

**BERGEN COMMUNITY COLLEGE  
THE SCHOOL OF HEALTH PROFESSIONS  
DEPARTMENT OF NURSING**

**NUR 182**

**LEVEL I**

**PHARMACOLOGY FOR NURSES**

**COURSE OUTLINE**

**1 CREDIT**

**LECTURE: 1 HOUR PER WEEK**

**FOR USE DURING THE FALL 2011 and  
SPRING 2012 SEMESTERS ONLY**

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**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 DESCRIPTION**

NUR-182, Pharmacology for Nurses is a Level I course which introduces the student to the drug classification system. Students will learn basic actions and side effects of drugs and drug regulations. Mathematical calculations necessary to the practice of nursing are taught, and students must achieve a score on a medication calculations test in order to pass this course.

1 lec. 1 credit

PREREQUISITE: Admission to the Department

CO-REQUISITES: NUR-181, NUR-183, BIO-109, PSY-101.

**COURSE LEARNING OUTCOMES**

1. Utilizes the nursing process in the administration of drugs and solutions for the improvement of the health of individuals.
2. Adapts medication administration according to the growth and developmental capacities of individuals.
3. Discusses actions, side effects and nursing implications of drugs and solutions when administering care to individuals.
4. Incorporates biological, psychological, sociological, cultural, spiritual, and economic factors related to the administration of drugs and solutions.
5. Accepts responsibility for maintaining current knowledge of drugs and solutions.
6. Complies with the legal and ethical regulations for medication administration.
7. Adapts to technological means for safe administration of drugs and solutions.
8. Uses critical thinking as the basis for safe administration of drugs and solutions.
9. Passes the Level I Pharmacological Math Computation Exam (PMCE) with a score of 80% or higher.
10. Teaches clients, groups, and families about medications.

**COURSE EVALUATION**

1. There will be 3 tests encompassing theory only which will equal 100% of the grade.
2. There will be a Pharmacological Math Computation Exam (PMCE). The passing score will be 80%. Students who fail to demonstrate proficiency on the first administered pharmacology test in the course will be permitted two opportunities to take a similar test as a re-take within the confines of this course. A student who does not demonstrate an acceptable level of proficiency (80%) on the computation re-take will receive an "F" for the course.
3. A passing course grade requires a numerical theory grade of 75% or greater.

A = 89.5% and above  
B+ = 84.5 to 89.4%  
B = 79.5% to 84.4%  
C+ = 74.5% to 79.4%  
F = 74.4% and below

**REQUIRED TEXTS**

Gray, Deborah. Calculate with Confidence. Elsevier, 5<sup>th</sup> edition, ISBN: 9780323056298

Kee, Hayes, and McCuiston. Pharmacology: A Nursing Process Approach. Elsevier, 7<sup>th</sup> edition. 2009  
ISBN: 978-1-4160-4663-9

**COURSE OUTLINE**

Theoretical Content	Teaching/Learning Activities
<u>Unit 1 - Math and Dosage Calculations</u>	
A) Systems of Measurement <ul style="list-style-type: none"> <li>• Metric system.....</li> <li>• Household system.....</li> <li>• Converting within and between systems.....</li> <li>• Conversions related to weight.....</li> </ul>	Gray, Chapter 6 Gray, Chapter 7  Gray, Chapter 8 Gray, Chapter 9, page 103
B) Methods of Calculations <ul style="list-style-type: none"> <li>• Using the Ratio/Proportion Method.....</li> <li>• Using the Formula Method.....</li> <li>• Using the Dimensional Analysis Method</li> </ul>	Gray, Chapter 14 Gray, Chapter 15 Gray, Chapter 16
C) Oral, Parenteral, Insulin, and Heparin Dosage Calculations.....	Gray, Chapters 17, 18, 20, 23
D) IV Therapy <ul style="list-style-type: none"> <li>• Calculation of Drops/minute</li> <li>• Calculation of ml's/hour</li> </ul>	Complete pharmacology math worksheets
	<u>CAI:</u> <ul style="list-style-type: none"> <li>• Giving Oral Medication Safely</li> <li>• Medical Administration 1</li> <li>• Medical Administration 2</li> <li>• Eliminating Medication Errors-S354/B307</li> <li>• Safe Administration of Medications</li> </ul>
	Kee, Hayes, and McCuiston, Chapter 4
<u>Unit 2 – Introduction to Nursing Pharmacology</u>	Computer Assisted Instruction (CAI) Rooms B-306 & B-307, Library CAI: Basic Principles of Pharmacology
A) Introduction to Drug Action.....	Kee, Chapter 1
B) Effects of drugs on the body	
C) Drug Interactions & Over-the-Counter Drugs	Kee, Chapter 8
D) Relation of Drugs to Sympathetic and Parasympathetic Systems..... <ul style="list-style-type: none"> <li>• Adrenergic and Adrenergic Blocker Drugs</li> <li>• Cholinergic and Anticholinergic Drugs, How they affect the body</li> </ul>	Kee, Chapter 18  Kee, Chapter 19
E) Lifespan Considerations Drugs and Geriatrics Population.....	Kee, Chapter 12
F) Use of Herbs..... Nursing implications with the use of herbs	Kee, Chapter 10

<p><u>Unit 3 – Antiinfective/Antibacterial Agents (Hazards)</u>.....</p> <p>A) Penicillins, Cephalosporins</p> <p>B) Macrolides, Tetracyclines, Aminoglycosides, Fluoroquinolones</p> <p>C) Sulfonamides</p> <p>D) Drug Classification</p> <ul style="list-style-type: none"> <li>• Drug Action</li> <li>• Treatment uses</li> <li>• Side effects and Nursing Considerations</li> </ul>	<p>Kee, Chapters 29-35</p>
<p><u>Unit 4 – Digestive System Agents (Food)</u>.....</p> <p>A) Acid-controlling agents</p> <p>B) Antidiarrheals and laxatives</p> <p>C) Antiemetic and Antinausea Agents</p> <p>D) Drug Classification</p> <ul style="list-style-type: none"> <li>• Drug Action</li> <li>• Treatment uses</li> <li>• Side effects and Nursing Considerations</li> </ul>	<p>Kee, Chapters 47, 48</p>
<p><u>Unit 5 – Respiratory System Agents (Air)</u></p> <p>A) Upper Respiratory Drugs.....</p> <p>B) Lower Respiratory Drugs.....</p> <p>C) Drug Classification</p> <ul style="list-style-type: none"> <li>• Drug Action</li> <li>• Treatment uses</li> <li>• Side effects and Nursing Considerations</li> </ul>	<p>Kee, Chapter 40</p> <p>Kee, Chapter 41</p>
<p><u>Unit 6 – Cardiovascular Agents (Water)</u></p> <p>A) Drugs for Cardiac disorders, Cardiac Glycosides, Antianginals, Antidysrhythmics.....</p> <p>B) Antihypertensive agents and Diuretics.....</p> <p>C) Circulatory disorder agents, drugs affecting blood coagulation.....</p> <p style="padding-left: 20px;">Lipid-lowering agents.....</p> <p>D) Drug Classification</p> <ul style="list-style-type: none"> <li>• Drug Action</li> <li>• Treatment uses</li> <li>• Side effects and Nursing Considerations</li> </ul>	<p>Kee, Chapter 42</p> <p>Kee, Chapters 43, 44</p> <p>Kee, Chapter 45</p> <p>Kee, Chapter 46</p>
<p><u>Unit 7 – Central Nervous System Agents (Hazards)</u></p> <p>A) Analgesics-opioid and nonopioid, and Antiinflammatory agents</p> <ul style="list-style-type: none"> <li>• Drug Classification</li> <li>• Drug Action</li> <li>• Treatment uses</li> <li>• Side effects and Nursing Considerations</li> </ul>	<p>Kee, Chapters 25, 26</p>

<p>B) Anxiolytic and Hypnotic agents.....</p> <ul style="list-style-type: none"> <li>• Drug Classification</li> <li>• Drug Action</li> <li>• Treatment uses</li> <li>• Side effects and Nursing Considerations</li> </ul>	<p>Kee, Chapters 21, 27</p>
<p>C) Antidepressant agents.....</p> <ul style="list-style-type: none"> <li>• Drug Classification</li> <li>• Drug Action</li> <li>• Treatment uses</li> <li>• Side effects and Nursing Considerations</li> </ul>	<p>Kee, Chapter 28</p>
<p>D) Psychotherapeutic agents and CNS stimulants and depressants.....</p> <ul style="list-style-type: none"> <li>• Drug Classification</li> <li>• Drug Action</li> <li>• Treatment uses</li> <li>• Side effects and Nursing Considerations</li> </ul>	<p>Kee, Chapters 20, 27</p>
<p>E) Anticonvulsant agents.....</p> <ul style="list-style-type: none"> <li>• Drug Classification</li> <li>• Drug Action</li> <li>• Treatment uses</li> <li>• Side effects and Nursing Considerations</li> </ul>	<p>Kee, Chapter 22</p>
<p>F) Drugs for Neurological disorders.....</p> <ul style="list-style-type: none"> <li>• Drug Classification</li> <li>• Drug Action</li> <li>• Treatment uses</li> <li>• Side effects and Nursing Considerations</li> </ul>	<p>Kee, Chapter 23</p>
<p><u>Unit 8 – Hormonal Agents (Hazards, Normalcy)</u>                  Antidiabetic drugs: Oral Antidiabetic agents and all Insulins</p> <ul style="list-style-type: none"> <li>• Drug Classification</li> <li>• Drug Action</li> <li>• Treatment uses</li> <li>• Side effects and Nursing Considerations</li> </ul>	<p>Kee, Chapter 52</p>
<p><u>Unit 9 – Ophthalmic and Otic Agents (Hazards)</u></p> <ul style="list-style-type: none"> <li>• Drug Classification</li> <li>• Drug Action</li> <li>• Treatment uses</li> <li>• Side effects and Nursing Considerations</li> </ul>	<p>Kee, Chapter 49</p>