers a thorough understanding of the proper use of medical equipment necessary to provide appropriate care. The competencies in this course are aligned with the Common Core State Standards and the California Career Technical Education Model Curriculum Standards. The course is also offered via “Distance Learning” and will meet in the classroom, twice a week in smaller groups, when given the authorization to resume “in-person” teaching by the Superintendent and Public Health Officer.

**A-G APPROVAL:** G

**ARTICULATION:** None

**DUAL ENROLLMENT:** None

**PREREQUISITES:**

Prerequisite
RCOE Fire Science Technology 1
RCOE Fire Science Technology 2
English 1 (Required) Algebra 1 (Required) Anatomy and Physiology (Required)
Medical Terminology (Recommended) Public Safety Personnel/First Aid-CPR, formerly Emergency Medical Responder (Recommended) Chemistry (Recommended)

**METHODS OF INSTRUCTION**

- Direct instruction
- Group and individual applied projects
- Multimedia
- Demonstration
- Field trips
- Guest speakers

**STUDENT EVALUATION:**

- Student projects
- Written work
- Exams
- Observation record of student performance
- Completion of assignment

**INDUSTRY CERTIFICATION:**

- None

**RECOMMENDED TEXTS:**

- Health Science Fundamentals: Exploring Career Pathways, Shirley A. Badasch and Doreen S. Chesebro (Pearson; 2009)
- Online National Registry EMT Practice Exams ([www.fisdap.net](http://www.fisdap.net))
- Emergency Care, 14th Edition, Limmer, O'Keefe, ISBN-13: 9780135379134 (Pearson 2020)

**PROGRAM OF STUDY**

Grade	Fall	Spring	Year	Course Type	Course Name
9, 10, 11, 12				Introductory	RCOE Fire Science Technology 1
10, 11, 12				Concentrator	RCOE Fire Science Technology 2
11, 12				Capstone	RCOE Emergency Medical Technician (PUB - 288)

I.	UNIT 01: ORIENTATION AND INTRODUCTION TO EMS SYSTEMS	CR	Lab/ CC	Standards
	<p>Students will understand and evaluate the responsibilities of an EMT and the components of the Emergency Medical Services (EMS) activation. They will apply fundamental knowledge of the EMS system to the provision of emergency care. The lesson will provide the students with a roadmap for learning the skill and knowledge domains of the EMS systems. Additionally, students will identify the personal characteristics, time involved, and education required for careers in the medical field. They will understand, apply, and evaluate classroom and workplace policies and procedures used in accordance with federal, state, and local safety and environmental regulations.</p> <p><b>Unit Objectives:</b></p> <ul style="list-style-type: none"> <li>● Give an overview of the historical events leading to the development of modern EMS System.</li> <li>● Describe the components of an EMS System that must be in place for a patient to receive emergency Medical Care.</li> <li>● Compare and contrast the specific area of responsibilities for the EMT, AEMT, and Paramedic.</li> <li>● Explains the purpose of the National Registry of Emergency Medical Technicians.</li> <li>● Provides specific examples of the physical and personality traits that are desirable for the EMT.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>● Research Internet sites that focus on information related to the evolution and history of Emergency Medical Services. Write a historical report on the history of Emergency Medical Services reflecting on the evolution of practice within the field of emergency medicine.</li> <li>● Research Internet sites that focus on information on benefits of Emergency Medical Services and create a brochure that includes five of the benefits of EMS and prepare a class presentation.</li> <li>● Utilize the Internet and look at the levels of training for pre-hospital care and prepare a multimedia presentation detailing the requirements necessary to obtain a certificate for each level of training.</li> <li>● Read a variety of texts on bias and research cases of bias within the emergency medical field. Students will then reflect on the texts and write a persuasive essay describing why it is inappropriate to judge a patient based on a cultural, gender, age, or socioeconomic model, and to vary the standard of care rendered as a result of that judgment.</li> <li>● Research the Internet sites that focus on information regarding the role of the EMS and write an essay that characterizes the EMS system's role in prevention and public education in our community.</li> </ul>	15	2	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Problem Solving and Critical Thinking: 5.1</p> <p><b>CTE Pathway:</b> B1.2, B1.4</p>
II.	UNIT 02: THE WELL-BEING OF THE EMT	CR	Lab/ CC	Standards
	<p><b>The Well-Being of the EMT</b></p> <p>Students will understand and evaluate the personal, emotional, and physical safety requirements for an EMT. This unit covers the emotional aspects of emergency medical care, stress management, body substance isolation (BSI), personal protection equipment (PPE), and safety precautions that can be taken prior to performing the role of an EMT. Students will identify the signs and symptoms of infection and explain the process of inflammation as a defense mechanism.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Given an example of a patient care situation, the student will determine the appropriate PPE to aid in the prevention of exposure to infectious disease.</li> <li>● Describe and demonstrate the proper procedure for hand washing and the utilization of alcohol-based hand cleaners.</li> <li>● Explain the essential provisions of OSHA, the CDC, the Ryan White CARE Act, and the Ryan White HIV/AIDS Treatment Extension Act of 2009 as they relate to infection control in EMS.</li> <li>● Outline the proper response to incidents including, Hazardous Materials Incidents, Terrorist Incidents, Rescue Operations, and Violence.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>● Read various texts on emotional aspects of emergency care, post-traumatic stress disorder (PTSD) and other effective aspects of emergency medicine. Reflect on the texts and write an essay that describes the emotional aspects of emergency care. Explain the steps that contribute to wellness and their importance in managing stress.</li> <li>● Infections and varied patient reactions are common in society. After reading several articles on infections and/or inflammatory response, create a multimedia presentation that explains the mode of transmission and the steps necessary to prevent or deal with an exposure to hepatitis, tuberculosis, HIV, COVID-19, or other infectious diseases.</li> <li>● The primary mode of transmission for the common cold is through their hands. After touching an object contaminated with the cold virus, the person transfers the virus to the nasal cavity where it causes an infection. Describe other ways in which the virus can get into the nasal cavity.</li> <li>● Create a chart to illustrate the difference between active and passive immunity. Compare how long active immunity and passive immunity lasts and describe situations where one type of immunity is preferred over the other.</li> <li>● Create a poster explaining the "Safety First" procedures that health care professionals need to follow in the workplace. The topic can be either "Wash your hands," "The use of gloves," or another instructor-approved procedure that is common to all healthcare professionals.</li> </ul>	15	2	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Health and Safety: 6.7</p> <p><b>CTE Pathway:</b> B4.1, B4.2, B4.3, B4.4</p>
III.	UNIT 03: AIRWAY MANAGEMENT	CR	Lab/ CC	Standards

	<p>This chapter addresses airway anatomy and physiology, how to maintain an open airway, pulmonary resuscitation, variations for infants and children, as well as patients with laryngectomies. The use of airways, suction equipment, and barrier devices will help students differentiate between medical equipment required based on the patient's medical condition. Students will recognize and apply the techniques for proper airway management.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>• Describe the anatomy and physiology of the upper and lower airways.</li> <li>• Describe common pathophysiologic problems leading to airway obstruction.</li> <li>• Demonstrate the assessment of the airway in a variety of patient scenarios.</li> <li>• Recognize patients who have an inadequate airway.</li> <li>• Demonstrate the proper opening of an airway using the head-tilt-chin-lift or jaw thrust maneuvers.</li> <li>• Describe the indications, contraindications, and how to properly size and place an oropharyngeal and nasopharyngeal airway.</li> <li>• Demonstrate the ability to suction patients.</li> <li>• Identify the differences between the adult and pediatric airway.</li> <li>• Demonstrate the ability to insert a supra-glottic airway in the apneic patient.</li> <li>• Demonstrate the ability to properly ventilate an apneic patient with the BVM.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>• Write a 500-word essay describing how ventilation is regulated during exercise and explaining the effect of exercise training on the respiratory system.</li> <li>• Based on the definition of recovery position in 300 words describe the indications for the use of this position to maintain a clear airway.</li> <li>• In a 500 - word essay explain the assessment of a patient who is in respiratory distress and the relationship of the assessment findings to patient management and transport decisions.</li> <li>• Patients with diabetes mellitus who are not being treated with insulin rapidly metabolize lipids and acidic by-products of lipid metabolism will accumulate in the circulatory system. In a 500-word essay describe the effects, this has on the ventilation.</li> <li>• In a 450 – word essay describing the factors that affect the diffusion of gasses across the respiratory membrane and give examples of diseases that decrease diffusion by altering these factors.</li> <li>• In a 300 – word essay describing the pressure changes that cause the air to move into and out of the lungs and explain what causes these pressure changes.</li> <li>• Write a report that describes the normal mechanisms that adjust for changes in pressure, explains how increased pressure might cause decreased breath sounds and creates a hypothesis of how another common condition might interfere with pressure adjustment.</li> <li>• In a 350 – word essay explain why hyperventilating before swimming underwater can increase the time spent underwater.</li> </ul>	15	2	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Technology: 4.5</p> <p><b>CTE Pathway:</b> B4.6, B9.1, B9.3, B9.6, B9.5, B9.7, B9.8</p>
<b>IV.</b>	<b>UNIT 04: ACADEMIC PROFICIENCY (WRITING, SPEAKING, AND MATHEMATICS)</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>
	<p>Students will understand and apply problem-solving, critical thinking, and academic proficiency skills. They will recognize the importance of effective reading, writing, speaking, and computational skills. This chapter will allow students to review the mechanics of grammar such as sentence construction, subject-verb agreement, and punctuation. Students will make observations and use the scientific method to create a hypothesis on several stringent medical issues.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>• Create a hypothesis from an article in a popular magazine or on the Internet on the benefits of prehospital care. Design an experiment that will test the hypothesis. Write up the experimental design using correct grammar, punctuation, and spelling.</li> <li>• Being given a set of body temperatures taken at different hours of the day, create a table to organize this data.</li> <li>• Research the number an employer has (doctors, registered nurses, nurses' aides, physical therapists), change the numbers into a percentage and create a circle graph (pie chart) to show percentages of hospital employees.</li> <li>• Being given a clinical case write a report about your patient which will include personal information, vital signs, special considerations, medications, and a narrative part describing the patient's present complaint and medical history.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>• Write a report to a co-worker in which you describe the condition of your client. You will read the report to the class before your co-worker receives the written form of your report.</li> <li>• Describe two scenarios in which it would be better to present data in either a table or a graph. Create a table and a graph that illustrates your point.</li> <li>• Your client received a medication prescription for pain. The medication is given in mg per client's weight expressed in kg. Create a math problem that includes conversion to the metric system.</li> <li>• Write a 300-word essay describing two scenarios in which instructions are given to clients using a 12 - hour clock may be confusing and could put clients at risk.</li> </ul>	6	3	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Technology: 4.3</p> <p><b>CTE Pathway:</b> B1.1, B6.2</p>
<b>V.</b>	<b>UNIT 05: EMPLOYABILITY SKILLS</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>

	<p>Students will understand and evaluate the skills, knowledge, and attitudes needed to locate, obtain, and maintain employment in healthcare careers. Upon completion of this unit, the students will be able to establish goals for self-improvement and lifelong education/ training and discuss the function of professional healthcare organizations. This unit will help students design sample résumés and cover letters and demonstrate appropriate interviewing techniques.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>• Demonstrates the ability to complete an online job application with a designated ambulance provider.</li> <li>• Students will research sites for sample interview questions.</li> <li>• Students will rehearse mock interview sessions, divided up into groups.</li> <li>• Communicate effectively during a job interview.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>• Interview three employed adults. Ask them about their job, how they found the job, and what advice they have for people trying to enter the field. Also, ask for other comments they might have about their career. Ask them about positive and negative experiences related to their job. Create a table and fill in the information gathered.</li> <li>• Research the Internet sites and calculate the full value of two different jobs by determining the dollar value of the salary, health insurance, paid vacation time, retirement benefits, and life insurance. Make a multimedia presentation of a chart showing the findings and comparing and evaluating which job is best for you.</li> </ul>	6	3	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Career Planning and Management: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9</p> <p><b>CTE Pathway:</b> B1.1, B1.2, B1.3</p>
<b>VI.</b>	<b>UNIT 06: COMMUNICATION AND INTERPERSONAL SKILLS</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>
	<p>Understand and apply effective communication skills and professional guidelines. Students will discuss and demonstrate techniques to remove barriers in communication and explain the importance of nonverbal communication such as gestures, facial expressions, posture, body language, and touch. The research will help students identify and analyze factors and strategies to consider therapeutic communication with patients.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>• Demonstrate the techniques of successful cross-cultural communication. Write a 350 – word essay presenting an imaginary dialog between the EMT and a patient with a different cultural background. Use correct grammar, punctuation, and spelling.</li> <li>• Demonstrate completion of an electronic patient care report (e-PCR). Fill out an e-PCR form using the Image Trend software, for a patient suffering from a chosen disease and present the report to the class. Use correct grammar, punctuation, and spelling.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>• List and describe the elements of effective leadership. Create a chart and compare leadership skills and follower skills.</li> <li>• Based on the definition of communication, write a 500-word essay showing a dialog between a first responder and a patient by using effective verbal and nonverbal communication.</li> <li>• Write a 450 - word essay that describes a recent event in which you or someone else did not use good listening skills. Explain what could have been done differently to demonstrate good listening skills.</li> <li>• Create a chart explaining the special considerations in communicating with older people, children, hearing-impaired patients, visually impaired patients, and non-English-speaking patients.</li> <li>• Write a 350 - word essay that explains the skills that should be used to communicate with family members, bystanders, people from other agencies, and hospital personnel.</li> </ul>	15	3	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Communications: 2.1, 2.5</p> <p><b>CTE Pathway:</b> B2.1, B2.2, B2.3, B3.3, B3.4, B4.5, B4.3</p>
<b>VII.</b>	<b>UNIT 07: PHARMACOLOGY</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>
	<p>Administering medication comes with great responsibility since the appropriate use of a medication can improve the patient's outcome. If used inappropriately, medication can cause harm and even death. Students will learn that administering medication without understanding the indications, actions, contraindications, and the side effects can cause further harm to the patient. They will explore and evaluate the use of medications that are administered by the EMT. Students will understand the importance of becoming familiar with the "street" names of commonly used and abused drugs.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>• Describe the specific medications carried on the ambulance by an EMT.</li> <li>• Describe the actions of bronchodilators, Nitroglycerin, Epinephrine auto-injectors, and force protection medication.</li> <li>• Describe the importance of checking for expiration dates and following the "Five Patient Rights" of medication administration.</li> <li>• Identify the steps of reassessment and documentation required after administering a medication.</li> <li>• Demonstrate the routes of drug administration on a manikin.</li> <li>• Calculate a drug dose based on the clinical presentation of the patient (age and weight, taken into consideration).</li> <li>• Demonstrate the appropriate use of the Epi-pen, Narcan, and Oral glucose.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>• Use the Internet to prepare a display listing the steps necessary in preparing a new drug for marketing. Include the number and types of trials.</li> <li>• Use Internet sites to create a table showing: drug type, drug facts, benefits, actions, contraindications, side effects, generic names, and trade name.</li> <li>• Create and solve a math problem that converts the amount of medication given in mg per kilogram and to</li> </ul>	15	3	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Responsibility and Flexibility: 7.2</p> <p>Ethics and Legal Responsibilities: 8.5</p> <p><b>CTE Pathway:</b> B9.3, B9.1, B9.2, B9.7, B9.8, B9.5, B9.9</p>

	<p>pounds.</p> <ul style="list-style-type: none"> <li>● In a 600 - word essay, describe the generic name, medication forms, dose, routes of administration, indications, actions, and contraindications for the following medications: Epinephrine, Naloxone, Albuterol, Glucose, and Nitroglycerine.</li> <li>● Write a 300 - word essay explaining how computers can help the medical community informed about the latest medications. Describe ways you can access this information if you do not own a computer.</li> </ul>			
<b>VIII.</b>	<b>UNIT 08: EMS OPERATIONS, GAINING ACCESS, AND HAZARDS ON SCENE</b>	<b>CR</b>	<b>Lab/ CC</b>	<b>Standards</b>
	<p>Students understand, apply, and evaluate access techniques and hazard awareness. The chapter presents an overview of the knowledge needed to function as an EMT in the pre-hospital environment. In addition, it provides the EMT student with an overview of extrication and rescue operations and information on hazardous materials, mass casualty situations, and basic triage. Students will recognize and apply basic disaster medical operations and multi-casualty incident management.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Demonstrate how to respond to a medical aid.</li> <li>● Demonstrate how to gain access to patients in vehicles, buildings, or trapped in a wreckage.</li> <li>● Demonstrate the extrication of patients using a Kendrick Extrication Device (KED).</li> <li>● Demonstrate the START (Simple Triage and Rapid Treatment) triage criteria for assessing patients in multiple-casualty-incidents.</li> <li>● Given a description of a Hazardous Materials Incident, identify the safe and danger zones, and the hot, warm and cold zones.</li> <li>● Describe the principles and features of the Incident Command System.</li> <li>● State the procedures for approaching a helicopter in the Landing Zone (LZ).</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>● Create a chart and explain the difference between simple access and complex access in vehicle extrication.</li> <li>● In a few sentences discuss how to ensure safety at the scene of a rescue incident. Include scene size-up and the selection of the proper personal protective equipment.</li> <li>● In 300 words explain how to perform triage based on a fictitious scenario that involves a mass-casualty incident.</li> <li>● Create a safety chart to gain access to patients trapped in vehicles and present it to the class.</li> <li>● Create a PowerPoint presentation explaining the proper use of the Kendrick Extrication Device (KED).</li> </ul>	15	3	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Leadership and Teamwork: 9.1, 9.2</p> <p><b>CTE Pathway:</b> B2.4, B2.5, B2.2, B2.3, B2.1, B3.5, B4.5, B4.2, B4.3, B6.5, B6.1</p>
<b>IX.</b>	<b>UNIT 09: INFANTS AND CHILDREN</b>	<b>CR</b>	<b>Lab/ CC</b>	<b>Standards</b>
	<p>Pediatric patients have their own set of health-related problems that are unique to their population. Similarly, many problems that are common in adults do not occur in children and vice versa. Students will recognize that children are not small adults and their treatment can be a challenge for healthcare providers. Students will understand the assessment and treatment of infants and children. They will present information concerning anatomical differences in infants and children, and discuss common medical and trauma situations.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Demonstrate the ability to perform a patient assessment on a pediatric patient to include the initial, focused, detailed, and ongoing assessments.</li> <li>● Demonstrate the proper patient care for an infant/child experiencing respiratory problems.</li> <li>● Demonstrate the proper patient care for an infant/child with an altered mental status.</li> <li>● Identify the possible causes of SIDS in infants.</li> <li>● Demonstrate assessment and care for pediatric patients suspected of neglect and abuse (psychological abuse, neglect, sexual abuse and physical abuse).</li> <li>● Ability to perform child and infant CPR according to the AHA 2020 Guidelines.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>● Discuss in a 450 – word essay the physical and cognitive developmental stages of an infant. Include signs that may indicate illness and patient assessment considerations when caring for an infant patient.</li> <li>● Make a presentation of a medical condition that can affect pediatrics. Your presentation should include an essay and a poster. The essay should include the following: description of the disease, signs, symptoms, treatment, and research about the frequency of the disease. The poster should show the body system affected by the disease.</li> <li>● Select and research a common chronic disease found in children and write a 600-word essay explaining the potential symptoms and complications.</li> </ul>	15	3	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Demonstration and Application: 10.2</p> <p><b>CTE Pathway:</b> B9.6, B9.2, B9.3, B9.1, B9.10, B9.7, B9.9, B9.4, B9.8</p>
<b>X.</b>	<b>UNIT 10: PREGNANCY AND CHILDBIRTH</b>	<b>CR</b>	<b>Lab/ CC</b>	<b>Standards</b>
	<p>Students will understand and evaluate emergency childbirth, the anatomy of pregnancy, and the stages of labor. Understanding the anatomical and physiological changes that occur during pregnancy will be a major part of the chapter. Throughout the lesson, students will demonstrate deliveries and newborn care. Students will describe the structures and functions associated with the female reproductive system; as well as, conditions that may cause homeostatic imbalance. The reproductive system ensures the continuity of the species by producing offspring. It also plays essential roles in the development of the structural and functional differences between males and females and influences human behavior. Students will identify the care required during pregnancy, childbirth, and postpartum period.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Demonstrate patient assessment for a pregnant woman and document the findings.</li> </ul>	15	2	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Ethics and Legal Responsibilities: 8.1</p> <p><b>CTE Pathway:</b> B9.8, B9.7, B9.9, B9.10, B9.1, B9.3, B9.6, B9.4,</p>

- Demonstrate patient care for a woman in labor and write a 150 – word report explaining the findings.
- Demonstrate care for the newborn. Create a brochure to emphasize the required care for a newborn. Include the required vaccinations.
- Calculate APGAR score 1 minute and 5 minutes after birth and explain the condition of the newborn based on the results.
- Demonstrate the formation of sex cell and create a chart for a class presentation.
- Demonstrate the ability to deliver an infant in the pre-hospital setting.

**Key Assignments:**

- In a 600-word essay describing the anatomy and function of the female reproductive system. Describe complications that can arise during childbirth.
- Birth control pills for women contain estrogen and progesterone compounds. In a 350 – word essay explain how these hormones can prevent pregnancy.
- Write an essay explaining why it is important to keep the evaluation of each pregnant female (physical and medical history) in mind at all times during the imminent labor.
- In a 500 - word essay discusses the female reproductive system. Include the developmental changes that occur during puberty and menopause.
- Writing Assignment: Write a 300 - word essay describing the assessment and management of gynecological emergencies and list the three stages of labor.

XI.	UNIT 11: BLEEDING, SHOCK, AND SOFT-TISSUE INJURIES	CR	Lab/ CC	Standards
	<p>Students will recognize the three different types of bleeding and learn how to control the bleeding. Students will recognize the signs and symptoms of shock. Students will demonstrate their ability to assess and treat soft tissue injuries. The lesson reviews the anatomy and physiology of the circulatory system, describes the care of the patient with internal and external bleeding and teaches the management of soft tissue injuries. Techniques of dressing and bandaging wounds will also be taught in this lesson. Students will review the anatomy of the musculoskeletal system. Students will learn how to use the Combat Application Tourniquet (CAT) and the use of hemostatic gauze for severe bleeding.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Demonstrates the steps in controlling an arterial bleed with the Combat Application Tourniquet (CAT).</li> <li>● Identifies the types of shock based on the patient's presentation and chief complaints.</li> <li>● Demonstrates the proper dressing and bandaging of an extremity after the bleeding has been controlled.</li> <li>● Demonstrates the ability to use hemostatic gauze in a severe bleed.</li> <li>● Ability to distinguish the characteristics of venous, arterial and capillary bleeding.</li> <li>● Describes the characteristics of the major classifications of shock.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>● In 450 - word essay describes the function of the immune system. Choose a disease and explain the role of the immune system in the recovery process.</li> <li>● Write a 300 - word essay describing the characteristics of superficial, partial-thickness, and full-thickness burns.</li> <li>● In a 600-word essay explaining the tissue response and inflammatory response to physical injury.</li> <li>● Cells are the basic unit of life. Write a 500-word essay describing the structure and function of the cells.</li> <li>● In a 500-word essay, explain how the use of the Combat Application Tourniquet, in combination with hemostatic gauze, has benefited patients with severe bleeding.</li> </ul>	15	2	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Responsibility and Flexibility: 7.4</p> <p><b>CTE Pathway:</b> B9.3, B9.4, B9.2, B9.1, B9.9, B9.10, B9.7, B9.6, B9.8</p>
XII.	UNIT 12: MEDICAL EMERGENCIES	CR	Lab/ CC	Standards
	<p>Students will understand how to manage general medical complaints, varying from seizures, altered mental status, environmental emergencies, behavioral emergencies, psychological crisis, and atypical patient presentations. While it is important for students to make the distinction between different medical emergencies, it is equally important for students to remember that patients may have a combination of medical complaints. Students will understand that some medical emergencies are caused by psychological or behavioral problems that can mimic drug and/or alcohol abuse.</p> <p>Students will also recognize that emergency situations are dynamic and can be very challenging, therefore good preparation is required to provide efficient patient care.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Demonstrate the ability to conduct a patient assessment and administer the proper patient care modalities.</li> <li>● Perform patient assessment and treatment of a diabetic patient. Differentiate between hyperglycemia and hypoglycemia.</li> <li>● Compare and contrast between a myocardial infarction and angina pectoris.</li> <li>● Demonstrate the ability to perform a patient assessment on an altered level of consciousness (ALOC) patient. Rule out the possible causes of the ALOC.</li> <li>● Identify the different classifications of seizures and their causes.</li> <li>● Explain the Load and Go criteria for critically ill and injured patients.</li> <li>● Demonstrates the ability to gather patient information using the SAMPLE and OPQRST mnemonic.</li> <li>● Demonstrates the proper technique in administering the Epi-pen during an anaphylactic allergic reaction.</li> <li>● Demonstrates the proper technique in administering Intra-nasal Narcan to the narcotic overdose patient.</li> <li>● Demonstrates the proper technique in the use of a glucometer for assessing blood glucose levels.</li> <li>● Conducts a head-to toe assessment with the use of DCAP BLS TIC.</li> <li>● Performs CPR according to the AHA 2020 Guidelines for Adults, Children and Infants.</li> </ul>	15	2	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Health and Safety: 6.6</p> <p><b>CTE Pathway:</b> B9.8, B9.7, B9.9, B9.10, B9.1, B9.2, B9.4, B9.6, B9.3</p>

	<p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>● Develop a presentation of a medical condition that can affect adults. Your presentation should include an essay and a poster. The essay should include the following: description of the disease, signs, symptoms, treatment, and research about the frequency of the disease and the description of the population at risk. The poster should show the body system affected by the disease.</li> <li>● Select and research a chronic disease and write a 600-word essay explaining the potential symptoms and complications.</li> <li>● Create a chart that includes heat cramps, heat exhaustion, and heat stroke. List five signs, symptoms and treatment for each condition and state the severity.</li> <li>● Write an essay describing methods to prevent or minimize the effects of extreme environmental conditions.</li> <li>● Use the Internet sites or library and write a 450-word essay describing the major functions of insulin and glucagon.</li> <li>● Write a 300 - word essay explaining some age-related considerations when managing a geriatric patient who has diabetes.</li> <li>● Nitroglycerin is a drug given to people who suffer from cardiac related chest pain. This drug causes vasodilation of arteries and veins. Construct a chart explaining why dilation of the arteries and veins reduces the amount of work performed by the heart.</li> </ul>			
<b>XIII.</b>	<b>UNIT 13: CARDIOPULMONARY RESUSCITATION (CPR) AND AUTOMATED EXTERNAL DEFIBRILLATOR (AED)</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>
	<p>Students will recognize a patient who has suffered a cardiac arrest. Students will understand, apply, and evaluate basic CPR and AED procedures according to the AHA 2020 Guidelines for the Basic Life Support (BLS) Provider. The lesson provides the EMT student with the knowledge and skills of chest compressions and ventilations for adults, children, and infants. Students will acquire skills that will assist them in recognizing and treating a patient in cardiac arrest.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Demonstrate the ability to perform CPR on an Adult, Child and Infant mannikins.</li> <li>● Demonstrate the use of an Automated External Defibrillator (AED) on a mannikin.</li> <li>● Demonstrates how to perform one-rescuer Adult CPR according to the AHA 2020 Guidelines.</li> <li>● Demonstrates how to perform two-rescuer Adult CPR according to the AHA 2020 Guidelines.</li> <li>● Demonstrates how to perform one-rescuer Child and Infant CPR according to the AHA 2020 Guidelines.</li> <li>● Demonstrates how to perform two-rescuer Child and Infant CPR according to the AHA 2020 Guidelines.</li> <li>● Verbalizes the modifications that need to take place for a pregnant female who needs compressions.</li> <li>● Explains what "ROSC" is and how to manage a patient in post-cardiac arrest scenario.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>● Use the Internet to research available BLS CPR classes locally. Create a poster or flyer describing the importance of CPR and including sign-up information for three locations.</li> <li>● Write a 600-word essay and describe the updated AHA 2020 Guidelines for the Chain of Survival and the importance of performing CPR and using an AED when available.</li> <li>● In a 300 - word essay, explain the relationship of age and weight to defibrillation and describe the advantages of using the AED.</li> </ul>	15	3	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Leadership and Teamwork: 9.5</p> <p><b>CTE Pathway:</b> B4.6, B9.3, B9.4, B9.1, B9.2, B9.10, B9.6, B9.7, B9.8, B9.9</p>
<b>XIV.</b>	<b>UNIT 14: LIFTING, MOVING, AND POSITIONING PATIENTS</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>
	<p>Students will understand the proper body mechanics of lifting and moving patients. Students will learn the considerations that must be taken to prevent injuries to the EMS workers and the patients when lifting and moving patients. Students will understand that both the patient's condition and the environment in which he/she is found will determine how a patient will be moved. The determination of how to lift and move the patient is made by considering the complaint, the severity of the condition and the location of the patient. Students will identify, apply, and evaluate techniques used to lift, move, and position patients. This chapter provides students with knowledge of body mechanics, lifting and carrying techniques, and principles of moving patients.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Demonstrate how to measure and apply a Cervical Collar (C – collar).</li> <li>● Demonstrate spinal immobilization on a longboard and shortboard using proper patient movement.</li> <li>● Identify and demonstrate lifting techniques using proper body mechanics.</li> <li>● Identify and demonstrate the steps necessary to: transfer a patient from bed to stretcher and position a patient.</li> <li>● Give examples of situations that would require emergency, urgent, and the non-urgent patient moves.</li> <li>● Identifies the various patient-carrying devices.</li> <li>● Distinguish between proper body mechanics and improper lifting and moving techniques.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>● Write a 150-word essay describing the reflex response.</li> <li>● Write a 450-word essay explaining why the injury to the spinal cord at the level of C6 doesn't significantly interfere with the nervous system control of the respiratory system.</li> <li>● A male patient has suffered a spinal cord injury in a car accident. In your narrative, write how an EMT would properly move and secure the patient and what type of equipment would you need to prevent further injury.</li> <li>● Based on the definition of the term body mechanics in a 500- word essay describe how following proper patient lifting and moving techniques can help prevent work-related injuries.</li> <li>● In 300 - words summarize the general considerations required to move patients safely without causing them further harm while simultaneously protecting the EMT from injury.</li> <li>● Based on the safety rules in a 350 –word essay describing the guidelines the EMT should follow when lifting and carrying a patient on a stretcher or backboard and identify how to avoid common mistakes.</li> </ul>	9	3	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Health and Safety: 6.4</p> <p><b>CTE Pathway:</b> B5.1, B5.2, B5.3, B8.7</p>

XV.	UNIT 15: VITAL SIGNS AND PATIENT ASSESSMENT	CR	Lab/ CC	Standards
	<p>Students will learn how to conduct a patient assessment (Medical and Trauma) by using the scene size-up, general impression, primary assessment, detailed focused exam and secondary assessments. Students will become familiar with the normal anatomy and physiology of the human body and topographical terminology to assist them in completing a thorough patient assessment. This information will provide a solid cornerstone on which the EMT can build the essentials of quality patient assessment and management. Students will understand how to use the various monitoring devices in assessing vital signs.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Explains the nature of the Scene Size-Up beyond the initial moments at the scene.</li> <li>● Explains the purpose of the Primary Assessment, and recognizes the “life-threats” that require immediate interventions.</li> <li>● Applies the OPQRST mnemonic to gain additional information about the chief complaint.</li> <li>● Applies the SAMPLE mnemonic to gather a medical history on a patient.</li> <li>● Demonstrates the ability to conduct a thorough head-to-toe physical exam.</li> <li>● Demonstrates the ability to conduct a Patient Assessment-Medical within the (15) minute time limit.</li> <li>● Demonstrates the ability to conduct a Patient Assessment-Trauma within the (15) minute time limit.</li> <li>● Identifies the vital signs obtained in the pre-hospital setting.</li> <li>● Recognizes the importance of “trending” in vital signs.</li> <li>● Demonstrates the ability to obtain an auscultated and palpated blood pressure.</li> <li>● Demonstrates the ability to asses and calculate a radial, brachial and carotid pulse.</li> <li>● Demonstrates the ability to assess and calculate a respiratory rate.</li> <li>● Demonstrates the proper method of auscultating lung sounds.</li> <li>● Demonstrates the application of O2 and CO2 monitoring devices on patients.</li> <li>● Demonstrates the proper methods of assessing for skin signs and pupillary response.</li> <li>● Demonstrates the proper use of a glucometer to evaluate a patient’s blood glucose level.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>● Write a short 450-word script of what you would tell your patient about the procedure as you begin taking the blood pressure.</li> <li>● Taking the temperature is a vital procedure but to many patients, it seems a nuisance. Write an essay describing how you would explain to the client that a change in temperature is important.</li> <li>● Create a chart with the normal blood pressure ranges for adults, children, and infants. Explain the impact an abnormal blood pressure reading can have on the patient’s health.</li> <li>● Write a 450-word report describing the changes in the heart rate caused by common diseases and how that affects cardiac output in patients.</li> <li>● Define the heart rate and explain what information can be determined by monitoring the pulse. Write a 450-word report describing the changes in the heart rate caused by common diseases.</li> <li>● Interview someone recovering from an accident and have the person describe how the injury occurred and what their resulting injuries were. Create an emergency action plan. Write the steps of the Emergency Action Plan as if you would have been there when the incident happened.</li> <li>● In 300 - word essay, explain why it is important to keep the evaluation of each client’s medical history in mind at all times during the initial and secondary patient assessment.</li> <li>● Identify the components of the patient assessment process. In 600 words explain how the different causes of emergencies will affect how each step of the patient assessment is performed by the EMT. Use correct grammar, punctuation, and spelling.</li> </ul>	12	3	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Technical Knowledge and Skills: 11.3</p> <p><b>CTE Pathway:</b> B9.1, B9.2, B9.3</p>
XVI.	UNIT 16: MEDICAL TERMINOLOGY	CR	Lab/ CC	Standards
	<p>Students will understand and apply the definitions, abbreviations, symbols, and terminology rules that are used in emergency medical care. They will demonstrate how keyword parts work together to form medical terms and use the many aids to help reinforce the word-building skills while mastering them. Learning medical terminology is similar to learning a new language. The medical language is logical in that each term, complex or simple, can be broken down into its basic component parts. Students will build medical terms for surgical, diagnostic, and pathological conditions. They will write the meaning of the word parts and use them to build and analyze words.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Defines key terms and explains the importance of the proper use of the medical terminology.</li> <li>● Recognizes when it’s appropriate to use medical terminology, acronyms, and abbreviations while communicating and documenting patient care reports.</li> <li>● Applies terms of position and direction to describe a location on the human body.</li> <li>● Identifies the anatomic regions of the body.</li> <li>● Communicates with the proper directional terms when describing an injury or illness on the human body.</li> <li>● Describes the structures, locations, and functions of each of the named body systems.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>● Use research materials, either text-based or internet-based, to find ten medical terms. Write each term and identify the prefixes, word roots, and suffixes. Give the meaning of each part of the word and the meaning of the medical term. Create a table and fill in the information for the ten words used in the assignment.</li> <li>● Choose 25 medical terms and create “Jeopardy” like the game. Make a poster with 25 squares and place either the medical term or the definition of a medical term in each square. Cover each word with a 3 x 3 card. Another classmate will challenge your words by giving you the definition of the medical term or the medical term the definition on your poster pertains to.</li> </ul>	15	3	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Technology: 4.3</p> <p><b>CTE Pathway:</b> B9.2, B9.1</p>

	<ul style="list-style-type: none"> <li>● Use a ring and insert 100 flashcards on the ring. Choose 100 medical words and write them on one side of the flashcards. On the other side write the definition of the medical terms. Choose 5 classmates, form a group and quiz each other by using the flashcards. Share the words with your group.</li> <li>● Write three sentences describing the client's medical complaints, initially by writing the sentences with the use of common words and then rewriting them with the use of medical terms.</li> </ul>			
<b>XVII.</b>	<b>UNIT 17: ANATOMY OF THE HUMAN BODY</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>
	<p>In this unit, students will develop an understanding of human anatomy and physiology preparing them to better understand where vital structures are located, how they function, and how injuries and illnesses can affect the human body in general. Students will know the structure and function of the human body and understand how the body responds to a stimulus. The anatomy and physiology of the human body will provide students with the basis for understanding the pathophysiology of the disease. This unit serves to introduce the students to the basic functions of living organisms, reviews the concept of homeostasis and introduces positive and negative feedback systems in response to homeostatic regulation. Students will use anatomical terms to describe body sections, body regions, and relative positions. Homeostatic balance, the relationship between structure and function, and the interrelationships between body systems are a focus throughout the chapter.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Demonstrate the positional and directional terms.</li> <li>● Identify the body regions and cavities on a lifelike model and label each cavity.</li> <li>● Recognize the main body parts of each system on a lifelike model and label each part.</li> <li>● Research the Internet, create a lung by using two balloons, and demonstrate how it functions.</li> <li>● Demonstrate the ATP muscle contraction and write a 150-word summary of this process.</li> <li>● Describe the mechanisms by which Na+, K+, and Ca++ are regulated in the extracellular fluid.</li> <li>● Describe the mechanisms that regulate the body fluid pH function by explaining how they respond to changes in the pH.</li> <li>● Identifies the structures of the Musculoskeletal system and describes the functions of each.</li> <li>● Identifies the structures of the Respiratory system and describes the functions of each.</li> <li>● Identifies the structures of the Cardiovascular system and describes the functions of each.</li> <li>● Identifies the components of blood and describes the functions of each.</li> <li>● Identifies the structures of the Lymphatic system and describes the functions of each.</li> <li>● Identifies the structures of the Nervous system and describes the functions of each.</li> <li>● Identifies the structures of the Digestive system and describes the functions of each.</li> <li>● Identifies the structures of the Integumentary system and describes the functions of each.</li> <li>● Identifies the structures of the Endocrine system and describes the functions of each.</li> <li>● Identifies the structures of the Renal/Kidney system and describes the functions of each.</li> <li>● Identifies the structures of the Reproductive system and describes the functions of each.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>● Write a 300-word essay explaining the body's topographic anatomy. Explain the anatomical position, the directional terms, and the planes of the body.</li> <li>● Use the Internet to research the importance of dialysis in clients with kidney failure. In 600 - word essay define dialysis, present the types of dialysis, and the importance of the procedure.</li> <li>● Create a chart and contrast the functions of the sympathetic and parasympathetic divisions of the autonomic nervous system.</li> <li>● Create a chart with the functions of the digestive system: enzyme, source, and function.</li> <li>● Create a diagram that shows the digestion of food molecules.</li> <li>● Create a chart showing the functions of the endocrine system with emphasis on water balance.</li> <li>● Write a 500-word essay describing the journey of the blood from the heart to the body cells and the return of the blood back to the heart. Create a diagram of the circulatory system and present it to the class.</li> <li>● Research the Internet and find pertinent information to evaluate the impact of biotechnology on the individual, society and the environment.</li> <li>● List the hormones secreted by each gland and write a 450 – word essay describing their functions and comparing the means by which the secretion rate of each is controlled.</li> <li>● Write a 300 - word essay explaining all the reasons why an elderly patient may have a difficult time walking from the living room to the bedroom.</li> <li>● Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.</li> </ul>	15	3	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Demonstration and Application: 10.1</p> <p><b>CTE Pathway:</b> B9.1, B9.2, B9.3</p>
<b>XVIII.</b>	<b>UNIT 18: LEGAL AND ETHICAL ISSUES</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>
	<p>The Legal and Ethical Issues unit will cover the expected roles and responsibilities of the EMT while interacting with the community both on and off duty. Key ideas covered in this unit will include introducing the students to the Scope of Practice and the Standard of Care of an EMT while rendering emergency medical care. In addition, the teacher will discuss the Duty to Act, types of patient consent, the patient's right to refusal of care, Do Not Resuscitate advance directives, assisted suicide concerns, and negligence.</p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>● Explain the concepts of Duty to Act and Breach of Duty as they relate to the Emergency Medical Technician.</li> <li>● Describe how the HIPPA Act of 1996 impacts the legality of what patient information can be shared by EMTs.</li> <li>● State how medical identification devices and organ donor status identification can guide the decisions made by the EMT.</li> <li>● Differentiate the terms Scope of Practice and Standard of Care.</li> <li>● Differentiate the various types of consent used by the Emergency Medical Technician.</li> </ul>	12	3	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Ethics and Legal Responsibilities: 8.1, 8.4</p> <p><b>CTE Pathway:</b> B1.5, B3.6, B3.7</p>

	<ul style="list-style-type: none"> <li>● Explain the role of the Emergency Medical Technician for patients who refuse care.</li> <li>● Describe the EMTs obligations when confronted with different types of Physician's Orders for Life-Sustaining Treatment (POLST).</li> <li>● Give examples of observations an EMT should make and document at a crime scene.</li> </ul> <p><b>Key Assignments:</b></p> <ul style="list-style-type: none"> <li>● Students will write a 500-word essay on the newly adopted CA State Senate Bill 128 (SB 128) that deals with the End of Life procedures. Students will research the bill, and specify the legal and ethical issues that will impact the EMT when responding to a scene for such patients.</li> <li>● Students will research the HIPPA Act of 1996 and discuss the techniques to ensure patient privacy and the repercussions failing to do so.</li> <li>● Students will be given a mock crime scene and will outline the steps in preserving evidence and contamination prevention.</li> </ul>			
<b>XIX.</b>	<b>COURSE NOTES</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>
	<p><b>Lead Teacher:</b> Dru Snider</p> <p><b>Date Completed:</b> 5/13/2021</p> <p><b>CP Approval:</b> 5/13/2021 (SC)</p>	0	0	<p><b>Academic:</b> LS: 11-12.1</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> B1.1</p>

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