PHARMACOLOGY FOR NURSING

COURSE SYLLABUS

NUR 2140

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Course Syllabus – Classroom Courses

GENERAL CLASS & COURSE INFORMATION

Course number: NUR 2140 **Class Reference Number:** Multiple **Term:** 2012-1

Course title: Pharmacology for Nursing **Credit/Contact hours:** 3 Credits

Course Description:
This course begins the nursing student's education on the concepts of Pharmacotherapeutics, establishing a knowledge base that applies to patient care and education. At the completion of this course the student will understand the major drug classifications, through the use of prototypes and understand the five concepts of human functioning emphasizing Pathophysiology structured on the steps of the Nursing process.

Course Learning Outcomes: As a result of taking this course, the student will be able to:

1	Cite historical perspectives contributing to the development of pharmacology through the present.
2	Utilize the nursing process and the five concepts of human functioning to assess appropriate/inappropriate responses to therapy.
3	Identify the roles of the professional nurse in relation to medication administration and education in both acute care and community health settings.
4	Explain the correct measures to ensure the prevention of medication errors.
5	Employ critical thinking skills to determine the effectiveness of medication administration on client care outcomes.
6	Predict potential drug-drug interactions and drug-food interactions based on physiologic responses to pharmacological agents and apply critical thinking skills for appropriate intervention.
7	Recognize differences in physiology and pathophysiology that must be considered in assessing correct dosages administered to “at risk” populations such as the fetus, infant, child, pregnant woman, and the frail elderly.
8	Describe the legal and ethical principles related to research and practice of medication administration in nursing.
9	Relate the differences in Pharmacology use and its effects across the lifespan, when administering medications to culturally diverse populations commonly occurring diseases.
10	Define the pharmacological terminology pertinent to specific categories and classifications of medications in relation to drug effects on commonly occurring diseases.
11	Identify major classifications of pharmacotherapeutics by prototypes as used in the treatment of commonly occurring health challenges.
12	Interpret effective communication in reports of the action, rationale for use, common and/or life-threatening side effects, nursing implications, and client teaching issues for each major classification of medications.

Course Outline for NUR2140 - PHARMACOLOGY FOR NURSING

Textbooks information:

1. Adams, P., Holland, L. & Urban, C. (2011). Pharmacology for Nurses: a pathophysiologic approach. (3rd Ed) New Jersey: Prentice Hall. ISBN 13-978-0-13-508981-1.

2. Pearson. (2011): **www.mynursingkit.com**

3. Wilson, B. et al (2012). Nurse's drug guide 2012 New Jersey: Prentice Hall. ISBN-10: 013-259867-x OR ISBN-13: 978-0-13-255867-9

4. Palm Beach State College Syllabus for NUR 1141 is posted online**.**

You may purchase your textbook(s) at any one of Palm Beach State College's campus bookstores or **online**.

The Electronic **Essential Nursing Resources** Video list is recommended & available in **MTIS** (Media Technology and Instructional Services) located on the first floor of the LLRC.

Web Content Information: This course has an Internet Component which is on the **Online Learning - Blackboard Campus** **To pass the course, you must be able to access this web site.**

It is the student's responsibility to have accessed this site no later than **the semester start date**. The web site has a security system which requires a *Sign on* and a *Password*. Only registered students will be able to access the course. On-line students are not permitted to attend "live lecture classes".

To login to the course web site:
User Name: Use your Palm Beach State College Student ID Number (no hyphens). Your Palm Beach State College Student ID Number can be found on the back of your student ID card. If you do not have a student ID card, you MUST obtain one in the bookstore at Lake Worth campus. For obtaining a student ID card on other campuses, check with the campus directly.

Password: The student's Blackboard password will be the student's Palm Beach State College Pin Number.

What do I do if I forget my password or need assistance with Blackboard?
E-mail the Blackboard administrator. You can also email the Palm Beach State College **Student Help Desk** or contact them by phone at (561)868-4000. Be sure you have the following information available:

- your full name
- your Palm Beach State College Student ID number
- course with the reference number
- details of the assistance needed and any error messages

The Student Help Desk Hours of Operation are posted on the web page:

On hours and days that the Help Desk is closed, the student may leave a voice message or an e-mail and the issue will be addressed the next business day.

"Netiquette Rule" requirements
Refer to the web site for network application. The faculty expectation is for student adherence to the same standards of behavior online that you follow in real life.

PROFESSOR'S CONTACT INFORMATION

Carol Alexander, MSN, RN Professor I BA 121 (561) 868-3425 Email
Deborah Marshall, MSN, RN Professor II AH 107, (561) 868-3440 Email
Faculty Office Hours are Posted on Faculty Web Pages and Outside Office

CLASS REQUIREMENTS

Assignments: NUR 2140 will have six exams, a cumulative final exam, a critique of a journal article; assigned case studies; and class participation. See grading scale for details. All students are encouraged to participate fully in classroom activities. All readings, classroom discussions, AV material, and guest speakers are testable material.

Late Assignment Policy: All late assignments will lose 5% for each day beyond the scheduled due date unless prior arrangements have been approved by the instructor.

Nursing Department Grading Scale and Policy

90 - 100 = A
83 - 89 = B
75 - 82 = C
Below 75 = F

The minimum score to pass the course is 75%.

All students must achieve an average grade of 75% on all tests before grades for assignments, journal critique, and class participation will be added for a final grade. An end of course grade of 75% is required to pass this course.

Tests, Quizzes And Final Examination - Your course grade will be determined by the following:

Test 1	=	10%
Test 2	=	10%
Test 3	=	10%
Test 4	=	10%
Test 5	=	10%
Test 6	=	10%
Final Exam	=	20%
Paper/Journal Article	=	5%
Class participation	=	10%
Assignments/Discussions	=	5%
Total		100%

Make-up Exam Policy:
Please see **Nursing Student Handbook** for standard Nursing policy related to Essay Make-up Exams.

CLASS POLICIES AND METHODOLOGY

Attendance: Professors are required to take attendance. **Students are expected to attend all classes.** Students who are actively involved in their learning are more successful. Students are expected to complete all class work and homework and participate in structured class discussions. .

ALL students are expected to attend all classes. In the event of an absence due to extenuating circumstances, the student is expected to notify the appropriate faculty member.

Electronic Device Use: Laptops and Hand-held devices are allowed in class for note-taking purposes, only. The use of Hand-held devices that are iPOD capable are encouraged to facilitate downloadable information as learning strategies and study tools. Cell phones must be turned off in class and are prohibited in the campus Testing Centers.

Email Policy: All students have access to a college email account. It is the responsibility of the student to activate this account in order to be kept current with college, program and course information. This course has a web component that has email within the course. Course email should be used for all course-related communications with faculty.

Faculty will contact students via college and course email, so be certain to check these email accounts twice weekly for any updates or changes to coursework.

Equipment & Supplies: Required text books; access to a computer with active Internet service; word processing and printing capabilities are essential to be successful in this class.

Professor's Expectations: The student will participate in discussions; will observe "Netiquette"; will read the assigned chapters; will make an appointment with the faculty member at the first indication of a test grade below 75%, for faculty mentoring and remediation plans.

Methods of Instruction:

1	Selected reading	8	Student group work
2	Lectures	9	Journal Articles
3	Demonstrations	10	Study Guides
4	Discussions	11	Interactive Educational Activities
5	Audiovisuals	12	Internet – Blackboard Learning System
6	Interactive video software programs	13	Student Lead Presentation
7	Computer-Assisted Instruction	14	Critical Thinking Exercises

Classroom Strategies

A. Class Discussion
B. Media Presentations: Video, Transparencies, PowerPoint
C. Group Presentations/Case Scenarios
D. Critical Thinking Exercises

Evaluation Methods

A. Group/Individual Activities
B. Critical Thinking Assignments
C. Class Attendance/Participation
D. Periodic Exams, Final Examination
E. Critique of a Journal Article/paper

Unique Requirements of the Class: This course has an Internet Component which is on the **Online Learning - Blackboard Campus**
To pass the course, you must be able to access this web site.
Although Nursing is a limited access program and as such maintains policies and procedures specific to Nursing Department needs, all students enrolled in a nursing course will adhere to the Palm Beach State College policies as stated in the Palm Beach State College Student Handbook.

All students enrolled in a Nursing course must maintain compliance with the policies and procedures published in the Nursing Student Handbook in addition to those established for the general college population by Palm Beach State College.

Please refer to the following documents:

- Palm Beach State **College Student Handbook**:
- Palm Beach State College **Nursing Student Handbook**:
- **PantherWeb** Student Information**:**

COLLEGE POLICIES AND WEB INFORMATION

Academic Dishonesty

Academic dishonesty includes the following actions, as well as other similar conduct aimed at making false representation with respect to the student's academic performance:

(1) Cheating on an exam, (2) Collaborating with others on work to be presented, if contrary to the stated rules of the course, (3) Submitting, if contrary to the rules of the course, work previously submitted in

another course, (4) Knowingly and intentionally assisting another student in any of the above actions, including assistance in an arrangement whereby work, classroom performance, examination, or other activity is submitted or performed by a person other that the student under whose name the work is submitted or performed, (5) Plagiarism.

Please refer to the **Palm Beach State College Student Handbook**

Classroom Etiquette and Student Behavior Guidelines

Students will demonstrate respect for professors and fellow students. Behavior that is disruptive to a positive learning environment reported by the professor will result in a warning on the first instance; the second instance might result in expulsion from the course or campus.

Computer Competency Component

Each student will, to the satisfaction of the professor, demonstrate a fundamental understanding of basic computer operations through various professor-determined exercises and/or assignments.

Disability Support Services

Students with disabilities are advised, in compliance with federal and state laws, that accommodations and services are available through the office of **Disability Support Services** (DSS). It is the student's responsibility to contact **Disabled Student Services Advisors** and to submit appropriate documentation prior to receiving services.

Eating, Drinking and Smoking

Eating and drinking are confined to areas designated on the campus. Smoking is not permitted in any College building and only in areas designated at each campus.

Student Responsibility Policy

When a student attends the College, s/he becomes subject to its jurisdiction. Students are expected to conduct themselves in a responsible manner, in all areas of campus life. By enrolling, they pledge to obey the rules and regulations of the College and are responsible for observing all College policies and procedures as published in the student handbook, the College catalog and other College publications. The student will be responsible for preparing for class, participating in class, and completing assignments on time.

Palm Beach State College Websites Of Interest

Withdrawal Policy for Individual Courses: The last day to withdraw from a College course with a "W" grade in this course is posted on the college academic calendar. It is the responsibility of the student to use the PantherWeb system or visit a campus Registrar's office to withdraw. An official withdrawal entitles the student to a grade of "W" in the class.

DEPARTMENT CONTACT INFORMATION

Kellie Bassell, MSN, EdS, RN
Nursing Program Director
AH 110 (561) 868-3412
Fax (561) 868-3452
Email

GETTING STARTED

1. Make sure you have all the computer system requirements as listed in the Computer Requirements section of this syllabus.
2. Obtain course materials. The textbook(s) can be purchased at the Palm Beach State College campus bookstore or **online**.
3. Log onto the course web site **Online Learning - Blackboard Campus.** Use your PantherWeb logon information.
4. Once inside the course website, read the "Mandatory Online Orientation" and complete the *Orientation Quiz*.
5. Explore the different parts of the web page. Be sure you print the syllabus, course calendar, and assignment sheet so that you know what is expected of you during the semester.
6. Begin completing your assignments as listed on the course calendar and/or class schedule.
7. Print the note-taking handouts for each section of content.

Have fun!

Disclaimer

Changes may be made to the syllabus at any time during the term by announcement of the professor. It is the responsibility of the student to make any adjustments as announced.

CRITIQUE DIRECTIONS AND GRADING TOOL

NUR2140 JOURNAL ARTICLE CRITIQUE
GRADING RUBRIC

Graded Element	***Possible Points***	***Actual Points Earned***
1. *Printed copy of article attached to critique*	*5 points*	
2. *APA format + 3 Refs*	*10 points*	
3. *Opening Summary Paragraph*	*10 points*	
4. *Analysis of article*	*40 points*	
5. *Impact on Nursing Statement Conclusion*	*25 points*	
6. *Appropriate spelling& grammar*	*10 points*	
Total Score	*100 points*	

Note: Paper must be submitted by due date to be graded. Late papers will not be accepted unless prior arrangements have been made with instructor. If accepted, a late paper will lose 5 points for every day it is late. **This paper is mandatory and must be submitted in order to receive a grade for this course**

Please note the following directions:

This paper must be written on an assigned article from the list provided, not chosen randomly.
Papers should not exceed 2 pages, plus the Title page and Reference page.
Title page must include the student's name; course and number; the day and time of class; and the title of the article read.
Submit a copy of this rubric for grading and comments.

COURSE CONTENT BY CONCEPTS

NIT I: PROFESSIONALISM - PHARMACOLOGY FOR NURSING

OBJECTIVES	CONTENT	RELATED LEARNING ACTIVITIES
The student will: Identify key events in the history of pharmacology . 1. Discuss the role of the FDA in the drug approval process. 2. Explain the basis for placing drugs in categories or classifications. 3. Discuss the prototype approach. 4. Distinguish between a drug's chemical, trade and generic names. 5. Describe what is meant by a drug's mechanism of action. 6. Explain why drugs are important in the context of emergency preparedness. 7. Describe the roles and responsibilities of the nurse regarding drug administration. 8. Describe drug-response relationship theory. 9. Compare the different responses of drug reactions among different age groups. 10. Identify common drug-herbal interactions. 11. Discuss how the nursing process applies to the management of safe medication administration. 12. Describe the nurse's role in drug research. 13. Identify community settings the nurse maybe involved in drug administration. 14. Describe the role of the nurse in delivering care to individuals who have substance abuse issues 15. Explain underlying causes of addiction.	A. Drug Regulation and Approval 1. Historical Perspective 2. Current Practices and Trends 3. Agencies B. Drug Classifications and Schedules 1. Therapeutic classes 2. Controlled substances 3. Drug names (generic/trade) C. Emergency Preparedness in the 21st Century 1. Role of the nurse 2. Agents used D. Principles of Drug Administration, Pharmacokinetics and Pharmacodynamics 1. Actions in the body 2. Effects on the body 3. Therapeutic responses E. Drug Therapy Considerations Throughout the Lifespan 1. Age related factors F. Herbal and Alternative Therapies 1. Concept of holism G. Nursing Process 1. Using the 5 step process H. Client Teaching Including Transcultural Consideration 1. Treating a diverse population I. Legal and Ethical Issues Related to Drug Administration 1. Standards of Care 2. Legal constraints 3. Medication errors J. Biosocial Aspects of Pharmacotherapy Including Substance Abuse 1. Physical/genetics 2. Psychological/personalities 3. Social factors	**Required Reading**: Adams, Holland & Urban text Chapters 1-12 **Recommended Activities**: www.mynursingkit.com exercises for corresponding chapters. **Text companion CD-ROM exercises**: Dosage and Calculations Case Study Audio Glossary Toolbox

UNIT II & III: SENSORY, PERCEPTION, COGNITION – DRUGS AFFECTING THE NERVOUS SYSTEM

OBJECTIVES	CONTENT	RELATED LEARNING ACTIVITIES
The student will: 1. Identify the 2 fundamental divisions of the nervous system. 2. Identify the 3 primary functions of the nervous system. 3. Compare and contrast the types of responses that occur during drug activation within the nervous system. 4. Describe the role of the nurse in managing pharmacologic agents affecting the autonomic nervous system. 5. Explain the mechanism of drug action, rationale for use and important adverse effects of neurological agents. 6. Identify the regions of the brain associated with anxiety, sleep and wakefulness. 7. Explain the pharmacologic management f anxiety and insomnia. 8. Identify the tree classification of medications used to treat anxiety and sleep disorders. 9. Recognize signs, symptoms and etiology of seizure disorders. 10. Categorize antiepileptic agents according to classification and mechanisms of action. 11. Identify 2 major categories of mood disorders with signs, symptoms and etiology. 12. Identify signs and symptoms of attention deficit-hyperactivity disorder.	A. Central Nervous System Stimulants 1. Anorexients 2. Amphetamine agents 3. Other CNS Stimulants B. Antidepressant and Antipsychotic agents 1. TCA's; MAOI's; SSRI's 2. Mood stabilizers 3. CNS stimulants C. Antianxiety, Sedative, Hypnotic agents 1. CNS depressants 2. Benzodiazepines 3. Barbiturates D. Psychotherapeutic agents 1. Typical agents 2. Atypical agents E. Autonomic Nervous System Agents 1. Adremergics a. Catecholamines b. Alpha & Beta Receptors 2. Cholinergics a. Alpha blockers b. Beta blockers F. Anesthetic agents 1. Local 2. General 3. Balanced G. Analgesic (Pain Management), agents 1. Opioids 2. Nonopioids 3. Antimigraine therapy. H. Anticonvulsant agents 1. GABA potentiators 2. Sodium influx suppression 3. Calcium influx suppression	**Required Reading**: Adams, Holland & Urban text Chapters 13-19 **Recommended Activities**: www.mynursingkit.com exercises for corresponding chapters. **Text companion CD-ROM exercises**: Dosage and Calculations Case Study Audio Glossary Toolbox

UNIT II & III: SENSORY, PERCEPTION, COGNITION – DRUGS AFFECTING THE NERVOUS SYSTEM

OBJECTIVES	CONTENT	RELATED LEARNING ACTIVITIES
13. Categorize drugs used for mood and emotional disorders based on their classification and drug action. 14. Categorize drugs used for psychosis based on classification and drug action. 15. Explain the importance of patient drug compliance in the pharmacological treatment of nervous system disorders. 16. Explain the neural mechanism for pain. 17. Explain analgesia through inhibition of neurotransmitters. 18. Explain the use of opioid agonists and antagonists in analgesia. 19. Compare the pharmacotherapeutic approaches to prevent migraines from those of aborting migraines. 20. Identify the actions of general anesthetics on the CNS. 21. Identify the 4 stages of general anesthesia.		

UNIT IV: REGULATION & CELLULAR INTEGRITY - DRUGS AFFECTING THE CARDIOVASCULAR & RENAL SYSTEMS

OBJECTIVES	CONTENT	RELATED LEARNING ACTIVITIES
The student will: 1. Identify the major risk factors associated with Hypertension. 2. Explain the effects of cardiac output, peripheral resistance and blood volume on blood pressure. 3. Discuss how the various influencing factors affecting blood pressure. 4. Discuss the role of the nurse in patient teaching related to cardiac agents. 5. Apply the Nursing Process to care for patients receiving cardiac agents. 6. Identify the major risk factors associated with heart failure. 7. Relate how the classic symptoms associated with heart failure may be caused by weakened hear muscle. 8. Explain how preload and after load affect cardiac function 9. Categorize representative cardiac and/or respiratory drug examples based on their mechanisms of action and important adverse affects. 10. Relate the effect of rhythm abnormalities on cardiac function. 11. Explain how an action potential is controlled by the flow of electrolytes across the myocardial membrane. 12. Categorize antidysrhythmic drugs according to classification and mechanism of action. 13. Explain the pathophysiology of angina pectoris myocardial infarction and cerebrovascular accident.	A. Drugs for Heart Failure 1. Cardiac Glycosides 2. ACE Inhibitors 3. Vasodilators 4. Diuretics 5. Phosphodiesterase Inhibitors 6. Beta-Adrenergic Blockers B. Drugs for Hypertension 1. Diuretics 2. Calcium Channel Blockers 3. Drugs affecting the Renin-Angiotensin System 4. Adrenergic Agents 5. Direct Vasodilators C. Drugs for Dysrhythmia 1. Sodium Channel Blocker 2. Beta-Adrenergic Blockers 3. Potassium Channel Blockers 4. Calcium Channel Blockers D. Drugs for Angina, Myocardial Infarction and Cerebrovascular Accident 1. Organic nitrates 2. Beta-Adrenergic Blockers 3. Calcium Channel Blocker 4. Glycoprotein Inhibitors 5. Thrombolytics E. Drugs for Lipid Disorders 1. HMG-CoA Reductase Inhibitors/Statins 2. Bile Acid Resins 3. Nicotinic Acid 4. Fibric Acid Agents	**Required Reading**: Adams, Holland & Urban text Chapters 22-26 **Recommended Activities**: www.mynursingkit.com exercises for corresponding chapters. **Text companion CD-ROM exercises**: Dosage and Calculations Case Study Audio Glossary Toolbox

UNIT IV: REGULATION & CELLULAR INTEGRITY - DRUGS AFFECTING THE CIRCULATORY & RENAL SYSTEMS

OBJECTIVES	CONTENT	RELATED LEARNING ACTIVITIES
The student will: 1. Explain the role of the urinary system in maintaining fluid, electrolyte, acid and base balance. 2. Explain the processes that occur as filtrate travels through the nephron. 3. Identify indications for diuretics. 4. Compare and contrast the loop, thiazide and potassium-sparing diuretics. 5. Describe the adjustments in pharmacotherapy that must be considered in patients with renal failure. 6. Describe conditions in which Intravenous therapy may be indicated. 7. Explain how changes in the osmolality or tonicity of a fluid can cause water to move to a different compartment. 8. Explain the importance of electrolyte balance in the body. 9. Discuss common causes of alkalosis and acidosis 10. Relate the general symptoms of shock to their physiological causes. 11. Explain the initial treatment for a patient who is in shock. 12. Summarize the link between high blood cholesterol levels and cardiovascular disease. 13. Compare and contrast the different types of lipoproteins. 14. Describe the process of hematopoesis.	A. Drugs for Coagulation Disorders 1. Anticoagulants 2. Antiplatelet Agents 3. Thrombolytics 4. Antifibrinolytics B. Drugs for Hematopoietic Disorders 1. Hematopoietic Growth Factors a. Human Eryghropoietin and Related Drugs b. Colony-Stimulating Factors c. Platelet Enhancers C. Anemias 1. Ant-anemic Agents a. Vitamin B12 and Folic Acid D. Diuretics 1. Loop Diuretics 2. Thiazide Diuretics 3. Potassium-Sparing Diuretics E Drugs for Fluid, Electrolyte and Acid-Base Disorders 1. Fluid replacement agents a. Crystalloids b. Colloids c. Electrolytes 1. Sodium replacement Therapy 2. Potassium Replacement Therapy d. Acid-Base Balance 1. Buffers 2. Ammonium Chloride	**Required Reading**: Adams, Holland & Urban text Chapters 27-31 **Recommended Activities**: www.mynursingkit.com exercises for corresponding chapters. **Text companion CD-ROM exercises**: Dosage and Calculations Case Study Audio Glossary Toolbox

UNIT IV: REGULATION & CELLULAR INTEGRITY - DRUGS AFFECTING THE CIRCULATORY & RENAL SYSTEMS

OBJECTIVES	CONTENT	RELATED LEARNING ACTIVITIES
15. Explain how hematopoesis is regulated 16. Classify types of anemia based on their causes. 17. Compare and contrast different types of anemias based on specific deficiencies. 18. Identify the primary mechanisms by which coagulation-modifier drugs act. 19. Explain how laboratory testing of coagulation parameters is used to monitor anticoagulant pharmacotherapy. 20. Explain the relationship between atherosclerosis and coronary artery disease.		

UNIT V: CELLULAR INTEGRITY - DRUGS AFFECTING THE IMMUNE & RESPIRATORY SYSTEMS

OBJECTIVES	CONTENT	RELATED LEARNING ACTIVITIES
The student will: 1. Identify the function of components of the lymphatic system and their functions. 2. Compare and contrast specific and nonspecific body defenses. 3. Compare and contrast the humoral and cell mediated immune responses. 4. Explain why immunosuppressant medications are necessary following organ transplants. 5. Identify the types of agents used as immunosuppressants. 6. Compare and contrast active immunity and passive immunity. 7. Categorize drugs used in the treatment of immune disorders based on their classification and mechanism of action. 8. Identify common signs and symptoms of inflammation. 9. Outline the basic steps in the acute inflammatory response. 10. Differentiate between H1 and H2 receptors. 11. Compare and contrast the terms pathogenicity and virulence. 12. Explain how resistance can develop to an anti-infective drug. 13. Describe the nurse's role in the pharmacologic management of bacterial infections. 14. Explain the importance of culture and sensitivity testing to anti-infective chemotherapy. 15. Identify the mechanism of development and symptoms of superinfections caused by anti-infective therapy.	A. Drugs for Immune System Modulation 1. Vaccines 2. Immunostimulants a. Biologic Response Modifiers 3. Immunosuppressants B. Drugs for Inflammation, Fever, and Allergies 1. Inflammation a. Nonsteroidal Anti-inflammatory Drugs b. Systemic Glucocorticoids 2. Fever 3. Allergy a. H2 Receptor Antagonists/Antihistamines b. Intranasal Glucocorticoids c. Sympathomimetics 4. Anaphylaxis C. Drugs for Bacterial Infection 1. Antibacterial Agents a. Penicillins b. Cephalosporins c. Tetracyclines d. Macrolides e. Aminoglycosides f. Fluoroquinolones g. Sulfonamides 2. Anti-tubercular agents D. Drugs for Fungal, Protozoan and Helminth Infections 1. Drugs for Systemic Fungal Infections a. Amphotericin B b. Azoles 2. Drugs for Superficial Fungal Infections 3. Protozoan Infections a. Metronidazole 4. Drugs for Helminthic Infections a. Mebendazole	**Required Reading**: Adams, Holland & Urban text Chapters 32-37 **Recommended Activities**: www.mynursingkit.com exercises for corresponding chapters. **Text companion CD-ROM exercises**: Dosage and Calculations Case Study Audio Glossary Toolbox

UNIT V: CELLULAR INTEGRITY - DRUGS AFFECTING THE IMMUNE & RESPIRATORY SYSTEMS

OBJECTIVES	CONTENT	RELATED LEARNING ACTIVITIES
16. Categorize antibacterial drugs based on their classification and mechanism of action. 17. Explain how the pharmacotherapy of tuberculosis differs from that of other infections. 18. Compare and contrast the treatment of superficial an systemic fungal infections. 19. Identify protozoan and helminth infections and appropriate drug interventions. 20. Explain the cycle of Plasmodium in relation to antimalarial therapy. 21. Describe the structural components of viruses. 22. Explain the advantages of HAART in the treatment of HIV/AIDS. 23. Categorize drugs used in the treatment of viral infections based on their classification and mechanism of action. 24. Explain the differences between normal cells and cancer cells. 25. Explain the significance of the growth fraction and the cell cycle to the success of chemotherapy. 26. Explain how combination therapy and special dosing protocols increase the effectiveness of chemotherapy. 27. Categorize anticancer drugs based on their classification and mechanism of action. 28. List the general adverse effects of chemotherapeutic agents and their causes 29. Discuss the role of the nurse in patient teaching related to respiratory agents. 30. Apply the Nursing Process to care for patients receiving respiratory agents. 31. Explain how the autonomic nervous system controls airflow in the bronchial tree and how this can be modified with drugs. 32. Compare the advantages and disadvantages of using the inhalation route of drug administration for pulmonary drugs. 33. Describe some common causes and symptoms of asthma, chronic bronchitis and emphysema.	E. Drugs for Viral Infections 1. HIV-AIDS a. Reverse Transcriptase Inhibitors b. Protease Inhibitors 2. Herpes Viruses 3. Influenza 4. Hepatitis F. Drugs for Neoplasia 1. Alkylating Agents 2. Antimetabolites 3. Antitumor Antibiotics 4. Plant extracts 5. Hormones and Hormone Antagonists 6. Biologic Response Modifiers 7. Other Antineoplastics G. Oxygenation Agents 1. Asthma a. Beta-Adrenergic Agonists b. Methylxanthines c. Anticholinergics d. Glucocorticoids e. Mast Cell Stabilizers f. Leukotriene Modifiers 2. Common Cold a. Anti-tussives b. Expectorants c. Mucolytics 3. Chronic Obstructive Pulmonary Disease	

UNIT VI: REGULATION & CELLULAR INTEGRITY - DRUGS AFFECTING THE GASTROINTESTINAL, ENDOCRINE & REPRODUCTIVE SYSTEMS

OBJECTIVES	CONTENT	RELATED LEARNING ACTIVITIES
The student will: 1. Describe the general structure and function of the endocrine system. 2. Describe the action of pituitary hormone agents and the concept of negative feedback. 3. Differentiate action and indications for use of agents affecting the thyroid. 4. Discuss action and common uses for glucocorticoids in relation to the adrenal glands. 5. Describe action and rationale for use of agents affecting the pancreas. 6. Compare and contrast Type 1 and Type 2 Diabetes Mellitus. 7. Discuss appropriate nursing management related to administration of endocrine agents. 8. Describe the signs, symptoms and etiology of hypo- and hyper-glycemia. 9. Describe the roles of the hypothalamus, pituitary and ovaries in maintaining female and male reproductive function. 10. Explain the mechanisms by which estrogens and progestins prevent conception. 11. Compare and contrast the role of hormones in replacement verses cancer therapy. 12. Discuss the use of androgens in replacement and cancer therapy. 13. Describe the role of drug therapy in fertility. 14. Describe the role of drug therapy in erectile dysfunction.	A. Pituitary and Hypothalamus Disorders 1. Growth Hormone 2. Anti-diuretic Hormone 3. Thyroid Agents 4. Antithyroid Agents B. Adrenal Gland Disorders 1. Glucocorticoids C. Pancreatic Disorders 1. Diabetes Mellitus a. Insulin b. Oral Hypoglycemics 2. Exocrine Disorders of the Pancreas a. Pancreatic Enzymes D. Drugs for Disorders and Conditions of the Female Reproductive System 1. Contraception a. Oral Contraception 2. Pharmacological Abortion a. Emergency Contraception 3. Menopause a. Hormone Replacement Therapy 4. Uterine Abnormalities a. Progestins 5. Labor and Breastfeeding a. Oxytoxics b. Tocolytics 6. Female Infertility E. Drugs for Disorders and Conditions of the Male Reproductive System 1. Male Hypogonadism a. Androgens 2. Male Infertility 3. Erectile Dysfunction a. Phosphodiesterase-5 Inhibitors 4. Benign Prostatic Hyperplasia a. Antiprostatic Agents	**Required Reading**: Adams, Holland & Urban text Chapters 40-46 **Recommended Activities**: www.mynursingkit.com exercises for corresponding chapters. **Text companion CD-ROM exercises**: Dosage and Calculations Case Study Audio Glossary Toolbox

UNIT VI: REGULATION & CELLULAR INTEGRITY - DRUGS AFFECTING THE GASTROINTESTINAL, ENDOCRINE & REPRODUCTIVE SYSTEMS

OBJECTIVES	CONTENT	RELATED LEARNING ACTIVITIES
15. Identify common causes, signs and symptoms of peptic ulcer disease. 16. Compare and contrast duodenal ulcers and gastric ulcers. 17. Explain why 2 or more antibiotics are used concurrently in the treatment of H.Pylori. 18. Categorize drugs used in the treatment of peptic ulcer disease based on their classification and mechanism of action. 19. Explain the pathogenesis of constipation and diarrhea. 20. Explain conditions where the pharmacotherapy of nausea and vomiting is indicated. 21. Describe the types of drugs used in the management of obesity. 22. Categorize drugs used in the treatment of bowel disorders, nausea, and vomiting based on their classification and mechanism of action. 23. Identify characteristics that differentiate vitamins from other nutrients. 24. Describe the functions of common vitamins and minerals. 25. Compare and contrast the properties of water soluble and fat-soluble vitamins. 26. Compare and contrast the properties of macro minerals and trace elements. 27. Identify differences among formulations for enteral nutrition. 28. Compare and contrast enteral and parenteral nutrition.	F. Drugs for Peptic Ulcer Disease 1. H2 Receptor Antagonists 2. Proton Pump Inhibitors 3. Antacids 4. Antibiotics for H. Pylori 5. Miscellaneous G. Drugs for Bowel Disorders 1. Constipation a. Laxatives 2. Diarrhea a. Antidiarrheals H. Drugs for Nausea and Vomiting 1. Antiemetics 2. Emetics I. Weight Loss 1. Anorexiants J. Nutritional Disorders 1. Vitamins a. Lipid-Soluble Vitamins b. Water-Soluble Vitamins 2. Minerals 3. Nutritional Supplements	

UNIT VII: MOBILITY & CELLULAR INTEGRITY - DRUGS AFFECTING THE MUSCULOSKELETAL SYSTEM, INTEGUMENT, EYE & EAR

OBJECTIVES	CONTENT	RELATED LEARNING ACTIVITIES
The student will: 1. Explain the neurochemical basis for drug therapy in the treatment of degenerative diseases of the CNS 2. Identify the most common degenerative diseases of the CNS. 3. Explain the goals of pharmacotherapy in the treatment of degenerative diseases of the CNS. 4. Explain the neurochemical basis for drug therapy in the treatment of degenerative diseases of the CNS. 5. Compare and contrast the actions of centrally acting skeletal muscle relaxants and direct-acting antispasmodics. 6. Discuss drug treatments for hypocalcaemia, osteomalacia and rickets.	A. Degenerative disease agents 1. Dopaminergics 2. Anticholinergics 3. Parasympathomimetics B. Drugs for Degenerative Disease of the Musculoskeltal System 1. Drugs for Muscle Spasms and Spasticity a. Direct acting b. Centrally acting 2. Drugs for Bone and Joint Disorders a. Calcium supplements b. Hormone replacements c. Uric acid disorders	**Required Reading**: Adams, Holland & Urban text Chapters 20-21, 47 **Recommended Activities**: www.mynursingkit.com exercises for corresponding chapters. **Text companion CD-ROM exercises**: Dosage and Calculations Case Study Audio Glossary Toolbox

UNIT VII: CDELLULAR INTEGRITY - DRUGS AFFECTING THE INTEGUMENT, EYE AND EAR

OBJECTIVES	CONTENT	RELATED LEARNING ACTIVITIES
The student will: 1. Identify the skin layers and associated structures. 2. Identify important drug therapies for diseases and disorders of the integument. 3. List representative drugs and explain the mechanism of drug action, primary actions and important adverse effects related to agents used to treat skin disorders and diseases. 4. Describe eye anatomy relevant to glaucoma development. 5. Explain the two major mechanisms by which drugs reduce intraocular pressure. 6. Describe the nurse's role in the management of eye and ear disorders. 7. Identify prototype drugs for treating glaucoma and explain their basic actions and adverse effects. 8. Identify miotic, mydriatic and cycloplegic agents and describe their mechanisms of action. 9. Identify types of drugs used in the treatment of ear conditions. 10. Apply the nursing process in the care of patients suffering from skin, eye and condition	A. Drugs for Skin Disorders 1. Skin Infections 2. Skin Parasites 3. Sunburn and Minor Burns 4. Acne and Rosacea 5. Dermatitis 6. Psoriasis B. Drugs for Eye/Optic Disorders 1. Glaucoma a. Cholinergic Agonists b. Nonselective Sympathomimetics c. Prostaglandins d. Beta-Adrenergic Agonists e. Carbonic Anhydrase Inhibitors f. Osmotic Diuretics C. Drugs for Ear Disorders 1. Otic/Aural Preparations	**Required Reading**: Adams, Holland & Urban text Chapters 48-49 **Recommended Activities:** www.mynursingkit.com exercises for corresponding chapters. **Text companion CD-ROM exercises**: Dosage and Calculations Case Study Audio Glossary Toolbox