

**ODESSA COLLEGE ASSOCIATE DEGREE NURSING PROGRAM  
SYLLABUS RNSG 1201**

**COURSE TITLE:** PHARMACOLOGY

**CREDIT:** TWO HOURS

**PLACEMENT:** FIRST SEMESTER OF NURSING PROGRAM; MAY BE TAKEN PRIOR TO PROGRAM ADMISSION

**PREREQUISITES:** BIOL 2401 OR CONSENT OF DEPARTMENT

**COREQUISITES:** 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:** **Kimberly Leftwich, M.S.N., R.N.**  
Section 640; Thursday 6:00-7:50 p.m.  
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She does not have an office on campus. Assignments can be turned in to her through the main nursing office or emailed.

**Nancy Johnson, M.S.N., R.N.-NCC, W.H.N.P.**  
Section 12; RNSG 1201; CT 217; Thursday 9:30 a.m.–11: a.m.  
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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 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 pharmacotherapeutic therapy 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 caring related to nursing care of 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, worksheets; if online, discussion boards and hyperlinks.

**EVALUATION AND GRADING:** 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%
Medication Sheets		20%
Comprehensive Final Exam		<u>20%</u>
<b>TOTAL</b>		<b>100%</b>

There will be four unit exams consisting of approximately 50 questions. The seventh unit of study will be tested on the final exam. The final exam consists of *approximately* 15-25 questions from the seventh unit and 80-85 questions from the first six units. Questions may be multiple-choice, matching, fill in the blank or true/false. A missed exam must be made up within one week *\*\*See Course Policies: Make-up exams.* There will be no test review done after a unit test, unless or until all students in the course have taken the test. You must notify the instructor if and when you are unable to take a test before the test date.

**Grading:** Grades are carried ONE decimal place until the final grade which will be rounded to the appropriate whole number. **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.

Note to Students: Important information is summarized in boxes or tables. Be sure to include these boxes and tables in your reading. You should do the “Review and Application Exercises” at the end of each chapter as a review (even if page number is not listed). Check the syllabus and your calendar often for important information.

Essential to your success on the exams: Note cards for the assigned drugs and notes from each unit on a 3 x 5” card, hand written, not computer generated.

Students will be relying on their textbooks a great deal and are responsible for attaining all of the pertinent information that is required for this course. Remember, “online” does not mean self paced so *deadlines for postings and exam dates are not optional. **The study guide to accompany the textbook is an excellent resource to review for exams as well as for the NCLEX exam.***

## **UNIT OBJECTIVES:**

### **Unit I**

#### Chapter 1     Introduction to Pharmacology

Objectives:

1. Differentiate between pharmacology and drug therapy.
2. Describe a prototypical drug.
3. Distinguish between generic and trade names of drugs.
4. 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.
8. Develop personal techniques for learning about drugs and using drug knowledge in client care.
9. Select Authoritative sources for drug information.

#### 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 client 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.
10. Discuss selected drug 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, including age, weight, health status, and lifestyle.
2. Identify nondrug interventions to prevent or decrease the need for drug therapy.
3. Discuss interventions to increase therapeutic effects and decrease adverse effects of drug therapy.
4. Discuss guidelines for rational choices of drugs, dosages, routes, and times of administration.
5. Identify interventions to prevent or decrease the need for drug therapy.
6. Discuss interventions to increase therapeutic effects and decrease adverse effects of drug therapy (e.g., teaching).
7. Describe how to evaluate clients for therapeutic and adverse responses to drug therapy.
8. Identify major considerations in drug therapy for children and older adults.
9. 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 6 major neurotransmission systems, the neurotransmitters, and their roles in nervous system functioning.
3. Discuss signs and symptoms of mild, moderate, and severe central nervous system (CNS) depression.
4. Discuss general types and characteristics of CNS depressant drugs.

#### Chapter 6 Opioid Analgesics and Pain Management

##### Objectives:

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

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

### Objectives:

1. Discuss aspirin and other nonsteroidal anti-inflammatory drugs (NSAID's) in terms of mechanism of action, indications for use, contraindications to use, nursing process, and principles of therapy.
2. Discuss the use of prostaglandins in the etiology of pain, fever, and inflammation.
3. Compare and contrast aspirin, other NSAID's, and acetaminophen in terms of indications for use and adverse effects.
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.
7. Teach patients interventions to prevent or decrease adverse effects of aspirin, other NSAIDs, and acetaminophen.
8. Identify factors influencing the use of aspirin, NSAIDs, and acetaminophen in special populations.
9. Discuss the use of NSAIDs and antigout drugs.
10. Discuss the use of NSAIDs, triptans, and ergot antimigraine drugs.

## 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 client teaching of guidelines for rational, safe use of antianxiety and sedative-hypnotic drugs.
5. Discuss the use of flumazenil (Romaxicon) and other treatments/ measures for overdose of benzodiazepines.
6. 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.
7. Describe strategies for preventing, recognizing, or treating benzodiazepine withdrawal reactions.
8. Contrast characteristics of selected nonbenzodiazepines and benzodiazepines.

## 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. Compare characteristics of "atypical" antipsychotic drugs with those of "typical" phenothiazines and related antipsychotic drugs
5. State interventions to decrease adverse effects of antipsychotic drugs.

6. State interventions to promote compliance with outpatient use 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 with tricyclic antidepressants.
4. Discuss selected characteristics of atypical antidepressants.
5. Describe the use of lithium in bipolar disorder.
6. Describe the use of atypical antipsychotics in the manic phase of bipolar disorder.
7. Discuss interventions to increase safety of lithium therapy.
8. Describe the nursing role in the preventing, recognizing, and treating overdoses of antidepressant drugs and lithium.
9. Analyze important factors in using antidepressant drugs and lithium in special populations.
10. Compare and contrast the different categories of antidepressants: SSRIs, TCAs, SNRIs, MAO 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. Differentiate between older and more recent antiseizure drugs.
5. Compare advantages and disadvantages between monotherapy and combination drug therapy for seizure disorders.
6. Apply the nursing process with patients receiving antiseizure drugs.
7. Describe strategies for prevention and treatment of status epilepticus.
8. Discuss the use of antiseizure drugs in special populations.

#### 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.
4. Discuss the use of antiparkinson drugs in selected populations.
5. Apply the nursing process with patients experiencing parkinsonism

#### Chapter 13 Skeletal Muscle Relaxants

##### Objectives:

1. Discuss common symptoms and 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. Apply the nursing process with patients experiencing muscle spasm or spasticity.

## **UNIT II EXAM**

### **Unit III**

#### Chapter 14 Substance Disorders

Objectives:

1. Identify risk factors for development of drug dependence.
2. Describe the effects of alcohol, cocaine, marijuana, and nicotine on selected body organs.
3. Compare and contrast characteristics of dependence associated with alcohol, benzodiazepines, cocaine, and opiates.
4. Describe specific antidotes for overdoses of CNS depressant drugs and the circumstances indicating their use.
5. Outline the major elements of treatment for overdoses of commonly abused drugs that do not have antidotes
6. Describe interventions to prevent or manage withdrawal reactions associated with alcohol, benzodiazepines, cocaine, and other CNS stimulants, and opiates.

#### Chapter 15 CNS Stimulants

Objectives:

1. Describe general characteristics of CNS stimulants.
2. Discuss reasons for decreased use of amphetamines for therapeutic purposes.
3. Discuss the rationale for treating ADHD with CNS stimulants.
4. Identify effects and sources of caffeine.
5. Identify nursing interventions to prevent, recognize, and treat stimulant overdose.

#### Chapter 16 Physiology of the Autonomic Nervous System

Objectives:

1. Identify physiologic effects of the sympathetic nervous system.
2. Differentiate subtypes and functions of sympathetic nervous system.
3. Identify physiologic effects of the parasympathetic nervous system.
4. Describe signal events that occur when receptors of the autonomic nervous system are stimulated.
5. State names and general characteristics of drugs affecting the autonomic nervous system.
6. Differentiate subtypes and functions of parasympathetic nervous system.

#### 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 of experiencing adverse effects with adrenergic drugs.

4. List commonly used over the counter preparations that contain adrenergic drugs and what they are used for.
5. Describe signs and symptoms of toxicity due to noncatecholamine adrenergic drugs.
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:
  - a. effects on body tissues,
  - b. indications of use,
  - c. nursing process implications,
  - d. principles of therapy , and
  - e. observation of client response.
2. Compare and contrast beta-adrenergic blocking drugs in terms of:
  - a. cardioselectivity,
  - b. indications for use,
  - c. adverse effects, and
  - d. other selected characteristics.
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.
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.
3. Describe the 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.

### **UNIT III EXAM**

#### ***Skip Chapter 21***

#### **Unit IV**

##### Chapter 22 Hypothalamic and Pituitary Hormones

###### Objectives:

1. Identify the clinical uses of selected hormones.
2. Differentiate characteristics and functions of anterior and posterior pituitary hormones.
3. Recognize the limitations of hypothalamic and pituitary hormones as therapeutic agents.
4. Identify major nursing considerations in the care of patients receiving specific hypothalamic and pituitary hormones.

##### 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. Manage individuals at risk for hypocalcemia.
3. Discuss the prevention and treatment of hypocalcemia and osteoporosis.
4. Manage 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 combinations of insulin and oral agents or different types of oral agents.

## *Skip Chapters 27 & 28*

## Chapter 29 General Characteristics of Antimicrobial Drugs

### Objectives:

1. Identify populations who have an increased risk of 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 older adults, those with renal or hepatic impairment, and those with critical illness.

## Chapter 30 Beta-Lactam Antibacterials: Penicillin's, Cephalosporins, and Other Drugs

### Objectives:

1. Describe general characteristics of beta-lactam antibiotics.
2. Question patients about allergies before giving antibiotics.
3. State the rationale of combining a penicillins and a beta-lactamase inhibitor drug.
4. Discuss similarities and differences between cephalosporins and penicillins.
5. Differentiate 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 using beta-lactam antibacterials in selected patient situations.

## **UNIT IV EXAM**

### **Unit V**

#### 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.

#### 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 V EXAM**

*Skip Chapters 37 through 42*

### **Unit VI**

#### 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 affecting 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 drugs.
3. Discuss the uses of anti-inflammatory drugs.
4. Explain the nursing process in relation to these drugs.
5. Discuss the principles of therapy for these drugs.
6. Differentiate between “quick relief” and long-term control of asthma symptoms.
7. Discuss the use of antiasthmatic drugs in special populations.
8. 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. Differentiate histamine receptors.
3. Describe the 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, (H<sub>1</sub>) 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 use 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 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.

#### 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 factors that control blood pressure.
2. Describe hypertension.
3. Review the effects of alpha-adrenergic blockers, beta-adrenergic blockers, calcium channel blockers, and diuretics in hypertension.
4. 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.
5. Describe the rationale for using combination drugs in the management of hypertension.

## **UNIT VI EXAM**

### **Unit VII**

#### 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. Using the drug Aspirin, contrast the dose and frequency of administration for antiplatelet effects with those for analgesic, antipyretic, and anti-inflammatory effects.
6. Describe thrombolytic agents in terms of indications and contraindications for use, routes of administration, and major adverse effects.
7. Describe systemic hemostatic agents for treating overdoses of anticoagulant and thrombolytic drugs.

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.

*Skip Chapters 56, 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 the 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 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.

## **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. (2005). *Davis Drug Guide for Nurses* (10<sup>th</sup> Ed.). Davis: Philadelphia.

## **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, class presentation, independent study, required readings, and guest speakers. 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 whenever 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. They may utilize a different format, such as essay exams 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. 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. You will go to the Odessa College Web page then click on e-mail in the top right hand corner. Follow the directions from there. Please access and check your OC e-mail at least once weekly for information or updates to this course and use your campus e-mail to correspond with your instructor by e-mail.
7. Black Board is used as a communication tool for the two on-campus sections of 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 responsible for all material presented or assigned in this course and will be held accountable for such material in the determination of course grades.



**On-Campus Students:** There will be a sign in sheet for each class day. Attendance at every class is highly encouraged and is directly related to the student's potential for success in this course. 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.

**On-Line Students:** Attendance will be "taken" by using the discussion board under Blackboard. Each week, a question will be posted by the instructor for you to answer. You will also be required to post two substantial responses to your classmates' postings. **"I agree" or "Good job" does not count as a posting!!!** If you have an emergency, contact the instructor immediately or you will be held liable for the missed posting for the week.

**All Students:** For every 1 credit hour per course you should plan to spend a minimum of 3 hours per week studying for that course. For this course you should be spending the equivalent of 2 hours per week of class time and 6 hours per week of study time which equals a minimum of 8 hours per week. (Just remember, pace yourself, and the more you *use the information*, the better you will do!)

**Exams:** There will be Six Unit Exams and a Comprehensive Final. On-line students will be allowed 1.5 hours to take the exam (due to time required for each question to load on blackboard). On-campus students will be given 1 minute per multiple choice question. (The general guideline for the time allowed is 1 minute per multiple choice question and 5 minutes per question for questions requiring calculations.) For example: On a 60 item test you will be allowed 60 minutes in which to complete the exam. Questions may be multiple choice, fill in the blank, matching, labeling, multiple-multiples, or true/false. There are 6 Unit Tests worth 10% each, a total of 60%; Medication sheets as a group are worth 20%, and the final exam is worth 20% of your course grade. Students will be allowed 1.5 hours to complete the final exam. *You will be allowed to bring a single 3 x 5 card with notes front and back to each exam, hand written, not computer generated.*

**On-Line Students:** You may take the exam **one time only**. On-line students 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 the exam, on Thursdays. The Final Exam (for online students) will be taken in the Allied Health Computer Lab: room TBA, and will be proctored. The test will be given on the Thursday of Finals Week. The specific start time will be announced for each online section, and will be enforced.

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, to mark your answers on. 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.

**Medication Sheets:** There are specific medications that you are assigned to write up for most of the chapters. The medication sheets will be graded and will count for 20% of your grade. The medication sheets for each unit are due before the corresponding unit test is scheduled. Any

medication sheets that are turned in after the corresponding unit test is scheduled will receive a grade of “0”. All of the medication sheets must be turned in. Failure to do so will result in an incomplete for the course. Please see the following list of medication sheets that you are required to do for each unit. Your medication sheets must contain the following headings:

- Name of Drug (both generic and brand name – the NCLEX exam will require you to know the generic name for all of the drugs)
- Drug Class
- Indications and Uses (What is the drug used for)
- Usual Adult Dose
- Mechanism of Action (this is how the drug works)
- Pharmacokinetics (where is it absorbed, where is it excreted)
- Major Adverse Effects (these will be in bold, underlined or red in the drug handbooks)
- Contraindications
- Interactions (with other drugs, foods, etc...)
- Nursing Implications (These are the things it is important for the nurse watch out for: observe for in the patient, monitor lab work for, etc.
- Patient Teaching (What are you going to teach your client about this drug: take with a full glass of water, take only at bedtime, may cause nausea....)
- What lab values do you watch

### **MEDICATION SHEET EXAMPLE**

Example of Weekly Assignment: THIS IS ONLY AN EXAMPLE, YOUR MED SHEETS WILL CONTAIN THE ABOVE INFORMATION LISTED BY THE BULLET POINTS

#### **Drug Name (Generic Name & Trade Name)**

- 1) Benzonatate
- 2) Tessalon Perles

#### **Drug Class**

- 1) Antitussive

#### **Indications & Uses**

- 1) Symptomatic relief of cough

#### **Usual Adult Dose**

- 1) PO 100mg TID, not to exceed 600mg/day

#### **Mechanism of Action**

Acts peripherally by anesthetizing the stretch receptors located in the respiratory passages, lungs, and pleura; reduces cough reflex at its source; has no inhibitory effect on the respiratory center in recommended dosage.

#### **Major Side Effects**

Dizziness, drowsiness, headache, chest numbness, rash, nausea, upset stomach, urticaria.

#### **Contraindications**

Hypersensitivity to ester-type local anesthetics.

#### **Nursing Implications**

## **Patient Teaching**

Do not chew or break capsules, will anesthetize mouth  
This is similar to what is expected. This is not meant to be hard. Most of the information is in either your lecture notes or the textbook (DRUG BOOK is excellent source). If you have questions please feel free to contact your instructor by phone or email. Remember, these homework assignments are 20% of your grade.

## **MEDIATION SHEET ASSIGNMENTS BY UNIT:**

### **Unit One (Chapters 1, 2, 4, 5, 6 and 7)**

Morphine, Codeine, Dilaudid, Demerol, Oxycodone, Ultram, Stadol, Nubain, Narcan, Fentanyl, Methadone

### **Unit Two (Chapters 8, 9, 10, 11, 12, and 13)**

Xanax, Librium, Klonopin, Valium, Ativan, Versed, Restoril, Halicon, Buspar, Vistaril, Paxil, Zoloft, Effexor, Ambien, Thorazine, Compazine, Haldol, Elavil, Prozac, Tegretol, Depakene, Wellbutrin, Cymbalta, Neurontin, Dilantin, Levodopa, Lodosyn, Loriseal, Soma, Flexeril, Skelaxin

### **Unit Three (Chapters 14, 15, 17, 18, 19, 20)**

Adderall, Ritalin, Concerta, Strattera, Levophed, Epinephrine, Catapres, Methyldopa, Inderal, Corgard, Trandate, Lopressor, Urecholine, Tensilon, Aricept, Atropine, Pseudoephedrine, Detrol LA

### **Unit Four (Chapters 22, 23, 24, 25, 26, 29, and 30)**

Cortisone, Dexamethasone, Hydrocortisone, Solu-Medrol, Prednisone, Levothyroxine, Humulin R, Humulin N, Humalog, Lantus, Glipizide, Glyburide, Metformin, Avandia, Glucovance, Actos, Amoxicillin, Augmentin, Zosyn, Keflex, Ceftin, Mefoxin, Rocephine, Penicillin

### **Unit Five (Chapters 31, 32, 33, 34, 35, and 36)**

Gentamicin, Tobramycin, Cipro, Levaquin, Floxin, Tetracycline, Doxycycline, Bactrim, Macrobid, Pyridium, Zithromax, Biaxin, Erythromycin, Cleocin, Flagyl, Vancomycin, INH, Rifadine, Famvir, Acyclovir, Zovavir, Valtrex, Tamiflu, Relenza, AZT, Amphotericin B, Diflucan, Monistat, Mycostatin

### **Unit 6 (Chapters 44, 45, 46, 47, 48, 49, 50, and 52)**

Proventil, Albuterol, Xopenex, Atrovent, Aminophylline, Advair, Combivent, Singulair, Nasonex, Flovent, Flonase, Pulmacort, Claritin, Allegra, Zyrtec, Benadryl, Afrin, Robitussin, Mucomyst, Digoxin, Quinidine, Lidocaine, Amniodarone, Cardizem, Adenosine, Nitroglycerine, Procardia, Norvasc, Digoxin, Isosorbide, Metoprolol

**Unit 7 (Chapters 53, 54, 55, 59, 60, 61, and 62)**

Capoten, Vasotec, Cozaar, Altace, Accupril, Zestril, Diovan, Catapres, Atenolol, Coreg, Labetalol, Apresoline, Bumex, Lasix, Hydrpchlorthiazide, Aldactone, Lovenox, Heparin, Coumadin, Plavix, Lipitor, Crestor, Zocor, Niacin, Maalox, Mylanta, Pepcid, Zantac, Protonix, Colace, Lactulose, Metamucil, Dulcolax, Lomotil, Imodium, Phenergan, Reglan, Anzemet, Zofran

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.***

**Special Needs** Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this or any other class at Odessa College, please feel free to contact me to discuss your concerns. You may also call the Office of Disability services at 432-335-6861 to request assistance and accommodations.

### **Learning Resource Center (Library)**

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The Library, known as the [Learning Resources Center](#), provides research assistance via the [LRC's catalog \(print books, videos, e-books\)](#) and [databases \(journal and magazine articles\)](#). [Research guides](#) covering specific subject areas, [tutorials](#), and the "[Ask a Librarian](#)" service provide additional help.

### **Student E-mail**

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Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

### **Student Portal**

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Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

### **Technical Support**

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For Blackboard username and password help and for help accessing your online course availability and student email account contact the Student Success Center at 432-335-6878 or online at [https://www.odessa.edu/dept/ssc/helpdesk\\_form.htm](https://www.odessa.edu/dept/ssc/helpdesk_form.htm).

### **Important School Policies**

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For information regarding student support services, academic dishonesty, disciplinary actions, special accommodations, or student's and instructors' right to academic freedom can be found in the [Odessa College Student Handbook](#).