

BROWARD COMMUNITY COLLEGE

COURSE OUTLINE

LAST REVIEW: 2005-2006

NEXT REVIEW: 2010-1011

STATUS: A

COURSE TITLE: Cardiac Nursing: Basic Arrhythmia

COMMON COURSE NUMBER: NUR 2297

CREDIT HOURS: 2

CONTACT HOUR BREAKDOWN

(per 16 week term)

CLOCK HOURS:

(Voc. Course ONLY)

Lecture: 32

Lab: -

Clinic: -

Other: -

PREREQUISITE(S): Florida RN License, BLS Course

COREQUISITE(S): NUR 2297(L)

PRE/COREQUISITE(S):

COURSE DESCRIPTION: This course will be taught on the Internet in the Virtual Classroom – Web CT and is designed to enhance learning for licensed health care professionals using a non-traditional teaching format. Two scheduled classroom sessions will consist of the Orientation to Web-based ECG learning and the written – short answer Final Proctored ECG Exam. The web-based instruction will provide basic yet comprehensive information in the fundamentals of cardiac arrhythmias. Content will include anatomy and physiology, basic rate and rhythm calculation, cardiac monitoring as well as the identification of non-lethal and lethal producing arrhythmias. Pre-Requisite: Florida RN License; Basic Life Support course (Healthcare Provider Level). *(750 characters, maximum)*

UNIT TITLES

1. Anatomy, Physiology and Circulation Through the Heart
2. Electrophysiology of the Heart
3. Waveforms, Intervals, Segments and Complexes
4. Cardiac Monitors
5. Analyzing a Rhythm Strip
6. Arrhythmias
7. Blocks and Pacemakers

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UNITS

Unit 1: Describe the Basic Anatomy, Physiology and Circulation through the Heart

General Outcome:

1.0 The student shall:

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 1.1 List 3 major layers of the heart wall
- 1.2 Name and label 4 chambers of the heart
- 1.3 Label the 4 heart valves
- 1.4 Trace the blood flow through the heart and lungs
- 1.5 Label 2 coronary arteries and 2 major structures that are supplied by each artery
- 1.6 Identify the 2 major components of the autonomic nervous system and their function as it relates to the cardiac system

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Unit 2: Electrophysiology of the Heart

General Outcome:

2.0 The student shall:

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 2.1 Distinguish two components between electrical cells and myocardial cells**
- 2.2 Identify 4 major structures of the electrical conduction system and the ECG waveform displayed**
- 2.3 Match waveform deflections (+ or -) as it relates to the flow of electrical current**
- 2.4 Define the time and voltage measurement used on ECG graph paper**

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Unit 3: Wave Forms, Intervals, Segments and Complexes

General Outcome:

3.0 The student shall:

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

3.1 Define the 6 key ECG waveforms that comprise the normal cardiac cycle

3.2 Identify 3 ECG intervals

3.3 Recognize 3 variations of the QRS complex

3.4 Recognize 3 ST segment variations

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Unit 4: Cardiac Monitors

General Outcome:

4.0 The student shall:

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 4.1 Recognize two indications for ECG monitoring**
- 4.2 Describe two types of single-lead monitoring**
- 4.3 Recognize the term “lead”**
- 4.4 List the two most common leads utilized during cardiac monitoring**
- 4.5 Recognize the normal ECG pattern for the two most common leads**
- 4.6 Demonstrate correct electrode placement in three-lead, and five-lead monitoring system**
- 4.7 Describe the patient preparation necessary for ECG monitoring**
- 4.8 Identify three problems that may occur during cardiac monitoring**

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Unit 5: Analysing a Rhythm Strip

General Outcome:

5.0 The student shall:

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 5.1 Determine the regularity of the rhythm of the R wave
- 5.2 Calculate the heart rate for regular and irregular rhythms
- 5.3 Identify and examine P waves
- 5.4 Measure the PR interval
- 5.5 Measure the QRS interval

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Unit 6: Arrhythmias

General Outcome:

6.0 The student shall:

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

6.1 Define the ECG criteria using the five-step method for:

- Normal Sinus Rhythm
- Sinus Bradycardia
- Sinus Tachycardia
- Sinus Arrhythmia
- Sinus Arrest/Sinus Block
- Wandering Atrial Pacemaker
- Premature Atrial Contraction (PACs)
- Nonconducted PAC
- Atrial Tachycardia
- Paroxysmal Atrial Tachycardia
- Atrial Flutter
- Atrial Fibrillation
- Premature Junctional Contraction (PJC)
- Junctional Rhythm
- Accelerated Junctional Rhythm
- Paroxysmal Junctional Tachycardia (PJT)
- First-degree AV Block
- Second-degree AV Block, Type I (Mobitz I or Wenckebach)
- Second-degree AV Block, Type II (Mobitz II)
- Third-degree AV Block (Complete Heart Block)

6.2 Discuss the clinical significance for each ECG rhythm

6.3 Determine the appropriate treatment modalities for each ECG examples

6.4 Analyze and interpret ECG examples

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Unit 7: Blocks and Pacemakers

General Outcome:

7.0 The student shall:

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

7.1 Define the ECG criteria using the five-step method for:

- Bundle Branch Block / Interventricular Conduction Delay (IVCD)
- Premature Ventricular Contractions (PVC)
- Ventricular Tachycardia / Torsades de poites
- Ventricular Fibrillation
- Idioventricular Rhythm / Ventricular Escape Rhythm
- Accelerated Idioventricular Thythm
- Ventricular Standstill – First and second degree
- Ventricular Asystole

7.2 Discuss the clinical significance for each ECG rhythm.

7.3 Determine the appropriate treatment modalities for each ECG rhythm

7.4 Analyze and interpret ECG examples

7.5 Compare and contrast the differences between transcutaneous and transvenous pacing

7.6 List three types of permanent pacemakers

7.7 Identify the indications for pacing

7.8 Define the letters of the pacing code system

7.9 List two common malfunctions with temporary pacemakers

7.10 Analyze and interpret pacemaker rhythm examples

7.11 Discuss the clinical significance of pacemaker rhythms