

## **Advanced Cardiac Life Support (EMSP 2135)**



**Credit:** 1 semester credit hour (1 hours lecture)

**Prerequisite/Co-requisite:** Submit a copy of a Texas Department of State Health Services EMT-Basic certification. Co-requisite: EMSP 2444, EMSP 2348, EMSP 2260

### **Course Description**

Theory and skills necessary for the management of cardiovascular emergencies as specified by the American Heart Association (AHA) guidelines. This course was designed to be repeated multiple times to improve student proficiency.

### **Required Textbook and Materials**

1. EMS Program Student Handbook.
2. Advanced Cardiovascular Life Support Provider Manual
3. Program uniform T-shirt.
4. EMT / Paramedic Pants (dark blue or black)
5. Conservative Black leather belt (no designs)
6. Black leather shoes or boots (not tennis shoes)
7. Stethoscope, pen light, blood pressure cuff, trauma shears

### **Course Objectives**

Upon completion of this course, the student will be able to:

1. Demonstrate a working knowledge of clinical information and related topics relevant to the practice of pre-hospital and hospital personnel in cardiac management.(SCANS: F1.3, F2.3, F3.2, F4.1, F5.5, F6.5, F8.5, F9.5, F12.5, C1.4, C4.3)
2. Demonstrate the ability to completely perform all applicable skills; (SCANS: F5.5, C3.4, C5.5, C6.5, C7.5, C8.3, C10.4, C18.5, C19.5, C20.5)
3. Exhibit attitudes and behavior consistent with the ethics and professionalism expected of pre-hospital and hospital personnel.) (SCANS: F13.5, F14.5, F15.5, F16.5, F17.5 C9.5, C11.5, C12.5, C13.5, C14.5)

Curriculum based on Department of Transportation National Standard Curriculum

### **SCANS Skills and Competencies**

Beginning in the late 1980's, the U.S. Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS) conducted extensive research and interviews with business owners, union leaders, supervisors, and laborers in a wide variety of work settings to determine what knowledge workers needed in order to perform well on a job. In 1991 the Commission announced its findings in *What Work Requires in Schools*. In its

Approved 11/2010

**EMSP 2135**  
Course Syllabi

research, the Commission determined that “workplace know-how” consists of two elements: foundation skills and workplace competencies.

**Course Outline**

- A. Essentials of ACLS
  - 1. Managing a cardiac arrest
  - 2. Teamwork
- B. Adjuncts for Airway Control, Ventilation, and Oxygenation
  - 1. Airway Management
  - 2. Proper Ventilation techniques
  - 3. Proper use of airway adjuncts
- C. Defibrillation
  - 1. The defibrillation function.
    - a. Indications
    - b. Contraindications
    - c. Power settings
    - d. Different Defibrillation devices
    - e. Safety in defibrillation
  - 2. Cardiac Pacing
    - a. Indications
    - b. Contraindications
    - c. Power Settings
    - d. Rhythm capture
    - e. Precautions
  - 3. Cardiovascular pharmacology
    - a. The heart’s reaction to the actions of the medications.
- D. Myocardial Infarction
  - 1. Signs, Symptoms and Treatment
  - 2. Scenario Training for managing cardiac arrests.
- E. Special Resuscitation Situations
  - 1. Resuscitation of the pregnant patient
  - 2. DNR Orders
- F. Adjuncts for Artificial Circulation
- G. Invasive Monitoring Techniques
- H. Invasive Therapeutic Techniques
- I. Cerebral Resuscitation: Treatment of the Brain After Cardiac Arrest
- J. Ethical Aspects of CPR and ECC
  - 1. Scenario teaching stations on different modalities of patients with cardiac emergencies
  - 2. Graded scenario stations where students simulate managing a cardiac patient.

**EMSP 2135**  
Course Syllabi

**Grade Scale**

90- 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

**Course Evaluation**

Final grades will be calculated according to the following criteria:

1. One graded Megacode scenario 80%
2. Written Exam minimum 84 grade 20%

**Course Requirements**

1. Students must complete one graded Megacode scenario
2. Students must pass the written exam with a minimum score of 84%.

**Course Policies**

1. Attendance Policy: The Texas Department of State Health Services Bureau of EMS requires that each student must complete all rotation requirements. If a student misses a rotation then it is the student's responsibility to contact the clinical coordinator to reschedule the rotation.
2. If you wish to drop a course, the student is responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an 'F' in the course.
3. Additional class policies as defined by the EMS Program Student handbook.

**Disabilities Statement**

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building.

**Course Schedule**

Week	Topic	Reference
First Class	Essentials of ACLS, Airway Management, Defibrillation, Cardiac Pacing, Cardiac Pharmacology, Myocardial Infarction.	Program Student Handbook
Second Class	Special Resuscitation Considerations,	

**EMSP 2135**  
Course Syllabi

<b>Week</b>	<b>Topic</b>	<b>Reference</b>
	Adjuncts for Artificial Circulation, Invasive Monitoring Techniques, Invasive Therapeutic Techniques,	
Third Class	Post Cardiac Arrest Treatment, Practice Stations	
Fourth Class	Graded Megacode Stations, Written Exam.	