



# Broward Community College

## Course Outline

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**STATUS: ACTIVE**

**COMMON COURSE NUMBER:** NUR2294 (NSP 2552)

**COMMON COURSE TITLE:** Coronary Care Nursing

**PRE-REQUISITE:** Florida RN Licensure eligibility

**CREDIT HOURS:** 9

LECTURE: 144

**COURSE DESCRIPTION:** A comprehensive cardiac course to review and add to the scientific knowledge needed by the coronary care nurse in the practice of her art. Specific skills and competencies shall be developed in the use of equipment and method of care. Guidelines shall be presented for and the guiding of other members of the health care team, in the effective application of the concepts of coronary care. Designed to foster an attitude of striving for excellence in knowledge. The methods and techniques were developed by the Florida Regional Medical Program as a standard. Coronary care certificate awarded upon successful completion.

**Term Offered:** On Demand

**UNIT TITLES:**

1. Philosophy
2. Anatomy and Physiology of the Cardiovascular System
3. Coronary Circulation
4. Electrophysiology
5. Coronary Angiography
6. Enzymes
7. Renal Anatomy, Physiology, and Fluid Balance
8. Kidneys and Diuretics
9. Nursing Management of Acute MI
10. Medical Management of AMI
11. Physical Assessment of Cardiovascular System
12. Introduction to Ventricular Rhythms
13. Acid Base Balance and Arterial Blood Gas Interpretation

## **NUR2294 Coronary Care Nursing**

### **I. Course Overview:**

Upon successful completion of this course, the students should be able to demonstrate an understanding of the skills and competencies needed by the coronary care nurse.

### **II. Units:**

#### **Unit 1. Philosophy**

##### **General Outcome:**

1.0 The students should be able to explain the history of the development of coronary care and demonstrate an understanding of the universal philosophies of coronary care.

##### **Specific Learning Outcomes:**

Upon successful completion of this unit, the students should be able to:

- 1.1 Present a chronological timetable of the development of coronary care units.
- 1.2 Demonstrate an understanding of the concept of a concerted effort of the multidiscipline delivery of care of the acute myocardial infarction patient.

#### **Unit 2. Anatomy and Physiology of the Cardiovascular System**

##### **General Outcome:**

2.0 The students should be able to demonstrate an understanding of the anatomy and physiology of the cardiovascular system.

##### **Specific Learning Outcomes:**

Upon successful completion of this unit, the students should be able to:

- 2.1 Explain the structure of the heart and blood vessels.
- 2.2 Trace the route of circulation through the heart, great vessels, and lungs.
- 2.3 Discuss the influence of pressure on flow.
- 2.4 Denote the differences in the types of the pacemaker cells.
- 2.5 Correlate EKG cycle with impulse progression through the conduction system.

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### Unit 3. Coronary Circulation

General Outcome:

3.0 The students should be able to list the major branches of the coronary arteries.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

3.1 Describe the arterial system.

3.2 Discuss the coronary blood supply to mechanical and electrical areas of the heart.

### Unit 4. Electrophysiology

General Outcome:

4.0 The students should be able to demonstrate an understanding of the electrophysiology of the heart.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

4.1 Correlate the myocardial pacemaker and muscle cell with depolarization and repolarization of an EKG tracing.

4.2 Measure complexes, intervals, rhythm, and rate using EKG strips.

4.3 Draw each of the twelve leads and the corresponding QRS complex.

4.4 Determine electrical axis.

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## Unit 5. Coronary Angiography

### General Outcome:

5.0 The students should be able to describe the value of coronary angiography in the management of coronary disease and identify post-procedure complications.

### Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 5.1 Identify indications.
- 5.2 Discuss uses.
- 5.3 Explain the procedure.
- 5.4 List complications.
- 5.5 Discuss nursing management prior to and following the procedure.

## Unit 6. Enzymes

### General Outcome:

6.0 The students should be able to discuss the physiology and release of cardiac enzymes.

### Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 6.1 Demonstrate an understanding of the physiology of enzyme release.
- 6.2 Determine which cardiac enzymes are elevated on a given post-infarction day.

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## Unit 7. Renal Anatomy, Physiology, and Fluid Balance

### General Outcome:

7.0 The students should be able to demonstrate an understanding of the anatomy and physiology of the renal system and its role in maintaining fluid balance.

### Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 7.1 Discuss the anatomy of the renal system.
- 7.2 Explain the structure and function of the nephron.
- 7.3 Describe the formation and excretion of urine.
- 7.4 Explain the kidney's response to decreased blood flow.
- 7.5 Determine the kidney's role in fluid-electrolyte and acid-base balance.

## Unit 8. Kidneys and Diuretics

### General Outcome:

8.0 The students should be able to demonstrate an understanding of the impact of diuretics.

### Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 8.1 Classify diuretics according to mode of action.
- 8.2 Identify the specific use of diuretics.
- 8.3 Recognize side effects of diuretics.

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### Unit 9. Nursing Management of Acute MI

General Outcome:

9.0 The students should be able to integrate all aspects of the care of the coronary patient.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 9.1 Coordinate all aspects of patient care among health team members.
- 9.2 Involve the patient and family/significant other in the care.
- 9.3 Be aware of the medical plan of the care.
- 9.4 Evaluate and revise the plan of care as needed.

#### Unit 10. Medical Management of AMI

General Outcome:

10.0 The students should be able to demonstrate an understanding of diagnoses and anticipate therapy.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 10.1 Demonstrate an understanding of the following elements of the diagnosis:
  - A. History
  - B. EKG
  - C. Enzymes
- 10.2 Demonstrate an understanding of the following elements of therapy:
  - A. Uncomplicated course
  - B. Complicated course
  - C. Arrhythmias
  - D. Failure
  - E. Cardiovascular shock
  - F. Treatment of acute pulmonary edema

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#### Unit 11. Physical Assessment of the Cardiovascular System

General Outcome:

11.0 The students should be able to demonstrate an understanding of heart rhythm and rate, blood pressure and pulses, heart sounds, and the Central Nervous System.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 11.1 Demonstrate the proper technique of auscultation using a stethoscope.
- 11.2 Correlate normal and abnormal heart sounds with the valve area where auscultated.
- 11.3 Identify S3 and S4, systolic, and diastolic murmurs and pericardial friction rubs.
- 11.4 Examine neck veins for distension.
- 11.5 Recognize symptoms and signs of inadequate cardiac output and tissue perfusion.
- 11.6 Assess the function of the CNS.

## Unit 12. Introduction to Ventricular Rhythms

General Outcome:

12.0 The students should be able to demonstrate an understanding of premature ventricular beats, parasystole, fusion, escape, ventricular tachycardia, and ventricular fibrillation.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 12.1 Use the correct method for interpreting an EKG rhythm strip.
- 12.2 Describe salient features of each arrhythmia.
- 12.3 Explain the hemodynamic effect of arrhythmias.
- 12.4 List specific treatment for each arrhythmia.

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### Unit 13. Acid Base Balance and Arterial Blood Gas Interpretation

#### General Outcome:

13.0 The students should be able to demonstrate an understanding of blood gas problems.

#### Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 13.1 State the normal pH of arterial blood.
- 13.2 Apply the value of the pH in determining alkalosis and acidosis.
- 13.3 Discuss the causes of the body's response.
- 13.4 Explain the role of the buffer, respiratory, and renal systems in regulating the pH.
- 13.5 Interpret blood gas problems.