NUR 227

PRESENTED AND APPROVED: NOVEMBER 5, 2010

EFFECTIVE: SPRING 2010-11
## COURSE PACKAGE FORM

<table>
<thead>
<tr>
<th>Team Leader and Members</th>
<th>Penni Ellis, RN, MSN; Linda Riesdorph and Laura Greenfield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of proposal to Curriculum Sub-committee:</td>
<td>10/25/10</td>
</tr>
<tr>
<td>Purpose:</td>
<td>___ New  _X_Change  __ Retire</td>
</tr>
<tr>
<td>If this is a change, what is being changed? (Check ALL that apply)</td>
<td>___ Update Prefix  ___ Title  <em>X</em> Learning Units  <em>X</em> Competencies  ___ Format Change  <em>X</em> Course Description  ___ Course Number  ___ Textbook  ___ Credits  <em>X</em> Prerequisite</td>
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<tr>
<td>Effective Semester/Year</td>
<td>Fall 20____  Spring 20_11____  Summer 20____</td>
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</table>

### COURSE INFORMATION

<table>
<thead>
<tr>
<th>Prefix &amp; Number: NUR 227 851</th>
<th>Title: Pharmacology for Nursing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog Course Description:</td>
<td>NUR 227, Pharmacology for Nursing is a three (3) credit course provided either online or regular classroom attendance for nursing students who have completed NUR 121. This course is appropriate for student nurses who have completed at least the first semester of the nursing program or for LPN’s or Paramedics returning to complete a transition program to RN. Prerequisite is successful completion of NUR 121 or LPN or Paramedic licensure with intention of enrollment in nursing courses beyond NUR121 or permission of the instructor. This course will review common drug classifications, actions, uses, and side effects of pharmacological agents. Accurate calculation of dosages, administration techniques, legal/safety considerations and nursing implications of common medications will be emphasized.</td>
</tr>
<tr>
<td>Credit Hours:</td>
<td>3.0</td>
</tr>
<tr>
<td>Modality:</td>
<td>Online: __<em>X</em>  On-Ground: _<strong>X</strong></td>
</tr>
<tr>
<td>Lecture Hours:</td>
<td>3</td>
</tr>
<tr>
<td>Lab Hours:</td>
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<tr>
<td>Prerequisite(s):</td>
<td>NUR 121; LPN or Paramedic Licensure or permission of instructor.</td>
</tr>
<tr>
<td>Co-requisite(s):</td>
<td>NUR 122 for generic nursing students.</td>
</tr>
<tr>
<td>Does this course need a separately scheduled lab component?</td>
<td>____Yes  <em>X</em> No</td>
</tr>
</tbody>
</table>
Does this course require additional fees? If so, please explain.  ____Yes  _X_No

| Is there a similar course in the course bank?  ____Yes  _X_No (Please identify.)  ____No |
| NUR 227 851 is currently an online elective course available to nursing students and others. |

| Articulation: Is this course or an equivalent offered at other two and four-year universities in Arizona? |
| ____No  _X_YES (Identify the college, subject, prefix, number and title: Several community college nursing programs have stand alone pharmacology courses.) |

**Writing Across the Curriculum Rationale:**
Mohave Community College firmly supports the idea that writing can be used to improve education; students who write in their respective content areas will learn more and retain what they learn better than those who don’t. Courses in the core curriculum have been identified as “Writing Across the Curriculum” courses.

**Minimum standards for the Writing Across the Curriculum component are:**

1. The writing assignments should total 1500 – 2000 words. For example, a single report which is 1500 words in length  
   OR  
   a series of essay questions and short papers (example: four 375-word assignments) which total 1500 words could meet the requirement.
2. The writing component will represent at least 10% of a student’s final grade in the course.

Is this course identified as a Writing Across the Curriculum course?  ____Yes  _X_No (See addendum for writing rubrics)

**Intended Course Goals**

By the end of the semester, students will be able to:

1. Identify the components of the assessment process when assessing clients receiving medications.
2. Formulate nursing diagnosis for clients receiving medications.
3. Incorporate the nursing process to identify specific goals and outcome criteria in order to evaluate clients receiving specific medications.
4. Incorporate the nursing process in implementing medication administration to ensure client safety.
5. Evaluate the indicated actions, interactions and effects of medication on a client.
6. Describe the pharmacologic principles of specific medications on the adult client.
7. Discuss cultural, genetic and racial or ethnic factors that may influence a person’s response to a medication.
8. Develop appropriate patient teaching for specific categories of drugs and specific medications within those categories.
8. Identify the application, action, effect and administration responsibilities associated with the common drug classes and their representative prototypes.

**Course Competencies and Objectives**

**By the end of the semester, students will be able to:**

### Competency 1
Apply the nursing process to medication administration safety and drug therapy.

- **Objective 1.1** Describe the use of the 5 phases of the nursing process as they relate to safe administration of drugs.
- **Objective 1.2** Explain the National Patient Safety Goals related to medication administration: use of at least two patient identifiers, label all medications and medication containers and medication reconciliation.
- **Objective 1.3** Recognize the top 6 classifications of drugs or drugs as identified by the Institute for Safe Medication Practices as having the highest risk of causing injury when misused.
- **Objective 1.4** Examine medication administration practices viewed in clinical situations which could be viewed as unsafe.
- **Objective 1.5** Describe the benefits and limitation of selected safety enhancing technologies related to medication administration.
- **Objective 1.6** Review basic mathematics.
- **Objective 1.7** Complete medication dosage problems to demonstrate knowledge and skill in safe drug administration.
- **Objective 1.8** Review the components of a patient teaching plan.

### Competency 2
Apply understanding of basic pharmacologic principles to medication administration.

- **Objective 2.1** Describe the application of principles of pharmaceutics, pharmacodynamics and pharmacokinetics in the assessment, administration and evaluation of medication effects.
- **Objective 2.2** Explain the concepts of half-life, onset, peak, duration and trough as related to drug effects.
- **Objective 2.3** Explain the categories of therapy in pharmacotherapeutics.
- **Objective 2.4** Outline how drug therapy is monitored.
- **Objective 2.5** Differentiate between drug and food interactions, drug interaction, side effects and toxicity.
- **Objective 2.6** Differentiate between adverse drug reaction, allergic reaction and idiosyncratic drug reaction.
- **Objective 2.7** Review current drug legislation and approval processes.
- **Objective 2.8** Identify the role of the professional nurse in the development of new and investigational drugs.
- **Objective 2.9** Consider culture in the client’s response to and compliance with drug therapy.
- **Objective 2.10** Practice mathematical conversion problems.

### Competency 3
Develop a nursing care plan for client on drug therapy that includes the influences of lifespan considerations.
| Competency 4 | Utilizing the nursing process, contrast the physiological effects of the central nervous system depressant and stimulant drugs.  
Objective 4.1 Review the anatomy and physiology of the central nervous system.  
Objective 4.2 Contrast mechanisms of action and adverse effects of benzodiazepines, barbiturates, hypnotics, muscle relaxants and CNS stimulant drugs.  
Objective 4.3 Discuss the nursing process as it relates to the care of a client receiving any central nervous system depressant or stimulant. |
| Competency 5 | Utilizing the nursing process, contrast the effects of drug therapy in selected nervous system disorders.  
Objective 5.1 Discuss the rationale for the use of the various classes of antiepileptic drugs administered for the management of the different forms of epilepsy.  
Objective 5.2 Develop a plan of care including teaching for client receiving antiepileptic drugs.  
Objective 5.3 Discuss the mechanisms of action, dosages, indications and adverse effects of antiparkinsonian drugs.  
Objective 5.4 Discuss the mechanisms of action, dosages, indications and adverse effects of drugs used to treat Myasthenia Gravis. |
| Competency 6 | Utilizing the nursing process, contrast pharmacologic approaches for the management of acute and chronic pain.  
Objective 6.1 Describe the mechanism of action, indications, dosages, routes of administration, adverse effects, toxicity, cautions, contraindications and drug interactions of nonopioids, nonsteroidal antiinflammatory drugs, opioid agonists, opioids with mixed actions, antagonists, and miscellaneous drugs.  
Objective 6.2 Identify examples of drugs classified as nonopioids, nonsteroidal antiinflammatory drugs, opioid agonists, opioids with mixed actions, opioid antagonists, as well as any miscellaneous drugs.  
Objective 6.3 Briefly describe special pain situations as well as specific standards of pain management as defined by the World Health Organization and the Joint Commission. |
| Competency 7 | Utilizing the nursing process, develop nursing care plans for the client undergoing general anesthesia, local anesthesia and moderate or conscious sedation.  
Objective 7.1 Discuss the most commonly used general and local anesthetics and associated risks.  
Objective 7.2 Compare the mechanisms of action, indications, adverse effects, routes of administration, cautions, contraindications and drug interactions for general and local anesthesia as well as drugs used for moderate or conscious sedation. |
| Competency 8 | Utilizing the nursing process, contrast the physiologic effects of drugs affecting the autonomic nervous system. |
Objective 8.1 Discuss the mechanisms of action, therapeutic effects, indications, adverse and toxic effects, cautions, contraindications, drug interactions and available antidotes to overdosage for the various adrenergic agonists or sympathomimetic drugs.

Objective 8.2 Discuss the mechanisms of action, therapeutic effects, indications, adverse and toxic effects, cautions, contraindications, drug interactions, dosages, routes of administration and any antidotal management for the various alpha antagonists (blockers), beta nonselective blockers and the beta 1 and beta 2 blockers.

Objective 8.3 Discuss the mechanisms of action, therapeutic effects, indications, adverse and toxic effects, drug interactions, cautions, contraindications, dosages, routes of administration and any antidotal management for the cholinergic agonists or parasympathomimetics.

Objective 8.4 Discuss the mechanisms of action, therapeutic effects, indications, adverse and toxic effects, drug interactions, cautions, contraindications, dosages, routes of administration and any antidotal management for the cholinergic antagonists.

Competency 9
Apply the nursing process as it relates to the nursing care of a client receiving psychotherapeutic drugs.

Objective 9.1 Identify the various psychotherapeutic drug classes: anxiolytics, antidepressants, mood-stabilizing drugs and antipsychotics.

Objective 9.2 Discuss the mechanisms of action, indications, therapeutic effects, adverse affects, toxic effects, drug interactions, contraindications and cautions associated with the various psychotherapeutic drugs.

Objective 9.3 Develop patient education guidelines for clients receiving psychotherapeutic drugs.

Competency 10
Discuss the nursing process as it relates to the nursing care of a client receiving anti-infective medications.

Objective 10.1 Explore the general concepts and principles of antibiotic therapy.

Objective 10.2 Discuss the mechanisms of action, indications, cautions, contraindications, side effects, routes of administration and drug interactions for sulfonamides, penicillins, cepalosporins, macrolides, aminoglycosides, fluoroquinolones, tetracyclines and miscellaneous other anti-infective medications.

Objective 10.3 Develop patient teaching and care planning for clients on sulfonamides, penicillins, cepalosporins, macrolides, aminoglycosides, fluoroquinolones, tetracyclines and miscellaneous other anti-infective medications.

Objective 10.4 Discuss the mechanism of action, indications, cautions, contraindications, routes, adverse effects and toxic effects of various anit-viral medications.

Objective 10.5 Discuss the mechanism of action, indications, cautions, contraindications, routes, adverse effects and toxic effects of various anit-fungal medications.

Objective 10.6 Develop a comprehensive teaching guide for patients and families impacted by a client being treated with anti-tubercular medications.

Objective 10.7 Describe the pharmacological management of anaphylactic shock.

Competency 11
Discuss the nursing process as it relates to the nursing care of a client receiving selected drugs that affect the endocrine system.

Objective 11.1 Review the normal function of the anterior and posterior lobes of the pituitary gland and their impact on the other endocrine glands.

Objective 11.2 Discuss the mechanism of action, indications, dosages, routes of administration, contraindications, cautions, drug interactions and adverse effects of drugs used to treat hypothyroidism and hyperthyroidism.

Objective 11.3 Discuss the mechanism of action, indications, drug interactions & adverse
effects of insulin, traditional oral hypoglycemic and other antidiabetic drugs.

Objective 11.4 Compare rapid, short, intermediate and long-acting insulin with regard to onset of action, peak effect and duration of action.

Objective 11.5 Develop care planning to include patient teaching for patients with type 1 and type 2 diabetes with a focus on drug therapies.

Objective 11.6 Contrast the mechanisms of action, indications, dosages, routes of administration, cautions, contraindications, drug interactions and adverse effects of glucocorticoids, mineralocorticoids and antiadrenal drugs.

Objective 11.7 Discuss the rationale for use, cautions and administration for estrogens and progestins.

Competency 12
Discuss the nursing process as it relates to the nursing care of a client receiving selected drugs that affect the respiratory system.

Objective 12.1 Discuss the mechanism of action, indications, contraindications, cautions, drug interactions, adverse effects, dosages and routes of administration for antihistamines, decongestants, antitussives, expectorants, bronchodilators and other respiratory medications.

Objective 12.2 Develop nursing care planning to include administration, cautions and patients teaching for clients on these specific medications.

Competency 13
Discuss the nursing process as it relates to the nursing care of a client receiving selected drugs that affect the heart, cardiovascular system and clotting mechanisms.

Objective 13.1 Discuss the mechanism of action, indications, dosages, routes of administration, cautions, contraindications, adverse effects and toxicities for drugs used to treat heart failure (phosphodiesterase inhibitors, cardiac glycosides and B-type natriuretic peptides).

Objective 13.2 Review cardiac conduction and correlate the classes of antidysrhythmic drugs with their effect on cardiac conduction.

Objective 13.3 Outline side effects and contraindications of the cardiac antidysrhythmic drugs.

Objective 13.4 Contrast the major classes of antianginal drugs (nitrates, calcium channel blockers and beta blockers) with regard to mechanism of action, dosage forms, routes of administration, cautions, contraindications, drug interactions, adverse effects, client tolerance, toxicity and patient education requirements.

Objective 13.5 Compare the mechanisms of action, indication, cautions, contraindications, drug interactions, adverse effects, routes of administration and dosages of the various anticoagulants, antiplatelets, antifibrinolytics and thrombolytics.

Objective 13.6 Identify any antidotes for coagulation modifiers.

Objective 13.7 Compare the mechanisms of actions, indications, cautions, contraindications, drug interactions, adverse effects, routes of administration and dosages of the various drugs used to treat hyperlipidemia.

Objective 13.8 Develop teaching plans for clients on cardiovascular medications.

Objective 13.9 Distinguish among the different classes of diuretics with regard to mechanisms of action, indications, dosages, routes of administration, adverse effects, toxicity, cautions, contraindications and drug interactions.

Objective 13.10 Describe how diuretics work in the kidneys to improve symptoms of congestive heart failure and to decrease hypertension.

Objective 13.11 Compare the various drugs used in the pharmacologic management of hypertension with regard to mechanism of action, specific indications, adverse effects, toxic effects, cautions, drug interactions, contraindications, dosages and routes of administration.

Competency 14

MCC Form EDU 0007 (rev. 9/01/10)
Discuss the nursing process as it relates to the nursing care of a client receiving selected drugs that affect the eye and ear.

Objective 14.1 Discuss the mechanism of action, indications, dosage forms with application techniques, adverse effects, cautions, contraindications and drug interactions for drugs used to treat clients with eye and ear problems.

Objective 14.2 Develop nursing care planning to include administration, cautions and patient teaching for clients on these specific medications.

Competency 15
Discuss the nursing process as it relates to the nursing care of a client receiving selected drugs that affect fluids and electrolytes.

Objective 15.1 Identify and discuss the electrolyte solutions commonly used to correct states of deficiency or excess.

Objective 15.2 Compare the various solutions used to expand and/or decrease a client’s fluid volume and electrolytes with regard to mechanism of action, purpose of use and specific antidotes available to counter any toxic effects.

Objective 15.3 Discuss the nurse’s role in blood administration.

Competency 16
Discuss the nursing process as it relates to the nursing care of a client receiving selected drugs that affect the gastrointestinal system.

Objective 16.1 Discuss the mechanisms of action, indications, cautions, contraindications, drug interactions, adverse effects, dosages and routes of administration for the following classes of acid controlling drugs: antacids, histamine 2 blockers, proton pump inhibitors and acid suppressants.

Objective 16.2 Discuss the mechanisms of action, indications, cautions, contraindications, drug interactions, adverse effects, dosages and routes of administration of the various antidiarrheals, laxatives and irritable bowel syndrome drugs.

Objective 16.3 Discuss the mechanisms of action, indications, cautions, contraindications, drug interactions, adverse effects, dosages and routes of administration for the various categories of antiemetic and antinausea drugs.

Objective 16.4 Develop a teaching plan for each of the categories of the gastrointestinal drugs.

Objective 16.5 Discuss the mechanisms of action, indications, cautions, contraindications, drug interactions, adverse effects, dosages and routes of administration for vitamins and minerals.

Competency 17
Discuss the nursing process as it relates to the nursing care of a patient receiving selected drugs that are used in cancer chemotherapy and biologic response modifier therapy.

Objective 17.1 Briefly describe the specific differences between cell cycle specific and cell cycle nonspecific antineoplastic drugs.

Objective 17.2 Discuss the mechanisms of action, indications, dosages, routes of administration, cautions, contraindications and drug interactions for the varied classes of antineoplastic drugs.

Objective 17.3 Discuss concepts of maximum benefit strategies.

Objective 17.4 Apply knowledge of the various cancer drugs to the development of comprehensive nursing care planning for patients receiving these medications.

Objective 17.5 Discuss common adverse and toxic reactions to cancer medications.

Objective 17.6 Compare the two major classes of biologic response modifying drugs: hematopoietic and immunomodulating drugs.
Objective 17.7 Discuss the mechanisms of action, indications, dosages, routes of administration, adverse effects, cautions, contraindication and drug interactions of the biologic response modifying drugs.

Objective 17.8 Develop a nursing care plan that addresses teaching needed when a client is ordered an antirheumatoid drug.

Teacher’s Guide
Course Textbook, Materials and Equipment

<table>
<thead>
<tr>
<th>Textbook(s)</th>
<th>Title</th>
<th>Author(s)</th>
<th>Publisher</th>
<th>ISBN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pharmacology and the Nursing Process</td>
<td>Lilley, Collins, Harrington and Snyder</td>
<td>Mosby Elsevier</td>
<td>978-0-323-05544-4</td>
</tr>
<tr>
<td></td>
<td>Davis’s Drug Guide for Nurses</td>
<td>Deglin, Vallerand and Sanoski</td>
<td>FA Davis</td>
<td>10:0-8036-2310-0</td>
</tr>
</tbody>
</table>

Software/Equipment
ATI Pharmacology modules online

Textbook Costs
Please indicate how much the textbook would cost if purchased through Barnes & Noble: Presently required for other nursing courses NUR121, 122, 221 and 222. Cost is $104.35

Course Assessments
Description of Possible Course Assessments (Essays, multiple choice, etc.) 14 Specific module submitted weekly and graded as well as a midterm and final exam

Exams standardized for this course?
__X Midterm
__XFinal
__X Other (Please specify):
ATI Comprehensive Pharmacology Testing

Are exams required by the department?
__X__Yes   ___No
If Yes, please specify: All

Where can faculty members locate or access the required standardized exams for this course? (Contact Person and Location)
Example: NCK – Academic Chair Office

Faculty member
Director of RN Program
Director of Nursing Programs

Student Outcomes: Identify the general education goals for student learning that is a component of this course.

Check all that apply:  Method of Assessment

1. Communicate effectively.
   a. Read and comprehend at a college level.  X
   b. Write effectively in a college setting.  X

2. Demonstrate effective quantitative reasoning and problem solving skills.  X

3. Demonstrate effective qualitative reasoning skills.  X

Modular work Examinations
Drug Dosage Problems
Nursing Care Planning
4. Apply effective methods of inquiry.
   a. Generate research paper by gathering information from varied sources, analyzing data and organizing information into a coherent structure. □
   b. Employ the scientific method. X

5. Demonstrate sensitivity to diversity
   a. Experience the creative products of humanity. □
   b. Describe alternate historical, cultural, global perspectives. □

Learning Units

<table>
<thead>
<tr>
<th>Learning Unit Topic 1: Nursing Process and Medication Administration Safety; Pharmacological Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency: 1, 2</td>
</tr>
<tr>
<td>Objectives: 1.1 to 1.8; 2.1</td>
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<tr>
<td>Activities/Assignments: Complete assigned readings and module exercise.</td>
</tr>
<tr>
<td>Chapters 1, 2, 6 and 7 and module work on the following:</td>
</tr>
<tr>
<td>A. Review of basic mathematics</td>
</tr>
<tr>
<td>B. Nursing process and medication administration</td>
</tr>
<tr>
<td>C. Safety and medication administration</td>
</tr>
<tr>
<td>D. Patient education</td>
</tr>
<tr>
<td>E. Pharmacokinetic principles</td>
</tr>
<tr>
<td>F. Pharmacodynamic principles</td>
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<tr>
<td>G. Pharmacotherapeutics</td>
</tr>
<tr>
<td>H. Administration routes, absorption times and nursing implications</td>
</tr>
<tr>
<td>Review Basic principles and dosage calculations on ATI.</td>
</tr>
<tr>
<td>Laboratory Activities:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Unit Topic 2: Basic Pharmacology Principles and Lifespan Considerations</th>
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</thead>
<tbody>
<tr>
<td>Competency: 2 &amp; 3</td>
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<tr>
<td>Objectives: 2.2-2.10; 3.1 &amp; 3.2</td>
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<td>Activities/Assignments: Complete assigned readings and module exercise.</td>
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<tr>
<td>Chapters 2, 3 &amp; 4 and module work on the following:</td>
</tr>
<tr>
<td>A. Drug interactions</td>
</tr>
<tr>
<td>B. Drug reactions, side effects and toxicity</td>
</tr>
<tr>
<td>C. Current legislation</td>
</tr>
<tr>
<td>D. Professional Nurse’s role in development of new and investigational drugs</td>
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<tr>
<td>E. Culture and the patient’s response to and compliance with drug therapy</td>
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<tr>
<td>F. Mathematical conversion practice</td>
</tr>
</tbody>
</table>
G. Individual variation in drug responses
H. Infants and children.
I. Elderly
J. Pregnant and lactating mothers

Review Lifespan considerations on ATI Pharmacology.
Review Basic principles on and dosage calculations on ATI.

Laboratory Activities:

Learning Unit Topic 3: Selected Endocrine Pathophysiology and Drug Therapy

Competency: 11
Objectives: 11.1 to 11.7
Activities/Assignments: Complete assigned readings and module exercise.

Chapter 30, 31, 32, 33 & 34

A. Insulin and oral hypoglycemics
B. Thyroid Disease therapy
C. Adrenal Cortical excess and deficiency
D. Estrogen and Progestin therapy

Review the Selected endocrine pathophysiology and drug therapy on ATI Pharmacology.

Laboratory Activities:

Learning Unit Topic 4: Gastrointestinal Agents

Competency: 16
Objectives: 16.1 to 16.5
Activities/Assignments: Complete assigned readings and module exercise.

Chapter 50, 51, 52, 53

A. Vitamins and minerals
B. Laxatives
C. Antidiarrheals
D. Antiemetics
E. Histamine 2 receptor agonists
F. Antacids and mucosal protectants

Review the Gastrointestinal system drugs on ATI Pharmacology.

Laboratory Activities:

Learning Unit Topic 5: Respiratory Agents

Competency: 12
Objectives: 12.1 to 12.2
Activities/Assignments: Complete assigned readings and module exercise.

Chapter 36, 37

A. Antihistamines
<table>
<thead>
<tr>
<th>A. Nonopioids</th>
<th>B. NSAIDS</th>
<th>C. Opioids</th>
<th>D. Local and general anesthesia</th>
<th>E. Conscious sedation</th>
</tr>
</thead>
</table>

Review the analgesic drugs on ATI Pharmacology.

Laboratory Activities:

**Learning Unit Topic 6: Pharmacological Pain Management and Anesthesia**
*Competency: 6, 7*

- **Objectives:** 6.1 - 6.3; 7.1-7.2
- **Activities/Assignments:** Complete assigned readings and module exercise.

**Chapters 11, 12**

<table>
<thead>
<tr>
<th>A. Anticoagulants</th>
<th>B. Antiplatelets</th>
<th>C. Thrombolytic therapy.</th>
<th>D. Antilipemics.</th>
<th>E. Antidysrhythmia</th>
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</table>

Review the antianginal drug groups and antihypertensive drug groups.

**Chapters 18, 19, 20, 21**

<table>
<thead>
<tr>
<th>A. Adrenergic drugs</th>
<th>B. Adrenergic blockers</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>A. Bronchodilator drug groups</th>
<th>D. Expectorants</th>
</tr>
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</table>

Review the Respiratory system drugs on ATI Pharmacology.

Laboratory Activities:

**Learning Unit Topic 7 & 8: Heart, Cardiovascular Agents, Anemia**
*Competency: 13, 8*

- **Objectives:** 13.1 to 13.11; 8.1-8.4
- **Activities/Assignments:** Complete assigned readings and module exercise.

**Chapter 22, 23, 28, 29**

<table>
<thead>
<tr>
<th>A. Antianginal drug groups</th>
<th>B. Antihypertensive drug groups</th>
<th>C. Diuretics and digitalis preparation</th>
</tr>
</thead>
</table>

Activities/Assignments: Complete assigned readings and module exercise.

**Chapters 18, 19, 20, 21**

<table>
<thead>
<tr>
<th>A. Adrenergic drugs</th>
<th>B. Adrenergic blockers</th>
</tr>
</thead>
</table>
C. Cholinergic drugs  
D. Anticholinergics  

Review the cardiac, cardiovascular and autonomic nervous system drugs on ATI Pharmacology.  

Laboratory Activities:  

<table>
<thead>
<tr>
<th>Learning Unit Topic 9: Central Nervous System Drugs</th>
<th>Competency: 4</th>
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<tbody>
<tr>
<td>Objectives: 4.1 to 4.3</td>
<td>Activities/ Assignments: Complete assigned readings and module exercise.</td>
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</table>

Chapter 13, 14 and module work on the following:  

A. Nervous System review.  
B. Benzodiazepines  
C. Sedatives, hypnotics, barbituates  
D. Muscle relaxants  
E. CNS Stimulants  

Review the Central Nervous System drugs on ATI Pharmacology.  

Laboratory Activities:  

<table>
<thead>
<tr>
<th>Learning Unit Topic 10: Drug Therapy in Selected Nervous System Disorders</th>
<th>Competency: 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives: 5.1 to 5.4</td>
<td>Activities/ Assignments: Complete assigned readings and module exercise.</td>
</tr>
</tbody>
</table>

Chapter 15, 16  

A. Parkinson's Disease.  
B. Seizure  
C. Myasthenia Gravis  

Review the Nervous system drugs on ATI Pharmacology.  

Laboratory Activities:  

<table>
<thead>
<tr>
<th>Learning Unit Topic 11: Eye and Ear Agents, Fluids and Electrolytes</th>
<th>Competency: 14, 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives: 14.1 to 14.2; 15.1-15.3</td>
<td>Activities/ Assignments: Complete assigned readings and module exercise.</td>
</tr>
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</table>

Chapter 27, 57, 58  

A. Antiglaucoma drugs  
B. Otic Drugs  
C. IV fluids: crystalloids and colloids  
D. Blood products  
E. Electrolytes  

Review the Eye and ear drugs on ATI Pharmacology.  

Laboratory Activities:
Learning Unit Topic 12: Cancer Chemotherapy and Biologic Response Modifiers
Competency: 17
Objectives: 17.1 to 17.8
Activities/Assignments: Complete assigned readings and module exercise.

Chapter 47, 48, 49

A. Review of the cell cycle
B. Chemotherapy dose limiting effects
C. Classifications of chemotherapeutic agents
D. Maximum benefit strategies
E. Biologic response modifiers, actions, uses and nursing implications

Review the Cancer drugs on ATI Pharmacology
Laboratory Activities:

Learning Topic 13 Psychotherapeutic Drugs
Competency 9
Objective 9.1-9.3
Activities/Assignments: Complete assigned readings and module exercise.

Chapter 17
A. Anxiolytics
B. Monamine oxidase inhibitors.
C. Cyclic antidepressants.
D. Second generation antidepressants (selective Serotonin reuptake inhibitors)
E. Lithium
F. Antipsychotic agents.
Review psychotherapeutic drugs on ATI Pharmacology

Laboratory Activities:

Learning Unit Topic 14: Antibiotic therapy
Competency: 10
Objectives: 10.1 to 10.7
Activities/Assignments: Complete assigned readings and module exercise.

Chapter 38, 39, 40, 41 and 42
A. General concepts and principles of antibiotic therapy.
B. The seven major antibiotic groups.
C. Common side effects of antibiotics and nursing implications.
D. Anaphylactic shock.
E. Antiviral agents.
F. Antitubercular agents
G. Antifungal agents

Review the Antibiotic therapy drugs on ATI Pharmacology.

Laboratory Activities: