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

Date Created/Updated (Month, Day and Year): September 21, 2018