

**ODESSA COLLEGE ASSOCIATE DEGREE NURSING PROGRAM  
SYLLABUS RNSG 1201  
FALL – 2011**

<b>COURSE TITLE:</b>	PHARMACOLOGY
<b>CREDIT:</b>	TWO HOURS
<b>PLACEMENT:</b>	FIRST SEMESTER OF NURSING PROGRAM; MAY BE TAKEN PRIOR TO PROGRAM ADMISSION
<b>PREREQUISITES:</b>	BIOL 2401 OR CONSENT OF DEPARTMENT
<b>COREQUISITES:</b>	BIOL 2402 OR PROGRAM ADMISSION WITH RNSG 1215, RNSG 1105, RNSG 1309, RNSG 1341, RNSG 1160, AND RNSG 1260

**LICENSING/CERTIFICATION BOARD:** TEXAS BOARD OF NURSING (BON)

**FACULTY:** Margaret Hawkins, M.S.N., R.N.  
Section 5305 in CT 217, W 5:30-7:20pm; & Sections WB, WB8 & WB9,  
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**COURSE DESCRIPTION:** Introduction to the science of pharmacology with emphasis on the actions, interactions, adverse effects, and nursing implications of each drug classification. Topics include the roles and responsibilities of the nurse in safe administration of medications within a legal/ethical framework. (SCANS 1, 2, 3, 4, 6, 9)

**LEARNING OUTCOMES:** Identify the roles and responsibilities of the nurse in administering pharmacological agents; and utilize knowledge of pharmacology needed to demonstrate safe administration of medications.

**COURSE OBJECTIVES:** Course Objectives utilize the framework of Differentiated Entry Level Competencies of Graduates of Texas Nursing Programs. At the completion of the course, the student should be able to: (PO=Corresponding Program Objective)

**As Provider of Care:**

1. Define terms, concepts, and basic processes associated with drug therapy. (PO 1, 3)
2. Recognize health data of clients as it applies to drug administration and evaluation of side effects and actions.(PO 1, 3, 7)
3. Describe the pathophysiology of selected conditions for which pharmacotherapy is commonly used.(PO 1, 2, 3)
4. Identify client-related and drug-related factors that influence drug effects. (PO 1, 7)
5. Discuss principles of therapy with major drug groups in relation to drug selection, dosage, route, and use in special populations (e.g., children, older adults, clients with impaired renal or hepatic function) (PO 1, 2)
6. Describe the professional attributes of nursing care for clients receiving drug therapy. (PO 3)

**As Coordinator of Care:**

7. Recognize the interdisciplinary relationships between the nurse and other members of the health

care team related to planning and delivery of drug therapy. (PO 9)

**As Member of a Profession:**

8. State the legal parameters of professional nursing practice involving pharmacotherapeutics, including those specified in the Nursing Practice Act. (PO 3, 12)

**TEACHING/LEARNING METHODS:** Lecture, discussion, power points, worksheets; and for online sections: discussion boards and hyperlinks.

**EVALUATION AND GRADING:** This is a Nursing Course. The grading policy for the Associate Degree Nursing Program is followed. No assignments or tests are optional. Components of student evaluation include the following:

Unit Exams (6)	10% each	60%
Comprehensive Final Exam (includes unit 7)		<u>40%</u>
<b>TOTAL</b>		<b>100%</b>

There will be six unit exams consisting of approximately 50 questions each. Each exam will cover several chapters. The comprehensive final exam consists of *approximately* 100 questions, including unit seven. Questions may be multiple-choice, matching, fill in the blank or true/false. A missed exam must be made up within the scheduled week **\*\*See Course Policies: Make-up exams.** There will be no review done after a unit test, until all students in all sections of the course have taken the test; and there will be no review of the final exam. You must notify the instructor if and when you are unable to take a test BEFORE the test date.

**Grading: The minimum passing grade is a 75. Grades will not be rounded up to passing.** This means that a grade of 74.5, 74.6, 74.7, 74.8, & 74.9 will not be rounded up to 75.

Academic Alerts: Academic alerts are issued when a course grade falls below passing (to include all grades up to that point in the semester). Alerts will be reissued after each Unit Exam as long as the course grade remains below passing. ***It is the student's responsibility to contact the instructor for assistance.***

Note to Students: Check the syllabus and calendar often for important information and dates. Use Unit Objectives and **\*\*“Medications by Chapter”** as your guide for reading and to obtain required medication information. Important information is summarized in boxes or tables in the text and in Power Points. You should do the “Review and Application Exercises” at the end of each chapter (answers on Student Resource CD) and use the textbook Study Guide to review.

Essential to success on exams: Summarizing each Medication By Chapter and notes summarizing each unit on 3x5 cards or on medication sheets provides you with good study tools and future references in the nursing program (\*see examples below). Students are responsible for attaining all pertinent information required for this course.

Online Students: Read and do discussion questions each week to interact with one another to aid your learning. Use this opportunity to ask questions of your instructor (also see Attendance Policy). Remember, “online” does not mean self-paced so ***deadlines for reading assignments and exams are not optional.***

**REQUIRED TEXTBOOKS:**

Abrams, A.C., Pennington, S. S., & Lammon, C. B. (2009). Clinical drug therapy: Rationales for nursing practice. 9<sup>th</sup> edition. Lippincott Williams & Wilkins: Philadelphia.

Deglin, J. & Vallerand, A. (2011). *Davis Drug Guide for Nurses* (12<sup>th</sup> Ed.). Davis: Philadelphia.

**UNIT OBJECTIVES: (No specific drugs for chapters marked with \*\*\*)**

**Unit I**

Chapter 1 Introduction to Pharmacology\*\*\*

Objectives:

1. Differentiate between pharmacology and drug therapy.
2. Distinguish between generic and trade names of drugs.
3. Define a prototypical drug.
4. Select Authoritative sources for drug information, and learn where to locate important drug information in each source.
5. Discuss major drug laws and standards and the role of the Food and Drug Administration.
5. Discuss the main categories of controlled substances in relation to therapeutic use and potential for abuse.
6. Identify nursing responsibilities in handling controlled substances correctly.
7. Discuss the potential impact of drug costs on drug therapy regimens.

Chapter 2 Basic Concepts and Processes\*\*\*

Objectives:

1. Review cellular physiology in relation to drug therapy.
2. Review the pathways and mechanisms by which drugs cross biologic membranes and move through the body.
3. Discuss each process of pharmacokinetics.
4. Discuss the clinical usefulness of measuring serum drug levels.
5. Review major characteristics of the receptor theory of drug action.
6. Discuss drug-related and patient-related variables that affect drug actions.
7. Discuss the differences between agonist drugs and antagonist drugs.
8. Identify signs and symptoms that may occur with adverse drug effects on major body systems.
9. Discuss general management of drug overdose and toxicity; and selected antidotes.

***Skip Chapter 3***

Chapter 4 Nursing Process in Drug Therapy\*\*\*

Objectives:

1. Assess patients for conditions and factors that are likely to influence drug effects.
2. Identify nondrug interventions to prevent or decrease the need for drug therapy.
3. Discuss interventions to increase therapeutic effects and decrease adverse effects if drug therapy.
4. Discuss guidelines for rational choices of drugs, dosages, routes, and times of administration.
5. Describe how to evaluate clients for therapeutic and adverse responses to drug therapy.
6. Identify major considerations in drug therapy for children and older adults.
7. Discuss major considerations for clients with impaired renal or hepatic function, or critical illness.

Chapter 5 Physiology of the CNS\*\*\*

Objectives:

1. Describe the process of neurotransmission.

2. Describe major neurotransmitters and their roles in central nervous system (CNS) functioning.
3. Discuss signs and symptoms of mild, moderate, and severe CNS depression.

#### Chapter 6 Opioid Analgesics and Pain Management

Objectives:

1. Discuss major types and characteristics of pain and the nurse's role in assessing and managing patients' pain.
2. List characteristics of opioid analgesics in terms of mechanism of action, indications for use, and major adverse effects.
3. Describe why higher doses of opioid analgesics are needed when the drugs are given orally.
4. Assess level of consciousness and respiratory status before and after administering opioids.
5. Describe signs and symptoms of opioid overdose, toxicity and withdrawal and the treatment of each.
6. Describe morphine as the prototype of opioid analgesics.
7. Teach clients about safe, effective use of opioid analgesics.

#### Chapter 7 Analgesic, Antipyretic, Anti-Inflammatory, & Related Drugs

Objectives:

1. Review the role of prostaglandins in the etiology of pain, fever, and inflammation.
2. Discuss aspirin and other nonsteroidal anti-inflammatory drugs (NSAID's) in terms of mechanism of action, indications for use, contraindications, nursing process, and principles of therapy. Find anti-inflammatory drugs in your nursing drug handbook.
3. Compare and contrast aspirin, other NSAID's, and acetaminophen in terms of indications for use and adverse effects and related patient teaching.
4. Differentiate among antiplatelet, analgesic, and anti-inflammatory doses of aspirin.
5. Differentiate between nonselective NSAID's and cyclooxygenase-2 inhibitor celecoxib.
6. Discuss recognition and management of acetaminophen toxicity.

### **UNIT I EXAM**

#### **Unit II**

#### Chapter 8 Antianxiety & Sedative-Hypnotic Drugs

Objectives:

1. Discuss characteristics, sources, and signs and symptoms of anxiety.
2. Discuss functions of sleep and consequences of sleep deprivation.
3. Describe nondrug interventions to decrease anxiety and insomnia.
4. Discuss the use of flumazenil (Romaxicon) and other treatment measures for overdose of benzodiazepines.
5. List characteristics of benzodiazepines antianxiety and hypnotic drugs in terms of indication for use, mechanism of action, nursing process implications, and potential for abuse and dependence.
6. Teach patients guidelines for rational, safe use of antianxiety and sedative-hypnotic drugs.

#### Chapter 9 Antipsychotic Drugs

Objectives:

1. Discuss common manifestations of psychotic disorders, including schizophrenia.
2. Discuss characteristics of phenothiazines and related antipsychotics.
3. Describe the main elements of acute and long term treatment of psychotic disorders.
4. State interventions to decrease adverse effects of antipsychotic drugs.

## Chapter 10 Antidepressants and Mood Stabilizers

Objectives:

1. Describe major features of depression and bipolar disorder.
2. Discuss characteristics of antidepressants in terms of mechanism of action, indications for use, adverse effects, principles of therapy, and nursing process implications.
3. Compare and contrast selective serotonin reuptake inhibitors (SSRIs) with tricyclic antidepressants (TCAs).
4. Identify the different categories of antidepressants: SSRIs, TCAs, SNRIs, MAOIs and other atypical antidepressants.

## Chapter 11 Antiseizure Drugs

Objectives:

1. Identify types and potential causes of seizures.
2. Discuss major factors that influence choice of an antiseizure drug for a client with a seizure disorder.
3. Differentiate characteristics and effects of commonly used antiseizure drugs.
4. Describe strategies for prevention and treatment of status epilepticus.

## Chapter 12 Antiparkinson Drugs

Objectives:

1. Describe major characteristics of Parkinson's disease.
2. Differentiate the types of commonly used antiparkinson drugs.
3. Discuss therapeutic and adverse effects of dopaminergic and anticholinergic drugs.

## Chapter 13 Skeletal Muscle Relaxants

Objectives:

1. Discuss common symptoms & disorders for which skeletal muscle relaxants are used.
2. Differentiate uses and effects of selected skeletal muscle relaxants.
3. Describe nonpharmacologic interventions to relieve muscle spasm and spasticity.
4. Review nursing actions for patients taking skeletal muscle relaxants.

## **UNIT II EXAM**

***Skip chapters 14 & 15***

### Unit III

## Chapter 16 Physiology of the Autonomic Nervous System (ANS)

Objectives:

1. Identify physiologic effects and functions of the sympathetic nervous system.
2. Identify physiologic effects and functions of the parasympathetic nervous system.
3. Describe signal events that occur when receptors of the ANS are stimulated.
4. Identify general characteristics of drugs affecting the ANS.

## Chapter 17 Adrenergic Drugs

Objectives:

1. Identify effects produced by stimulation of alpha- and beta-adrenergic receptors.
2. Discuss use of epinephrine to treat anaphylactic shock, acute bronchospasms, and cardiac arrest.
3. Identify clients at risk for adverse effects associated with adrenergic drugs.
4. Discuss commonly used over-the-counter preparations containing adrenergic drugs.

5. Describe signs and symptoms of noncatecholamine adrenergic drug toxicity.
6. Discuss treatment of overdose with non-catecholamine adrenergic drugs.
7. Teach patient about the safe, effective use of adrenergic drugs.
8. Discuss principles of therapy and nursing process for using adrenergic drugs in special populations.

#### Chapter 18 Antiadrenergic Drugs

##### Objectives:

1. List characteristics of antiadrenergic drugs in terms of effects on body tissues, indications of use, nursing process implications, principles of therapy, and observation of client response.
2. Compare and contrast beta-adrenergic blocking drugs in terms of cardioselectivity, indications for use, and adverse effects.
3. Discuss client education regarding safe, effective use of antiadrenergic drugs.
4. Discuss principles of therapy and nursing process for using antiadrenergic drugs in special populations.

#### Chapter 19 Cholinergic Drugs

##### Objectives:

1. Describe effects and indication for use of cholinergic drugs.
2. Describe major nursing care for clients receiving cholinergic drugs.
3. Describe signs, symptoms, and treatment of overdose with cholinergic drugs.
4. Discuss atropine and pralidoxime as antidotes for cholinergic drugs.
5. Discuss drug therapy for myasthenia gravis.
6. Discuss the use of cholinergic drugs for paralytic ileus and urinary retention.
7. Discuss drug therapy for Alzheimer's Dementia.
8. Discuss principles of therapy for using cholinergic drugs in special populations.
9. Teach patients about safe, effective use of cholinergic drugs.

#### Chapter 20 Anticholinergic Drugs

##### Objectives:

1. List characteristics of anticholinergic drugs in terms of effects on body tissues, indications for use, nursing process implications, and observation of client response.
2. Explain uses, indications, and precautions for Atropine as the prototype of anticholinergic drugs. Locate Atropine in your drug handbook.
3. Describe signs and symptoms of atropine or anticholinergic drug overdose and its treatment.
4. Discuss clinical disorders in which anticholinergic drugs are used.
5. Describe the mechanism by which atropine relieves bradycardia.
6. Discuss principles of therapy and nursing process for using anticholinergic drugs in special populations.
7. Teach patients about the safe, effective use of anticholinergic drugs.

### ***Skip Chapters 21 & 22***

#### Chapter 23 Corticosteroids

##### Objectives:

1. Review the physiologic effects of endogenous corticosteroids
2. Discuss clinical indications for use of exogenous corticosteroids.
3. Differentiate between physiologic and pharmacologic doses of corticosteroids.
4. Differentiate between short-term and long-term corticosteroid therapy.
5. State the rationale for giving corticosteroids topically when possible rather than systemically.

6. Recognize at least 10 adverse effects of long term corticosteroid therapy.
7. Analyze the use other drugs and interventions to decrease the need for corticosteroids.
8. Discuss the use of corticosteroids in selected populations and conditions.
9. Apply the nursing process with a patient receiving long term systemic corticosteroid therapy, including teaching needs.

Chapter 24 Thyroid and Antithyroid Drugs

Objectives:

1. Discuss physiologic effects of thyroid hormone.
2. Identify subclinical, symptomatic, and severe effects of inadequate or excessive thyroid hormone.
3. Describe characteristics, uses, and effects of thyroid drugs.
4. Describe characteristics, uses, and effects of antithyroid drugs.
5. Discuss the influence of thyroid and antithyroid drugs on the metabolism of other drugs.
6. Describe client teaching of self-care activities related to the use of thyroid and antithyroid drugs.
7. Apply the nursing process with patients receiving thyroid and antithyroid drugs.

Chapter 25 Hormones That Regulate Calcium & Bone Metabolism

Objectives:

1. Describe the roles of parathyroid hormone, calcitonin, and vitamin D in regulating calcium metabolism.
2. Identify individuals at risk for hypocalcemia.
3. Discuss the prevention and treatment of hypocalcemia and osteoporosis.
4. Identify individuals at risk for hypercalcemia.
5. Outline appropriate management strategies of hypercalcemia as a medical emergency.
6. Evaluate the use of calcium and vitamin D supplements, calcitonin, and bisphosphonate drugs in the treatment of osteoporosis.

Chapter 26 Antidiabetic Drugs

Objectives:

1. Describe the major effects of endogenous insulin on body tissues.
2. Discuss insulin and insulin analogs in terms of characteristics and uses.
3. Discuss the relationship among diet, exercise, and drug therapy in controlling diabetes.
4. Discuss different types of oral antidiabetic agents in terms of mechanisms of action, indications for use, adverse effects, and nursing process implications.
5. Discuss the benefits of maintaining glycemic control in preventing complications of diabetes.
6. State reasons for combining insulin with oral agents or combining different types of oral agents.

**UNIT III EXAM**

***Skip Chapters 27 & 28***

**Unit IV**

Chapter 29 General Characteristics of Antimicrobial Drugs

Objectives:

1. Identify populations who have an increased risk for infection.
2. Discuss common pathogens and methods of infection control.
3. Discuss assessment of clients for local and systemic signs of infection.
4. Discuss common and potentially serious adverse effects of antimicrobial drugs.
5. Identify clients at increased risk for adverse reactions to antimicrobial drugs.
6. Discuss guidelines for safe and accurate administration of antibiotics.
7. Discuss important elements of using antimicrobial drugs in special populations.

Chapter 30 Beta-Lactam Antibacterials: Penicillins, Cephalosporins, and Other Drugs

Objectives:

1. Describe general characteristics of beta-lactam antibacterials.
2. Question patients about allergies before giving antibiotics.
3. State the rationale of combining penicillin with a beta-lactamase inhibitor drug.
4. Discuss similarities and differences between Cephalosporins and penicillins.
5. Discuss Cephalosporins in relation to antibacterial spectrum, indications for use and adverse effects.
6. Describe major characteristics of carbapenem and monobactam drugs.
7. Apply principles of beta-lactam antibacterial therapy.

Chapter 31 Aminoglycosides and Fluoroquinolones

Objectives:

1. Discuss the aminoglycosides and fluoroquinolones drug groups including a basic description, indications, and contraindications for use.
2. Discuss the importance of measuring serum drug levels during aminoglycoside therapy.
3. Describe measures to decrease nephrotoxicity and ototoxicity with aminoglycosides.
4. Discuss principles of using aminoglycosides and fluoroquinolones in renal impairment and critical illness.

Chapter 32 Tetracyclines, Sulfonamides, and Urinary Agents

Objectives:

1. Discuss major characteristics and clinical uses of tetracyclines.
2. Recognize doxycycline as the drug of choice for renal impairment.
3. Discuss characteristics, clinical uses, adverse effects, and nursing implications of selected sulfonamides.
4. Describe the use of urinary antiseptics in the treatment of urinary tract infections.
5. Teach patients strategies for preventing, recognizing, and treating urinary tract infections.

Chapter 33 Macrolides, Ketolides, and Miscellaneous Antibacterials

Objectives:

1. Discuss the drug groups Macrolides, Ketolides, and Miscellaneous Antibacterials including a basic description, indications, and contraindications for use.

Chapter 34 Drugs for Tuberculosis and *Mycobacterium avium* Complex Disease

Objectives:

1. Describe characteristics of latent, active, and drug-resistant tuberculosis infections.
2. List characteristics, uses, effects, and nursing implications of using primary antitubercular drugs.
3. Identify populations at high risk for developing TB.

Chapter 35 Antiviral Drugs

Objectives:

1. Describe characteristics of viruses and common viral infections.
2. Discuss the principles of therapy for antiviral drugs (include indications & adverse effects), and identify at least two commonly used antiviral drugs.

Chapter 36 Antifungal Drugs

Objectives:

1. Describe characteristics of fungi and fungal infections.
2. Discuss antibacterial drug therapy and immunosuppression as risk factors for development of fungal infections.
3. Describe commonly used antifungal drugs in terms of indications for use, adverse effects, and nursing process.
4. Differentiate between adverse effects associated with systemic and topical antifungal drugs.
5. Teach patients about prevention and treatment of fungal infections.

## **UNIT IV EXAM**

### ***Skip Chapters 37 through 42***

#### **Unit V**

##### **Chapter 43    Physiology of the Respiratory System**

Objectives:

1. Review roles and functions of the main respiratory tract structures in oxygenation of body tissues.
2. Describe the role of carbon dioxide in respiration.
3. List common signs and symptoms associated with respiratory function.
4. Identify general categories of drugs used to treat respiratory disorders.

##### **Chapter 44    Drugs for Asthma and Other Bronchoconstrictive Disorders**

Objectives:

1. Describe the main pathophysiologic characteristics of bronchoconstrictive disorders.
2. Discuss the uses and effects of bronchodilating and anti-inflammatory drugs.
3. Explain the nursing process in relation to these drugs.
4. Discuss the principles of therapy for these drugs.
5. Differentiate between “quick relief” and long-term control of asthma symptoms.
6. Discuss the use of antiasthmatic drugs in special populations.
7. Teach patients self-care and long-term control measures.

##### **Chapter 45    Antihistamines and Allergic Disorders**

Objectives:

1. Differentiate effects of histamine on selected body tissues.
2. Identify histamine receptors.
3. Describe types of hypersensitivity or allergic reactions.
4. Discuss allergic rhinitis, allergic contact dermatitis, and drug allergies as conditions for which antihistamines are commonly used.
5. Identify the effects of histamine that are blocked by histamine (H1) receptor antagonist drugs.
6. Differentiate first- and second-generation antihistamines.
7. Describe antihistamines in terms of indications for use, adverse effects, and nursing process implications.

##### **Chapter 46    Nasal Decongestants, Antitussives, and Cold Remedies**

Objectives:

1. Discuss common respiratory disorders and their symptoms.
2. Review decongestants and adverse effects of adrenergic drugs.
3. Describe general characteristics and effects of antitussive agents.
4. Discuss the advantages and disadvantages of using combination products to treat the common cold.
5. Evaluate over-the counter allergy, cold, cough and sinus remedies for personal or patient use.
6. Use the nursing process in the care of individuals with the common cold.

##### **Chapter 47    Physiology of the Cardiovascular System**

Objectives:

1. Review the functions of the heart, blood vessels, and blood in supplying oxygen and nutrients to body tissue.
2. Describe the role of vascular endothelium in maintaining homeostasis.
3. Discuss atherosclerosis and the basic disorder causing many cardiovascular disorders for which drug therapy is required.
4. List cardiovascular disorders for which drug therapy is a major treatment modality.

## Chapter 48 Drug Therapy for Heart Failure

Objectives:

1. Describe the major manifestations and causes of heart failure (HF).
2. Differentiate the types of drugs used to treat HF.
3. List characteristics of Digoxin in terms of effects on myocardial contractility and cardiac conduction, indications for use, principles of therapy, and select nursing process implications.
4. Discuss Indications for and Contraindications to use of Digoxin.
5. Identify signs & symptoms of Digoxin toxicity; & therapeutic and toxic serum levels.
6. Identify clients at risk for development of Digoxin toxicity.
7. Discuss nursing interventions to prevent or minimize Digoxin toxicity.

## Chapter 49 Antidysrhythmic Drugs

Objectives:

1. Discuss cardiac electrophysiology and identify two types of cardiac dysrhythmias.
2. Describe general characteristics and major classifications of antidysrhythmic drugs.
3. Discuss select prototypical antidysrhythmic drugs.
4. Discuss general considerations for the client taking these drugs.

## **UNIT V EXAM**

### **Unit VI**

## Chapter 50 Antianginal Drugs

Objectives:

1. Describe the types, causes, and effects of angina pectoris.
2. Describe the general characteristics and types of antianginal drugs.
3. Discuss nitrate antianginals
4. Discuss calcium channel blockers in terms of their effects on body tissues, clinical indications for use, common adverse effects, and select nursing process implications.

### ***Skip Chapter 51***

## Chapter 52 Antihypertensive Drugs

Objectives:

1. Describe hypertension and factors that control blood pressure.
2. Review the effects of alpha-adrenergic blockers, beta-adrenergic blockers, calcium channel blockers, and diuretics in hypertension.
3. Discuss angiotensin-converting enzyme inhibitors and angiotensin II receptor blockers in terms of mechanisms of action, indications for use, adverse effects, and nursing process implications.
4. Describe rationale for using combination drugs in the management of hypertension.

## Chapter 53 Diuretics

Objectives:

1. Review renal physiology.
2. List characteristics of diuretics in terms of mechanism of action, indications for use, principles of therapy, and nursing process implications.
3. Recognize commonly used potassium-wasting and potassium-sparing diuretics.
4. Discuss the rationale for using combination products containing a potassium-wasting and a potassium-sparing diuretic.
5. Discuss the rationale for concomitant use of a loop diuretic and a thiazide or related diuretic.

## Chapter 54 Drugs That Affect Blood Coagulation

Objectives:

1. Review the physiology of hemostasis and thrombosis.
2. Describe characteristics and uses of anticoagulant, antiplatelet, and thrombolytic agents.
3. Compare and contrast heparin and warfarin in terms of indications for use, onset and duration of action, route of administration, blood tests used to monitor effects, and nursing implications.
4. Discuss antiplatelet agents in terms of indications for use and effects on blood coagulation.
5. Describe thrombolytic agents in terms of indications and contraindications for use, routes of administration, and major adverse effects.
6. Describe systemic hemostatic agents for treating overdoses of anticoagulant and thrombolytic drugs (e.g.; antidotes for warfarin and heparin).

Chapter 55 Drugs for Dyslipidemia

Objectives:

1. Discuss the role of dyslipidemia in the etiology of atherosclerosis.
2. Describe dyslipidemic drugs in terms of mechanism of action, indications for use, and major adverse effects.

## **UNIT VI EXAM**

Chapter 56 Physiology of the Digestive System (review on your own)

1. Review the digestive system and describe effects of drugs on the digestive system.

***Skip Chapters 57 & 58***

Chapter 59 Drugs Used for Peptic Ulcer and Acid Reflux Disorders

Objectives:

1. Describe the main elements of peptic ulcer disease and gastroesophageal reflux disease (GERD).
2. Differentiate the types of drugs used to treat peptic ulcers and acid reflux disorders.
3. Discuss the advantages and disadvantages of proton pump inhibitors.
4. Differentiate between prescription and over-the-counter uses of histamine 2 receptor blocking agents.
5. Describe characteristics, uses, and effects of antacids.
6. Discuss rationale for using combination antacid products.

Chapter 60 Laxatives and Cathartics

Objectives:

1. Differentiate the major types of laxatives.
2. Differentiate the consequences of occasional use versus chronic use.
3. Discuss rational choices of laxatives for selected client populations or purposes.
4. Discuss bulk-forming laxatives as the most physiologic agents.
5. Discuss possible reasons for and hazards of overuse and abuse of laxatives.

Chapter 61 Antidiarrheals

Objectives:

1. Identify clients at risk for development of diarrhea.
2. Discuss guidelines for assessing diarrhea.
3. Describe types of diarrhea in which antidiarrheal drug therapy may or may not be indicated.
4. Discuss characteristics, effects, and nursing process implications of commonly used antidiarrheal agents.

Chapter 62 Antiemetics

Objectives:

1. Identify clients at risk of developing nausea and vomiting.
2. Discuss guidelines for preventing, minimizing, or treating nausea and vomiting.
3. Differentiate the major types of antiemetic drugs.
4. Discuss characteristics, effects, and nursing process implications of selected antiemetic drugs.

**The contents of the last five chapters will be tested on the Final.**

## **COMPREHENSIVE FINAL EXAM - TBA**

### **COURSE POLICIES:**

ALL STUDENTS ARE EXPECTED TO:

1. Adhere to requirements delineated in the Nursing Student Handbook (available on the Nursing web page to all students on the OC website).
2. Achieve a grade of at least **75** in RNSG 1201 to pass the course.
3. Refer to the course calendar for class schedule and units to be studied. Utilize unit objectives for study. These objectives are statements of the minimum competencies to be achieved. Read and study references and learn unfamiliar terms *prior to class*. Remember, you will receive from your education whatever **you** put into it.
4. The student is responsible for any material covered through audio-visual media, independent study, required readings, and discussions. In the case of contradictory information, and *unless otherwise directed*, the course textbooks are the authority to be used.
5. **Make-up exams:** Please notify the instructor if you have to miss an exam *before* the exam date. Students are allowed **one** make up exam. A second missed exam will be given a zero. Make up exams will be scheduled at the instructor's convenience and must be within one week of the scheduled exam. The exam may be in a different format, such as essay or fill-in-the-blank and will cover the same material as the corresponding unit exam. Exam format is at the discretion of the instructor.

**On-line Students:** You may experience being “bumped off” during an exam. If this occurs the only recourse is for the instructor to clear the attempt at the exam which means, the student must contact the instructor and will restart the exam. If you click the “back” button on the tool bar at the top of the screen you will be bumped off of the test. Each student will have no more than two (2) tests cleared due to being “bumped off”, for the semester (not including the final exam). You cannot stop and restart an exam; once the exam is begun, you must complete it.

6. E-mail correspondence will be through your OC student e-mail only, not your personal e-mail address. You must activate your OC e-mail account. If you have problems with your e-mail, contact the Student Success Center at 432-335-6673. Please access and check your OC e-mail daily for information or updates to this course and use your campus e-mail to correspond with your instructor by e-mail.
7. On-Campus students: some course materials will be available on Blackboard (power points).  
Online students: Black Board is used as a communication tool for this course. You will need to check it frequently for announcements, any documents you may need, or information that you may need. Students can use this Black Board for communication with the instructor as well.

**ATTENDANCE POLICY:** Students are expected to attend all classes and will be held accountable for all material presented or assigned in this course in determining course grades.

Attendance policy will follow the same guidelines as listed in the college catalog. This policy states that any student who misses as much as 20 percent of scheduled class time in any semester should review his or her standing in the class with the instructor and determine whether to continue in class or withdraw.

**On-Campus students:** There will be a sign in sheet for each class day. It is an expectation within the

nursing profession that nurses will conduct themselves in a professional manner. You will be held to those expectations as a student nurse. Therefore you are expected to notify your instructor whenever you will not be able to attend class. You should do so prior to the start of class and you are expected to be on time. For safety reasons, according to OC safety policy, the door will be closed and locked 5 minutes after class begins.

**Online students:** Attendance will be “taken” by using the discussion board or other activities as assigned under Blackboard or via email. Each week, pertinent questions will be posted by the instructor for you to answer and/or discuss. Other assignments may be substituted for these discussions at the instructor’s discretion in order to enhance your learning and “take” attendance. If you have an emergency, contact the instructor immediately or you will be held liable for the missed assignment for the week. Attendance is expected per the above policy and the 20 percent guideline applies.

**Planning for success:** For every 1 credit hour per summer course, you should plan to spend a minimum of 12 (3 x 4) hours per week studying for that course. For this course you should be spending the equivalent of 8 (2 x 4) hours per week of class time and 24 (6 x 4) hours per week of study time which equals a minimum of 32 (8 x 4) hours per week. Just remember, pace yourself, and the more you use the information, the better you will do! (Summer classes have a fourth of the time as in a regular semester, so multiply the time by about four times.)

**Exams:** There will be Six Unit Exams and a Comprehensive Final. All students will be allowed one hour to take unit exams. Questions may be multiple choice, fill in the blank, matching, or true/false. There are 6 Unit Tests, worth 10% each, a total of 60% and the final exam is worth 40% of your course grade. Students will be allowed 2 hours to complete the final exam. *You will be allowed to bring a single 3 x 5 card with notes front and back hand written, not computer generated, , to the final exam (all students)*. Students are allowed to review exam questions after each unit exam. To review an exam, the student must make an appointment with the instructor within one week of the exam unless prior arrangements are made with the instructor. If exam questions are challenged, students must submit their challenge in writing. There will be no review or challenge of questions for the final exam.

**On-Campus** students will take the test in the classroom. You must have a red and white ParScore sheet, Form No. F-288-PAR-L. You may mark on your test booklet. Make sure that you mark your scantron correctly. Once it is turned in you will not be allowed to change anything. You will be allowed to bring a single 3 x 5 card as stated above for all exams.

**Online students:** You may take an exam **one time only** and you will be able to see only one question at a time. “Back tracking” will not be permitted. This means you must answer each question before going on to the next question. The exam will be timed as indicated above. Students will have a 24 hour time period in which to take unit exams as indicated on the course calendar.

\*Information to be included on Medication Sheets:

- 1) Name of Drug and classification
- 2) Mechanism of Action (How the drug works) and Indications (what is it used for).
- 3) Implications:
  - a. Assessment (signs, symptoms, labs, etc...)
  - b. How do you know the medication has worked?
  - c. Major/common adverse effects
  - d. What action will you take in case of adverse effects?

\*Example of Medication sheet:

- 1) Acyclovir (Zovirax)- Antiviral
- 2) Acyclovir penetrates virus-infected cells, becomes activated by an enzyme and inhibits viral DNA reproduction. A patient with genital herpes or herpes simplex would receive this drug.
- 3) Implications:

- a) The nurse should assess renal function before administering this drug (BUN, Creatinine levels)
- b) If the patient has genital herpes and the pain is better as well as skin lesions, the drug is working
- c) 3 major effects include nephrotoxicity, nausea, headache
- d) Notify the physician

\*Medications by Chapter: (Be prepared for these to be on the exams.)

**Unit I:**

Chapter 6 – Morphine & Narcan

Chapter 7 – Aspirin, Acetaminophen (also Ketorolac)

**Unit II:**

Chapter 8 – Xanax, Valium (also look up Romazicon – increased risk for benzodiazepine = low albumin)

Chapter 9 – Thorazine & Haldol

Chapter 10 – Effexor, Lithium Carbonate (also look up Prozac & Desyrel)

Chapter 11 – Dilantin & Ativan

Chapter 12 – Levodopa, Carbidopa (also Requip)

Chapter 13 – Flexeril, Dantrium (and Robaxin)

[Chapter 14 – Librium, Antabuse; Chapter 15 – Adderall, Vyvanase, Provigil: These will not be on any exam for this course but are good to include in making med sheets for your references.]

**Unit III:**

Chapter 17 – Epinephrine, pseudoephedrine, theophyllin

Chapter 18 – Propranolol, clonidine

Chapter 19 – Prostigmin & Urecholine (and Aricept)

Chapter 20 – Atropine, Detrol LA

Chapter 23 – Hydrocortisone, Prednisone (Dexamethosone) – see systemic forms not topical for exams

Chapter 24 – Levothyroxine, Propylthiouracil

Chapter 25 – Actonel, Calcitonin – salmon (Aredia)

Chapter 26 – Regular & NPH insulin (Know onset, peak and duration of these)

**Unit IV:**

Chapter 30 – Penicillin & Cephalexin

Chapter 31 – Garamycin, Cipro & Levaquin

Chapter 32 – Tetracycline, Bactrim & Pyridium

Chapter 33 – Erythromycin, Flagyl, Ketek & Vancomycin

Chapter 34 – INH (Isoniazid), Rifampin (also Azithromycin)

**Unit V:**

Chapter 35 – Acyclovir & Zidovudine (AZT)

Chapter 36 – Diflucan & Nystatin

Chapter 44 – Albuterol & Atrovent

Chapter 45 – Benadryl & Phenergan

Chapter 46 – Codeine & Sudafed

**Unit VI:**

Chapter 48 - Digoxin

Chapter 49 – Lidocaine & Quinidine

Chapter 50 – Nitroglycerin – (sublingual, & Isosorbide (Isordil))

Chapter 52 – Captopril & Metoprolol

Chapter 53 – Hydrochlorothiazide (HCTZ) & Furosemide (Lasix) (also Aldactone)

Chapter 54 – Heparin & warfarin (Coumadin), (also Lovenox)

**Unit VII:**

Chapter 55 – Atorvastatin (Lipitor) &amp; Niacin

Chapter 59 – Famotadine (Pepcid) &amp; pantoprazole (Protonix)

Chapter 60 – Lactulose &amp; Colace

Chapter 61 – Loperamide (Immodium) &amp; diphenoxylate (Lomotil)

Chapter 62 – Metoclopramide (Reglan)

## Course Calendar

<b>August 22-Sept 6</b> <b>Unit I</b> Introduction to Pharmacology*** Basic Concepts & Processes*** Nursing Process in Drug Therapy*** Physiology of the CNS ( <i>on your own</i> ) *** Opioid Analgesics and Opioid Antagonists Analgesic, Antipyretic, Anti-Inflammatory, & Related Drugs	Chapters 1, 2, 4, 5, 6, 7 <i>Skip chapter 3</i>
UNIT 1 EXAM – Sept 7	See exam review & discussions
5:30 PM On Campus	Open from 9am 9/7 to 9am 9/8 Online
<b>Sept 7-20</b> <b>Unit II</b> Antianxiety & Sedative-Hypnotic Drugs Antipsychotic Drugs Antidepressants and Mood Stabilizers Antiseizure Drugs Antiparkinson Drugs Skeletal Muscle Relaxants	Chapters 8, 9, 10, 11, 12, 13 <i>Skip chapters 14 &amp; 15 (review on your own as needed – not tested on exams)</i>
UNIT 2 EXAM – SEPT 21	See exam review & discussions
5:30 PM On Campus	Open from 9am 9/21 to 9am 9/22 Online
<b>Sept 21-Oct 4</b> <b>Unit III</b> Physiology of the ANS ( <i>on your own</i> ) *** Adrenergic Drugs Antiadrenergic Drugs Cholinergic Drugs Anticholinergic Drugs Corticosteroids Thyroid and Antithyroid Drugs Hormones That Regulate Calcium and Bone Metabolism Antidiabetic Drugs	Chapters 16, 17, 18, 19, 20, 23, 24, 25, & 26 <i>Skip chapters 21&amp;22</i>
UNIT 3 EXAM – OCT 5	See exam review & discussions
5:30 PM On Campus	Open from 9am 10/5 to 9am 10/6 Online

<p><b>Oct 5 - 18</b>  <b>Unit IV</b>  General Characteristics of Antimicrobial Drugs  Beta-Lactam Antibacterials: Penicillins, Cephalosporins, and Other Drugs  Aminoglycosides and Fluoroquinolones  Tetracyclines, Sulfonamides, and Urinary Agents  Macrolides, Ketolides, and Miscellaneous  Drugs for Tuberculosis &amp; <i>M. avium</i> Complex</p>	<p><b>Skip chapters 27 &amp; 28</b>  Chapters 29, 30, 31, 32, 33, 34</p>
<p><b>UNIT 4 EXAM – OCT 19</b></p>	<p>See exam review &amp; discussions</p>
<p><b>5:30 PM On Campus</b></p>	<p>Open from 9am10/19 to 9am10/20 Online</p>
<p><b>Oct 19-Nov 1</b>  <b>Unit V</b>  Antiviral Drugs  Antifungal Drugs  Physiology of the Respiratory System (on your own)***  Drugs for Asthma and other Bronchoconstrictive Disorders  Antihistamines and Allergic Disorders  Nasal Decongestants, Antitussives, and Cold Remedies</p>	<p>Chapters 35, 36, 43, 44, 45, 46  <b>Skip chapters 37 – 42</b></p>
<p><b>UNIT 5 EXAM – Nov 2</b></p>	<p>See exam review &amp; discussions</p>
<p><b>5:30 PM On Campus</b></p>	<p>Open from 9am 11/2 to 9am 11/3 Online</p>
<p><b>Nov 2-Nov15</b>  <b>Unit VI</b>  Physiology of the Cardiovascular System (on your own)***  Drug Therapy for Heart Failure  Antidysrhythmic Drugs  Antianginal Drugs  Antihypertensive Drugs  Diuretics  Drugs That Affect Blood Coagulation</p>	<p>Chapters 47, 48, 49, 50, 52, 53, 54  <b>Skip chapter 51</b></p> <p style="text-align: center;"><b>NOV 23-27</b>  <b>THANKSGIVING BREAK!!!</b></p> <p style="text-align: center;">  </p>
<p><b>UNIT 6 EXAM – NOV 16</b></p>	<p>See exam review &amp; discussions</p>
<p><b>5:30 PM On Campus</b></p>	<p>Open from 9am 11/16 to 9am 11/17 Online</p>
<p><b>Nov 28-Dec 6</b>  <b>Unit VII</b>  Drugs for Dyslipidemia  (Review Digestive System on your own as needed)***  Drugs Used for Peptic Ulcer and Acid Reflux Disorders  Laxatives and Cathartics  Antidiarrheals  Antiemetics</p>	<p>Chapters 55, 59, 60, 61, 62  <b>Skip chapters 56 – 58, &amp; 63-65</b></p>
<p><b>FINAL EXAM – DEC 7</b></p>	<p>See exam review &amp; discussions</p>
<p><b>5:30-7:30 PM – On Campus Class</b></p>	<p>Times TBA on campus – Online Classes</p>