

Lakeview College of Nursing
N322 Basic Concepts of Pharmacology

Course Concepts: Syllabus review, introduction to pharmacology, key terms in chapter readings, drug naming/sources, drug laws/approval, category of controlled substances, culture of safety (drug administration), medication errors/prevention, legalities, documentation do's/don'ts/tall man letters, high alert medications & safety hand-out, pharmacokinetics: absorption, distribution, metabolism, excretion, drug levels, half-life, drug/patient variables, black box warnings & toxicology, routes of administration. Drugs for cholesterol: which includes the following: drugs for dyslipidemia, HMG-CoA reductase inhibitors, bile acid sequestrants, fibrates, cholesterol absorption inhibitors. Pharmacokinetics of drug classes listed. Uses of drug classes listed. Adverse effects of drug classes listed. Nursing implications of drug classes listed. Drugs for hematology: which includes the following pharmacological classes: anticoagulants, direct thrombin inhibitors, anti-platelets, aspirin, and thrombolytic drugs. Pharmacokinetics of drug classes listed. Uses of drug classes listed. Adverse effects of drug classes listed. Nursing implications of drug classes listed. Anecdotes.

Course Learning Outcomes (CLOs):

1. Apply knowledge of pathophysiology to identify appropriate drug therapies.
2. Explain the therapeutic and side effects of selected drugs for each major classification with a focus on high-alert drugs and patient safety.
3. Describe the effects of common drug-drug, drug-food, and drug-herb interactions in patients across the lifespan.
4. Use dosage calculation skills to accurately calculate oral and parenteral dosages for patients across the lifespan.
5. Identify evidence-based nursing assessments and interventions associated with administering drug therapy.

Week	Unit Concept	Weekly Student Outcomes	Required Readings	Teaching methods/ Classroom Activities	Lab/ Sim Activities	Evaluation Method
One	<ul style="list-style-type: none"> • Review Syllabus • Intro to Pharmacology • Key Terms listed in Chapter readings • Drug naming/sources • Drug Laws/Approval • Category of Controlled Substances • Culture of Safety (Drug Administration), medication errors/prevention, legalities • Documentation Do's/Don'ts/Tall man letters • High Alert Medications & Safety Hand-outs • Pharmacokinetics: Absorption, Distribution, Metabolism, Excretion. • Drug levels, Half-life, Drug/Patient Variables 	<ul style="list-style-type: none"> • Summarize the key concepts composing the introduction to pharmacology. (CSLO #1) • Identify the key components of pharmacology for nurses that are critical to safe and effective medications delivery. (CSLO #1,2,3,5) • Discuss the 5 rights of medication administration and articulate the importance of each right and the consequences of failure to follow the 5 rights. (CSLO #5) • Define and review pharmacokinetics and explain each process involved including 	<p>Abrams' Clinical Drug Therapy: Rationales for Nursing Practice: Chapters: 1, 2, 3, 9, 11</p> <p>Recommended Extra Learning: ATI RN Pharmacology for Nursing Chapters: 1, 2, 3, 4, 5, 6, 25, 27</p>	<p>PowerPoint Lecture & Discussion</p> <p>Medication Calculation Worksheet - Practice</p> <p>Kahoot - Intro to Pharm</p> <p>ATI Intro to Pharm Activity</p> <p>Polypharmacy and rubric</p>		<p>Class Participation</p> <p>Signed copy of academic integrity statement/syllabus/ Handbook acknowledgment per syllabus due dates</p> <p>Four ATI Assignments due per syllabus due</p>

	<ul style="list-style-type: none"> • Black Box Warnings & Toxicology • Routes of Administration <p><u>Drugs for Hematology</u> Pharmacological Classes in these readings</p> <ul style="list-style-type: none"> • Anticoagulants (Heparin, Warfarin, Lepirudin) • Direct Thrombin Inhibitors (Xarelto) • Anitplatelets (clopidogrel) • Aspirin • Thrombolytic Drugs (Alteplase) <p>-Pharmacokinetics of drug classes listed -Uses of drug classes listed -Adverse Effects of Drug classes listed -Nursing implications of Drug classes listed</p> <ul style="list-style-type: none"> • Anecdotes (Vitamin K, Protamine sulfate)lecture, separate the days like shown. 	<p>the major organs and discuss their individual roles. (CSLO #1,2,5)</p> <ul style="list-style-type: none"> • Define and review situations that can increase or decrease the pharmacokinetic process. Discuss how dosage, route, diet, and other medications can affect drug actions. (CSLO #3,5) • Discuss the legal responsibilities of medication administration and how it applies to the nursing process. (CSLO #5) • Compare the advantages and disadvantages of oral, parenteral, and topical routes of medication administration. (CSLO #2,3,5) • Name the classifications for hematology medications. (CSLO #2) • Match hematology medications into the appropriate drug classifications. (CSLO #2) • Recall the mechanisms of action and indications for use of hematology medications. (CSLO #1,2) • Identify common dosages and routes of administration for hematology medications.(CSLO #1,2) • Explain the most common, potential side effects, adverse reactions, and contraindications of hematology medications. (CSLO #2,3) • Identify the essential nursing implications and interventions 		<p>reviewed and assigned</p> <p>Discussion of Handouts: Suffixes, High Alert Meds, Abbreviations, Tall Man Letters</p> <p>Kahoot - Coagulation Disorders Key Terms</p> <p>Kahoot - Drug Therapy for Coagulation Disorders</p> <p>Dosage Calculation Time-Out / Lovenox</p> <p>ATI Hematologic System Case Study</p>		<p>dates</p> <p>Medication Math Quiz 1</p>
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for hematology medications.
(CSLO #1,2,3,4,5)

- Determine the core patient education necessary for patients taking hematology medications.
(CSLO #1,2,3,5)

Course Concepts: Cardiac drugs: which includes the following: cardiac glycosides, phosphodiesterase inhibitors, human b-type natriuretic peptides, adjuvant medications, thiazide diuretics, loop diuretics, potassium sparing diuretics, as well as nitropruss, angiotensin-converting enzyme inhibitors, angiotensin II receptor blockers, beta-adrenergic blockers, aldosterone antagonists, class IA sodium channel blockers, class IB sodium channel blockers, class III potassium channel blockers, class IV calcium channel blockers, unclassified anti-dysrhythmic drugs, organic nitrates, beta-adrenergic blockers, calcium channel blockers, metabolic modulators, adrenergic drugs, angiotensin-converting enzyme inhibitors, angiotensin receptor blockers, anti-adrenergic, alpha antagonists, beta-adrenergic, and alpha-beta adrenergic blockers. Pharmacokinetics of drug classes listed. Uses of drug classes listed. Adverse effects of drug classes listed. Nursing implications of drug classes listed.

Course Learning Outcomes (CLOs):

1. Apply knowledge of pathophysiology to identify appropriate drug therapies.
2. Explain the therapeutic and side effects of selected drugs for each major classification with a focus on high-alert drugs and patient safety.
3. Describe the effects of common drug-drug, drug-food, and drug-herb interactions in patients across the lifespan.
4. Use dosage calculation skills to accurately calculate oral and parenteral dosages for patients across the lifespan.
5. Identify evidence-based nursing assessments and interventions associated with administering drug therapy.

Week	Unit Concept	Weekly Student Outcomes	Required Readings	Teaching methods/ Classroom Activities	Lab/ Sim Activities	Evaluation Method
Two	<p>Cardiac Drugs - Pharmacological Classes in these readings</p> <ul style="list-style-type: none"> • Cardiac Glycosides (Digoxin) • Phosphodiesterase Inhibitors (Milrione lactate) • Human B-Type Natriuretic Peptides (Nesiritide) • Adjuvant Medications(Vasotec, Cozaar, Inderal, ALdactone) • Thiazide diuretics (HCTZ), Loop (Lasix) • Potassium Sparing (Spironolactone), Other (Nitropruss) • Angiotensin-Converting Enzyme Inhibitors (enalapril/vasotec) • Angio-tension II receptor blockers (Losartin) • Beta-Adrenergic Blockers (Propranolol) • Aldosterone antagonists (Spirinolcatone) • Class IA Sodium channel blockers (quinidine) 	<ul style="list-style-type: none"> • Name the classifications for cardiac medications. (CSLO #2) • Match cardiac medications into the appropriate drug classifications. (CSLO #2) • Recall the mechanisms of action and indications for use of cardiac medications. (CSLO #1,2) • Identify common dosages and routes of administration for cardiac medications. (CSLO #1,2) • Explain the most common, potential side effects, adverse reactions, and contraindications of cardiac medications. (CSLO #2,3) • Identify the essential nursing implications and interventions for cardiac medications. (CSLO #1,2,3,4,5) • Determine the core patient education necessary for patients 	<p>Abrams' Clinical Drug Therapy: Rationales for Nursing Practice: Chapters: 26, 27, 28, 29, 30</p> <p>Recommended Extra Learning: ATI RN Pharmacology for Nursing Chapters:19, 20, 21, 22, 23</p>	<p>Brain Drain</p> <p>PowerPoint Lecture & Discussion</p> <p>Kahoot - Week 5 Cardiac</p> <p>Cardiac Crossword</p> <p>Korotkoff sounds video</p> <p>ATI Learning System 3.0 In Class Quiz</p> <p>Digoxin Case Study Handout</p>	<p>Mary Richards</p> <p>LWW virtual sim</p>	<p>Class Participation</p> <p>Exam 1 Drug Cards due per syllabus due dates</p> <p>Exam 1</p>

	<ul style="list-style-type: none"> • Class IB Sodium channel blockers (lidocaine) • Class III Potassium channel blockers (amiodarone) • Class IV calcium channel blockers (Cardizem) • Unclassified antidysrhythmic drugs (adenosine, mag sulfate (magnesium and calcium gluconate – pregnancy) • Organic nitrates (nitroglycerin) • Beta-Adrenergic blockers (atenolol) • Calcium channel blockers (nifedipine, norvasc) • Metabolic modulator (Ranolazine) • Adrenergic Drugs (epinephrine), cardiopulmonary resuscitation, Excess Use • Angiotension-Converting enzyme inhibitors (captopril) • Angiotensin receptor blockers (Losartan) • Antiadrenergics (Doxazosin) • Alpha agonists (Catapres) • Beta-Adrenergic (Atenolol) • Alpha-Beta Adrenergic Blockers (Carvedilol) <p>-Pharmacokinetics of drug classes listed -Uses of drug classes listed -Adverse Effects of Drug classes listed -Nursing implications of Drug classes listed</p>	<p>taking cardiac medications. . (CSLO #1,2,3,5)</p>		<p>Cardiac Worksheet</p> <p>Medication Calculation Review</p>		
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interferon, adjuvants such as Proleukin, immunizations, cytotoxic immunosuppressive agents, other drugs such as methotrexate, antirejection agents, cytokine inhibitors, interleukin-blocking, fusion protein inhibitors. Drug dosage calculations for pediatrics/drug safety, pharmacokinetics in pediatrics by age, pediatric adverse effects/nursing indications, pharmacodynamics in older adults, pharmacokinetics in older adults, older adult adverse effects/ nursing indications, beers criteria, medication adherence, androgens and anabolic steroids, phosphodiesterase type 5 inhibitors, 5-alpha reductase inhibitors. Pharmacokinetics of drug classes listed. Uses of drug classes listed. Adverse effects of drug classes listed. Nursing implications of drug classes listed. Respiratory drugs- which includes the following: nasal decongestants, antitussives, expectorants, mucolytics, herbal drugs, multi-ingredient cold medications, anaphylactoid reaction drugs, first generation histamine 2 receptor antagonists, second generation histamine 2 receptor antagonists, adrenergics, anticholinergics, other respiratory drugs, xanthines, corticosteroids, leukotriene modifiers, mast cell stabilizers, combination therapies. Pharmacokinetics of drug classes listed. Uses of drug classes listed. Adverse effects of drug classes listed. Nursing implications of drug classes listed.

Course Learning Outcomes (CLOs):

1. Apply knowledge of pathophysiology to identify appropriate drug therapies.
2. Explain the therapeutic and side effects of selected drugs for each major classification with a focus on high-alert drugs and patient safety.
3. Describe the effects of common drug-drug, drug-food, and drug-herb interactions in patients across the lifespan.
4. Use dosage calculation skills to accurately calculate oral and parenteral dosages for patients across the lifespan.
5. Identify evidence-based nursing assessments and interventions associated with administering drug therapy.

Week	Unit Concept	Weekly Student Outcomes	Required Readings	Teaching methods/ Classroom Activities	Lab/ Sim Activities	Evaluation Method
Three	<p><u>Respiratory Drugs</u></p> <p>Pharmacological Classes in these readings</p> <ul style="list-style-type: none"> • Nasal Decongestants (Pseudoephedrine) • Antitussives (dextromethorphan) • Expectorants (Guaifenesin) • Mucolytics (Mucomyst) • Herbal drugs • Multi-ingredient cold medications • Anaphylactoid reaction drugs • First Gen histamine 2 receptor antagonists (diphenhydramine, Tavist, Vistaril, Phenergan) • Second Gen histamine 2 receptor antagonists (Allegra) • Adrenergics (Albuterol) • Anticholinergics (Atrovent) • Other (Spiriva) 	<ul style="list-style-type: none"> • Name the classifications for respiratory medications. (CSLO #2) • Match respiratory medications into the appropriate drug classifications. (CSLO #2) • Recall the mechanisms of action and indications for use of respiratory medications. (CSLO #1,2) • Identify common dosages and routes of administration for respiratory medications. (CSLO #1,2) • Explain the most common, potential side effects, adverse reactions, and contraindications of respiratory medications. 	<p>Abrams' Clinical Drug Therapy: Rationales for Nursing Practice: Chapters: 10, 22, 31, 32, 33</p> <p>Recommended Extra Learning:</p> <p>ATI RN Pharmacology for Nursing Chapters: 17, 18, 24</p>	<p>Chapter 32 Crossword Puzzle</p> <p>ATI The Respiratory System Case Study</p> <p>Kahoot- Drug Therapy for Tuberculosis</p> <p>Exam 2 Review Options: Jeopardy (available in class only), Kahoot Exam</p>		<p>Class Participation</p> <p>Four ATI Assignments due per syllabus due dates</p> <p>ATI Learning System 3.0 Dynamic Quizzing (In Class)</p> <p>Medication Math Quiz 2</p>

<ul style="list-style-type: none"> • Xanthines (Theophylline) • Corticosteroids (Beclomethasone – QVAR) • Other (pulmicort, , Flonase, asmanex, nasonex, azmacort) • Leukotrienes modifiers (singulair) • Mast cell stabilizers (cromolyn) • Combination therapies (Advair, Symbicort, Combivent, DuoNeb) <p>-Pharmacokinetics of drug classes listed -Uses of drug classes listed -Adverse Effects of Drug classes listed -Nursing implications of Drug classes listed</p> <p><u>Drugs for Cholesterol</u></p> <ul style="list-style-type: none"> • Dyslipidemia (management) • HMG-CoA Reductase Inhibitors (Atorvastatin) • Bile Acid Sequestrants (Cholestyramine) • Fibrates (Fenofibrate) • Cholesterol Absorption Inhibitor (Zetia) <p>-Pharmacokinetics of drug classes listed -Uses of drug classes listed -Adverse Effects of Drug classes listed -Nursing implications of Drug classes listed</p>	<p>(CSLO #2,3)</p> <ul style="list-style-type: none"> • Identify the essential nursing implications and interventions for respiratory medications. (CSLO #1,2,3,4,5) • Determine the core patient education necessary for patients taking respiratory medications. . (CSLO #1,2,3,5) • Name the classifications for hyperlipidemia medications. (CSLO #2) • Match hyperlipidemia drugs into the appropriate drug classifications. (CSLO #2) • Recall the mechanisms of action and indications for use of hyperlipidemia medications. (CSLO #1,2) • Identify common dosages and routes of administration for hyperlipidemia medications. (CSLO #1,2) • Explain the most common, potential side effects, adverse reactions, and contraindications of hyperlipidemia medications. (CSLO #2,3) • Identify the essential nursing implications and interventions for hyperlipidemia medications. (CSLO #1,2,3,4,5) • Determine the core patient education necessary for patients taking 		<p>2 Review, Google Docs escape room</p> <p>Picmonics: Atorvastatin</p> <p>Picmonics: Bile acid resins</p> <p>Kahoot – Drug Therapy for Dyslipidemia</p> <p>Cholesterol Worksheet Matching Game</p>		
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		<ul style="list-style-type: none">hyperlipidemia medications. (CSLO 1,2,3,5)				
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Lakeview College of Nursing
N322: Basic Concepts of Pharmacology

Course Concepts: Drugs for Inflammation & Pain- which includes the following: opioid agonists, opioid anatagonists, anesthesia, amides, esters, anesthetics, nitrous oxide, propofol, neuromuscular blocking agents, adjuvant medications, opioid analgesics, as well as medications for pain, fever, and inflammation. Pharmacokinetics of drug classes listed. Uses of drug classes listed. Adverse effects of drug classes listed. Nursing implications of drug classes listed.

Course Learning Outcomes (CLOs):

1. Apply knowledge of pathophysiology to identify appropriate drug therapies.
2. Explain the therapeutic and side effects of selected drugs for each major classification with a focus on high-alert drugs and patient safety.
3. Describe the effects of common drug-drug, drug-food, and drug-herb interactions in patients across the lifespan.
4. Use dosage calculation skills to accurately calculate oral and parenteral dosages for patients across the lifespan.
5. Identify evidence-based nursing assessments and interventions associated with administering drug therapy.

Week	Unit Concept	Weekly Student Outcomes	Required Readings	Teaching methods/ Classroom Activities	Lab/ Sim Activities	Evaluation Method
Four	<p><u>Drugs for Inflammation & Pain</u> Pain Management</p> <ul style="list-style-type: none"> • Opioid Agonist (Morphine Sulfate, codeine, fentanyl, Hydrocodone w/ tylenol, dilaudid, meneral, methadone, Oxycodone, Oxymorphone, Tramadol) • Opioid Agonists/Antagonists (Nubain/Stadol) • Opioid Antagonists (Narcan) • Anesthesia • Amides (Lidocaine) • Esters (Novacaine) • Anesthetics (Inhaled/Intravenous/Intramuscular) • Nitrous Oxide • Propofol • Neuromuscular Blocking Agents (Vecuronium) • Adjuvant (Benzodiazepines: Versed) • Opioid Analgesics (Fentanyl) • Meds for Pain, fever, Inflammation (Non-steroidal anti-inflammatory, Oxicam derivatives, acetic acids, selective cyclooxygenase (COX)-2 Inhibitors, Salicylate, Non-narcotic analgesic antipyretics – aspirin, tylenol, Ibuprofen/Motrin, Mobic, Indocin, Celebrex, Ketorlac) 	<ul style="list-style-type: none"> • Name the classifications for medications relevant to immunology and cancer. (CSLO #2) • Match medications for immunology and cancer into the appropriate drug classifications. (CSLO #2) • Recall the mechanisms of action and indications for use of immunology and cancer medications. (CSLO #1,2) • Identify common dosages and routes of administration for immunology and cancer medications. (CSLO #1,2) • Explain the most common, potential side effects, adverse reactions, and contraindications of immunology and cancer medications. CSLO (2,3) • Identify the essential nursing implications and interventions for immunology and cancer medications. (CSLO 1,2,3,4,5) • Determine the core patient education necessary for patients taking immunology and cancer medications. (CSLO # 1,2 3,5) • Name the classifications for anti- 	<p>Abrams' Clinical Drug Therapy: Rationales for Nursing Practice: Chapters: 12, 13, 14, 15, 16, 17, 49</p> <p>Recommended Extra Learning: ATI RN Pharmacology for Nursing Chapters: 35,36,37,38, 41, 42</p>	<p>Brain Drain</p> <p>PowerPoint Lecture & Discussion</p> <p>Week 8 Crossword</p> <p>Kahoot - Pain/ Inflammation</p> <p>Kahoot - Opioids</p> <p>ATI Skills Modules: Medication Administration 2, Practice Challenge 3</p> <p>ATI Pain & Inflammation Case Study Kahoot - Drug Therapy to Decrease Immunity</p>		<p>Class Participation</p> <p>Exam 2 Drug Cards due per syllabus due dates</p> <p>Exam 2</p> <p>Four ATI Assignments due per syllabus due dates</p>

<p><u>Drugs for Immunology & Cancer</u></p> <ul style="list-style-type: none"> • Erythrocyte Hematopoietic Drugs (epoetin alfa) • Granulocyte Colony Stimulating Factor (filgrastim) • Interferons (interferon alfa-2b) • Adjuvant (Proleukin) • Immunizations (active/passive) • Cytotoxic Immunosuppressive Agents (mycophenolate mofetil) • Other drugs (methotrexate) • Antirejection agents (cyclosporine) • Cytokine Inhibitors (Infiximab) • Interleukin-Blocking (Anakinra) • Fusion Protein Inhibitors (Abatacept) <p>Pharmacological Classes in these readings:</p> <p>Pediatric Drug Use</p> <ul style="list-style-type: none"> • Drug dose calculations for pediatrics/Drug Safety • Pharmacokinetics in pediatrics by age • Pediatric adverse effects/nursing indications <p>Older Adult Drug Use</p> <ul style="list-style-type: none"> • Pharmacodynamics in older adults • Pharmacokinetics in older adults • Older adult adverse effects/ nursing indications • Beers criteria • Medication adherence • Androgens and Anabolic Steroids (testosterone) • Phosphodiesterase Type 5 Inhibitors (Viagra) • 5-Alpha Reductase Inhibitors 	<p>inflammatory and pain medications. (CSLO #2)</p> <ul style="list-style-type: none"> • Match anti-inflammatory and pain medications into the appropriate drug classifications. (CSLO #2) • Recall the mechanisms of action and indications for use of anti-inflammatory and pain medications. (CSLO #1,2) • Identify common dosages and routes of administration for anti-inflammatory and pain medications. (CSLO #1,2) • Explain the most common, potential side effects, adverse reactions, and contraindications of anti-inflammatory and pain medications. (CSLO #2,3) • Identify the essential nursing implications and interventions for anti-inflammatory and pain medications. (CSLO #1,2,3,4,5) • Determine the core patient education necessary for patients taking anti-inflammatory and pain medications. . (CSLO #1,2,3,5) 		<p>Kahoot - Drug Therapy for the Treatment of Cancer</p> <p>Chemo Case Study</p> <p>Think, Pair, Share on CDC Vaccine Chart PowerPoint Lecture & Discussion</p>		
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	<p>(Finasteride)</p> <ul style="list-style-type: none">-Pharmacokinetics of drug classes listed-Uses of drug classes listed-Adverse Effects of Drug classes listed-Nursing implications of Drug classes listed					
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Lakeview College of Nursing
N322: Basic Concepts of Pharmacology

Course Concepts: Drugs for infection – which includes the following: anti-infectives, mitotic agents, uricosuric agents, glucocorticoids, corticosteroids, mineralcorticoids, beta-lactamase antibiotics, oral cephalosporins, aminoglycosides, fluoroquinolones, other drugs such as Levofloxacin, tetracycline, other drugs such as doxycycline, sulfonamides, drugs for urinary tract infections, macrolides, ketolides, miscellaneous anti-infectives, first line tuberculosis drugs, second line tuberculosis drugs, antivirals, abreve, fungal anti-infectives, azoles, pyrimidine analogs, amebicides, antimalarials, antihelminthics, scabicides and pediculicides. Pharmacokinetics of drug classes listed. Uses of drug classes listed. Adverse effects of drug classes listed. Nursing implications of drug classes listed.

Course Learning Outcomes (CLOs):

1. Apply knowledge of pathophysiology to identify appropriate drug therapies.

<ol style="list-style-type: none"> 2. Explain the therapeutic and side effects of selected drugs for each major classification with a focus on high-alert drugs and patient safety. 3. Describe the effects of common drug-drug, drug-food, and drug-herb interactions in patients across the lifespan. 4. Use dosage calculation skills to accurately calculate oral and parenteral dosages for patients across the lifespan. 5. Identify evidence-based nursing assessments and interventions associated with administering drug therapy. 						
Week / Section	Unit Concept	Weekly Student Outcomes	Required Readings	Teaching methods/ Classroom Activities	Lab/ Sim Activities	Evaluation Method
Five	<p><u>Drugs for Infection</u> Pharmacological Classes in these readings</p> <ul style="list-style-type: none"> • Anti-infectives • Mitotic agent (Colchicine) • Uricosuric Agents (Allopurinol) • Glucocorticoids • Corticosteroids (Prednisone, beclometasone, Budosenide, Decadron, fluticasone, hydrocortisone, Medrol, Solu-medrol, Nosonex, Prelone, Triamcinolone) • Mineralocorticoid (Fludrocortisone) • Beta-Lactamase antibiotics – <i>First Generation: Cefazolin, Second Generation: Cefotetan, Third Generation: Rocephin, Fourth Generation: Maxipine, Fifth Generation: Teflaro</i> • Oral Cephalosporins: First generation: Keflex, Second Generation: Cefaclor, Third Generation: Omnicef • Aminoglycosides (Gentamicin, Neomycin, Streptomycin, Tobramycin) • Fluoroquinolones (Ciproflaxin, Levaquin) • Other: (Levoflaxin) • Tetracyclines (Tetracycline hydrochloride) • Other drugs (doxycycline) • Sulfonamides (Sulfisoxazole, Silvadene, 	<ul style="list-style-type: none"> • Name the classifications for anti-infective medications. (CSLO #2) • Match anti-infective medications into the appropriate drug classifications. (CSLO #2) • Recall the mechanisms of action and indications for use of anti-infective medications. (CSLO #1,2) • Identify common dosages and routes of administration for anti-infective medications. (CSLO #1,2) • Explain the most common, potential side effects, adverse reactions, and contraindications of anti-infective medications. (CSLO #2,3) • Identify the essential nursing implications and interventions for anti-infective medications. (CSLO #1,2,3,4,5) • Determine the core patient education necessary for patients taking anti-infective medications. . (CSLO #1,2,3,5) 	<p>Abrams' Clinical Drug Therapy: Rationales for Nursing Practice: Chapters: 18, 19, 20, 21, 23, 24, 25</p> <p>Recommended Extra Learning: ATI RN Pharmacology for Nursing Chapters: 43, 44, 45, 46, 47, 48</p>	<p>PowerPoint Lecture & Discussion</p> <p>Medication Calculation Review</p> <p>Kahoot – Drugs for Infection</p> <p>ATI Infection Case Study</p> <p>Picmonics: Vancomycin</p> <p>Google Forms Escape Room (Pain, Inflammation & Infection)</p> <p>Kahoot – Exam 3 Review</p>		<p>Class Participation</p> <p>Six ATI Assignments due per syllabus due dates</p> <p>ATI Learning System 3.0 Dynamic Quizzing (In Class)</p> <p>Medication Math Quiz 3</p>

	<p>Bactrim)</p> <ul style="list-style-type: none">• Urinary Tract Infection Drugs (Macrobid, Pyridum, Trimethoprim)• Macrolides (Erythromycin)• Ketolides (Telithromycin)• Miscellaneous Anti-infectives (Chloramphenicol, Clindamycin, Flagyl, Vancomycin, Rifaximil, Tygacil)• First Line tuberculosis Drugs (Isoniazid, Rifampin)• Second Line tuberculosis Drugs (Aminoglycosides, Fluroquinolones, Oral bacteriostatic agents)• Antiviral (acyclovir, ribavirin, Amantadine, Tamiflu, Valtrex)• Other drugs (Abreva)• Fungal anti-infectives (Amphotericin B)• Azoles (Fluconazole)• Pyrimidine Analog (flucytosine)• Amebicides (tetracycline, Flagyl)• Antimalarials (chloroquine)• Anthelmintics (Mebendazole)• Scabicides and Pediculicides (Permethrin) <p>-Pharmacokinetics of drug classes listed -Uses of drug classes listed -Adverse Effects of Drug classes listed -Nursing implications of Drug classes listed</p>					
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Lakeview College of Nursing
N322: Basic Concepts of Pharmacology

Course Concepts: Drugs for the gastrointestinal tract, gastroesophageal reflux disease, nausea and vomiting – which includes the following: antacids, gastrointestinal cocktails, histamine receptor antagonists, zantac, proton pump inhibitors, miscellaneous meds such as prostaglandin and sucralfate, treatments for helicobacter pylori, cytotec, amoxicillin, clarithromycin, metronidazole, tetracycline, bismuth, phenothiazine, other meds such as Compazine and thorazine, antihistamines, serotonin (5-HT3) receptor antagonists, cannabinoids, herbals, laxatives, stool softeners, lubricant laxatives, cathartics, lactulose, opiate related anti-diarrheals. Pharmacokinetics of drug classes listed. Uses of drug classes listed. Adverse effects of drug classes listed. Nursing implications of drug classes listed.

Course Learning Outcomes (CLOs):

1. Apply knowledge of pathophysiology to identify appropriate drug therapies.
2. Explain the therapeutic and side effects of selected drugs for each major classification with a focus on high-alert drugs and patient safety.
3. Describe the effects of common drug-drug, drug-food, and drug-herb interactions in patients across the lifespan.
4. Use dosage calculation skills to accurately calculate oral and parenteral dosages for patients across the lifespan.

5. Identify evidence-based nursing assessments and interventions associated with administering drug therapy.						
Week	Unit Concept	Weekly Student Outcomes	Required Readings	Teaching methods/ Classroom Activities	Lab/ Sim Activities	Evaluation Method
Six	<p><u>Drugs for the Gastrointestinal tract : gastroesophageal reflux disease, nausea, vomiting, constipation & diarrhea</u></p> <p>Pharmacological Classes in these readings</p> <ul style="list-style-type: none"> • Antacids (Mylanta) • Gastrointestinal Cocktail (Donnatell, Maalox, Viscous Lidocaine) • Histamine Receptor Antagonists (Tagamet, Pepcid) • Other (Zantac) • Proton Pump Inhibitors (Prilosec) • Miscellaneous Meds (Prostaglandin, Sucralfate) • Helicobacter Pylori treatment • Cytotec, Amoxicillin, Clarithromycin, Metronidazole, Tetracycline, Bismuth) • Phenothiazines (Phenergan) • Other (Thorazine, Compazine) • Antihistamines (Vistraril, Atarax) • Serotonin (5-HT3) Receptor Antagonists (Zofran) • Miscellaneous (cannaboid) • Herbals • Constipation (laxatives/stool softeners) • Citrucel, Colace, Metamucil, dulcolax • Lubricant laxatives • Cathartics (dulcolax) • Miscellaneous (lactulose) • Opiate Related Antidiarrheal agents (lomotil) <p>-Pharmacokinetics of drug classes listed</p>	<ul style="list-style-type: none"> • Name the classifications for gastrointestinal medications. (CSLO #2) • Match gastrointestinal medications into the appropriate drug classifications. (CSLO #2) • Recall the mechanisms of action and indications for use of gastrointestinal medications. (CSLO #1,2) • Identify common dosages and routes of administration for gastrointestinal medications. (CSLO #1,2) • Explain the most common, potential side effects, adverse reactions, and contraindications of gastrointestinal medications. (CSLO #2,3) • Identify the essential nursing implications and interventions for gastrointestinal medications. (CSLO #1,2,3,4,5) • Determine the core patient education necessary for patients taking gastrointestinal medications. (CSLO #1,2,3,5) 	<p>Abrams' Clinical Drug Therapy: Rationales for Nursing Practice: Chapters: 37, 38, 39, 40</p> <p>Recommended Extra Learning: ATI RN Pharmacology for Nursing Chapters: 28,29,30.</p>	<p>Brain Drain</p> <p>PowerPoint Lecture & Discussion</p> <p>Medication Calculation Review</p> <p>Week 11 Worksheet</p> <p>Kahoot - Drugs for the GI Tract</p>		<p>Class Participation</p> <p>Exam 3 Drug Cards due per syllabus due dates</p> <p>Exam 3</p> <p>Three ATI Assignments due per course syllabus</p>

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	<ul style="list-style-type: none"> -Uses of drug classes listed -Adverse Effects of Drug classes listed -Nursing implications of Drug classes listed 					
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Lakeview College of Nursing
N322: Basic Concepts of Pharmacology

Course Concepts: Drugs for the hepatic system, diuretics, vitamins, and weight management – which includes the following: thiazide diuretics, loop diuretics, potassium-sparing diuretics, osmotic diuretics, vitamins A, D, E, K, B, B5, B6, B12, C, biotin, folic acid, macrominerals, potassium, chloride, magnesium, chromium, cobalt, copper, fluoride, iodine, iron, zinc, as well as fat vs water soluble vitamins. Pharmacokinetics of drug classes listed. Uses of drug classes listed. Adverse effects of drug classes listed. Nursing implications of drug classes listed.

Course Learning Outcomes (CLOs):

1. Apply knowledge of pathophysiology to identify appropriate drug therapies.
2. Explain the therapeutic and side effects of selected drugs for each major classification with a focus on high-alert drugs and patient safety.
3. Describe the effects of common drug-drug, drug-food, and drug-herb interactions in patients across the lifespan.
4. Use dosage calculation skills to accurately calculate oral and parenteral dosages for patients across the lifespan.
5. Identify evidence-based nursing assessments and interventions associated with administering drug therapy.

Week	Unit Concept	Weekly Student Outcomes	Required	Teaching	Lab/	Evaluation
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			Readings	methods/ Classroom Activities	Sim Activi ties	Method
Seven	<p><u>Drugs for Hepatic System, Diuretics, Vitamins & Weight Management</u> Pharmacological Classes in these readings Diuretics</p> <ul style="list-style-type: none"> • Thiazide diuretics (hydrochlorothiazide) • Loop diuretics (Lasix, Bumex, Toresemide) • Potassium-Sparing diuretics (Aldactone) • Osmotic diuretics (Mannitol) <p>Vitamins</p> <ul style="list-style-type: none"> • Vitamin A (retinol) • Vitamin D/Vitamin E (Antioxidant) • Vitamin K • Water soluble (Vitamin B – Thiamine/riboflavin) • Biotin • Vitamin B (niacin) • Vitamin B5, B6, B12 (panthotenic acid, pyridoxine, cyanocobalamin) • Folic Acid • Vitamin C (ascorbic acid) • Macrominerals • Potassium, Chloride, Magnesium, Chromium, Cobalt, Copper, Fluoride, Iodine, Iron, Zinc • Fat vs water soluble vitamins <p>-Pharmacokinetics of drug classes listed -Uses of drug classes listed Adverse Effects of Drug classes listed -Nursing implications of Drug classes listed</p> <p><u>Drugs for the Endocrine System: Pituitary, Calcium, Addison’s Disease & Cushing’s Disease & Cushing’s Syndrome</u></p>	<ul style="list-style-type: none"> • Name the classifications for hepatic and diuretic medications and vitamins. (CSLO #2) • Match hepatic and diuretic medications and vitamins into the appropriate classifications. (CSLO #2) • Recall the mechanisms of action and indications for use for hepatic and diuretic medications and vitamins. (CSLO #1,2) • Identify common dosages and routes of administration for hepatic and diuretic medications and vitamins. (CSLO #1,2) • Explain the most common, potential side effects, adverse reactions, and contraindications of hepatic and diuretic medications and vitamins. (CSLO #2,3) • Identify the essential nursing implications and interventions for hepatic and diuretic medications and vitamins. (CSLO #1,2,3,4,5) <p>Determine the core patient education necessary for patients taking hepatic and diuretic medications and vitamins. . (CSLO #1,2,3,5)</p>	<p>Abrams’ Clinical Drug Therapy: Rationales for Nursing Practice: Chapters: 34, 35, 43, 44, 45</p> <p>Recommended Extra Learning: ATI RN Pharmacology for Nursing Chapters: 30</p> <p>Administering Nutrition via Feeding Tube (Continuous & Intermittent) videos embedded in powerpoint</p>	<p>PowerPoint lecture & Discussion</p> <p>Kahoot – Week 12</p> <p>Kahoot – Exam 4 Review</p>		<p>Class Participation</p> <p>Polypharmacy project due</p> <p>Two ATI Assignments due per course syllabus</p> <p>Medication Math Quiz 4</p>

<p>Pharmacological Classes in these readings</p> <p>Anterior Pituitary Hormone Drugs for Growth Deficiency in Children (Somatropin, Corticotropin, human chorionic gonadotropin, Ovidrel, Bravelle)</p> <p>Posterior Pituitary Hormone for Diabetes Insipidus (Desmopressin, Vasopressin, Oxytocin)</p> <ul style="list-style-type: none"> • Central Precocious Puberty (Lupron) • Acromegaly (Sandostatin) • Calcium • Vitamin D • Biphosphonates (Fosamax) • Hypercalcemia (calcimir) <p>Addison's Disease treatment</p> <ul style="list-style-type: none"> • Adrenocorticoids/Mineralcorticoids (hydrocortisone/forinef) <p>Cushing's disease</p> <ul style="list-style-type: none"> • 11-Deoxycortisol inhibitors (ketoconazole) • Antineoplastics (mitotane) <p>-Pharmacokinetics of drug classes listed -Uses of drug classes listed -Adverse Effects of Drug classes listed -Nursing implications of Drug classes listed</p>					
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**Lakeview College of Nursing
N322: Basic Concepts of Pharmacology**

Course Concepts: Drugs for the endocrine system: diabetes and thyroid – which includes the following meds: insulin, sulfonylurea, alpha-glucosidase inhibitors, bifuanide, thiazolidinediones, meglitinides, depeptidyl peptidase-4 inhibitors, incretin mimetics, angiotensin converting enzyme inhibitors, β -Hydroxy β -methylglutaryl-CoA (HMG-CoA) reductase inhibitors, hypoglycemic treatment, antithyroid drugs, adjuvant meds for thyroid, thyroid drugs. Pharmacokinetics of drug classes listed. Uses of drug classes listed. Adverse effects of drug classes listed. Nursing implications of drug classes listed.

Course Learning Outcomes (CLOs):

1. Apply knowledge of pathophysiology to identify appropriate drug therapies.

<ol style="list-style-type: none"> 2. Explain the therapeutic and side effects of selected drugs for each major classification with a focus on high-alert drugs and patient safety. 3. Describe the effects of common drug-drug, drug-food, and drug-herb interactions in patients across the lifespan. 4. Use dosage calculation skills to accurately calculate oral and parenteral dosages for patients across the lifespan. 5. Identify evidence-based nursing assessments and interventions associated with administering drug therapy. 						
Week	Unit Concept	Weekly Student Outcomes	Required Readings	Teaching methods/ Classroom Activities	Lab/ Sim Activities	Evaluation Method
Eight	<p><u>Drugs for the Endocrine System: Diabetes Mellitus & Thyroid</u></p> <p>Pharmacological Classes in these readings</p> <p>Diabetes Medications</p> <ul style="list-style-type: none"> • Insulin (Regular Insulin, Humulin R, Novolin R, lantus, NovoLog, Detemir, analog mixtures) • Sulfonylureas (Glyburide) • Alpha-glucosidase inhibitors (Acarbose) • Bifuanide (Metformin) • Thiazolidinediones (Avandia) • Meglitinides (Repaglinide) • Depeptidyl peptidase-4 inhibitor (Januvia) • Incretin mimetics (Exanatide) • Angiotensin converting enzyme inhibitors (Vasotec) • β-Hydroxy β-methylglutaryl-CoA (HMG-CoA) reductase inhibitor (zocor) • Hypoglycemic treatment (Dextrose 50% / Glucagon) <p>Thyroid Medications</p> <ul style="list-style-type: none"> • Antithyroid drugs (Propyathiouracil (PTU)) 	<ul style="list-style-type: none"> • Name the classifications for endocrine medications. (CSLO #2) • Match endocrine medications into the appropriate drug classifications. (CSLO #2) • • Recall the mechanisms of action and indications for use of endocrine medications. (CSLO #1,2) • Identify common dosages and routes of administration for endocrine medications. (CSLO #1,2) • Explain the most common, potential side effects, adverse reactions, and contraindications of endocrine medications. • Identify the essential nursing implications and interventions for endocrine medications. (CSLO #1,2,3,4,5) • Determine the core patient education necessary for patients taking endocrine medications. . (CSLO #1,2,3,5) 	<p>Abrams' Clinical Drug Therapy: Rationales for Nursing Practice: Chapters: 41, 42</p> <p>Recommended Extra Learning: ATI RN Pharmacology for Nursing Chapters: 39,40</p>	<p>Brain Drain</p> <p>PowerPoint Lecture & Discussion</p> <p>Medication Calculation Review</p> <p>Mnemonics for Different Types of Insulin</p> <p>ATI The Endocrine System Case Study</p> <p>Diabetic Ketoacidosis Video</p> <p>Kahoot - Endocrine</p>		<p>Class Participation</p> <p>Drug Cards for Exam 4 due per syllabus due dates</p> <p>Exam 4</p> <p>Three ATI Assignments due per course syllabus</p>

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	<ul style="list-style-type: none"> • Adjuvant meds for thyroid (propranolol) • Thyroid drugs (Levothyroxine) -Pharmacokinetics of drug classes listed -Uses of drug classes listed -Adverse Effects of Drug classes listed -Nursing implications of Drug classes listed 					
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Lakeview College of Nursing
N322: Basic Concepts of Pharmacology

Course Concepts: Drugs for the autonomic and central nervous system- which includes the following meds: indirect acting cholinergics, reversible indirect-acting cholinergics, direct acting cholinergics, dopamine receptor agonists, catechol-O-methyltransferase inhibitors, decarboxylase inhibitors/ dopamine precursors, anticholinergics drugs, belladonna alkaloid and derivatives, centrally acting anticholinergics, gastrointestinal anticholinergics, urinary antispasmodics, non-steroidal anti-inflammatory drugs, Tylenol/aspirin/caffeine combination, ergot alkaloids, triptans, estrogen, preventative measures, herbals, adjuvant, barbituates, benzodiazepines, gamma-aminobutyric acid, hydantoins, iminostilbenes, sulfonamides, carboxylic acid derivatives, other drugs for seizures, functionalized amino acids, mineral electrolytes, phenyltriazine derivatives, sulfamate-substituted monosaccharides, carbamate derivatives, gamma-aminobutyric acid, hydantoin derivatives, tricyclic antidepressant derivatives, imidazoline derivatives. Pharmacokinetics of drug classes listed. Uses of drug classes listed. Adverse effects of drug classes listed. Nursing implications of drug classes listed.

Course Learning Outcomes (CLOs):

1. Apply knowledge of pathophysiology to identify appropriate drug therapies.
2. Explain the therapeutic and side effects of selected drugs for each major classification with a focus on high-alert drugs and patient safety.
3. Describe the effects of common drug-drug, drug-food, and drug-herb interactions in patients across the lifespan.
4. Use dosage calculation skills to accurately calculate oral and parenteral dosages for patients across the lifespan.
5. Identify evidence-based nursing assessments and interventions associated with administering drug therapy.

Week	Unit Concept	Weekly Student Outcomes	Required Readings	Teaching methods/ Classroom Activities	Lab/ Sim Activities	Evaluation Method
Nine	<ul style="list-style-type: none"> • ATI Proctored Exam <p><u>Drugs for the Autonomic & Central Nervous System</u></p> <p>Pharmacological Classes in these readings</p> <ul style="list-style-type: none"> • Indirect Acting Cholinergics (Neostigmine) 	<ul style="list-style-type: none"> • Apply ATI pharmacology book student learning objectives. (CSLO # 1,2,3,4,5) • Synthesize weekly concepts of body systems and medication administration pharmacokinetics. (CSLO #1,2,3,5) • Apply the nursing process as it relates to medication 	<p>Reviewed chapter readings as needed for ATI exam.</p> <p>Abrams' Clinical Drug Therapy: Rationales for Nursing</p>	<p>PowerPoint Lecture</p> <p>ATI The Neurologic System Part 1 Case Study</p> <p>PowerPoint Lecture &</p>		<p>Class Participation</p> <p>Four ATI Assignments due per course syllabus</p>

	<p>Alzheimer's Disease Medications</p> <ul style="list-style-type: none"> • Reversible Indirect-Acting Cholinergics (Donepezil) • Direct-Acting Cholinergics (Bethanechol Chloride) <p>Parkinson's Disease Medications</p> <ul style="list-style-type: none"> • Dopamine Receptor Agonists (Levodopa/Carbidopa) • Catechol-O-Methyltransferase Inhibitors (Tolcapone) • Catechol-O-Methyltransferase Inhibitor and Decarboxylase Inhibitor/Dopamine Precursor (Levodopa, carbidopa, entacapone) • Anticholinergic drugs • Belladonna Alkaloid and Derivatives (Atropine sulfate) • Centrally acting Anticholinergics (benztropine mesylate - Cogentin) • Gastrointestinal Anticholinergics (antisecondary/Antispasmodic) (Bentyl) • Urinary Antispasmodic (Ditropan) <p>Migraine Treatments</p> <ul style="list-style-type: none"> • Non-steroidal anti-inflammatory drugs (Naproxen/Aleve, Ketorlac) • Tylenol/Aspirin/Caffeine combination (Excedrin) • Ergot Alkaloids (ergotamine tartrate) • Triptans (Sumatriptan/Imitrex) • Estrogen (Edradiol) • Preventative Measures (Valproic acid, Neurontin, Topamax, Beta blockers, verapamil, ACE inhibitors, Angiotensin II, Tricyclic antidepressants (tofranil) 	<p>administration, therapeutic monitoring and intervention (CSLO #2,3,5)</p> <ul style="list-style-type: none"> • Apply accumulated test taking skills in the NCLEX simulated environment (CSLO #1,2,3,4,5) • Develop a study plan from identified weakened areas from the practice exam (CSLO # 1,2,3,4,5) • Review self-identified pharmacological inadequacies and develop a study plan. (CSLO #1,2,3,4,5) • • Name the classifications for autonomic and central nervous system medications. (CSLO #2) • Match autonomic and central nervous system medications into the appropriate drug classifications. (CSLO #2) • Recall the mechanisms of action and indications for use of autonomic and central nervous system medications. (CSLO #1,2) • Identify common dosages and routes of administration for autonomic and central nervous system medications. (CSLO #1,2) • Explain the most common, potential side effects, adverse reactions, and contraindications of autonomic and central nervous system medications. • Identify the essential nursing implications and interventions for autonomic and central nervous system medications. 	<p>Practice: Chapters: 46, 47, 48, 51, 52</p> <p>Recommended Extra Learning: ATI RN Pharmacology for Nursing Chapters: 7,13,14,15,16</p>	<p>Discussion if needed to finish week 14</p> <p>Kahoot - Exam 5 Review</p>		
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	<ul style="list-style-type: none"> • Herbals • Adjuvant (Thorazine) <p>Seizure Treatment</p> <ul style="list-style-type: none"> • Barbiturates (Phenobarbitol) • Benzodiazepines (Valium) • Gamma-Aminobutyric Acid (Gabapentin) • Hydantoins (Dilantin) • Iminostilbenes (tegretol) • Sulfonamides (Diamox) • Carboxylic Acid Derivatives (Depakote) • Other (Keppra, Topamax, Lamictal) • Functionalized Amino Acid (Lacosamide) • Mineral Electrolytes Magnesium Sulfate • Phenyltriazine derivatives (Lamictal) • Sulfamate-Substituted Monosaccharides (Topamax) • Carbamate Derivatives (Soma) • Gamma-Aminobutyric Acid (Balofen) • Hydantion Derivatives (Dantrium) • Tricyclic Antidepressant Derivatives (flexeril) • Imidazoline Derivatives (Zanaflex) <ul style="list-style-type: none"> -Pharmacokinetics of drug classes listed -Uses of drug classes listed -Adverse Effects of Drug classes listed -Nursing implications of Drug classes listed 	<p>(CSLO #1,2,3,4,5)</p> <ul style="list-style-type: none"> • Determine the core patient education necessary for patients taking autonomic and central nervous system medications. . (CSLO #1,2,3,5) 				
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Lakeview College of Nursing
N322: Basic Concepts of Pharmacology

Course Concepts:

Course Learning Outcomes (CLOs):

1. Apply knowledge of pathophysiology to identify appropriate drug therapies.
2. Explain the therapeutic and side effects of selected drugs for each major classification with a focus on high-alert drugs and patient safety.
3. Describe the effects of common drug-drug, drug-food, and drug-herb interactions in patients across the lifespan.
4. Use dosage calculation skills to accurately calculate oral and parenteral dosages for patients across the lifespan.
5. Identify evidence-based nursing assessments and interventions associated with administering drug therapy.

Week	Unit Concept	Weekly Student Outcomes	Required Readings	Teaching methods/ Classroom Activities	Lab/ Sim Activities	Evaluation Method
Ten	<ul style="list-style-type: none"> • Exam 5 	<ul style="list-style-type: none"> • Acknowledge and review identified areas of concept weakness (CSLO #1,2,3,4,5) • Break down identified concept weaknesses and prioritize with remediation. (CSLO #1,2,3,4,5) • Select and prepare bullet points that reflect an area that needs further clarification. (CSLO #1,2,3,4,5) • Engage in timed video reviews and differentiate between areas of adequate and inadequate knowledge and application. (CSLO #1,2,3,4,5) 		Brain Drain		ATI Proctored Exam Remediation due per syllabus due dates Exam 5 Exam 5 Drug Cards due per syllabus due dates

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