

**J. Sargeant Reynolds Community College  
Course Content Summary**

**Course Prefix and Number:** EMS 142

**Credits:** 1

**Course Title:** Cardiovascular Care Lab

**Course Description:** Focuses on skills involved in the assessment and management of cardiac-related emergencies. Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, EMS 128. Corequisite EMS 141. Laboratory 2 hours per week.

**General Course Purpose:** The purpose of this course is to teach the skills involved in the assessment and management of cardiac-related emergencies. It develops competency in basic dysrhythmia recognition and overall cardiac patient care.

**Course Prerequisites and Co-requisites:**

Prerequisites: EMS 121, EMS 123, EMS 125, EMS 126, EMS 127, EMS 128

Corequisite EMS 141

**Student Learning Outcomes:**

Upon completing the course, the student will be able to

- a. Demonstrate competency in identifying basic EKG rhythms and associated treatments;
- b. Perform a minimum of two (2) assessments on patient complaining of cardiac-related emergencies in a scenario;
- c. Demonstrate competency in defibrillating a minimum of two (2) patients in an unwitnessed arrest in a lab setting;
- d. Demonstrate competency in defibrillating a minimum of four (4) patients in an unwitnessed arrest in a scenario;
- e. Demonstrate competency in performing transcutaneous pacing on a minimum of two (2) patients in a lab setting;
- f. Demonstrate competency in performing transcutaneous pacing on a minimum of four (4) patients in a scenario;
- g. Demonstrate competency in performing synchronized cardioversion on a minimum of two (2) patients in a lab setting;
- h. Demonstrate competency in performing synchronized cardioversion on a minimum of four (4) patients in a scenario; and
- i. Demonstrate competency in interpreting a 12-lead EKG.

**Major Topics to Be Included:**

- a. Assessment of the Cardiovascular Patient
  - Primary survey for cardiovascular assessment
  - History and physical/sample format specific to the cardiovascular patient
  - Secondary survey for cardiovascular assessment
  - Differentiating cardiovascular disorders

- b. Identification of Types of Rhythms
  - Sinus rhythms
  - Atrial rhythms
  - Junctional rhythms
  - Tachycardic rhythms
  - Bradycardic rhythms
  - Heart blocks
  - Pulseless rhythms
  
- c. Management of the patient with an arrhythmia
  - Symptomatic and asymptomatic patients
  - Non-invasive interventions
  - Pharmacological interventions
  - Electrotherapy interventions
  
- d. Cardiovascular specific pharmacology
  - Gases
  - Sympathomimetic
  - Anticholinergic
  - Antiarrhythmic
  - Beta blocker
  - Vasopressor
  - Calcium channel blocker
  - Purine nucleoside
  - Platelet aggregate inhibitor
  - Alkalinizing agents
  - Cardiac glycoside
  - Narcotic/analgesic
  - Diuretic
  - Nitrate
  - Antihypertensive

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