NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY
EMS 142 – CARDIOVASCULAR CARE LAB (1 CR.)

Course Description

Focuses on skills involved in the assessment and management of cardiac-related Laboratory 2 hours. Total 2 hour 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/Corequisites

Prerequisite: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS.
Corequisite EMS 141.

Course Objectives

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 an in a lab setting
f) Demonstrate competency in performing transcutaneous pacing on a minimum of four (4) patients in an in a scenario.
g) Demonstrate competency in performing synchronized cardioversion on a minimum of two (2) patients in an in a lab setting
h) Demonstrate competency in performing synchronized cardioversion on a minimum of four (4) patients in an in a scenario.
i) Demonstrate competency in interpreting a 12 lead EKG

Major Topics to be Included

a) Assessment of the Cardiovascular Patient
    a. Primary survey for cardiovascular assessment
    b. History and physical/ SAMPLE format specific to the cardiovascular patient
    c. Secondary survey for cardiovascular assessment
    d. Differentiating cardiovascular disorders
b) Identification of Types of Rhythms
    a. Sinus rhythms
    b. Atrial rhythms
    c. Junctional rhythms
    d. Tachycardic rhythms
    e. Bradycardic rhythms
    f. Heart blocks
    g. Pulseless rhythms
c) Management of the patient with an arrhythmia

    a. Symptomatic and asymptomatic patients
    b. Non-invasive interventions
    c. Pharmacological interventions
    d. Electrotheraphy interventions
d) Cardiovascular specific pharmacology
    a. Gases
    b. Sympathomimetic
    c. Anticholinergic
    d. Antiarrhythmic
    e. Beta blocker
    f. Vasopressor
    g. Calcium channel blocker
    h. Purine nucleoside
    i. Platelet aggregate inhibitor
    j. Alkalinizing agents
    k. Cardiac glycoside
    l. Narcotic/ analgesic
    m. Diuretic
    n. Nitrate
    o. Antihypertensive