EMS 160 Cardiology I

COURSE DESCRIPTION:

Prerequisites: Take EMS 110
Corequisites: None

This course introduces the study of cardiovascular emergencies and is required for paramedic certification. Topics include anatomy and physiology, pathophysiology, electrophysiology, and rhythm interpretation. Upon completion, students should be able to recognize and interpret rhythms.

Course Hours per Week: Class, 2. Lab Hours per Week, 3. Semester Hours Credit, 3.

LEARNING OUTCOMES:

Upon completing requirements for this course, the student will be able to:

1. Demonstrate the ability to apply 3-lead electrocardiograms on live patients of all ages.
2. Be able to interpret normal and abnormal heart rhythms.
3. Identify the underlying pathophysiology of arrhythmias.
4. Demonstrate appropriate prehospital treatment of simulated patients who present with arrhythmias.
5. Obtain certification in Advanced Cardiac Life Support.
6. Explain the medications used for patients in tachy-and bradyarrhythmia, and cardiac arrest.

OUTLINE OF INSTRUCTION:

I. Didactic
   - A. BLS Patient Assessment and BLS CPR Review; Anatomy of the Cardiovascular System
   - B. Cardiac Cycle, Action Potentials, & Electrophysiology
   - C. Nervous System Control of the Heart, Introduction to EKG, Relating the EKG to the Cardiac Cycle, EKG Placement (Exam 1 Anatomy & Physiology)
   - D. SA Node Rhythms
   - E. Atrial & AV Node Rhythms
   - F. Junctional Rhythms
   - G. Ventricular Rhythms
   - H. Management of Tachycardias
   - I. Management of Bradycardias
     - i. Module Skills: Synchronized Cardioversion, Defibrillation, Transcutaneous Pacing
   - J. ACLS (specialty certification)

II. Cardiology I Midterm

III. Final Exams
   - A. Cardiology Mock TSOP

B. Cardiology I Final TSOP
C. Cardiology Final Written

REQUIRED TEXTBOOK AND MATERIAL:

AAOS: Sanders' Paramedic Textbook & The Only EKG Book You'll Ever Need