

EMC 114 Course Outline as of Fall 2019**CATALOG INFORMATION**

Dept and Nbr: EMC 114 Title: BASIC ARRHYTHMIA

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	2.00	17.5	Lecture Scheduled	35.00
Minimum	2.00	Lab Scheduled	0	6	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	2.00		Contact Total	35.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 105.00

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 21 - Legally Mandated Repetition

Also Listed As:

Formerly: EMC 275.1

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:**

Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:**Schedule of Classes Information:**

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. (Grade Only)

Prerequisites/Corequisites:

Recommended: Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Transfer Credit:
Repeatability: Legally Mandated Repetition

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area	Effective:	Inactive:
CSU GE:	Transfer Area	Effective:	Inactive:
IGETC:	Transfer Area	Effective:	Inactive:
CSU Transfer:		Effective:	Inactive:
UC Transfer:		Effective:	Inactive:

CID:

Certificate/Major Applicable:

Both Certificate and Major Applicable

COURSE CONTENT

Student Learning Outcomes:

At the conclusion of this course, the student should be able to:

1. Identify a normal electrocardiogram
2. Identify common abnormal cardiac rhythms

Objectives:

At the conclusion of this course, the student should be able to:

1. Identify and define 9 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 electrocardiogram (EKG) configuration.
4. Demonstrate a systematic method of EKG interpretation.
5. Identify normal waveforms for monitoring leads II, modified cardiac lead (MCL) 1 and 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. Discuss possible nursing and medical interventions for 15 major arrhythmias.
11. Identify pacemaker rhythms.

Topics and Scope:

- I. Overview
 - A. Cardiac anatomy and physiology
 - B. Myocardial blood supply
 - C. Cardiac conduction system
- II. EKG Interpretation
 - A. Vectors, lead placements
 - B. Waves and measurements
 - C. Analysis of EKG rhythm strips
 - D. Modified cardiac leads
- III. Conduction System
 - A. Anatomy
 - B. EKG analysis
 - C. Sinus rhythms
- IV. Cardiac Rhythms
 - A. Atrial
 - B. Junctional
 - C. Ventricular
- V. Heart Blocks - Conduction Defects

Assignment:

1. Read approximately 10 pages per week
2. Identify approximately 20 rhythm strips per week
3. Exam identifying 15 strips 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.

Identify 20 rhythm strips

Writing
5 - 10%

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

None

Problem solving
0 - 0%

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

Class performances, Performance exams

Skill Demonstrations
20 - 45%

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

Completion, Identify EKG rhythm strips

Exams
45 - 70%

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

None

Other Category
0 - 0%

Representative Textbooks and Materials:

ECG Workout: Exercises in Arrhythmia Interpretation. 7th ed. Huff, Jane. Lippincott. 2016
Instructor prepared materials.