



**SCIENCE & HEALTH
PROFESSIONS**

NURSING PROGRAM

**NUR 151
COURSE OUTLINE**

SPRING 2014



COURSE OUTLINE

Course Number: NUR 151

Course Title: Pharmacology in Nursing

Credits: 3

Hours: 3 lecture hours/week x 15 weeks

Catalog description:

This course presents pharmacology as an integrated aspect of nursing practice. Emphasis is placed on information necessary for safe administration of medications, current drug therapies for common medical conditions, and current information necessary to ensure safe nursing practice in the area of pharmacologic interventions.

Prerequisites: MCCC NUR 120/121/122 or instructor permission.

Corequisites: None

Required texts/other materials:

Adams, Michael P. and Holland, Jr., Leland (2011), *Pharmacology for Nurses – a Pathophysiologic Approach*. (4th ed.) Upper Saddle River, NJ: Pearson Prentice Hall.

On-line Resource: My Nursing Lab/My Nursing Kit (2011). Upper Saddle River: Pearson Prentice Hall.

OR

Lilley, L.L., Harrington, S., and Snyder, J. (2010). *Pharmacology and the Nursing Process*. (6th ed.) St. Louis: Elsevier Mosby. (ISBN: 13:978-0-323-04486-8).

Lilley, L.L., Harrington, S., and Snyder, J.S. (2010). *Study Skills Guide for Pharmacology and the Nursing Process*. (6th ed.). St. Louis: Elsevier Mosby

Last revised: 1/2014

Course faculty: Barbara Kunkel, RN, MSN, Course Coordinator

Information resources: Textbook, library sources, nursing program handbook

Class materials/lectures: All theory notes are available on the Angel website at NUR 151 Pharmacology Course. Students are responsible to review all online course materials, print as appropriate, and participate in all online and written requirements.

Course Goals:

At the end of this course the student will be able to:

Describe the nurse's role in the safe administration of pharmacologic agents.

Compare and contrast common drug classifications used in the therapeutic management of common conditions affecting body systems.

Recognize the potential for adverse interactions among medications, foods, and herbal therapies.

Course Schedule: Classes Mon 2-5p

Mon, January 20, 2013 – Martin Luther King, Jr., Day – Holiday – No Class

Mon, Feb 17, 2014 - Test #1

Mon, Feb 24, 2014 – Oral Presentation #1

Mon, Mar 17 – Sun, Mar 23, 2014 – Spring Break – No Class

Mon, Mar 10, 2014 - Test # 2

Mon, Mar 31, 2014 – Oral Presentation #2

Mon, Apr 14, 2014 - Test # 3

Mon, Apr 28, 2014 – Oral Presentation #3

Mon, May 12, 2014 – Final Exam

Thurs, May 15, 2014 – Grades Posted

Online students are welcome to attend all land sessions.

Theory:

Theory sessions are based on learning objectives from the course outline and equate to 4 hours per week. The on-line portion of this hybrid course is completed through the Angel Website. Textbook readings are assigned based on weekly learning objectives listed in the course outline and should be completed that week beginning Sunday through Saturday. Interactive learning activities are an integral part of this course. The land portion of this course contains three classroom presentations and four pen and paper exams.

Please note: Students may review their exams with the Course Coordinator according to the following schedule:

- Review of Exam #1 up to Mar 3, 2014
- Review of Exam #2 up to Apr 7, 2014
- Review of Exam #3 up to May 5, 2014

Office Hours: Mon 11a – 1:30p; Thurs 12n – 2p. Exams will not be available for review after these dates.

Oral Presentation:

Each student will work in small groups to present a topic as assigned three times during the semester. Presentation topics will be pre-assigned, and will be done in small groups composed of approximately 4-5 students, each with a related topic to present within a ten-minute time frame. The presenter will also provide a written study guide to student colleagues during the presentation or via email to student colleagues.

Students are encouraged to be creative when developing their study guides to focus on enhancing learning. Students and faculty will document a grade following the guidance of a grading rubric. The grade on this project of three presentations will count as a total of 30% total of the class grade (10% for each presentation).

Evaluation of Student Learning:

Course Requirements:

1. Unit Exams (3)
2. Oral Presentations (3)
3. Weekly 10 question online quiz (12 count 10 highest)
4. Discussion Forum Weekly (6 ques/week x 12) wks (online)
4. Final Exam

GRADING

A	97%-100%
A-	93%-96.99%
B+	89%-92.99%
B	85%-88.99%
B-	81%-84.99%
C+	78%-80.99%
C	76%-77.99%
D	61%-75.99%
F	60% or below

Grading –

Weekly online quiz average.....10%

Unit Exams 10% each = 30%

Oral Presentations.....10% each = 30%

Weekly Discussion Forums(online) / required for course completion

Final Exam..... 30%

100%

Student must achieve a minimum grade of 76 to pass this course.

Grades are not rounded.

Method of Evaluation:

OnLine Students: Weekly Discussion Forum:

The daily discussion forum instructions are as follows: Your **substantive** responses should be distributed over the week to address the following – **Pace your responses with the first response on Mon, then respond through the week with your last response no later than 6p Fri.**

On a weekly basis, you are responsible to make nine (9) substantive discussion forum responses to three faculty postings to include:

Respond to each posted question before Tuesday on a weekly basis = **6 per week.**

Respond to any response or follow-up question that faculty make within 24 hours.

Respond to three (3) of your student colleague's postings made on Tues, Wed, or Thurs with your final response no later than 6p Fri = **3 per week.**

The definition of substantive: A thought, idea, or reference from the literature that adds to further understanding by the readers.

You will significantly enhance your learning when you participate in the daily question forum. Please do not copy and paste. Use your own words to discuss and demonstrate your understanding.

Weekly Quiz: 12 on-line question quiz to be completed by each Friday on the following dates: Jan 31, Feb 7, 14, 21, 28, Mar 7, 14, 28, Apr 4, 11, 18, and 25. The lowest grade will not be counted in the average. Quiz grade average counts as 10% of the final grade. **Land and online students will take quiz on line.**

Unit Exams: three (3) unit exams, each contain 50 multiple choice questions. Each unit exam counts as 10% of the grade for a total of 30% of the grade.

Final Exam will be cumulative 75-question multiple choice exam that will also assess the content after the 4th unit exam. Final exam counts as 30% of the final grade

Testing Procedure: Land and online students will take all exams in class.

- All belongings, including but not limited to backpacks, books, purses, edibles and liquids, cell phones, and electronic devices are to be placed in the front of the classroom.
- Seating during the exam is at the discretion of the instructor or exam proctor.
- All coats and hats are to be removed during the exam period. Please refer to nursing program testing policy in the Nursing Program Handbook.
- All tests are scored on Scantron forms. The Scantron sheet stands as the formal grade. Please have #2 pencils available for testing.
- All cell phones must be turned off and stored with student belongings during testing.
- The cumulative (entire course) final exam will consist of 50 multiple choice questions.
- After testing, all Scantron forms are secured in sealed envelope, and returned to the nursing office for processing and storage.
- Please refer to the nursing program testing policy in your program handbook for more information on testing.
- In order to successfully pass this course, point scores for the calculation of tests must be 75% or higher.

Academic Integrity Statement:

ACADEMIC INTEGRITY OMB 210

Mercer County Community College is committed to Academic Integrity -- the honest, fair and continuing pursuit of knowledge, free from fraud or deception. This implies that students are expected to be responsible for their own work, and that faculty and academic support services staff members will take reasonable precautions to prevent the opportunity for academic dishonesty.

The college recognizes the following general categories of violations of Academic Integrity, with representative examples of each. Academic Integrity is violated whenever a student:

A. Uses or obtains unauthorized assistance in any academic work.

- copying from another student's exam.
- using notes, books, electronic devices or other aids of any kind during an exam when prohibited.
- stealing an exam or possessing a stolen copy of an exam.

B. Gives fraudulent assistance to another student.

- completing a graded academic activity or taking an exam for someone else.
- giving answers to or sharing answers with another student before, during or after an exam or other graded academic activity.
- sharing answers during an exam by using a system of signals.

C. Knowingly represents the work of others as his/her own, or represents previously completed academic work as current.

- submitting a paper or other academic work for credit which includes words, ideas, data or creative work of others without acknowledging the source.
- using another author's words without enclosing them in quotation marks, without paraphrasing them or without citing the source appropriately.
- presenting another individual's work as one's own.
- submitting the same paper or academic assignment to another class without the permission of the instructor.

D. Fabricates data in support of an academic assignment.

- falsifying bibliographic entries.
- submitting any academic assignment which contains falsified or fabricated data or results.

E. Inappropriately or unethically uses technological means to gain academic advantage.

- inappropriately or unethically acquiring material via the Internet or by any other means.
- using any electronic or hidden devices for communication during an exam.

Each instructor and academic support service area is authorized to establish specific guidelines consistent with this policy.

CONSEQUENCES FOR VIOLATIONS OF ACADEMIC INTEGRITY

For a single violation, the faculty member will determine the course of action to be followed. This may include assigning a lower grade on the assignment, assigning a lower final course grade, failing the student in the course, or other penalty appropriate to the violation.

In all cases, the instructor shall notify the Chair of the Academic Integrity Committee of the violation and the penalty imposed.

When two (or more) violations of academic integrity are reported on a student, the Academic Integrity Committee (AIC) may impose disciplinary penalties beyond those imposed by the course instructors. The student shall have the right to a hearing before the AIC or a designated AIC subcommittee.

APPEALS

The student has a right to appeal the decision of the instructor or the Academic Integrity Committee. Judicial procedures governing violations of Academic Integrity are contained in the Student Handbook.

Approved by the MCCC Board of Trustees March 18, 2004

ADA Statement

If you believe that you may require special accommodations or services to participate in this course, please contact the instructor or a counselor in Student Services. See the MCCC Student Handbook for further details.

Units of Study in Detail

NUR 151 COURSE SCHEDULE

WK	OBJECTIVE(S)	TOPIC	RECOMMENDED READING(S)
2	<ul style="list-style-type: none"> • Demonstrate understanding of the role of pharmacokinetics and pharmacodynamics in medications administration. • Relate the ethical aspects of drug administration and the nurse's role. 	<p>Core Concepts in Pharmacology</p> <ul style="list-style-type: none"> -Introduction to Pharmacology: Drug Regulation & Approval -Drug Classes & Schedules -Principles of Drug Administration -Pharmacokinetics -Pharmacodynamics 	<p>Adams Chapters- 1, 2, 3, 4, 5</p> <p>Lilley Chapters- 1-6</p>
2	<ul style="list-style-type: none"> • Apply the function and purposes of the nursing process as related to drug therapy. • Apply the influence of age on the effects of medications for a client. • Demonstrate the importance of client education in the administration of medications. • Apply correct techniques for medication administration. • Compare and contrast the effects of herbal medication and their possible drug interactions. 	<p>Pharmacology & the Nurse-Client Relationship</p> <ul style="list-style-type: none"> -The Nursing Process in Pharmacology -Drug Administration throughout the Lifespan -Medication Errors & Risk Reduction -Psychosocial, Gender, & Cultural Influences on Pharmacotherapy -Substance Abuse <p>The topic of herbal medications will be discussed with each system</p>	<p>Adams Chapters 6, 7, 8, 9, 12</p> <p>Adams Chap 10</p>
2	<ul style="list-style-type: none"> • Demonstrate how the nursing process is applied to clients receiving sedative-hypnotic agents. • Identify the role of the nurse in promoting client compliance with drug therapy for seizure activity • Describe strategies to enhance compliance in the patient taking antiepileptic drugs 	<p>The Nervous System</p> <ul style="list-style-type: none"> -Drugs for Anxiety & Insomnia -Drugs for Seizures 	<p>Adams Chapter 14</p> <p>Lilley Chapter 11</p> <p>Adam Chapter 15</p> <p>Lilley Chapter 13</p>

WK	OBJECTIVE(S)	TOPIC	RECOMMENDED READING(S)
3	<ul style="list-style-type: none"> • . Compare and contrast the difference between an opioid agonist, agonist-antagonist, and antagonist. • Review the sympathetic nervous system as related to drug therapy with adrenergic agents. • Discuss the nurse's role in assessment of the effects of adrenergic agonists, adrenergic antagonists and cholinergic agents. 	<p>-Drugs for the Control of Pain</p> <p>Drugs Affecting the Autonomic Nervous System</p> <p>-Adrenergic Agonists</p> <p>-Adrenergic Blocking Agents</p>	<p>Adams Chapter 18 Lilley Chapter 15 Lilley Chapter 14</p> <p>Adams Chapter 13 Lilley Chapter 18 Lilley Chapter 19</p>
3-4	<ul style="list-style-type: none"> • Break down the function of cholinergic receptors with contrast of stimulation versus blocking of these receptors. • Identify the role of the nurse in assessment of the effects of cholinergic blocking drugs and the different drugs. • Identify the mechanisms of action, dosage forms, routes of administration, cautions, contraindications, drug interactions, adverse effects, patient tolerance, toxicity and patient education with the use of cholinergic blocking drugs. 	<p>Cholinergic Drugs</p> <p>Cholinergic-Blocking Drugs</p>	<p>Adams Chapter 13 Lilley Chapter 20 Lilley Chapter 21</p>
4	<ul style="list-style-type: none"> • Discuss the pathophysiology related to Parkinson's disease. • Compare and contrast the different classes of medications used in the treatment of Parkinson's disease including the first and second line drugs used in therapy. • Analyze the mechanisms of action, dosage forms, routes of administration, cautions, contraindications, drug interactions, adverse effects, patient tolerance, toxicity and patient education with the use of anti-parkinsonian drugs. 	<p>Drugs for Degenerative Diseases of the Nervous System</p> <p>-Drugs for Parkinson's Disease</p>	<p>Adams Chapter 20 Lilley Chapter 16</p>

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4	<ul style="list-style-type: none"> • Explain the goals of pharmacotherapy for Alzheimer’s disease and the efficacy of existing medications. • Categorize drugs used in the treatment of Alzheimer’s disease. 	-Drugs for Alzheimer’s Disease	Adams Chapter 20
4	<ul style="list-style-type: none"> • Compare and contrast the various drugs in the following classes of psychotherapeutic agents: antianxiety agents, antidepressants, antimanic agents, antipsychotics. 	-	Adams Chapter 16
4	<ul style="list-style-type: none"> • Identify the mechanism of action, indication, therapeutic effects, adverse effects, toxic effects, drug interactions, contraindications and cautions associated with various psychotherapeutic drugs. • Develop a nursing plan of care that includes all phases of the nursing process related to administration of psychotherapeutics. • Develop client education for this population of clients. 	-Drugs for Emotional and Mood Disorders -Drugs for Psychoses	Lilley Chapter 17 Adams Chapter 17
5	<ul style="list-style-type: none"> • Identify the various antilipemic agents commonly used to treat hyperlipidemia. • Discuss and define hypertension, with comparison of primary and secondary hypertension and their related manifestations. • Discuss protocol for treating hypertension. • Discuss the most recent guidelines; compare the various drugs used in the pharmacologic 	The Cardiovascular & Urinary Systems -Drugs for Lipid Disorders	Adams Chapter 22 Lilley Chapter 29 Adams Chapter 23

WK	OBJECTIVE(S)	TOPIC	RECOMMENDED READING(S)
5	<p>management of hypertension with regard to mechanism of action, specific indications, adverse effects, toxic effects, cautions, contraindications, dosages and routes of administration.</p>	-Drugs for Hypertension	Lilley Chapter 25 Lilley Chapter 26
5	<ul style="list-style-type: none"> • Discuss the normal anatomy of the renal system. • Discuss the impact of the renal system on hypertension. • Discuss how diuretics work in the renal system. • Discuss indications for the use of diuretic therapy 	-Diuretic Therapy & Drugs for Renal Failure	Adams Chapter 30
5	<ul style="list-style-type: none"> • Discuss the pathophysiology of myocardial ischemia and the subsequent experience of angina. • Discuss the various factors that may precipitate angina and measures to decrease the occurrence. <p>Discuss the differences in the major classes of antianginal drugs with regard to their mechanisms of action, dosage forms, routes of administration, cautions, contraindications, drug interactions, adverse effects, patient tolerance, toxicity and patient education.</p>	-Drugs for Angina Pectoris & Myocardial Infarction	Adams Chapter 25 Lilly Chapter 24
6	<ul style="list-style-type: none"> • Discuss and describe the effects of cardiac glycosides and other positive inotropic drugs on the failing and/or diseased heart. • Compare and contrast rapid versus slow digitalization including nursing consideration, food interactions and laboratory tests. • Identify significant drugs, laboratory tests, and food interactions associated with positive inotropic agents. 	-Drugs for Heart Failure	Adams Chapter 24 Lilly Chapter 22

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6-7	<ul style="list-style-type: none"> • Compare and contrast the differences between inotropic, chronotropic, and dromotropic terms. • Compare, contrast and then discuss the various dysrhythmias with regard to their basic characteristics, the impact on the structure of the heart and related symptoms. • Identify the various classes of antidysrhythmic agents as determined by their mechanism of action. • Develop an educational plan and a plan of care for this population of clients. 	-Drugs for Shock	Adams Chapter 29
7	<ul style="list-style-type: none"> • Compare and contrast the types of shock. • Compare and contrast the use of colloids and crystalloids in fluid replacement therapy. • Explain the mechanism of action, primary actions, and important adverse effects in each of the classes of drugs used in the treatment of shock. • Use the Nursing Process to care for clients who are receiving drug therapy for shock. 	-Drugs for Dysrhythmias	Adams Chapter 26 Lilly Chapter 23
7	<ul style="list-style-type: none"> • Identify the indications for and contraindications to the use of coagulation modifiers. • Discuss the administration procedures, laboratory tests, and diet modifications for the various coagulation modifiers. 		
8	<ul style="list-style-type: none"> • Discuss the general principles of antibiotic therapy. • Discuss how they rid the body of infection. • Discuss the pros and cons of antibiotic use with the attention to over use or abuse of antibiotics and the 	-Drugs for Coagulation Disorders	Adams Chapter 27 Lilly Chapter 28

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8	<ul style="list-style-type: none"> development of drug resistance. • Describe the various antibiotics and the classifications of them. • Describe effects of the immune system with attention to various types of immunity. • Discuss the process of immunosuppression in patients with viral infections, specifically those with HIV. • Identify the teaching needs of clients receiving antifungal medications. 	<p>The Immune System</p> <ul style="list-style-type: none"> -Drugs for Immune System Modulation -Drugs for Inflammation and Fever -Drugs for Bacterial Infections - Antituberculosis Drugs -Drugs for Fungal, Protozoan, and Helminthic Infections 	<ul style="list-style-type: none"> Adams Chapter 32 Lilly Chapter 38 Adams Chapter 33 Lilly Chapter 41 Adams Chapter 34 Adams Chapter 35
9	<ul style="list-style-type: none"> • Identify the indications for use of antimalarial and antiprotozoal • Describe the actions of nonsteroidal antiinflammatory drugs and Antigout agents 	<ul style="list-style-type: none"> - Drugs for Viral Infections 	<ul style="list-style-type: none"> Adams Chapter 36 Lilly Chapter 39
10	<ul style="list-style-type: none"> • Identify the role of immunosuppressive therapy in the treatment of autoimmune diseases. • Discuss the purpose of Antineoplastic and biologic response modifiers in the treatment of neoplasm. 		
11	<ul style="list-style-type: none"> • Identify the mechanisms of actions and indications for the use of antihistamines, decongestants, antitussives and expectorants. • Identify classes of specific agents used in the treatment of lower respiratory tract disease • Identify the first and second line drugs indicated for the treatment of TB. 	<ul style="list-style-type: none"> -Drugs for Neoplasia 	<ul style="list-style-type: none"> Adams Chapter 37 Lilly Chapter 47, 48
11	<ul style="list-style-type: none"> • Discuss the physiology influences of various pathologies, such as peptic ulcer disease, gastritis, spastic colon, gastroesophageal reflux disease, and 	<p>Drugs Affecting the Respiratory System</p> <ul style="list-style-type: none"> -Drugs for Allergic Rhinitis and the Common Cold 	<ul style="list-style-type: none"> Adams Chapter 38 Adams Chap 39

WK	OBJECTIVE(S)	TOPIC	RECOMMENDED READING(S)
12	<p>hyperacidity stated on the health of patients and their GI tracts.</p> <ul style="list-style-type: none"> • Identify various agents used to treat gastric disorders. • Differentiate antidiarrheal, laxative and cathartic drugs. <ul style="list-style-type: none"> • Develop an educational plan and a plan of care for this population of clients • Comprehends the normal actions and functions of the pancreas. • Compare and contrast the contrast between Type 1 and Type 2 diabetes mellitus with regard to age of onset, signs and symptoms, pharmacologic and non-pharmacologic treatment incidence and etiology. • Identify the various agents used to manage Type 1 and Type 2 diabetes mellitus. • Describe the mechanisms of action, dosage forms, routes of administration, cautions, contraindications, drug interactions, adverse effects, patient tolerance, of the various categories of insulin and oral hypoglycemic drugs • Develop a patient education resource for the patient receiving insulin. • Developed education and plan of care using the nursing process for this population of clients. 	<p>-Drugs for Asthma and Other Pulmonary Disorders</p> <p>Drugs Affecting the Gastrointestinal System</p> <p>-Drugs for Peptic Ulcer Disease -Drugs for Bowel Disorders and Other Gastrointestinal Disorders -Drugs for Nutritional Disorders</p> <p>Drugs Affecting the Endocrine System: -Antidiabetic Drugs</p>	<p>Adams Chap 40 Lilley Chapter 50 Adams Chap 41 Lilley Chapter 51 Adams Chap 42 Lilley Chapter 52</p> <p>Adams Chap 44 Lilley Chapter 32</p>
13	<ul style="list-style-type: none"> • Identify the various agents used to treat pituitary disorders. 		

WK	OBJECTIVE(S)	TOPIC	RECOMMENDED READING(S)
13-14	<ul style="list-style-type: none"> • Identify the client teaching needs for a client on thyroid or antithyroid agents. • Develop the teaching needs of clients receiving adrenal medications. 	<p>-Pituitary Drugs</p> <p>-Thyroid and Antithyroid Drugs</p> <p>-Adrenal Drugs</p>	<p>Adams Chap 43 Lilly Chapter 30 Lilly Chapter 31</p>
15	<ul style="list-style-type: none"> • Identify the expected therapeutic responses to the various women's health agents. • Discuss the rationale for various treatments involving estrogen, progesterone, uterine motility altering drugs, alendronate and other drugs related to women's health, with indications, adverse effects, cautions, contraindications, drug interactions, dosages and routes of administration. 	<p>Drugs for Disorders and Conditions of the Female Reproductive System</p>	<p>Lilly Chapter 33</p> <p>Adams Chap 5 Lilly Chapter 34</p>
15	<ul style="list-style-type: none"> • Identify the various male reproductive agents and their indications • Compare the various men's health drugs with discussion of their rationale for use, dosage forms. • Discuss and describe the mechanisms of action, dosage, adverse effects, cautions, contraindications, drug interactions, and routes of administration for the various men. 	<p>Drugs for Disorders and Conditions of the Male Reproductive System</p>	<p>Adams Chap 46 Lilly Chapter 35</p>

