

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: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS. 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: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS. 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

- Demonstrate competency in identifying basic EKG rhythms and associated treatments;
- Perform a minimum of two (2) assessments on patient complaining of cardiac-related emergencies in a scenario;
- Demonstrate competency in defibrillating a minimum of two (2) patients in an unwitnessed arrest in a lab setting;
- Demonstrate competency in defibrillating a minimum of four (4) patients in an unwitnessed arrest in a scenario;
- Demonstrate competency in performing transcutaneous pacing on a minimum of two (2) patients in a lab setting;
- Demonstrate competency in performing transcutaneous pacing on a minimum of four (4) patients in a scenario;
- Demonstrate competency in performing synchronized cardioversion on a minimum of two (2) patients in a lab setting;
- Demonstrate competency in performing synchronized cardioversion on a minimum of four (4) patients in a scenario; and
- 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

Effective Date/Updated: September 21, 2018