



School of Nursing and Health Professions

Syllabus



**THIS COURSE IS OFFERED THROUGH COOPERATIVE AGREEMENT WITH
RWJ-BARNABAS HEALTHEMS MOBILE TRAINING CENTER**

Term: **Credit: 5** **Office Hours:**

Course Code: EMT 220 **Office Location:**

Title of Course: EMERGENCY **Email:**
CARDIAC CARE **Phone:**

Days & Times: **Prerequisites: ENG 101, BIO 211**

Location: **Corequisites: EMT 110, 120, 124**

Instructor:

COURSE DESCRIPTION:

This course is intended to teach emergency service personnel the epidemiology, assessment and treatment of cardiac related illness and sudden cardiac death. The anatomy and physiology of the cardiovascular system, electrophysiology, cardiac pathology, ECG interpretation, cardiac arrest management and post-resuscitation care are all covered in-depth. Students will also complete the Advanced Cardiac Life Support (ACLS) class as part of the requirements for completion of this course.

COURSE OBJECTIVES:

- 1) Describe the incidence, morbidity, and mortality of cardiovascular disease.
- 2) Describe the anatomy of the heart, including the position in the thoracic cavity, layers of the heart, chambers of the heart, and location and function of cardiac valves.
- 3) Identify the major structures of the vascular system, the factors affecting venous return, the components of cardiac output, and the phases of the cardiac cycle.
- 4) Identify how heart rates, durations, and amplitudes may be determined from ECG recordings.
- 5) Describe a systematic approach to the analysis and interpretation of cardiac dysrhythmias.
- 6) Correlate abnormal ECG findings with clinical interpretation.
- 7) Identify the major mechanical, pharmacological, and electrical therapeutic objectives in the treatment of the patient with any dysrhythmia.

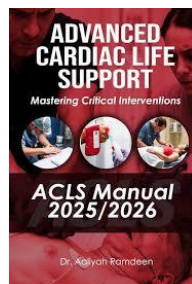
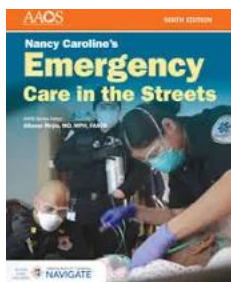
- 8) Based on field impressions, identify the need for rapid intervention for the patient in cardiovascular compromise.
- 9) Describe the epidemiology, morbidity, mortality, and pathophysiology of myocardial infarction.
- 10) Specify the measures that may be taken to prevent or minimize complications in the patient suspected of myocardial infarction.
- 11) Describe the most commonly used cardiac drugs in terms of therapeutic effect and dosages, routes of administration, side effects, and toxic effects.
- 12) Identify the most common complications of an acute myocardial infarction. Utilize the results of the patient history, assessment findings, and ECG analysis to differentiate between, and provide treatment for, patients with the following conditions.
 - Cardiovascular disease
 - Chest pain
 - In need of a pacemaker
 - Angina pectoris
 - Suspected myocardial infarction
 - Heart failure
 - Cardiac tamponade
 - Hypertensive emergency
 - Cardiogenic shock
 - Cardiac arrest
- 13) Given several preprogrammed patients with cardiac complaints, provide the appropriate assessment, treatment, and transport

Lab/Clinical: Advanced Cardiac Life Support (ACLS)

TEXTBOOK REQUIRED:

Mejia, A. (2023). *Nancy Caroline's Emergency Care in the Streets*. Burlington: Jones and Bartlett.

American Heart Association. (2025). *Advanced Cardiovascular Life Support (ACLS) Provider Manual*. American Heart Association.



EVALUATION METHODS: Students must maintain a grade of 80% or better to pass the course. All courses in the term must be passed in order to progress in the Paramedic Program. The course grade will be determined by:

Grade Item	Weight
Homework	5%
Quizzes	5%
Written Assignments	5%
Skill Portfolio	5%
Affective Behavior	10%
Practical Final	10%
Tests	30%
Final Exam	30%

WEEKLY OUTLINE: Schedules, Topics, Due Dates, Test Dates and all other schedule information is found in the Learning Management System (LMS).

Topics include: Cardiovascular A&P, EKG Monitoring, Intro to Arrhythmias, Cardiac Patient Assessment and Specific Treatments, ACLS, Management and Resuscitation of the Critical Patient, 12 Lead Introduction, and Cardiac Drugs.

HCCC POLICIES, STATEMENTS, AND SERVICES:

<https://www.hccc.edu/administration/academic-affairs/syllabus-addendum.html>