LOS ANGELES COUNTY COLLEGE OF NURSING AND ALLIED HEALTH
School of Nursing

Nursing 111:

NURSING PHARMACOLOGY

Fall 2022

COURSE TITLE:	**N111 Nursing Pharmacology**
PRE-REQUISITES:	Acceptance into the Nursing Program
UNITS:	1 Unit
HOURS:	3 hours per week
LENGTH:	7 Weeks
PLACEMENT:	Semester 1
CONCURRENCY:	All semester theory courses are taken concurrently with the clinical courses.
COURSE DESCRIPTION:	This is an introductory course designed to serve as a foundation for the integration of pharmacology content into subsequent nursing courses. The student is introduced to the general aspects of drug standards, legislation, action, and classification necessary to understand the role of drug therapy in the management of clients with common health problems. The major classifications of drugs studied are fluid and electrolytes, antihypertensives, anti-inflammatory and pain management agents, antineoplastics, drugs affecting the respiratory system and to treat Tuberculosis. The nurse's role and responsibility related to safe administration of drugs, including standard methods of dosage calculation, are emphasized throughout this course.
COURSE OBJECTIVES:	Upon satisfactory completion of the course, the student will: 1. Discuss the nursing process in understanding the mechanism of action, therapeutic dose, indications, adverse reactions, and nursing implications of selected pharmacologic agents for safe patient-centered care of individuals with common health problems. 2. Identify the electronic drug resources and references to communicate basic concepts in pharmacology and regulations guiding the safe standards of medication administration. 3. State the collaborative relationships with healthcare providers to promote safe medication administration. 4. Discuss the legal/ethical implications of medication administration to improve quality of care for individuals with common health problems. 5. Identify the responsibilities of the nurse in decision-making for safe medication administration.

6. Identify the educational needs, teaching methodologies, and evidence-based practice on medication administration for individuals with common health problems.

7. Acknowledge the value of sociocultural variations of individuals with common health problems in relation to practices and beliefs about medications.

STUDENT LEARNING OUTCOME: Students competently identify the integration of pharmacological knowledge in the delivery of nursing care to clients receiving medications.

TEACHING METHODS: Discussion, case studies, computer-assisted instruction, computer adaptive learning, handouts, and lectures.

METHOD OF EVALUATION: Students attain an overall cumulative score of 70% or higher on examinations and quizzes indicating attainment of student learning outcome.

<u>Grade is calculated from:</u>

3 exams consisting of 50 questions each
- Exam 1: 32% of total grade
- Exam 2: 32% of total grade
- Final Exam: 32% of total grade

4 Adaptive Learning assignments: 4%
- No late assignments will be accepted.

GRADING SCALE: The percentage grading scale is used as the method of scoring and determining final grade in course (See the student handbook on grading policy).

COURSE EVALUATION: Evaluation of the course is mandatory for all students. Course grade will be withheld until the course evaluation is submitted electronically. Instructions will be given towards the end of the course.

REQUIRED READING:

Frandsen, G. & Pennington, S. S. (2021). *Abrams' clinical drug therapy: Rationales for nursing practice* (12th ed.). Wolters Kluwer.

Hinkle, J. L., Cheever, K. H., & Overbaugh, K.J. (2022). *Brunner & Suddarth's Textbook of Medical-Surgical Nursing* (15th ed.). Wolters Kluwer.

Taylor, C., Lynn, P., Bartlett, J. L. (2019). *Fundamentals of nursing: The art and science of person-centered nursing care* (9th ed.). Wolters Kluwer.

How to Access Lippincott CoursePoint+:

1. If you do not already have access to Lippincott CoursePoint+ for Frandsen & Pennington: Abrams' Clinical Drug Therapy: Rationales for Nursing Practice, Twelfth Edition, redeem your **ACCESS CODE** and complete registration at http://thePoint.lww.com/activate.

2. From the **"My Content"** page, click on Lippincott CoursePoint+ for Frandsen & Pennington: Abrams' Clinical Drug Therapy: Rationales for Nursing Practice, Twelfth Edition.

3. On the welcome screen or from **"My Classes"**, select **"Join a Class"**, enter your **CLASS CODE**: **C6865219** and click **"Enroll".**

If you experience any problems, check the code again and re-enter it. If it does not work, contact Lippincott Online Product Support at 1-800-468-1128 or techsupp@lww.com for assistance.

Not sure what an **ACCESS CODE** is?
Learn more at http://thepoint.lww.com/Help/BookAccess.

LAC+USC Medical Center Protocols and Policies

General Medication Policy
Nursing Policy #900

Black Box Warning Medication Administration
Nursing Policy #909

Medication Reconciliation
Medical Center Policy #721

High Alert Medications
Nursing Policy #910

High Alert Medications Requiring Independent Double Check Verification – Nursing Policy #910-A

Intravenous Therapy
Nursing Policy #911

Allergy and Adverse Drug Reactions (documentation)
Nursing Policy #927

(**Note:** To access the LAC+USC Medical Center Nursing Clinical Standards and Policies log on to the LAC+USC Intranet; click on Reference Materials, then click on Policy & Procedure Portal then:

- **For Nursing Clinical Standards** (aka Protocols) click the plus sign next to Nursing Clinical Standards. Then click Nursing Clinical Standards. Use the drop-down menu to choose the desired clinical standard (Protocol).

- **For Nursing Standardized Procedures** click on the plus sign next to **Nursing Standardized Procedures** and use the drop-down menu to click on desired standardized procedure.
- **For Nursing Policies** click on the plus sign next to "Nursing Policy Manuals" and use the drop-down menu to click on desired Nursing Policy.

All academic policies are strictly enforced.

For any conflict or issue, students must first meet with their respective instructor to discuss a solution. If issue is not resolved, students must adhere to the appropriate chain of command, starting with the Semester Coordinator, SON Dean, then Provost.

Unit Title: Introduction to Drug Therapy		
Objectives	**Content Outline**	**Student Activities**
A. Discusses basic concepts of pharmacology related to competent nursing practice. 1. Defines the following terms: • Pharmacology • Generic names • Trade names • Pharmacokinetics • Pharmacodynamics • Adverse reaction • Toxic effects 2. States the pharmacokinetics of drug actions in relation to absorption, distribution, metabolism, and excretion to include: • Effects of protein binding on drug absorption, distribution, metabolism, and elimination • Side effects, adverse reactions, and drug toxicity • Peak and trough drug levels	A. Concepts of pharmacology: 1. Definitions • Pharmacology • Pharmaceutic phase of drug action • Pharmacokinetic phase of drug action • Pharmacodynamic phase of drug action 2. Basic concepts/process • Absorption • Distribution • Metabolism • Excretion • Other considerations « Side effects « Adverse reactions « Drug toxicity « Drug levels	**Required Reading:** Frandsen, G. & Pennington, S. S., Chapter 1, pp. 1-12, Chapter 2, pp. 15-33. **Adaptive Learning assignment:** *CoursePoint+ PrepU* Chapter 2: Basic Concepts and Processes **References:** –Nursing Policy #909: Black Box Warning –Nursing Policy #721: Medication Reconciliation –Medical Center Policy #910: High Alert Medications

Unit Title: **Introduction to Drug Therapy (Cont'd)**

Objectives	Content Outline	Student Activities
B. Discusses drug standards and regulations guiding nursing practice related to drug administration. 1. States the purpose and function of the FDA 2. Describes federal legislation regarding medications 3. Describes the schedules for controlled substances.	B. Legal/ethical: Accountability in medication administration: 1. FDA • Purpose • Function 2. Federal legislation • Federal Food, Drug, and Cosmetic Act 3. Controlled Substance Act • Regulation of controlled substances • Nursing interventions • Schedule categories of controlled substances « Schedule I ▪ Non-medical use « Schedule II ▪ High drug abuse potential « Schedule III ▪ Dependence risk < Schedule I & II « Schedule IV ▪ May cause dependence « Schedule V ▪ Very limited potential for dependence	

Unit Title: **Introduction to Drug Therapy (Cont'd)**		
Objectives	**Content Outline**	**Student Activities**
4. Identifies the legal/ethical responsibilities of the nurse related to safe drug administration	4. Nurse Practice Acts • Laws regarding drug administration • Legal terms « Misfeasance « Nonfeasance « Malfeasance • Drug Names « Generic « Trade	
C. Identifies common drug resources/reference books.	C. Drug Information Resources: 1. References • Nursing Drug Guides • Online Sites • Smartphone Applications 2. Black Box Warning 3. High Alert Medications	
D. Review of the medication reconciliation process. 1. Define the term "Medication Reconciliation" 2. State the purposes of a Medication Reconciliation Policy 3. Summarize the Medication Reconciliation Policy, inclusive of the five steps that are designated to actualize this process	D. Joint Commission involvement and recommendations for medication reconciliation: 1. Definition of Medication Reconciliation 2. State the rationale for recommendation to instate medication reconciliation 3. LAC+USC Medication Reconciliation Policy (#721)	

Unit Title: Nursing Process in Medication Administration		
Objectives	**Content Outline**	**Student Activities**
A. Identifies the use of the nursing process in relation to drug therapy. 1. Discusses the importance of the assessment step in client teaching. 2. Describes common patient problems related to drug therapy. 3. Recognizes the significance of the planning step in assisting the client in drug therapy. 4. Outlines the format for effective client teaching in the implementation step. 5. Discusses the importance of the evaluation step in client teaching. 6. Identifies guidelines for successful teaching sessions.	A. Nursing process in medication administration: • Applying QSEN competencies to medication administration 1. Assessment: Nurse's physical examination of client, including: • Monitor lab values • Diagnostic studies 2. Patient problems: Accurate identification of potential problems based on assessment data. 3. Planning: Characterized by goal setting or establishing expected outcomes of clients. 4. Interventions & Implementation: Key nursing responsibilities are client education, administration of medications, & assessment of medication effectiveness. 5. Evaluation: To determine effectiveness of health teaching and goal attainment. 6. Teaching tools.	**<u>Required Reading:</u>** Frandsen, G. & Pennington, S. S., Chapter 3, pp. 35-51, 53-66.

Unit Title: **Nursing Process in Medication Administration (Cont'd)**		
Objectives	**Content Outline**	**Student Activities**
B. Identifies effective teaching principles for individuals about safe, effective use of medications. 1. Identifies three (3) components of general information included in client teaching. 2. States the essential information needed to teach clients about drug therapy and safe self-administration of medications. 3. Describes the nurse's role in teaching clients about home safety. 4. Identifies possible pharmacodynamic interactions. 5. Identifies pediatric and older adult considerations.	B. Client and family teaching for safe drug administration in a home setting: 1. General information • Importance of compliance • OTC medications/herbal products • Importance of lab tests 2. Essential information • Proper technique/asepsis • Self-administration • Diet based on specific drug therapy • Side effects/adverse reactions • Cultural considerations • Evaluation 3. Home safety: • Proper storage • Proper disposal • Poison Control Centers • Other resources (pharmacist) 4. Possible pharmacodynamic interactions; client teaching • Drug-food interaction • Drug-laboratory interaction • Drug-induced photosensitivity 5. Pediatric and Older Adult Considerations	

Unit Title: Fluids and Electrolytes, Nutrition		
Objectives	**Content Outline**	**Student Activities**
A. Discusses the nursing process in the promotion and maintenance of system stability related to vitamin and mineral uses. 1. Identifies the following characteristics of vitamins and minerals: • Pharmacokinetics • Pharmacodynamics • Therapeutic uses • Indication for use • Route and dosage range • Mechanism of action • Interactions with medications • Contraindications and adverse effects • Nursing assessment and interventions • Client education 2. Discusses the nursing responsibilities as they relate to the administration of vitamins and minerals.	A. Promoting and maintaining system stability in individuals receiving vitamins and minerals: 1. Effects of pharmacokinetics and pharmacodynamics of nutrients in: • Fat soluble vitamins « Vitamin A « Vitamin D « Vitamin E « Vitamin K • Water soluble vitamins « Vitamin B_1, B_2, B_3, B_6, B_{12} « Folate (folic acid) « Vitamin C • Effects of age on pharmacokinetics and pharmacodynamics of nutrients in: « Children « Elderly 2. Nursing responsibilities: • Signs/symptoms of deficiency/excess • Causes of deficiency/excess • Sources of vitamins/minerals • Client education	**<u>Required Reading</u>**: Frandsen, G. & Pennington, S. S., Chapter 35 Chapter 44 Hinkle, J.L., Cheever, K.H., & Overbaugh, K.J., Chapter 10, pp. 224-258, 264-270. Chapter 41, pp. 1313-1318

Unit Title: Fluids and Electrolytes, Nutrition (Cont'd)		
Objectives	**Content Outline**	**Student Activities**
B. Identifies the educational needs of clients on vitamin and mineral therapy with regards to dietary considerations and dosing. 1. Explains the usage of, chromium, selenium copper, iodine, zinc, and iron. 2. Identifies treatment for iron deficiency 3. Describes interactions between iron and some food and drugs 4. Discusses effects of excess states of iron and chelating agents used to remove excessive copper, iron, and lead from the body.	B. Education needs regarding vitamin/mineral therapy: 1. Minerals: chromium, selenium, copper, iodine, zinc, and iron • Characteristics • Function • Food sources • Signs/symptoms of deficiency/excess • Treatment • Contraindications • Complications 2. Medications used to treat iron deficiency • Ferrous gluconate • Ferrous sulfate • Iron dextran • Iron sucrose 3. Interactions with iron • Antacids • Tetracycline • Vitamin C • Dairy products • Herbs: St. John's Wort, Feverfew 4. Excess states of iron • Iron poisoning (acute) • Hemochromatosis (chronic) • Chelating agents «Penicillamine «Succimer «British Anti-Lewisite (BAL) «Deferoxamine/Deferasirox	

Unit Title: Fluids and Electrolytes, Nutrition (Cont'd)		
Objectives	**Content Outline**	**Student Activities**
C. Applies the nursing process in understanding mechanism of action, therapeutic dose, indications, adverse reactions, and nursing implications in the maintenance of system stability. 1. Defines fundamental terminology related to IV fluids 2. Discusses and identifies the osmolar states of intravenous solution. 3. Identifies the purpose and client/disease-related considerations of the various intravenous solutions. 4. Identifies medications and their purposes used in intravenous infusions. 5. Identifies assessment needs during administration and adverse reactions of the various intravenous infusions and their additives.	C. Actions, doses, indications, adverse reactions, and nursing implications of fluids: 1. Definitions • Osmosis • Osmotic pressure • Osmolality • Osmolarity • Tonicity • Ion • Electrolyte 2. Osmolar states of fluids in relationship to serum • Isotonic • Hypotonic • Hypertonic 3. Considerations for IV fluid replacement • NPO status • Fluid/electrolyte • Fluid, caloric, protein needs • Illness/surgery 4. Classifications of intravenous solutions • Crystalloids • Colloids • Blood and blood products • Lipids 5. Assessment needs • Vital signs	

Unit Title: Fluids and Electrolytes, Nutrition (Cont'd)		
Objectives	**Content Outline**	**Student Activities**
6. Identifies the purpose of blood and blood product transfusions. 7. Discusses the role of hyperalimentation, lipids, and enteral feedings. 8. Identifies assessments and interventions for adverse reactions during feedings. D. Discusses age considerations for intravenous infusions. E. Discusses the legal/ethical implications of drug administration for individuals with common health problems and their families.	• Whole blood • Packed red blood cells (PRBC) • Plasma & Platelets • Albumin 6. Blood and blood products • Whole blood • Packed red blood cells (PRBC) • Plasma & Platelets • Albumin 7. Hyperalimentation (PPN/TPN) • Lipids • Enteral feedings. 8. Adverse reactions D. Geriatric and pediatric populations E. Legal/ethical implications of IV therapy: 1. Protocols and Procedures 2. RN responsibilities	

Unit Title: Fluids and Electrolytes, Nutrition (Cont'd)		
Objectives	**Content Outline**	**Student Activities**
F. Identifies the implementation of the nursing process in the promotion and maintenance of system stability. 1. Describes signs, symptoms, and lab values of sodium, potassium, chloride, magnesium, calcium, and phosphorus imbalances. 2. Discusses the treatments used to correct sodium, potassium, chloride, magnesium, calcium, and phosphorus deficiency and excess.	F. Promoting system stability related to fluid & electrolyte imbalances: 1. Electrolyte function, food source, and normal serum levels • Sodium • Potassium • Chloride • Magnesium • Calcium • Phosphorus 2. Treatment of electrolyte imbalances • Medical interventions • Nursing assessments and interventions	

Unit Title: Anti-inflammatory and Pain Management Agents		
Objectives	**Content Outline**	**Student Activities**
A. Applies the nursing process in determining the mechanism of action, therapeutic dose, indications, adverse reactions, and nursing implications of selected drugs used to reduce pain, inflammation, and fever. 1. Discusses the role of prostaglandins in etiology of pain, fever, and inflammation. 2. States pharmacodynamics of aspirin and nonsteroidal anti-inflammatory drugs with consideration for the elderly and young children. 3. Differentiates among antiplatelet, analgesic, and anti-inflammatory effects of aspirin. 4. Compares and contrast aspirin, other NSAIDS, and acetaminophen.	A. Anti-inflammatory, Fever reducing and Pain management agents: • Mechanism of action • Therapeutic dose • Indications • Adverse Reaction • Nursing Implication 1. Role of prostaglandins • Pain • Fever • Inflammation 2. NSAIDS and Aspirin • Pharmacodynamics • Age-related consideration 3. Aspirin • Antiplatelet • Analgesic • Anti-inflammatory 4. Compare and contrast: • Aspirin • Other Nonsteroidal Anti-Inflammatory Drugs: « Propionic Acid Derivatives « Oxicam Derivatives « Acetic Acid Derivatives « Selective COX-2 Inhibitors • Antigout Medications « Mitotic agents	**Required Reading:** Frandsen, G. & Pennington, S. S., Chapters 16, 49, & 54. **Adaptive Learning assignment**: *CoursePoint+ PrepU* Chapter 49: Drug Therapy with Opioids Suggested Reading: Hinkle, J.L., Cheever, K.H., & Overbaugh, K.J., Chapter 9, 196 - 223

Unit Title: **Anti-inflammatory and Pain Management Agents (Cont'd)**		
Objectives	**Content Outline**	**Student Activities**
B. Applies the nursing process in determining the mechanism of action, therapeutic dose, indications, adverse reactions and nursing implications of selected drugs affecting the central nervous system.	B. Drugs affecting the central nervous system • Mechanism of action • Therapeutic dose • Indications • Adverse reactions • Nursing implications	
1. Differentiates between agonist and antagonists.	1. Differentiate between agonist and antagonist	
2. Discusses possible side effects, adverse reactions, and contraindications of opioid use.	2. Opioids • Side effects • Adverse reactions • Contraindications	
3. Discuss the pharmacodynamics and pharmacokinetics of the following drug categories. • Opioid agonists • Opioid agonist-antagonists • Opioid antagonists	3. Pharmacodynamics and Pharmacokinetics for the following drug categories: • Opioid Analgesics (Agonists) • Opioid Agonists/Antagonists • Opioid Antagonists	
4. Explains why higher dosage of opioid analgesics is required when the drug is given orally.	4. Higher doses of oral opioid analgesics	
5. Discusses the role of the nurse in assessing pain and the effects of opiates.	5. Nursing implication in assessing pain and the effects of opioids	
6. Identifies signs and symptoms of opioid overdose and withdrawal and the treatment of each.	6. Opioid Overdose and Withdrawal • Signs and symptoms • Overdose treatment • Withdrawal treatment • Methadone programs	

Unit Title: **Anti-inflammatory and Pain Management Agents (Cont'd)**		
Objectives	**Content Outline**	**Student Activities**
7. States the definition and purpose for procedural/conscious sedation. 8. Reviews the nursing responsibilities for client care before, during and after the conscious sedation procedure. 9. Explains the rationale for use of patient-controlled analgesia (PCA).	7. Procedural/Conscious (Moderate) Sedation definition and purpose 8. Nursing implications: Procedural/Conscious (Moderate) Sedation 9. PCA- Patient Controlled Analgesia • Purpose	
C. Discusses the legal/ethical implications of drug administration with common health problems in relation to administering narcotics. 1. Identifies populations at risk for opioid addiction or abuse including the elderly. 2. Reviews the nursing responsibilities for the administration of opioid analgesics.	C. Legal-ethical implications in drug administration: 1. Opiate addiction or abuse 2. Nursing responsibilities	
D. Identifies the educational needs and teaching methodologies regarding drugs and drug implications for effective use of opioid analgesics, acetaminophen, and anti-inflammatory drugs, to include the elderly population.	D. Client teaching including discussion about the effects of polypharmacology: 1. Safe use 2. Effective use 3. Monitor for interactions between drugs.	
E. Discusses the use of benzodiazepines and nonbenzodiazepine sedative-hypnotics on the central nervous system.	E. Benzodiazepines and Nonbenzodiazepines Sedative-hypnotics	

Unit Title: Antihypertensives		
Objectives	**Content Outline**	**Student Activities**
A. Applies the nursing process in determining the mechanism of action, therapeutic dose, indications, adverse reactions, and nursing implications of antihypertensive drugs. 1. Discusses pharmacologic treatments for hypertension including the major considerations in using antihypertensive therapy with elderly clients and children. 2. Summarizes the rationale for using combination drugs in the treatment of hypertension. 3. Explains how the blood pressure can be reduced with the use of: • Angiotensin-Converting Enzyme Inhibitors • Angiotensin II Receptor Blockers • Calcium Channel Blockers • Alpha and Beta-Adrenergic Blockers • Vasodilators 4. Discusses how the blood pressure can be reduced with the use of diuretic therapy: • Loop diuretics, • Thiazide, Potassium Sparing Diuretics, Osmotic Diuretics.	A. Antihypertensive Drugs 1. Pharmacologic treatment for hypertension: • Medications • Major considerations in using antihypertensive therapy with elderly clients and children • Lipid studies: Normal Levels: Cholesterol, Triglyceride, HDL, LDL 2. Rationale for using combination drug therapy in treatment of hypertension. 3. Pharmacodynamics/pharmacokinetics of the following drugs: • Angiotensin-Converting Enzyme Inhibitors • Angiotensin II Receptor Blockers • Calcium Channel Blockers • Alpha-Adrenergic Blockers • Beta-Adrenergic Blockers • Vasodilators 4. Pharmacodynamics and Pharmacokinetics of Diuretics: • Loop • Thiazide • Potassium Sparing • Osmotic • Lab test monitoring for diuretic therapy serum electrolytes	**Required Reading**: Frandsen, G. & Pennington, S.S., Chapter 26 Chapter 34 **Adaptive Learning assignment**: *CoursePoint+ PrepU* Chapter 26: Drug Therapy for Hypertension

Unit Title: **Antihypertensives (Cont'd)**		
Objectives	**Content Outline**	**Student Activities**
5. States how adverse effects of antihypertensive drugs can be minimized or prevented. 6. Outlines the contents of a teaching plan for a client newly diagnosed with hypertension. 7. States interventions by the various health care providers that may help hypertensive clients adhere to their treatment regimens.	5. Minimizing and preventing side effects of antihypertensive drug therapy 6. Nursing process implication for antihypertensive drug therapy including teaching plan: • Assessment • Nursing Diagnoses • Planning/Goals • Intervention • Evaluation 7. Interventions from health team collaboration	

Unit Title: Drugs Used to Treat Respiratory Infection: Tuberculosis		
Objectives	**Content Outline**	**Student Activities**
A. Discusses the nursing implications of selected drugs used to treat tuberculosis. 1. Identifies the following categories for all tuberculin medications: • Pharmacokinetics • Pharmacodynamics • Therapeutic uses • Indication for use • Route and dosage range • Mechanism of action • Contraindications • Adverse effects • lab values • Nursing assessment • Nursing intervention • Client education	A. Nursing implications of selected antitubercular drugs: • Isoniazid • Rifampin • Pyrazinamide • Ethambutol • Drug Combinations: « First-Line « Second-Line • Strategies to increase adherence to antitubercular drug regimens 1. Identifies the following categories for all tuberculin medications: • Pharmacokinetics • Pharmacodynamics • Therapeutic uses • Indication for use • Route and dosage range • Mechanism of action • Contraindications • Adverse effects • lab values • Nursing assessment • Nursing intervention • Client education	**<u>Required Reading</u>**: Frandsen, G. & Pennington, S. S., Chapter 22, pp. 407-424.

Unit Title: Drugs Affecting the Respiratory System		
Objectives	**Content Outline**	**Student Activities**
A. Discusses the nursing process and the nursing implications of selected drugs affecting the respiratory system. 1. Discusses the following characteristics of all respiratory medications: • Pharmacokinetics • Pharmacodynamics • Therapeutic uses • Indication for use • Route and dosage range • Mechanism of action • Contraindications • Adverse effects (including lab values) • Nursing assessment • Nursing intervention • Client education 2. Discusses drugs used to decrease histamine and allergic response. • Nasal decongestants • Antitussives • Expectorants • Mucolytics • Antihistamines	A. Nursing implications and the nursing process related to selected respiratory drugs: 1. Common characteristics of all respiratory Medications • Pharmacokinetics • Pharmacodynamics • Therapeutic uses • Indication for use • Route and dosage range • Mechanism of action • Contraindications • Adverse effects (including lab values) • Nursing assessment • Nursing intervention • Client education 2. Common drugs used to decrease histamine and allergic response • Drug Therapy for Nasal Congestion and Cough: « Nasal decongestants « Antitussives « Expectorants « Mucolytics	**<u>Required Reading</u>**: Frandsen, G. & Pennington, S. S., Chapter 31 Chapter 32 Chapter 33. **<u>Adaptive Learning assignment</u>**: *CoursePoint+ PrepU* Chapter 33: Drug Therapy for Asthma and Bronchoconstriction

Unit Title: Drugs Affecting the Respiratory System (Cont'd)		
Objectives	**Content Outline**	**Student Activities**
3. Discusses the following classifications and characteristics of medications used to treat asthma, airway inflammation, and bronchoconstriction: • Adrenergics • Anticholinergics • Xanthines • Corticosteroids • Leukotriene Modifiers • Immunosuppressant monoclonal antibodies • Mast Cell Stablizers	• Drug Therapy to decrease histamine effects « First-generation H_1 receptor antagonists « Second-generation H_1 receptor antagonists « Third-generation H_1 receptor antagonists 3. Common Drugs used to treat asthma, airway inflammation, and bronchoconstriction: • Adrenergics • Anticholinergics • Xanthines • Corticosteroids • Leukotriene Modifiers • Immunosuppresant monoclonal antibodies • Mast Cell Stabilizers	

Unit Title: Drugs Affecting the Respiratory System (Cont'd)		
Objectives	**Content Outline**	**Student Activities**
4. Discusses the use of asthma drugs according to severity and age. 5. Discusses the educational needs of clients who use the aerosol inhaler (MDI and DPI) to promote self-care.	4. Asthma Drugs according to age and severity 5. Educational needs of clients who use the aerosol inhaler (MDI and DPI)	

Unit Title: Drugs Affecting the Immune System: Antineoplastic		
Objectives	**Content Outline**	**Student Activities**
A. Applies the nursing process in determining the mechanism of action, therapeutic dose, indications, adverse reactions, and nursing implications of drugs antineoplastic/oncology treatments. 1. Defines the terms antineoplastic and oncology. 2. Discusses the characteristics of cytotoxic antineoplastic drugs. 3. Discusses rationales for using combination chemotherapy drugs. 4. Describes the effects of the following drugs on cancer cells and normal cells during treatment: • Cytotoxics • Alkalating agents • Antimetabolites • Antitumor antibiotics • Plant alkaloids 5. Plans interventions for chemotherapy side effects and complications: Chemotherapy-induced nausea and vomiting, anorexia, fatigue, alopecia, mucositis, infection, bleeding, hyperuricemia, extravasation	A. Nursing implications and the nursing process related to selected antineoplastic drugs: 1. Terminology: Antineoplastic, oncology 2. Characteristics of cytotoxic antineoplastic drugs 3. Rationales for using combination chemotherapy drugs 4. Pharmacodynamics/pharmacokinetics of drugs: • Cytotoxics • Alkylating Agents • Antimetabolites • Antitumor antibiotics • Plant alkaloids 5. Interventions for chemotherapy side effects and complications: • Antiemetics • Colony-stimulating factors	**<u>Required Reading</u>**: Frandsen, G. & Pennington, S. S., Chapter 14.

Unit Title: **Drugs Affecting the Immune System: Antineoplastic (Cont'd)**

Objectives	Content Outline	Student Activities
6. Discusses adverse effects of cytotoxic chemotherapy agents and its management.	6. Common adverse effects and its management: « Alopecia « Anemia « Bleeding « Fatigue « Mucositis « Nausea/vomiting/diarrhea « Neutropenia « Myelosuppression « Thrombocytopenia « Damage to the heart, liver, lungs, kidneys, or nerves	
7. Summarizes guidelines for handling cytotoxic antineoplastic drugs.	7. Guidelines for handling cytotoxic neoplastic drugs	
8. Lists the adjuvant medications used to treat cancer.	8. Adjuvant medications: • Biologic antineoplastic drugs • Antineoplastic hormone inhibitor drugs • Cytoprotectant drugs	
9. Discusses the use of cytotoxic agents in children, older adults, and patients with renal and hepatic impairment.	9. Use of cytotoxic agents: • Children • Older adults • Patients with renal and hepatic impairment	