



## **Cardiology EMSP 2444 (Lab)**

### **Credit**

- 2 Semester Credit Hours; (3 Lab Hours)

### **Prerequisite**

- EMT-Basic certification

### **Co-requisite**

- EMSP 1172
- EMSP 2205
- EMSP 2264

### **Course Description**

Assessment and management of patients with cardiac emergencies; includes single and multi-lead ECG interpretation.

### **Required Textbook**

- EMS Program Student Handbook
- Nancy Caroline's Emergency Care in the Streets 8<sup>th</sup>
  - ISBN 13: 9781284137187
- ECG Interpretation made Incredibly Easy, Lippincott, Williams, And Wilkins 5<sup>th</sup>
  - ISBN 13-9781608312894
- FISDAP

### **Course Objectives<sup>1</sup>**

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

- Demonstrate how to perform cardiac monitoring.
- Demonstrate how to provide emergency medical care for the symptomatic adult patient with bradycardia.
- Demonstrate how to perform transcutaneous pacing (TCP).
- Demonstrate how to provide emergency medical care for the symptomatic adult patient with tachycardia.
- Demonstrate how to perform synchronized cardioversion.
- Demonstrate how to perform manual defibrillation.
- Demonstrate how to manage an adult cardiac arrest.
- Demonstrate how to perform defibrillation with an AED.
- Demonstrate how to perform immediate post-cardiac arrest care.
- Demonstrate how to acquire a 12-lead ECG.
- Demonstrate how to assess and provide emergency medical care for a patient with an acute coronary syndrome.

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<sup>1</sup> Curriculum based on the National EMS Education Standards set by the United States Department of Transportation (DOT).

## Course Outline

- A. ECG Fundamentals
  - 1. Obtaining a rhythm strip
  - 2. Interpreting a rhythm strip
- B. Recognizing arrhythmias
  - 1. Sinus Node arrhythmias
  - 2. Atrial arrhythmias
  - 3. Junctional arrhythmias
  - 4. Ventricular arrhythmias
  - 5. Atrioventricular Blocks
- C. Treating Arrhythmias
  - 1. Non-pharmacologic Treatments
  - 2. Pharmacologic Treatments
- D. 12-Lead ECG
  - 1. Acquisition Modes
  - 2. Lead Placement
  - 3. Interpreting a 12-lead ECG
- E. Pathophysiology, Assessment, and Management of Specific Cardiovascular Conditions
  - 1. Acute Coronary Syndromes
  - 2. Heart Failure
  - 3. Cardiac Tamponade
  - 4. Cardiogenic Shock
  - 5. Hypertensive Emergencies
  - 6. Infectious Diseases of the Heart
  - 7. Vascular Disorders

## Grade Scale

90-100	A
84-89	B
75-89	C
70-74	D
0-69	F

## Course Evaluation

Final grades will be calculated according to the following criteria:

- |                             |     |
|-----------------------------|-----|
| 1. Skills Performance Sheet | 80% |
| 2. Affective Evaluation     | 20% |

## Course Policies

- 1. No food, drinks, or use of tobacco products in class.
- 2. Computers, telephones, headphones, and any other electronic devices must be turned off while in class or used only with permission of the instructor.
- 3. Do not bring children to class.

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4. No late assignments will be accepted.
5. Attendance Policy. Three absences are allowed. If a student is tardy to class or departs early three (2) times, it will be equal to one (1) absence. Each absence beyond three absences will result in a 5 point deduction from your final grade.
6. 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.
7. Additional class policies as defined by EMS Program Student Handbook.
8. Lab Skill Sheets
  - a. Each specific lab skill sheet will be assigned a minimal points required to pass the specific skill.
  - b. Each specific lab skill sheet will be assigned "Critical Criteria" which must be met in order to pass the skill.
  - c. Each specific lab skill sheet must have a letter score of "C" or better and all critical criteria must be met in order for that lab skill to be accepted.
9. All lab skills are required to be passed the number of times assigned to each specific lab skill.

### Lab Skills Required

Skill	Peer to Peer Required	Instructor Required
12-Lead ECG	3	2
Defibrillation	3	2
Dynamic Cardiology	3	2
Medical and Cardiac Physical Assessment	3	2
Static Cardiology	3	2
Synchronized Cardioversion	3	2
Transcutaneous Pacing	3	2

### Technical Requirements (for courses using Blackboard)

The latest technical requirements, including hardware, compatible browsers, operating systems, software, Java, etc. can be found online at:

[https://help.blackboard.com/en-us/Learn/9.1\\_2014\\_04/Student/015\\_Browser\\_Support/015\\_Browser\\_Support\\_Policy](https://help.blackboard.com/en-us/Learn/9.1_2014_04/Student/015_Browser_Support/015_Browser_Support_Policy) A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of the online technology and resources.

### 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

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accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building. You may also visit the online resource at <http://www.lit.edu/depts/stuserv/special/defaults.aspx>

**Student Code of Conduct Statement**

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at [www.lit.edu](http://www.lit.edu) or obtained in print upon request at the Student Services Office. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document