

RARITAN VALLEY COMMUNITY COLLEGE ACADEMIC COURSE OUTLINE

NURS 016 Pharmacology Clinical Calculations

I. Basic Course Information

A. Course Number and Title: NURS 016 Pharmacology Clinical Calculations

B. New or Modified Course: Modified

C. Date of Proposal: Semester: Spring Year: 2023

D. Effective Term: Fall 2023

E. Sponsoring Department: Health Science Education

F. Semester Credit Hours: 2 NC

G. Weekly Contact Hours: 2 Lecture: 2

Out of class student work per week: 4

H. Prerequisite: Admission to the clinical nursing program. Students who pass the Pharmacology Clinical Calculations Exam (PCC Exam)are exempt from NURS-016. The PCC exam is taken upon admission to the clinical program. Students who do not pass the PCC exam must successfully complete NURS-016 prior to registering for NURS-101 or NURS -130

I. Additional Fees: None

J. Name and E-Mail Address of Department Chair and Divisional Dean at time of approval:

Chair Linda Romaine linda.romaine@raritanval.edu

Dean Sarah Imbriglio sarah.imbriglio@raritanval.edu

II. Catalog Description

Prerequisite: Admission to the clinical nursing program. Students who pass the Pharmacology Clinical Calculations Exam (PCC Exam)are exempt from NURS-016. The PCC exam is taken upon admission to the clinical program. Students who do not pass the PCC exam must successfully complete NURS-016 prior to registering for NURS-101 or NURS -130

Upon admission to the clinical nursing program, students are required to successfully pass the Pharmacology Clinical Calculations Placement exam. Students who are unable to pass the exam are required to successfully complete NURS-016 Pharmacology Clinical Calculations.

This course is designed to assist nursing students to safely calculate, prepare, and administer medications. There will be a review of basic math concepts and an introduction to the formulas, knowledge and skills necessary to solve drug dosage problems that occur in the practice of nursing.

III. Statement of Course Need

- A. This course meets a program requirement for the AAS Nursing degree. Pharmacology Clinical Calculations prepares students to integrate principles of basic mathematics and safe nursing practice in the calculation, preparation and administration of medications.
- B. There is no lab component.
- C. The course meets the calculation requirement for transfer to Kean University Baccalaureate in Nursing Degree Program.

IV. Place of Course in College Curriculum

- A. Free Elective
- B. This course meets a program requirement for the AAS Nursing degree.
- C. The course meets the calculation requirement for transfer to Kean University Baccalaureate in Nursing Degree Program. To see course transferability: a) for New Jersey schools, go to the NJ Transfer website, www.njtransfer.org; b) for all other colleges and universities, go to the individual websites.

V. Outline of Course Content

- A. Math Review: Decimals, Fractions
- B. Joint Commission Medication abbreviations
- C. Dosage Calculations/Ratio and Proportions
- D. Dosage Calculations/Formula Method
- E. Percentages
- F. Metric Systems
- G. Temperature Conversions
- H. House-hold Systems
- I. Reading Medication Labels
- J. Calculation of Oral Medications
- K. Calculation of Parental Medications
- L. Calculation of Intravenous Medications
- M. Reconstitution of Powdered Drugs
- N. Medication dosage by Body Weight
- O. Legal, ethical issues and medication administration

VI. A. Course Learning Outcomes

At the completion of the course the student will:

1. Function as providers of care when they:
 - 1.1. Integrate holistic human needs in providing safe nursing care through accurate medication administration. (GE- 1, 3, 8)
 - 1.2 Utilize evidence- based practice/best practice standards when planning and delivering nursing care. (GE- 2, 3, 5, ER, *)
2. Function as managers of care when they:
 - 2.1. Apply concepts of current trends, including information technology, when planning and delivering nursing care. (GE- 4)
3. Function as members within the profession of nursing when they:
 - 3.1. Incorporate ethical behaviors based on the ANA Code of Ethics for Nurses when providing care. (GE- ER)
 - 3.2. Demonstrate accountability by following the ethical/legal guidelines for professional practice in accordance with the Rules and Regulations of the New Jersey Board of Nursing. (GE- ER, *)
4. . Utilize components of basic mathematics and safe, legal and ethical nursing practice in the calculation, preparation, and administration of oral, parenteral, and intravenous medications.
5. Calculate and interpret Centigrade and Fahrenheit temperatures.
6. Utilize the metric and household system in calculating medications.
7. Calculate conversions in the metric and household systems.
8. Perform calculations necessary for preparation of oral, parenteral, and intravenous medications.

*embedded critical thinking

B. Assessment Instruments

1. computation of workbook problems
2. quizzes and final examination (required)

VII. Grade Determinants

A. tests

Given the goals and outcomes described above, LIST the primary formats, modes, and methods for teaching and learning that may be used in the course:

- A. lecture/discussion
- B. small-group work
- C. computer-assisted instruction
- D. simulation/role playing
- E. independent study

VIII. Texts and Materials

LIST which of the following types of course materials will be used. Specify title and publication information about textbooks and any other major text sources or other materials.

- A. Gray Morris, D. (2022). Calculate with Confidence. (8th ed). St. Louis: Mosby Elsevier

(Please Note: The course outline is intended only as a guide to course content and resources. Do not purchase textbooks based on this outline. The RVCC Bookstore is the sole resource for the most up-to-date information about textbooks.)

IX. Resources

- A. Simple calculator
- B. Computer

X. Honors Option -N/A