Western Technical College

10531916 Paramedic Cardiology

Course Outcome Summary

Course Information

Description	This course teaches the paramedic student to integrate assessment findings with principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a cardiovascular complaint.
Career Cluster	Law, Public Safety, Corrections and Security
Instructional Level	Associate Degree Courses
Total Credits	4
Total Hours	90

Textbooks

Bledsoe's Paramedic Care: Principles and Practice MyLab BRADY with Pearson eText -- Combo Access Card. 6th Edition. Copyright 2023. Bledsoe, Bryan. Publisher: Pearson. **ISBN-13:** 978-0-13-766443-6. Required.

Prehospital Emergency Pharmacology. 8th Edition. Copyright 2019. Bledsoe, Bryan E. Publisher: Pearson. **ISBN-13:** 978-0-13-487409-8. Required.

Basic Arrhythmias. 8th Edition. Copyright 2017. Walraven, Gail. Publisher: Pearson. **ISBN-13:** 978-0-13-438099-5. Required.

Platinum Planner: Paramedic – Student Access Card. Copyright 2016. Platinum Educational Group. Publisher: Pearson. **ISBN-13:** 978-0-13-444223-5. Required.

EMStesting.com: Paramedic – Student Access Card. Copyright 2012. Platinum Educational Group. Publisher: Pearson. **ISBN-13:** 978-0-13-289660-5. Required.

MyLab Health Professions with Pearson eText -- Access Card -- for Anatomy & Physiology for Health Professions. Copyright 2016. Colbert, Bruce, Jeff Ankney and Karen Lee. Publisher: Pearson. **ISBN-13:** 978-0-13-385764-1. Required.

Learner Supplies

Program Clothing. **Vendor:** To be discussed in class. Required.

Success Abilities

1. Cultivate Passion: Expand a Growth-Mindset
2. Cultivate Passion: Increase Self-Awareness
3. Refine Professionalism: Improve Critical Thinking
4. Refine Professionalism: Participate Collaboratively
5. Refine Professionalism: Practice Effective Communication

Program Outcomes

1. Integrate pathophysiological principles and assessment findings to provide appropriate patient care
2. Demonstrate paramedic skills associated with established standards and procedures for a variety of patient encounters
3. Communicate effectively with others
4. Demonstrate professional behavior

Course Competencies

1. Examine the anatomy and physiology of the cardiovascular system.

Assessment Strategies

1.1. Oral, Written or Graphic Assessment

Criteria

Your performance will be successful when:

1.1. you answer questions related to the learning objectives on a test
1.2. you achieve the threshold identified by your Training Center on the assessment

Learning Objectives

1.a. Describe the anatomy of the cardiovascular system.
1.b. Describe the physiology of the cardiovascular system.
1.c. Discuss the electrophysiology of the cardiovascular system.

2. Demonstrate the assessment of a cardiovascular patient.

Assessment Strategies

2.1. Skill Demonstration

Criteria

Your performance will be successful when:

2.1. you follow the published protocol provided by your Training Center

Learning Objectives

2.a. Discuss the primary survey as applied to a cardiovascular assessment.
2.b. Discuss the history and physical/SAMPLE format as applied to a cardiovascular assessment.
2.c. Discuss the secondary survey as applied to a cardiovascular assessment.
2.d. Discuss the electrophysiology of the heart.
2.e. Describe proper placement of ECG leads/electrodes.
2.f. Describe the ways in which ECG outputs/strips are standardized.
2.g. Describe the ECG waveform and its analysis.
2.h. Describe the heart surfaces shown by each lead system.
2.i. Describe the steps used to analyze and interpret and ECG.

3. Characterize the precipitating causes, morbidity/mortality, pathophysiology, assessment findings, management, and communication strategies associated with cardiac disease

Assessment Strategies

3.1. Oral, Written or Graphic Assessment

Criteria

You will know when you are successful when:

3.1. you answer questions related to the learning objectives on a test
3.2. you achieve the threshold identified by your Training Center on the assessment

Learning Objectives

3.a. Discuss the incidence, morbidity/mortality, risk factors, and possible contributing risks associated with cardiovascular disease, along with the prevention strategies that may reduce the morbidity and mortality of cardiovascular disease.
3.b. Discuss possible assessment findings of a patient with a cardiac arrhythmia.
3.c. Identify pharmacological interventions available for the treatment of cardiac arrhythmias.
3.d. Discuss electrical interventions available for the treatment of cardiac arrhythmias.
3.e. Discuss transport considerations for a patient with a cardiac arrhythmia.
3.f. Describe an aortic aneurysm/dissection.
3.g. Describe a thromboembolism.
3.h. Discuss congenital heart disease.
3.i. Describe valvular heart disease.
3.j. Discuss coronary artery disease.
3.k. Discuss infectious diseases of the heart.
3.l. Discuss the precipitating causes, morbidity/mortality, pathophysiology, assessment findings, and management of infectious diseases of the heart.
3.m. Describe cardiomyopathy.
3.n. List specific hypertensive emergencies.
3.o. Discuss the precipitating causes, morbidity/mortality, pathophysiology, assessment findings, and management of congenital cardiac abnormalities, including age-related variations.
3.p. Discuss support and communication strategies when addressing the patient, family members, medical direction, the receiving facility, and others.

4. Characterize the precipitating causes, morbidity/mortality, pathophysiology, assessment findings, management, and communication strategies associated with coronary syndrome

Assessment Strategies

4.1. Oral, Written or Graphic Assessment

Criteria

You will know when you are successful when:

4.1. you answer questions related to the learning objectives on a test
4.2. you achieve the threshold identified by your Training Center on the assessment

5. Characterize the precipitating causes, morbidity/mortality, pathophysiology, assessment findings, management, and communication strategies associated with acute myocardial infarction/angina

Assessment Strategies

5.1. Oral, Written or Graphic Assessment

Criteria

You will know when you are successful when:

5.1. you answer questions related to the learning objectives on a test
5.2. you achieve the threshold identified by your Training Center on the assessment

6. Characterize the precipitating causes, morbidity/mortality, pathophysiology, assessment findings, management, and communication strategies associated with heart failure

Assessment Strategies

6.1. Oral, Written or Graphic Assessment

Criteria

You will know when you are successful when:

6.1. you answer questions related to the learning objectives on a test
6.2. you achieve the threshold identified by your Training Center on the assessment

7. Characterize the precipitating causes, morbidity/mortality, pathophysiology, assessment findings, management, and communication strategies associated with non-traumatic cardiac tamponade

Assessment Strategies

7.1. Oral, Written or Graphic Assessment

Criteria

You will know when you are successful when:

7.1. you answer questions related to the learning objectives on a test
7.2. you achieve the threshold identified by your Training Center on the assessment

8. Characterize the precipitating causes, morbidity/mortality, pathophysiology, assessment findings, management, and communication strategies associated with hypertensive emergencies

Assessment Strategies

8.1. Oral, Written or Graphic Assessment

Criteria

You will know when you are successful when:

8.1. you answer questions related to the learning objectives on a test
8.2. you achieve the threshold identified by your Training Center on the assessment

9. Characterize the precipitating causes, morbidity/mortality, pathophysiology, assessment findings, management, and communication strategies associated with cardiogenic shock

Assessment Strategies

9.1. Oral, Written or Graphic Assessment

Criteria

You will know when you are successful when:

9.1. you answer questions related to the learning objectives on a test
9.2. you achieve the threshold identified by your Training Center on the assessment

10. Characterize the precipitating causes, morbidity/mortality, pathophysiology, assessment findings, management, and communication strategies associated with cardiac arrest

Assessment Strategies

10.1. Oral, Written or Graphic Assessment

Criteria

You will know when you are successful when:

10.1. you answer questions related to the learning objectives on a test
10.2. you achieve the threshold identified by your Training Center on the assessment

11. Characterize the precipitating causes, morbidity/mortality, pathophysiology, assessment findings, management, and communication strategies associated with vascular disorders

Assessment Strategies

11.1. Oral, Written or Graphic Assessment

Criteria

You will know when you are successful when:

11.1. you answer questions related to the learning objectives on a test
11.2. you achieve the threshold identified by your Training Center on the assessment

12. Manage the care of a cardiovascular patient.

Assessment Strategies

12.1. Skill Demonstration

Criteria

Your performance will be successful when:

12.1. you follow the published protocol provided by your Training Center

Learning Objectives

12.a. Identify cardiac arrhythmias.
12.b. Apply ECG procedures.
12.c. Apply electrical therapy.
12.d. Apply "mechanical" (non-electrical) cardiovascular interventions.
12.e. Apply pathophysiological principles to the assessment of a patient with cardiovascular disease.
12.f. Formulate a field impression for a patient with cardiovascular disease.
12.g. Develop a patient management plan based on the field impression.
12.h. Execute a patient management plan based on the field impression.