

**JEFFERSON COLLEGE**

**COURSE SYLLABUS**

**PAR215 Paramedic Advanced Cardiology**

4 credit hours

Prepared by: Earl Neal

Date: 03-31-2016

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## PAR215 Paramedic Advanced Cardiology

### I. CATALOGUE DESCRIPTION

#### A. Prerequisites

1. EMT206, or one year, documented, full-time patient care experience
2. ENG101, with a grade of “C” or better
3. BIO116 or BIO212, with a grade of “C” or better
4. Reading proficiency
5. Current American Heart Association Healthcare Provider CPR certification
6. Current Missouri EMT license
7. Criminal background check
8. Current immunizations required: MMR, PPD, Flu, Hepatitis B series, Tdap, and Varicella series
9. PAR200 Paramedic Advanced Care and Terminology
10. PAR205 Paramedic Pharmacology

#### Co-requisites

1. PAR210 Paramedic Medical Emergencies
2. PAR220 Paramedic Clinical Practicum I
3. PAR225 Paramedic Internship I

#### B. 4 credit hours

- C. Paramedic Advanced Cardiology prepares the student to identify life threatening and non-life threatening cardiac emergencies. The student will learn how to analyze standard 4-lead and 12-lead Electrocardiogram (ECG) information and determine a plan of action. The student will learn to manage cardiopulmonary arrest and other cardiovascular emergencies using the American Heart Association standards. (F)

### II. EXPECTED LEARNING OUTCOMES/CORRESPONDING ASSESSMENT MEASURES

Learning Outcome	Assessment Measures
Demonstrate how to administer proper medications identifying proper medication, routes of administration, and correct dosages for the cardiac patient	Written exams, quizzes, class discussions, practical application
Identify the risk factors most predisposing to coronary artery disease	Written exams, quizzes, class discussions, practical

	application
Define preload, afterload, and left ventricular end-diastolic pressure and relate each to the pathophysiology of heart failure	Written exams, quizzes, class discussions, practical application
Identify patient situations where ECG rhythm analysis is indicated	Written exams, quizzes, class discussions, practical application
Describe the dysrhythmias seen in cardiac arrest and successfully provide the proper treatment	Written exams, quizzes, class discussions, practical application
Describe the proper placement of a 4- and 12-lead ECG and evaluate the cardiac rhythm	Written exams, quizzes, class discussions, practical application
Evaluate the rhythm and describe the proper treatment for various cardiac conditions	Written exams, quizzes, class discussions, practical application

### III. OUTLINE OF TOPICS

- A. Cardiovascular anatomy
  1. Cardiac physiology
  2. Electrophysiology
  
- B. Electrocardiographic monitoring
  1. The ECG
  2. Relationship of the ECG to electrical events in the heart
  3. Interpretation of rhythm strips
  
- C. Dysrhythmias
  1. Classification of dysrhythmias
  2. Dysrhythmias originating in the atria
  3. Dysrhythmias originating in the ventricle
  4. Atrial ventricular (AV) blocks
  5. Bundle branch blocks
  
- D. Assessment of the cardiovascular patient
  1. Scene size up and primary assessment
  2. Focused history
  3. Secondary assessment
  
- E. Management of cardiovascular emergencies
  1. Basic life support (BLS)
  2. Advanced life support (ALS)
  3. Vagal maneuvers

4. Defibrillation
  5. Transcutaneous pacing
  6. Carotid sinus massage
- F. Managing specific cardiovascular emergencies
1. Acute coronary syndrome
  2. Angina pectoris
  3. Myocardial infarction
  4. Cardiac arrest
  5. Prehospital 4- and 12-lead ECG monitoring

#### IV. METHOD(S) OF INSTRUCTION

- A. Lecture
- B. Psychomotor practice and simulation
- C. Classroom discussions
- D. Student participation
- E. Homework

#### V. REQUIRED TEXTBOOK(S)

- A. Bledsoe, B., Porter, R., & Cherry, R., *Essentials of Paramedic Care Update*. Upper Saddle River, NJ: Prentice Hall, Current ed
- B. Walraven, G., *Basic Arrhythmias*. Upper Saddle River, NJ: Prentice Hall, Current ed

#### VI. REQUIRED MATERIALS

- A. Uniform for lecture/lab
  1. Navy blue color polo with EMS logo embroidered
  2. Dark blue or black EMS pants
  3. Dark socks
  4. Black shoes
  5. Black belt
  6. Jefferson College Student ID badge
- B. Stethoscope
- C. Wristwatch with second hand capabilities

- D. Computer with internet access (available through Jefferson College Labs)

## VII. SUPPLEMENTAL REFERENCES

- A. Library Resources: IPAD
- B. Miller, C.D., *Paramedic National Standards Self Test*. Upper Saddle River, NJ: Prentice Hall, Current ed
- C. All students review and sign a Contract of Understanding outlining the additional rules applied to all Paramedic courses.

## VIII. METHOD OF EVALUATION

- A. Didactic
  - 1. Quizzes
  - 2. Homework
  - 3. Module exams
  - 4. Classroom participation
  - 5. Class project (Drug Cards)
- B. Psychomotor
  - 1. Student portfolio
  - 2. Practical evaluations
  - 3. Independent labs
  - 4. Professionalism
- C. Assignment of Final Letter Grades
  - A = 92 - 100
  - B = 85 – 91.9
  - C = 80 – 84.9
  - D = 75 – 79.9
  - F = Below 75

## IX. ADA AA STATEMENT

Any student requiring special accommodations should inform the instructor and the Coordinator of Disability Support Services (Library; phone 636-481-3169).

## X. ACADEMIC HONESTY STATEMENT

All students are responsible for complying with campus policies as stated in the Student Handbook (see College website, <http://www.jeffco.edu>).

## XI. ATTENDANCE STATEMENT

Regular and punctual attendance is expected of all students. Any one of these four options may result in the student being removed from the class and an administrative withdrawal being processed: (1) Student fails to begin class; (2) Student ceases participation for at least two consecutive weeks; (3) Student misses 15 percent or more of the coursework; and/or (4) Student misses 15 percent or more of the course as defined by the instructor. Students earn their financial aid by regularly attending and actively participating in their coursework. If a student does not actively participate, he/she may have to return financial aid funds. Consult the College Catalog or a Student Financial Services representative for more details.

## XII. OUTSIDE OF CLASS ACADEMICALLY RELATED ACTIVITIES

The U.S. Department of Education mandates that students be made aware of expectations regarding coursework to be completed outside the classroom. Students are expected to spend substantial time outside of class meetings engaging in academically related activities such as reading, studying, and completing assignments. Specifically, time spent on academically related activities outside of class combined with time spent in class meetings is expected to be a minimum of 37.5 hours over the duration of the term for each credit hour.

