Bergen Community College
Division of Health Professions
Department of Nursing
NUR-182
Pharmacology for Nurses

Basic Information about Course and Instructor

Semester and Year:
Course and Section Number:
Meeting Times and Location:
Instructor:
Location:
Phone:
Email Address:

Course Description

This Level-1 course introduces the student to the study of drugs and how they affect the biological systems. Course topics include the drug classification system, regulations, drug calculations, basic actions and side effects of drugs and nursing implications. Students must achieve a score of 80% or higher on a medication calculation test in order to pass the course. Students may retake the test two additional times to achieve a score of 80%.

1 Lecture, 1 credit
Co-requisites: NUR-181, NUR-183, BIO-109, WRT-101

STUDENT LEARNING OUTCOMES

Students will be able to:

1. Describe the nursing process in the administration of drugs and solutions for the improvement of health of individuals
2. Calculate medication administration according to the growth and development capacities of individuals
3. Discusses action, side effects and nursing implications of drugs and solutions when administering care to individuals
4. Demonstration responsibility for maintaining current knowledge of drugs and solutions
5. Discuss the legal and ethical regulations of medication administration
6. Explain technological means for safe administration of drugs and solutions
7. Uses critical thinking as the basis for safe administration of drugs and solutions
8. Passes the Level-1 Pharmacological Math Computation Exam (PMCE) with a score of 80% or higher
9. Teaches clients, groups and families about medication

Student Learning	Suggested Means of Assessment
1. Describe the nursing process in the administration of drugs and solutions for the improvement of health of individuals	Lectures, classroom discussion
2. Calculate medication administration according to the growth and development capacities of individuals	Observation clinical rotation Math Computation exam Assigned reading
3. Discusses action, side effects and nursing implications of drugs and solutions when administering care to individuals	Observation skills practice One-to-one validation Observation clinical rotation Assigned reading
4. Demonstration responsibility for maintaining current knowledge of drugs and solution	Lectures, classroom discussion Exam testing, quizzes Assigned reading
5. Discuss the legal and ethical regulations of medication administration	Skills practice One-to-one validation Observation during clinical rotation Assigned reading
6. Explain technological means for safe administration of drugs and solutions	Observation during clinical rotations
7. Describe critical thinking as the basis for safe administration of drugs and solutions	Observation skills practice Observation one-one validation
8. Passes the Level-1 Pharmacological Math Computation Exam (PMCE) with a score of 80% or higher	Exam testing Math Computation Exam (use of non-scientific calculator)
9. Teaches clients, groups and families about medication	Observation during clinical rotation Assigned reading

COURSE POLICIES

All policies and course requirements are subject to revision on a semester by semester basis. Students will be notified of any revision/s at the beginning of the semester in which the policy or requirements is/are to be implemented during the first meeting of the appropriate nursing class.

COURSE EVALUATION

1. There will be 3 tests encompassing theory only, which will equal 90% of grade
2. There will be 4 unannounced quizzes which will equal 10% of the grade
    a. Quizzes will be given at the start of the class with only 5 minutes allowed for the completion of the quiz
    b. Any student arriving after the start of the quiz will not be permitted to take the quiz and will receive a “O” for that quiz.
    c. Quizzes may not be made up
3. A passing course grade requires a numerical theory grade of 78% or greater

GRADING SYSTEM

A = 89.45 – 100
B+ = 85.45 – 89.44
B = 81-45 – 85.45
C+ = 77.45 -81.44
C = 73.45 – 77.44
D = 69.45 – 73.44
F – 69.44 and below

Please note: In order to pass the course you must receive a minimum grade of a C+

Disability Statement

If you have a disability or suspect that you have a disability, your first step is to contact the Office of Special Services (OSS) in Room L-115 (201) 612-5269 or www.bergen.edu/oss Appropriate accommodations will be generated based upon evidence of documented disability. Please be aware that students with disabilities are responsible for meeting the same standards for mastery of course content as students without disabilities.
Reasonable accommodations include but are not limited to:

- Extended time on tests
- Assistive adaptive technology
- Recorded text
- Reader or Scribe
- Peer note-takers
- Books in alternate format
- Assistance in arranging for sign language interpreters and C-print captionists

Nursing Tutoring

Thursdays 1pm- 5pm Room HP 333
For further information: Call 2-1-447-7837 Room L 125
Email: CLAC@bergen.edu

REQUIRED TEXTS

Morris Gray, D (2018). Calculate with Confidence. (7th Edition) Elsevier, ISBN: 978-0-323-39683-7.

McCuistion, Dimaggio, Winton and Yeager. (2018). Pharmacology: A Nursing Process Approach. (9th Edition) Elsevier, ISBN: 978-0-323-39916-6.

COURSE CONTENT

Theoretic Content	Teaching/Learning Activities
<u>Unit 1 – Introduction to Nursing Pharmacology</u> A) Drug standards and Legislation B) Drug Names C) Drug Interactions & Over-the-Counter Drugs D) Drug References	Computer Assisted Instructions (CAI) Room HP 220, Library (Stat Ref, Judy Miller Online, ATI) CAI: Basic Principles of Pharmacology McCuistion, Chapter 1
Pharmacokinetics Pharmacodynamics Pharmacogentics	McCuistion Chapter 2 McCuistion Chapter 2 McCuistion Chapter 2
Cultural Considerations Complementary and alternative Therapy Nursing implications with use of herbs Pediatric Considerations Geriatric Considerations	McCuistion Chapter 3 McCuistion Chapter 4 McCuistion Chapter McCuistion Chapter 6
<u>Unit 2 – Pharmacotherapy and Drug Administration</u>	Pharmacological Math Computation Skills Self-Learning Module Library (Stat Ref, Judy Miller Online, ATI Tutorials)
Safety and quality Drug Calculations A) Of Measurement • Metric system • Household system • Converting within and between systems • Conversion related to weight	McCuistion Chapters 9 McCuistion Chapter 11 Morris Chapter 6; McCuistion Chapter 11 Morris Chapter 7; 86-89, McCuistion Ch 11 Morris Chapter8 Morris Chapter 9; 115-117
B) Methods of Drug Calculations • Using the Formula method • Using the Ratio/proportion Method • Using the Dimensional Analysis Method	Morris Chapter 15 Morris Chapter 14 Morris chapter 16, McCuistion Chapter 11
Calculating Dosages of: C) Oral, Parenteral, Insulin and Heparin dosages	Morris Chaprters 17. 18, 20, 23, McCuistion Chapter 11
D) IV Therapy • Calculation of drops/minute • Calculation of ml's hour	Morris Chapter 22: 536-559 McCuistion Chapter 11 CAI:

	• Giving Oral Medication Safety • Medication Administration 1 • Medication Administration II • Eliminating Medication Errors • Safe Administration of Medication • HP 220 Computer Lab; ATI, Library Stat Ref Tutorials
<u>Unit 4- Autonomic Nervous System Drugs (Hazards)</u> Sympathetic Nervous system • Adrenergic Agonists and Antagonists Parasympathetic Nervous System • Cholinergic System (How they affect the body)	McCuistion Chapter 15 McCuistion 16
<u>Unit 5 – Central and Peripheral Nervous System Drugs (Hazards)</u> A- Stimulants • Drug Classification • Drug Action • Treatment Use • Side effects and Nursing consideration	McCuistion Chapter 17
B- Depressants • Drug Classification • Drug Action • Treatment Use • Side effects and Nursing consideration	McCuistion Chapter 18
C- Anti-Seizure Drugs • Drug Classification • Drug Action • Treatment Use • Side effects and Nursing consideration	McCuistion Chapter 19
D -Drugs for Parkinson and Alzheimer • Drug Classification • Drug Action • Treatment Use • Side effects and Nursing consideration	McCuistion Chapter 20
E -Drugs for Neuromuscular and Muscle Spasms • Drug Classification • Drug Action • Treatment Use • Side effects and Nursing consideration	McCuistion Chapter 21

<u>Unit 6- Mental and Behavioral Health Drugs (Hazards)</u> A -Anti-Psychotic and Anxiolytic • Drug Classification • Drug Action • Treatment uses • Side effects and Nursing Considerations	McCuistion Chapter 22
B - Anti-depressants and Mood Stabilizers • Drug Classification • Drug Action • Treatment uses • Side effects and Nursing Considerations	McCuistion Chapter 23
<u>Unit -7 Pain and Inflammation Management Drugs (Hazards)</u> A -Anti-Inflammatories • Drug Classification • Drug Action • Treatment uses • Side effects and Nursing Considerations	McCuistion Chapter 24
B -Analgesics • Drug Classification • Drug Action • Treatment uses • Side effects and Nursing Considerations	McCuistion Chapter 25
<u>Unit 8- Antimicrobial Drugs (Hazards)</u> A -Antibacterials Pencillins, Cephalosporins Macrolides, Lincosamides, Tetracyclines Aminoglycosides, Fluoroquinolones Sulfonamides, Nitromidazoles • Drug Classification • Drug Action • Treatment uses • Side effects and Nursing Considerations	McCuistion Chapter 26
Anti-tubercular, Antifungals, Anti-viral Anthelmintics and Peptides • Drug Classification • Drug Action • Treatment uses • Side effects and Nursing Considerations	McCuistion Chapter 27 McCuistion Chapter 28

<u>Unit 11 – Respiratory Drugs (Air)</u> A -Upper Respiratory Drugs	McCuistion Chapter 35
B- Lower Respiratory Drugs • Drug Classification • Drug Action • Treatment uses • Side effects and Nursing Considerations	McCuistion Chapter 36
<u>Unit 12 – Cardiovascular Drugs (Water)</u> Cardiac Glycosides, Anti-angina, Anti-dysrhythmias Diuretics Anti-hypertensives Anti-coagulants, Anti-platelets Anti-hyperlipidemias Colony Stimulating Factors • Drug Classification • Drug Action • Treatment uses • Side effects and Nursing Considerations	McCuistion Chapter 37 McCuistion Chapter 38 McCuistion Chapter 39 McCuistion Chapter 40 McCuistion Chapter 41 McCuistion Chapter 34
<u>Unit 13 – Gastrointestinal Drugs (Food)</u> Gastrointestinal Tract Disorders Anti-Ulcer Drugs Urinary Disorders • Drug Classification • Drug Action • Treatment uses • Side effects and Nursing Considerations	McCuistion Chapter 42 McCuistion Chapter 43 McCuistion Chapter 48
<u>Unit 14- Eyes and Ears (Hazards)</u> Eye and Ear Disorder Drugs • Drug Classification • Drug Action • Treatment uses • Side effects and Nursing Considerations	McCuistion Chapter 44 Self-Study Module
<u>Unit 15 – Endocrine Drugs (Hazards, Normalcy)</u> Anit-Diabetic Drugs: Insulin and Oral Anti-Diabetic Drugs • Drug Classification • Drug Action • Treatment uses • Side effects and Nursing Considerations	McCuistion Chapter 47

Course Outline		Topics of Discussion
Weeks	Dates	
1		Introduction to Pharmacology
2		Pharmacology Math Self-Study Module Review
3		Antimicrobial and Colony Stimulating Factor Drugs
4		Gastrointestinal and Urinary System Drugs
5		Respiratory Drugs
6		Test 1
7		Cardiovascular Drugs
8		Cardiovascular, Colony Stimulating Factor, Autonomic, Central and Peripheral Nervous System Drugs
9		Mental and Behavioral Health Drugs
10		Test 2
11		Pain and Inflammation Management Drugs
12		Antidiabetic Drugs
13		Eyes and Ear Drugs (Self-Study Module)
14		Test 3
15		Review of test and final grade