GROSSMONT COLLEGE

COURSE OUTLINE OF RECORD

Curriculum Committee Approval: 03/22/2022

GCCCD Governing Board Approval: 04/19/2022

CARDIOVASCULAR TECHNOLOGY 114 – CARDIOVASCULAR PHARMACOLOGY

1. Course Number Course Title Semester Units

CVTE 114 Cardiovascular Pharmacology 2

Semester Hours 2 hours lecture: 32-36 hours 64-72 outside-of-class hours 96-108 total hours

2. Course Prerequisites

A “C” grade or higher in CVTE 111

Corequisite

None

Recommended Preparation

None

3. Catalog Description

This course introduces medications used in the field of cardiovascular healthcare. Emphasis will be on the mechanism of the different types of medications and their use in the care of the cardiovascular patient. Concepts of drug classification, pharmacokinetics, and application of medications to cardiovascular disease and cardiovascular procedures will be the focus of this course.

4. Course Objectives

The student will:

a. Cite and correlate fundamental pharmacologic concepts such as drug classification, pharmacokinetics, pharmacodynamics, and common abbreviations established by the instructor.

b. Define the role of the cardiovascular technologist with the delivery and documentation of medications.

c. Identify and summarize the cardiovascular drug classifications introduced.

d. Select the appropriate classification of medication for the described cardiovascular patient.

e. Design and produce a presentation focused on a cardiovascular medication meeting criterion established by the instructor.

5. Instructional Facilities

Standard classroom.

6. Special Materials Required of Student

None

7. Course Content

* 1. Introduction to pharmacology
  2. Autonomic nervous system review
  3. Beta Blockers
  4. Nitrates
  5. Calcium Channel Blockers
  6. Diuretics
  7. Angiotensin-Converting Enzyme (ACE) Inhibitors
  8. Angiotensin II-Receptor Blockers (ARBs)
  9. Antihypertensives
  10. Antiarrhythmics
  11. Heart Failure medications
  12. Antithrombotics
  13. Lipid-Lowering agents
  14. Diabetic medications
  15. Antibiotics
  16. Imaging contrast
  17. Analgesics

8. Method of Instruction

a. Lecture.

b. Class discussion.

c. Multimedia presentations.

d. Classroom activities such as applying selection of medications to treat different cardiovascular patient scenarios.

9. Methods of Evaluating Student Performance

1. Exams.
2. Quizzes non-graded and graded based on course content such as beta-blockers.
3. Medication cards for assigned medications used for student presentations.
4. Discussions in class and on Canvas focused on cardiovascular medications.
5. Student presentations of an assigned medication seen in cardiovascular patients.

10. Outside Class Assignments

a. Specified readings.

b. Problem-solving homework assignments such as creating a diagram of the clotting cascade.

11. Representative Texts

a. Representative Text(s):

Opie MD, Lionel. *Drugs for the Heart.* 8th Edition. Elsevier Health Sciences. 2013.

1. Supplementary texts and workbooks:

None

Addendum: Student Learning Outcomes

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

* 1. Define prescribed terms, abbreviations, symbols and units of measurement commonly used in conjunction with cardiovascular pharmaceuticals.
  2. Describe prescribed legal issues associated with cardiovascular pharmaceuticals and the role of the Cardiovascular Technologist.
  3. Summarizecommonly prescribed medications used for the treatment of heart disease.

d. Explain the mechanism of action of select cardiovascular medications.