

EMS248 : Cardiology

General Information

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Course Code (CB01) :	EMS248
Course Title (CB02) :	Cardiology
Department:	EMS
Proposal Start:	Spring 2025
TOP Code (CB03) :	(1251.00) Paramedic*
CIP Code:	(51.0904) Emergency Medical Technology/Technician (EMT Paramedic).
SAM Code (CB09) :	Advanced Occupational
Distance Education Approved:	No
Will this course be taught asynchronously?:	No
Course Control Number (CB00) :	CCC000642895
Curriculum Committee Approval Date:	10/25/2023
Board of Trustees Approval Date:	01/09/2024
Last Cyclical Review Date:	10/25/2023
Course Description and Course Note:	EMS 248 introduces the student to cardiovascular emergencies and the care of patients presenting with such emergencies. Course topics include: assessment of the cardiovascular system, electrocardiogram (ECG) acquisition and interpretation of various heart dysrhythmias, pathophysiology of cardiovascular disease and treatments (including pharmacology) indicated for presenting disease.
Justification:	New Course
Academic Career:	<ul style="list-style-type: none">Credit
Author:	<ul style="list-style-type: none">Abraham Baca

Academic Senate Discipline

Primary Discipline:	<ul style="list-style-type: none">Emergency Medical Technologies
Alternate Discipline:	
Alternate Discipline:	

Course Development

Basic Skill Status (CB08)

Course is not a basic skills course.

Allow Students to Gain Credit by Exam/Challenge

Course Special Class Status (CB13)

Course is not a special class.

Pre-Collegiate Level (CB21)

Not applicable.

Grading Basis

- Grade with Pass / No-Pass Option

Course Support Course Status (CB26)

Course is not a support course

Transferability & Gen. Ed. Options

General Education Status (CB25)

Not Applicable

Transferability

Not transferable

Transferability Status

Not transferable

Units and Hours

Summary

Minimum Credit Units (CB07) 3.5

Maximum Credit Units (CB06) 3.5

Total Course In-Class (Contact) Hours 90

Total Course Out-of-Class Hours 121.5

Total Student Learning Hours 211.5

Credit / Non-Credit Options

Course Type (CB04)

Credit - Degree Applicable

Noncredit Course Category (CB22)

Credit Course.

Noncredit Special Characteristics

No Value

Course Classification Code (CB11)

Credit Course.

Variable Credit Course

Funding Agency Category (CB23)

Not Applicable.

Cooperative Work Experience

Education Status (CB10)

Weekly Student Hours

	In Class	Out of Class
Lecture Hours	3	6
Laboratory Hours	2	0
Studio Hours	0	0

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	54
Course In-Class (Contact) Hours	
Lecture	54

Laboratory	36
Studio	0
Total	90

Course Out-of-Class Hours

Lecture	108
Laboratory	13.5
Studio	0
Total	121.5

Time Commitment Notes for Students

Adult Cardiac Care Hospital Clinical (16 tba hours)

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
Adult Cardiac Care Hospital Clinical	Laboratory	0	0.88

Pre-requisites, Co-requisites, Anti-requisites and Advisories

Co-Requisite

EMS250 - Trauma Emergencies (in-development)

AND

Co-Requisite

EMS252 - Paramedic Internship Prep (in-development)

AND

Co-Requisite

EMS246 - Diverse Patient Populations (in-development)

AND

Prerequisite

EMS240 - Fundamentals of Paramedic Practice (in-development)

Outcomes

- List body structures and systems.
- Associate how disease or trauma affects each body system and structure.
- Write patient documentation correctly.
- Perform proper technique for aseptic IV therapy.

AND

Prerequisite

EMS242 - Pharmacology (in-development)

Outcomes

- Recall and apply applicable laws affecting prehospital medications.
- Determine indications and contraindications for prehospital medications.
- Identify, manipulate and solve medication dose formulas for both adult and pediatric patients.

AND

Prerequisite

EMS244 - Medical Emergencies (in-development)

Outcomes

- Compare pathophysiology and a specific disease.
 - Summarize how disease affects a certain body system.
 - Perform the correct assessment and treatment of a medical patient.
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Entry Standards

Entry Standards

No value

Course Limitations

Cross Listed or Equivalent Course

Description

No value

No value

Specifications

Methods of Instruction

Methods of Instruction

Lecture

Methods of Instruction

Laboratory

Methods of Instruction

Multimedia

Out of Class Assignments

- Written lab reports (e.g patient assessments)
- Hospital clinical time

Methods of Evaluation**Rationale**

Exam/Quiz/Test

Block exams

Evaluation

Evaluation of lab skills

Writing Assignment

Evaluation of patient care reports

Exam/Quiz/Test

Final exam

Textbook Rationale

No Value

Textbooks**Author****Title****Publisher****Date****ISBN**

Bryan E. Bledsoe

Paramedic Care: Principles and Practice

Pearson

2022

9780136914594

Other Instructional Materials (i.e. OER, handouts)

No Value

Materials Fee

No value

Learning Outcomes and Objectives**Course Objectives**

Summarize pathophysiology and any disease process of the cardiac system.

Perform a correct assessment and treatment of the cardiac patient.

Recall cardiac diseases and their treatments.

Classify cardiac diseases and their treatments.

Obtain valid American Heart Association (AHA) Advanced Cardiac Life Support (ACLS) card.

SLOs

Explain cardiac function, and correct placement and rhythm interpretation of 4-lead and 12-lead electrocardiogram.

Expected Outcome Performance: 70.0

Additional SLO Information

Does this proposal include revisions that might improve student attainment of course learning outcomes?

No

Is this proposal submitted in response to learning outcomes assessment data?

No

If yes was selected in either of the above questions for learning outcomes, explain and attach evidence of discussions about learning outcomes.

No Value

SLO Evidence

No Value

Course Content

Lecture Content

Introduction (8 hours)

- Introduction to cardiovascular system
- Pathophysiology of cardiac system
- Potential disease processes of the cardiac system
 - Effects of cardiac disease and diverse populations
 - Cultural factors, language barriers, age, religious affiliation, socioeconomic status, and lack of knowledge may affect a patient's willingness to accept certain cardiac treatments and how to handle resistance.

Cardiac patient (10 hours)

- Presentation
- Assessment
 - Various assessments for diverse populations
- Treatment
 - Various treatment modalities for diverse patient populations

Pharmacology (10 hours)

- Aspirin
- Nitroglycerin
- Epinephrine
- All other relevant cardiac medications
 - Various medication possibilities for a diverse patient group

Electrocardiogram (ECG) (10 hours)

- 3 lead
- 4 lead
- 12 lead
- Pacing
- Defibrillation
- Interpretation

Advanced Cardiac Life Support (ACLS) (16 hours)

- ACLS medications
- ACLS guidelines
- ACLS practicum
- ACLS scenarios
- ACLS certification

Total Hours: 54

Laboratory/Studio Content

Laboratory (36 hours)

- 3 lead
- 4 lead
- 12 lead practice
- Hospital clinical time

Total hours: 36