

**EMC 103 Course Outline as of Spring 2022****CATALOG INFORMATION**

Dept and Nbr: EMC 103 Title: EMT

Full Title: Emergency Medical Technician

Last Reviewed: 9/27/2021

Units	Course Hours per Week	Nbr of Weeks	Course Hours Total
Maximum 7.50	Lecture Scheduled 6.00	17.5	Lecture Scheduled 105.00
Minimum 7.50	Lab Scheduled 2.00	12	Lab Scheduled 35.00
	Contact DHR 3.00		Contact DHR 52.50
	Contact Total 11.00		Contact Total 192.50
	Non-contact DHR 0		Non-contact DHR 0

Total Out of Class Hours: 210.00

Total Student Learning Hours: 402.50

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

Basic level course primarily designed to meet the California State Emergency Medical Services Authority (EMSA) requirements for the Emergency Medical Technician who functions on an operational ambulance. Students will apply principles of anatomy, physiology and communications as they relate to the assessment of the sick and injured and rendering pre-hospital basic life support. Students will apply the above knowledge to develop manipulative skills necessary to the practice of an Emergency Medical Technician. Students are required to attend the minimum number of hours required by California Title 22; this includes the required weekend activities. Students must be 18 years of age by first class meeting. Students must clear a criminal background check through Livescan (DOJ/FBI). Students must have current immunizations in accordance with state healthcare guidelines. Course required for California EMT certification.

**Prerequisites/Corequisites:**

Course Completion of EMC 100 and Minimum Age 18 or older

**Recommended Preparation:**

Eligibility for ENGL 100 or ESL 100

**Limits on Enrollment:**

Student must be at least 18 years of age and pass DOJ/FBI Live Scan background check.

Student must have current certification in American Heart Association Health Care Provider CPR. Required immunizations in accordance with standard health care guidelines.

**Schedule of Classes Information:**

Description: Basic level course primarily designed to meet the California State Emergency Medical Services Authority (EMSA) requirements for the Emergency Medical Technician who functions on an operational ambulance. Students will apply principles of anatomy, physiology and communications as they relate to the assessment of the sick and injured and rendering pre-hospital basic life support. Students will apply the above knowledge to develop manipulative skills necessary to the practice of an Emergency Medical Technician. Students are required to attend the minimum number of hours required by California Title 22; this includes the required weekend activities. Students must be 18 years of age by first class meeting. Students must clear a criminal background check through Livescan (DOJ/FBI). Students must have current immunizations in accordance with state healthcare guidelines. Course required for California EMT certification. (Grade Only)

Prerequisites/Corequisites: Course Completion of EMC 100 and Minimum Age 18 or older

Recommended: Eligibility for ENGL 100 or ESL 100

Limits on Enrollment: Student must be at least 18 years of age and pass DOJ/FBI Live Scan background check. Student must have current certification in American Heart Association Health Care Provider CPR. Required immunizations in accordance with standard health care guidelines.

Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

**ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>		Effective:	Inactive:
<b>UC Transfer:</b>		Effective:	Inactive:

**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

**COURSE CONTENT**

**Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Assess various emergency illnesses and injuries in order to prioritize treatment.
2. Demonstrate skills required to treat victims of a medical or trauma emergency.
3. Identify the job requirements of the Emergency Medical Technician as it relates to the Emergency Medical Service System.

**Objectives:**

At the conclusion of this course, the student should be able to:

1. Demonstrate knowledge of the Emergency Medical System (EMS) at the state and county level to include the medical-legal responsibilities of the Emergency Medical Technician (EMT).
2. Identify the basic anatomy and physiology of the:
  - A. Respiratory system
  - B. Cardiovascular system
  - C. Musculoskeletal system
  - D. Nervous system
  - E. Digestive system
  - F. Endocrine system
  - G. Genitourinary system
3. Recognize a minimum of five mechanisms, signs and symptoms of the pathophysiology as related to basic emergency care:
  - A. Respiratory system
  - B. Cardiovascular system
  - C. Central nervous system
  - D. Integumentary systems
  - E. Musculoskeletal system
  - F. Endocrine system
  - G. Genitourinary system
4. Identify five pre-hospital modalities appropriate for diagnoses involving the systems:
  - A. Respiratory system
  - B. Cardiovascular system
  - C. Central nervous system
  - D. Integumentary systems
  - E. Musculoskeletal system
  - F. Endocrine system
  - G. Genitourinary system
5. Recognize minimum of three signs and symptoms and identify pre-hospital treatment of:
  - A. Diabetic emergencies
  - B. Environmental emergencies
  - C. Seizures
  - D. Behavioral emergencies
  - E. Communicable diseases
  - F. Poisoning and overdose
  - G. Anaphalaxis
  - H. Cardiac emergencies
  - I. Respiratory emergencies
6. Identify the basic anatomy and physiology of normal childbirth, and recognize three complications of childbirth.
7. Identify at least two medical conditions specific to infant/pediatric and geriatric patients.
8. Define and apply five principles of triage and multi casualty incidents.
9. Demonstrate effective verbal and written communication skills as they relate to the Emergency Medical Services.
10. Recognize at least three components of emergency vehicle operation and safety.
11. Demonstration of good body mechanics for moving and lifting
12. Provide safe and appropriate techniques in extricating and moving victims involved in motor vehicle accidents.
13. Apply knowledge of accident scene management.
14. Recognize rescue equipment.
15. Apply principles of immobilization techniques.
16. Identify and demonstrate proper use of required ambulance equipment.
17. Identify and demonstrate proper use of communication equipment.

18. Demonstrate appropriate patient care documentation.
19. Identify and demonstrate appropriate use of Glucometry.
20. Identify appropriate operations in tactical operations.
21. Identify and demonstrate appropriate use of Oximetry.

## **Topics and Scope:**

### **I. Overview**

- A. EMS system
- B. Role and responsibilities of EMT

### **II. First Principles of Emergency Care**

- A. Medical-legal
- B. Communications and crisis intervention
- C. Documentation

### **III. Patient Assessment**

- A. Primary and secondary exam
- B. Vital signs
- C. Subjective/objective assessment plan
- D. Medical history taking

### **IV. Respiratory System**

- A. Anatomy
- B. Physiology
- C. Oxygen therapy

### **V. Pathophysiology of the Respiratory System**

- A. Disease processes
- B. Assessment and treatment
- C. Oxygen therapy

### **VI. Cardiovascular System**

- A. Anatomy
- B. Physiology

### **VII. Pathophysiology of the Cardiovascular System**

- A. Disease processes
- B. Assessment and treatment

### **VIII. Shock**

- A. Classifications
- B. Assessment and treatment

### **IX. Central Nervous System**

- A. Anatomy, physiology and pathophysiology
- B. Assessment and treatment

### **X. Integumentary System**

- A. Anatomy, physiology and pathophysiology
- B. Assessment and treatment

### **XI. Musculoskeletal System**

- A. Anatomy, physiology and pathophysiology
- B. Assessment and treatment

### **XII. Altered Level of Consciousness-Medical Emergencies**

- A. Diabetes
- B. Seizures
- C. Stroke
- D. Poisoning and overdose

### **XIII. Childbirth**

- A. Anatomy, physiology and pathophysiology

- B. Delivery procedure
- C. Complications
- XIV. Introduction to Ambulance Operation
  - A. Safe driving
  - B. Patient transport
- XV. Interface with Advanced Life Support
  - A. IV therapy
  - B. Cardiac monitoring
  - C. Advanced airway procedures
- XVI. Behavioral Emergencies
  - A. Disease processes
  - B. Management including use of restraints
  - C. Critical incident stress
- XVII. Infectious Disease
  - A. Hepatitis
  - B. HIV/ AIDS
- XVIII. Environmental Emergencies
  - A. Heat exposure
  - B. Cold exposure
  - C. Insect/spider/snakes
  - D. Barotrauma
  - E. Radiation illness
- XIX. Pediatric/Geriatric
  - A. Abuse
  - B. Sudden infant death syndrome
  - C. Unique physiology
- XX. Patient Packaging
  - A. Size up
  - B. Stabilization
  - C. Access/Disentanglement
  - D. Patient assessment/care
  - E. Immobilization
  - F. Transport
  - G. Accident scene management
- XXI. Patient Moving and Lifting
  - A. Good body mechanics
  - B. Moving/lifting techniques
- XXII. Tactical Operations
  - A. Interfacing with Law Enforcement
  - B. Tactical communications
  - C. Warm and hot zone operations
- XXIII. Proper Administration of EMT Medications

All Areas of the Topics and Scope are covered in both the Lecture and Lab portions of the course

California Code of Regulations, Title 22 Section 100079 and Section 100081 states students must apply for certification within two (2) years of course completion and if there is a lapse in certification of greater than twenty-four (24) months, an individual shall complete an entire course.

## Assignment:

### Lecture-Related Assignments:

1. Read approximately 70 pages per week
2. Complete patient log describing at least 10 patient contacts
3. Complete a clinical experience essay (2 - 3 pages)
4. View or listen to recorded instructional materials (ungraded)

### Lab-Related Assignments:

1. Weekly demonstration of skills utilizing scenario-based exercises
2. Quizzes and exams will include:
  - A. Lab quizzes (2)
  - B. Division exams (8) - Students must receive an average of 80% total on all exams in order to pass the course
  - C. Skills midterm - Students must pass in order to receive a passing grade
  - D. Written midterm
  - E. Skills final exam - Students must pass in order to receive a passing grade
  - F. Written exam - 80% needed in order to receive a passing grade
3. Complete 9 hours of volunteer prescribed activities
4. Participate in 24 hours of clinical time at an approved hospital or ambulance
5. Title 22 State mandated attendance requirements

## Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Clinical experience essay and patient logs

Writing  
5 - 15%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Scenario exercises

Problem solving  
10 - 20%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Quizzes and exams

Skill Demonstrations  
10 - 20%

**Exams:** All forms of formal testing, other than skill performance exams.

Quizzes and exams: Multiple choice, completion

Exams  
20 - 40%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

State mandated attendance, volunteer activities

Other Category  
30 - 50%

**Representative Textbooks and Materials:**

EMT Complete: A Comprehensive Worktext. 2nd ed. LeBaudour, Chris and Batsie, Daniel and Dickinson, Edward. Brady. 2013 (classic)

Instructor prepared materials