

HSCI 0007 - EMERGENCY MEDICAL RESPONDER

Catalog Description

Hours: 80 (62 lecture, 18 laboratory)

Description: Provides the knowledge and practical skills training required to be certified as an Emergency Medical Responder (EMR). Comprehensive training includes oxygen therapy and delivery, basic airway adjuncts, positive pressure ventilation, bleeding control, extremity splinting and spinal immobilization. Emphasizes a systematic patient assessment, critical thinking and medical interventions at the first responder level. Provides the mandated training for recognizing the risks of bloodborne pathogens, infection control, body substance isolation (BSI), and personal protection equipment in accordance with OSHA standard 29 CFR 1910.1030 specific to the EMS first responder and healthcare professional. Upon completion with a grade of "C" or better, students are issued a certificate of completion and are eligible to apply for an EMR certification through the state of California. (CSU)

Course Student Learning Outcomes

- CSLO #1: Demonstrate a comprehensive patient assessment for an illness or injury and perform the appropriate interventions and treatment per the patient's condition within the EMR scope of practice.
- CSLO #2: Describe the role and responsibility of the EMR during scene size-up, basic scene management, incident command system and turning over care with a proper report.
- CSLO #3: Demonstrate competency in all EMR practical skills testing required for certification with the National Registry of Emergency Medical Technicians and qualify for certification with an EMS agency.

Effective Term

Fall 2023

Course Type

Credit - Degree-applicable

Contact Hours

80

Outside of Class Hours

124

Total Student Learning Hours

204

Course Objectives

Lecture Objectives:

1. Describe the legal considerations, roles and responsibilities of the EMR;
2. Identify the different human systems and the basic anatomy and physiology of each;
3. Describe the role and responsibility of the EMR during scene size-up and scene safety;

4. Name the steps required to complete a primary and secondary patient assessment;
5. Explain the purpose of obtaining vital signs and how the information is used for patient assessment;
6. Identify basic components of anatomy and physiology for the respiratory system;
7. Describe the signs and symptoms of respiratory emergencies and related causes;
8. Explain the intervention and management skills required of the EMR for respiratory emergencies;
9. Identify the basic component of anatomy and physiology for the cardiovascular system;
10. Describe the signs and symptoms of cardiac emergencies and of related causes;
11. Explain the intervention and management skills required of the EMR for cardiac emergencies;
12. Describe the basic components of the circulatory system and the physiology of perfusion;
13. Describe the signs and symptoms of hypoperfusion and pathophysiology of shock;
14. Identify basic components of anatomy and physiology for the musculoskeletal system;
15. Describe the signs and symptoms and pathophysiology of musculoskeletal injuries;
16. Explain the assessment and management skills for stabilizing musculoskeletal injuries;
17. Identify basic components of anatomy and physiology for the nervous system;
18. Describe the signs and symptoms and pathophysiology of neurological emergencies;
19. Explain the assessment and intervention skills for stabilizing neurological injuries;
20. Describe the signs and symptoms and pathophysiology of various medical emergencies;
21. Explain the assessment and intervention skills for various medical injuries;
22. Identify the primary environmental factors and the effect on the different human systems;
23. Describe the signs and symptoms of heat and cold related illnesses;
24. Describe the signs and symptoms of different environmental injuries and illnesses;
25. Explain the assessment and intervention skills for stabilizing environmental emergencies;
26. Identify the basic components of anatomy and physiology of emergency childbirth;
27. Describe the stages of labor and normal delivery during childbirth;
28. Identify the indications and pathophysiology of childbirth complications;
29. Explain the management and intervention skills for emergency childbirth;
30. Describe requirements of OSHA standard 29 CFR 1910.1030;
31. Identify the basic anatomical and physiological differences for pediatric patients;
32. Explain the assessment and intervention skills for different pediatric emergencies;
33. Describe the assessment and management skills for behavioral emergencies;
34. Describe infection control and the occupational requirements of OSHA standard 29 CFR 1910.1030;
35. Describe Universal and Standard precautions and the protocols used in the healthcare profession;

35. Describe the different types of bloodborne pathogens and the varying routes of exposure;

36. Describe the occupational requirements and engineering controls used to regulate body waste and fluid clean-up;

37. Describe the different types of field and clinical associated exposures to bloodborne pathogens;

38. Describe the Exposure Control protocol and the incident reporting requirements of OSHA.

Laboratory Objectives:

1. In a simulated training scenario, perform primary and secondary assessment on an ill patient and recognize the signs and symptoms associated with medical emergencies;

2. In a simulated training scenario, perform primary and secondary assessment on an injured patient and recognize the signs and symptoms associated with traumatic injuries;

3. In a simulated training scenario, demonstrate the ability to perform a full set of vital signs, recognize if there are any abnormal discrepancies, and properly record and communicate the findings;

4. In a simulated training scenario, demonstrate the ability to perform initial spinal stabilization and to securely immobilize a patient on a backboard;

5. On a simulated training manikin, correctly assess the patient presenting with a compromised airway and properly insert the oropharyngeal airway adjunct;

6. On a simulated training manikin, correctly assess the patient presenting with a compromised airway and properly insert the nasopharyngeal airway adjunct;

7. On a simulated training manikin, correctly assess the patient with a compromised respiratory effort and properly demonstrate the use of the bag valve mask and administration of positive pressure ventilation;

8. On a simulated training manikin, demonstrate the application of the non-rebreather oxygen mask and proper delivery of high flow supplemental oxygen;

9. On a simulated training manikin, demonstrate the application of the automatic external defibrillator and proper delivery of electrical cardioversion on the unconscious and pulseless patient;

10. On a simulated training manikin, demonstrate the proper application of the air splinting device and stabilization of an orthopedic injury;

11. On a simulated training manikin, demonstrate the proper assessment of an obstetrical patient and the medical assistance required during emergency childbirth;

12. On a simulated training manikin, demonstrate the recognition of an obstetrical emergency and the required interventions for childbirth complications;

13. Demonstrate the proper hand washing techniques as defined by OSHA standards for infection control and exposure protection of bloodborne pathogens;

14. Demonstrate the use of personal protective equipment and how to properly don the equipment per OSHA standards for infection control and exposure protection from bloodborne pathogens;

15. Demonstrate airway management and suction techniques and injection practices as defined by OSHA standards for infection control and exposure protection of bloodborne pathogens.

General Education Information

- Approved College Associate Degree GE Applicability
 - AA/AS - Health Ed/Physical Ed
- CSU GE Applicability (Recommended-requires CSU approval)
- Cal-GETC Applicability (Recommended - Requires External Approval)
- IGETC Applicability (Recommended-requires CSU/UC approval)

Articulation Information

- CSU Transferable

Methods of Evaluation

- Objective Examinations
 - Example: Weekly Quizzes and Exams: Given multiple choice and fill-in questions, student will correctly identify the primary signs and symptoms of respiratory failure, and describe the appropriate steps in patient care interventions. Example: True or False: Tripod position could indicate severe respiratory distress.
- Problem Solving Examinations
 - Example: The student will be given a practical emergency medical scenario with minimal information on patient history or current situation. Using skills learned in the course, student will utilize subjective and objective components of the primary assessment to demonstrate their ability to provide appropriate patient care. Graded based on industry standards.
- Projects
 - Example: Student will be required to research the components and organizational structure of Emergency Medical Services or Disaster Response System, and provide a written summary of the Emergency Medical Responders role. Student will also be required to give an oral presentation to the class, utilizing any media tools during the presentation such as audio visual, Internet, PowerPoint, video, as well as handouts. Presentation requirements are to remain within a 5-10 minute time frame. Grading will be based on an approved national standard.
- Other
 - Example: Given a simulated emergency medical scenario, the student will correctly demonstrate the appropriate EMR skills and interventions to properly establish a patient airway utilizing an oral pharyngeal adjunct and provide positive pressure ventilation utilizing a bag valve mask device with supplemental oxygen administration. Grading will be based on an approved national standard.

Repeatable

No

Methods of Instruction

- Laboratory
- Lecture/Discussion
- Distance Learning

Lab:

1. During a practical skills lab, the EMR Instructor will demonstrate the proper application of the cervical collar to immobilize the cervical spine of an injured trauma patient, and how to complete the spinal immobilization process utilizing the long backboard restraint system. This is followed by the students demonstrating the skill.

Lecture:

1. During a lecture presentation utilizing audio visual display, the instructor will lead a discussion on burn patient assessments, how to determine the degree of severity, and total body surface affected using rule-of-nine calculations. Students are expected to participate in the discussion.

Distance Learning

1. Online lecture on medical signs and symptoms for respiratory emergencies, followed by students outlining and posting signs of symptoms of an instructor assigned injury or illness. Students use of the discussion board will facilitate critical thinking and group discussion. Students will be required to respond to a minimum of 2 others students initial responses which will allow for interaction between students and the instructor.

- OER Link:
- OER:

Other materials and-or supplies required of students that contribute to the cost of the course.

Personal Stethoscope, Blood Pressure Cuff and Penlight. Sierra College EMR uniform polo shirt.

Typical Out of Class Assignments Reading Assignments

1. Student will read the lesson plans on respiratory emergencies, describe the signs and symptoms associated with a severe asthma attack, and explain the different interventions available within the EMR scope of practice to manage acute respiratory failure.
2. Student will read the lesson plans on shock, identify the different types of hypoperfusion and describe the interventions required within the EMR scope of practice.

Writing, Problem Solving or Performance

1. Given a detailed emergency medical scenario, student will use standard medical terms and common acronyms to verbally communicate a medical report and transfer of patient care. Student will then compose a written report to summarize the emergency medical interventions performed and the EMR scene management of the incident.
2. Given the results of the objective and subjective patient assessment, student will correctly document the findings of the event, patient's chief complaint, vital signs, level of consciousness, and pertinent medical history.

Other (Term projects, research papers, portfolios, etc.) Required Materials

- AAOS Emergency Medical Responder
 - Author: David Schottke
 - Publisher: Jones and Bartlett Learning
 - Publication Date: 2018
 - Text Edition: 6th
 - Classic Textbook?:
 - OER Link:
 - OER:
- AAOS Emergency Medical Responder Student Workbook
 - Author: David Schottke
 - Publisher: Jones and Bartlett Learning
 - Publication Date: 2018
 - Text Edition: 6th
 - Classic Textbook?:
 - OER Link:
 - OER:
- Bloodborne and Airborne Pathogens
 - Author: AAOS
 - Publisher: Jones & Bartlett
 - Publication Date: 2018
 - Text Edition: 7th
 - Classic Textbook?: