GROSSMONT COLLEGE

COURSE OUTLINE OF RECORD

Curriculum Committee Approval: 03/22/2022

GCCCD Governing Board Approval: 04/19/2022

CARDIOVASCULAR TECHNOLOGY 111 – CARDIOVASCULAR PHYSIOLOGY II

1. Course Number Course Title Semester Units

CVTE 111 Cardiovascular Physiology II 4

Semester Hours 4 hours lecture 64-72 hours 128-144 outside-of-class hours 192-216 total hours

2. Course Prerequisites

A “C” grade or higher in CVTE 100 and 101 and 102 and 103.

Corequisite

None

Recommended Preparation

None

3. Catalog Description

This course is acontinuation of Cardiovascular Technology 101, Cardiovascular Physiology I, with emphasis on cardiovascular disease including arrhythmias, coronary artery disease, peripheral vascular disease, cardiomyopathies, heart failure and hypertension. Congenital heart disease will be introduced beginning with a study of the embryologic development of the heart.

4. Course Objectives

The student will:

1. Recognize and differentiate cardiovascular disease processes such as ischemic heart disease, inflammatory heart disease, heart rhythm disease and peripheral vascular disease.
2. Explain and diagnose resulting cardiovascular conditions such as heart failure and hypertension.
3. Predict how cardiovascular health is affected by renal and pulmonary disease.
4. Identify and recall embryologic development of the normal heart.

e. Recallthe anatomic structure and pathophysiology of specified congenital heart anomalies.

f. Illustrate and contrast fetal circulation compared with adult circulation.

5. Instructional Facilities

Standard classroom.

6. Special Materials Required of Student

None

7. Course Content

a. Review of normal heart

b. Cardiac arrhythmias

c. Coronary artery disease

d. Peripheral vascular disease

e. Heart valve disease

f. Pericardial disease

g. Myocarditis

h. Endocarditis

i. Rheumatic heart disease

j. Cardiomyopathy

k. Heart failure

l. Hypertension

m. Renal disease

n. Pulmonary disease

o. Embryologic development of the heart

p. Fetal circulation

q. Embryologic development of blood vessels

r. Congenital heart defects/disease

8. Method of Instruction

a. Lecture.

b. Class discussion.

c. Multimedia presentations.

d. Instructional handouts.

e. Classroom activities such as applying diagnostic information to identify different cardiovascular diseases and using Play-Doh to create embryologic cardiac structures.

9. Methods of Evaluating Student Performance

a. Quizzes non-graded and graded based on course content such as cardiomyopathy.

b. Homework assignments such as diagraming fetal circulation.

c. Written examinations.

d. Comprehensive final exam.

10. Outside Class Assignments

a. Assigned reading.

b. Homework exercises such as creating a heart tube model.

11. Representative Texts

a. Representative text(s):

Runge, M., Stouffer, G., Patterson, C. *Netter’s Cardiology*. 3rdEd. Philadelphia: Saunders Elsevier Publisher. 2019.

b. Supplementary texts and workbooks:

Study materials and handouts supplied by the instructor.

Addendum: Student Learning Outcomes

Upon completion of this course, our students will be able to do the following:

* 1. Categorize common cardiac disease processes.
  2. Describe how cardiovascular disease can develop into heart failure and hypertension.
  3. Relate cardiac disease to renal and pulmonary disease.
  4. Describe the process and identify the structures associated with the embryonic formation of the heart and great vessels.
  5. Describe the structural changes, pathophysiology, clinical findings and interventional procedures associated with prescribed congenital malformations of the heart.