

**EMC 275.1 Course Outline as of Summer 2002****CATALOG INFORMATION**

Dept and Nbr: EMC 275.1      Title: BASIC ARRHYTH RECOG  
 Full Title: Basic Arrhythmia Recognition Course  
 Last Reviewed: 12/10/2018

| Units   | Course Hours per Week |                   | Nbr of Weeks |    | Course Hours Total |       |
|---------|-----------------------|-------------------|--------------|----|--------------------|-------|
| Maximum | 2.00                  | Lecture Scheduled | 3.00         | 11 | Lecture Scheduled  | 33.00 |
| Minimum | 2.00                  | Lab Scheduled     | 0            | 4  | Lab Scheduled      | 0     |
|         |                       | Contact DHR       | 0            |    | Contact DHR        | 0     |
|         |                       | Contact Total     | 3.00         |    | Contact Total      | 33.00 |
|         |                       | Non-contact DHR   | 0            |    | Non-contact DHR    | 0     |

Total Out of Class Hours: 66.00

Total Student Learning Hours: 99.00

Title 5 Category: AA Degree Applicable  
 Grading: Grade Only  
 Repeatability: 27 - Exempt From Repeat Provisions  
 Also Listed As:  
 Formerly: HLC 275B

**Catalog Description:**

Application of basic principles of cardiac anatomy and physiology to recognize basic heart arrhythmias. Designed for health and allied care personnel who assume responsibility for cardiac monitoring in the pre-hospital and hospital setting.

**Prerequisites/Corequisites:****Recommended Preparation:****Limits on Enrollment:****Schedule of Classes Information:**

Description: Basic principles of cardiac anatomy & physiology to recognize basic heart arrhythmias. Course for health & allied care personnel who assume responsibility for cardiac monitoring in the pre-hospital or hospital setting. (Grade Only)

Prerequisites/Corequisites:

Recommended:

Limits on Enrollment:

Transfer Credit:

Repeatability: Exempt From Repeat Provisions

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

|                   |                      |            |           |
|-------------------|----------------------|------------|-----------|
| <b>AS Degree:</b> | <b>Area</b>          | Effective: | Inactive: |
| <b>CSU GE:</b>    | <b>Transfer Area</b> | Effective: | Inactive: |

|               |                      |            |           |
|---------------|----------------------|------------|-----------|
| <b>IGETC:</b> | <b>Transfer Area</b> | Effective: | Inactive: |
|---------------|----------------------|------------|-----------|

|                      |            |           |
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| <b>CSU Transfer:</b> | Effective: | Inactive: |
|----------------------|------------|-----------|

|                     |            |           |
|---------------------|------------|-----------|
| <b>UC Transfer:</b> | Effective: | Inactive: |
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**CID:**

**Certificate/Major Applicable:**

Not Certificate/Major Applicable

## **COURSE CONTENT**

### **Outcomes and Objectives:**

The students will be able to:

1. Label and define nine anatomical structures of the heart and their basic function.
2. Define the following terms related to cardiac electrophysiology:
  - A. Depolarization.
  - B. Repolarization.
  - C. Action potential.
  - D. Refractory states.
3. Describe the sequence of cardiac activation and recovery, and relate this information to the EKG configuration.
4. Demonstrate a systematic method of EKG interpretation.
5. Identify normal waveforms for monitoring leads II, MCL 1, MCL 6.
6. Classify arrhythmias according to site, mechanism and severity.
7. Identify 15 arrhythmias.
8. Recognize and describe 4 conduction defects.
9. Identify 3 premature and escape beats and state the mechanism for each.
10. Given the major arrhythmias, discuss possible nursing and medical interventions for each.

### **Topics and Scope:**

1. Overview.
  - A. Cardiac anatomy and physiology.
  - B. Myocardial blood supply.
  - C. Cardiac conduction system.
2. EKG Interpretation.
  - A. Vectors, lead placements.
  - B. Waves and measurements.

- C. Analysis of EKG rhythm strips.
- 3. Conduction System.
  - A. Anatomy.
  - B. EKG analysis.
  - C. Sinus rhythms.
- 4. Atrial Rhythms.
- 5. Junctional Rhythms.
- 6. Ventricular Rhythms.
- 7. Review of all Cardiac Rhythms.
- 8. Heart Blocks.
- 9. Pacemakers.
  - A. 12 lead EKGs.
  - B. Bundle branch.
- 10. Review.

**Assignment:**

- 1. Read approximately 10 pages per week.
- 2. On a weekly basis identify approximately 20 rhythm strips.

**Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

|                  |                    |
|------------------|--------------------|
| Written homework | Writing<br>5 - 10% |
|------------------|--------------------|

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

|                                   |                            |
|-----------------------------------|----------------------------|
| Homework problems, Quizzes, Exams | Problem solving<br>5 - 25% |
|-----------------------------------|----------------------------|

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

|                                       |                                  |
|---------------------------------------|----------------------------------|
| Class performances, Performance exams | Skill Demonstrations<br>30 - 60% |
|---------------------------------------|----------------------------------|

**Exams:** All forms of formal testing, other than skill performance exams.

|  |                   |
|--|-------------------|
| Completion, IDENTIFY EKG RHYTHM STRIPS | Exams<br>15 - 45% |
|--|-------------------|

**Other:** Includes any assessment tools that do not logically fit into the above categories.

|      |                          |
|------|--------------------------|
| None | Other Category<br>0 - 0% |
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**Representative Textbooks and Materials:**

EKG Workbook by Huff, Lippincott 4thed. 2002  
Instructor prepared materials.