Pharmacology for Nurses  
NUR 400 Section-734  
3 CREDITS  
On-Line  
Summer 2012

Catalog Course Description: Principles of nursing management in drug therapy, drug classifications and patient-related variables. Assessment and evaluation of patient responses in relation to health, age, lifestyle, gender, ethnicity and other cultural factors.

Additional Course Description
This 3 credit on-line course focuses on the principles of nursing management in drug therapy along with the basics of core drug knowledge and patient-related variables. Nursing implications are a major focus of the weekly assignments, and evidence based treatment guidelines are strongly emphasized in the textbook. In addition, course content and activities strengthen assessment and evaluation skills related to ensure patient safety and responses that change in accordance with health, age, lifestyle, gender and other factors.

Course Objectives: At the end of this course, students will:
1. Define pharmacodynamics, pharmacogenomics, and pharmacokinetics
2. Explain the significance of drug classifications.
3. Evaluate the nursing management of drug therapy.
4. Explain strategies for maximizing therapeutic effects of drug therapy and minimizing adverse effects in drug therapy.
5. Define polypharmacy and its relevance in managing drug therapy in older adults.
6. Describe the effects of health, age, lifestyle, gender, ethnicity and culture on drug therapy.
7. Describe the intent, scope, and benefits of drug standards and legislation.
8. Apply knowledge of pharmacology to nursing practice
9. Establish a knowledge base in the basic science of drugs
10. Discuss how to evaluate drug therapy and its nursing management
11. Define multiple drug prescriptions and its relevance in managing drug therapy in older adults
12. Describe the intent, scope and benefits of drug standards and legislation

Prerequisites: NUR 313 and NUR 310 and NUR 341. Admission to RN-BSN program or permission of instructor.

Co-requisites: None

Professional Standards & Guidelines: The curriculum is guided by the following documents:
Faculty Contact Information:

Mary Smania, MSN, FNP-BC  
Assistant Professor  
Nurse Practitioner  
Office: A108 Life Sciences  
Phone: 57-355-3309  
E-mail: mary.smania@ht.msu.edu  

Note: Times can be arranged to accommodate student schedules.

Required Texts and Resources:

b. Required Texts:


c. Required Resources, References, Supplies:

ANGEL Help Line  
1.800.500.1554 (24 hrs, 7 days/week)  
517.355.2345 (24 hrs, 7 days/week)  
www.angel.msu.edu (ANGEL Help link in upper right corner)  

Always check with the ANGEL Help Line first!

Instructional Model

This is an on-line course that includes textbook reading, multiple choice quizzes, case studies, research postings related to new medications, and multiple choice examinations.

Grading:

Grades will be determined by adding all of the course activities together and arriving at a specific number (point total). The MSU 4.0 grading system will be utilized to report final course grades. Points will be rounded to whole numbers using the 0.5 rules. Points at ≥ 0.5 will be rounded up while those ≤ 0.5 will be rounded down to the nearest whole number. The following grade scale is used:

a. Course Grading Scale: The standard College of Nursing grading scale will be utilized.

<table>
<thead>
<tr>
<th>%</th>
<th>GRADE</th>
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<tbody>
<tr>
<td>94%-100%</td>
<td>4.0</td>
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<tr>
<td>89%-93%</td>
<td>3.5</td>
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<tr>
<td>84%-88%</td>
<td>3.0</td>
</tr>
<tr>
<td>79%-83%</td>
<td>2.5</td>
</tr>
<tr>
<td>75%-78%</td>
<td>2.0</td>
</tr>
<tr>
<td>70%-74%</td>
<td>1.5</td>
</tr>
<tr>
<td>65%-69%</td>
<td>1.0</td>
</tr>
<tr>
<td>&lt;64%</td>
<td>0.0</td>
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</table>

“Final Course Grades will not be rounded”
Grades will be based on the following criteria:

<table>
<thead>
<tr>
<th>Points per item</th>
<th>Total number of points</th>
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</thead>
<tbody>
<tr>
<td>Introduction to self and first week discussion board</td>
<td>5 points for introduction</td>
</tr>
<tr>
<td>Discussion Board</td>
<td>3 discussion topics-10 points for topic/week</td>
</tr>
<tr>
<td>Quizzes</td>
<td>5 quizzes worth 10 points each</td>
</tr>
<tr>
<td>Case Studies</td>
<td>1 Case Studies 10 points each</td>
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<tr>
<td>Mid Term Exam</td>
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<tr>
<td>Final Exam</td>
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<tr>
<td><strong>Total</strong></td>
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* A minimum of 2.0 is required by the College of Nursing.

**Attendance**

It is expected that all quizzes, case studies, research postings and exams will be completed on due dates. Student will receive a zero if assignment is late without permission from instructor.

**Learning Methodology**

This is on-line ANGEL course is built on a weekly framework of material including: guidepost and introduction to the week’s content, objectives, textbook readings, additional required readings (external links), student enrichment activities, quizzes and discussion question (participation/engagement).

This course is not based on a self-paced learning model. Although assignments may be completed at any time during the week they are due, **ALL materials need to be posted by 11:55 pm Eastern Standard Time on the designated evening of each week.** Discussion Board assignments will be graded based on a rubric with participation throughout the week. and Case Studies/Quizzes are due **Sunday** evening. We highly encourage students to participate throughout the week. Faculty will have 2 weeks in which to grade the case study responses and discussion boards.

Students are expected to be active participants in the ANGEL discussion. Active participation (engagement) is an expectation for all students. Parameters **Friday/Saturday only posts will not be eligible for full points as this is not considered engagement with classmates or faculty** and guidelines for participation can be found under Lessons & Documents in ANGEL. As adult learners, it is expected that students will do relevant reading and study for the identified weekly topics. It is expected that students will search literature outside of the assigned textbook readings and suggest/share relevant findings with faculty and classmates.

**Attendance**

It is expected that all quizzes, case studies, postings and exams will be completed on due dates. Student will receive a zero if assignment is late without permission from instructor.

**Access to Faculty**

In a regular classroom setting, faculty are generally available to meet with students before or after class, during scheduled office hours, or if an appointment is made. In an online course setting, faculty is available to answer questions in a different
manner. It may take up to 72 hours for faculty to respond to your questions – especially after 5:00 pm, excluding weekends and holidays. Faculty are not online 24 hours a day, 7 days a week. Expect a reasonable response time for your questions. Do not wait until the last minute to ask an important question – plan ahead!

Generally, faculty will not respond to Forums, or answer questions, after 5:00 pm EDST on Friday. Please write email in complete sentences; your emails are considered professional communication. Remember, you are not internet messaging to a friend. If you would like to make an appointment to meet face to face, please contact Professor Smania.

Communication

All students are expected to check Angel for course information. E-mail is for the sole purpose of conveying constructive, positive course and nursing information. Any student utilizing this service to convey personal opinion, pass on chain letters, or advertise will be reported to the Director of the Office of Student Services and the Associate Dean for Academic Affairs and dealt with on an individual basis. Inappropriate use may result in the individual being removed from the class list, and any other actions determined necessary by the Course Chairperson and College of Nursing administrators.

Student Faculty Relationship

It is expected that a professional, courteous, positive demeanor will be exhibited to peers, faculty and College of Nursing staff with each encounter. Students may email or phone instructor to arrange an appointment to discuss course issues.

University & College Policies:

The College of Nursing expects that students will demonstrate professional behavior in all situations. Specific expectations for clinical and other professional venues can be found in the appropriate handbook. You are responsible for reviewing and acting in accordance with the policies and procedures found in the following sources, including the following topics: Professionalism, Academic Integrity, Accommodations for Students with Disabilities, Disruptive Behavior, Attendance, Compliance, and Progression.

- CON Student handbook  http://nursing.msu.edu/handbooks.asp
- Information for Current Students—including Rights, Responsibilities and Regulations for Students http://www.msu.edu/current/index.html
- Academic Programs http://www.reg.msu.edu/UCC/AcademicPrograms.asp

University Policies

Academic integrity: Please read each part of the following site to fully understand your responsibilities and the position of the University regarding:

- Cheating
- Plagiarism
- MSU regulations, ordinances and policies regarding academic honesty and integrity
- Academic Integrity links http://www.msu.edu/unit/ombud/honestylinks.html

Academic dishonesty in any form will not be tolerated in the College of Nursing. Any student involved in academic dishonesty will be reported to the Office of Academic Affairs and the Office of Student Support Services in the College of Nursing and a grade of 0.0 may be issued for the course.

Lectures, quizzes and examinations must remain the property of the College of Nursing and must not be copied from the internet. According to university policy, consequences for academic dishonesty may include failure of the course, expulsion from the major, or expulsion from the university.
Online discussions and exercises are confidential and should not be discussed with others who are not enrolled in the class. It is important for each course participant to express his/her ideas. All ideas need to be respected in discussions and exercises. Any "group projects" that are required, still require individual work as a minimal expectation.

Article 2.3.3 of the Academic Freedom Report states that "the student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." In addition, the College adheres to the policies on academic honesty as specified in General Student Regulations 1.0, Protection of Scholarship and Grades; the all-University Policy on Integrity of Scholarship and Grades; and Ordinance 17.00, Examinations. (See Spartan Life: Student Handbook and Resource Guide and/or the MSU Web site: www.msu.edu). Therefore, unless authorized by your instructor, you are expected to complete all course assignments, including homework, lab work, quizzes, tests and exams, without assistance from any source. You are expected to develop original work for this course; therefore, you may not submit course work you completed for another course to satisfy the requirements for this course. Also, you are not authorized to use the www.allmsu.com web site to complete any course work in NUR 400. Students who violate MSU rules may receive a penalty grade, including--but not limited to--a failing grade on the assignment or in the course. Contact your instructor if you are unsure about the appropriateness of your course work.

Accommodations for students with disabilities: Students with disabilities should contact the Resource Center for Persons with Disabilities to establish reasonable accommodations. For an appointment with a disability specialist, call 353-9642 (voice), 355-1293 (TTY), or visit MyProfile.rcpd.msu.edu.

Disruptive behavior: Article 2.3.5 of the Academic Freedom Report (AFR) for students at Michigan State University states: "The student's behavior in the classroom shall be conducive to the teaching and learning process for all concerned." Article 2.3.10 of the AFR states that "The student has a right to scholarly relationships with faculty based on mutual trust and civility." General Student Regulation 5.02 states: "No student shall . . . interfere with the functions and services of the University (for example, but not limited to, classes . . .) such that the function or service is obstructed or disrupted. Students whose conduct adversely affects the learning environment in this classroom may be subject to disciplinary action through the Student Faculty Judiciary process.

Attendance: Students whose names do not appear on the official class list for this course may not attend this class. Students who fail to attend the first four class sessions or class by the fifth day of the semester, whichever occurs first, may be dropped from the course. See the Ombudsman’s web site for a discussion of student observance of major religious holidays, student-athlete participation in athletic competition, student participation in university-approved field trips, medical excuses and a dean's drop for students who fail to attend class sessions at the beginning of the semester.

College of Nursing policies regarding Professional Development Guidelines [found in CON Student Handbooks at CON website]. Students are responsible for the information found in the BSN CON Student Handbook.
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Unit</th>
<th>Textbook Readings</th>
<th>Activity</th>
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</thead>
</table>
| 1    | May 14   | Pharmacology Basics; Principles of Drug Administration; Pharmacokinetics | Ch. 1  Orientation to Pharmacology  
Ch. 2  Application of Pharmacology in Nursing Practice  
Ch. 3  Drug Regulation, Development, Names and Information  
Ch. 4  Pharmacokinetics  
Ch. 5  Pharmacodynamics | Introduction of Self-Required  
Discussion Board |
| 2    | May 21   | Basics of Pharmacology cont.; Drug Therapy Across the Lifespan | Ch. 6  Drug Interactions  
Ch. 7  Adverse Drug Reactions & Medication Errors  
Ch. 8  Individual Variation in Drug Responses  
Ch. 9  Drug Therapy During Pregnancy & Breast-Feeding  
Ch. 10 Drug Therapy in Pediatric Patients  
Ch. 11 Drug Therapy in Geriatric Patients | Quiz-will cover week 1 and 2 |
| 3    | May 28   | Nervous System Drugs                      | Ch. 12 Basic Principles of Neuropharmacology  
Ch. 13 Physiology of the Peripheral Nervous System  
Ch. 17 Adrenergic Agonists  
Ch. 18 Adrenergic Antagonists  
Ch. 19 Indirect-Acting Antiadrenergic Agents (pages 175-178 only-Central Acting Alpha 2 Agonists) | Discussion board |
| 4    | June 4   | Nervous System Drugs: Neurodegenerative Disorders; Neurologic Drugs; Pain | Ch. 20 Introduction to Central Nervous System Pharmacology  
Ch. 21 Drugs for Parkinson’s Disease  
Ch. 22 Alzheimer’s Disease  
Ch. 24 Drugs for Epilepsy  
Ch. 25 Drugs for Muscle Spasm & Spasticity  
Ch. 28 Opioid (Narcotic) Analgesics, Opioid Antagonists, & Nonopioid Centrally Acting Analgesics  
Ch. 30 Drugs for Headache  
Ch. 70 Cyclooxygenase Inhibitors: NSAIDS & Acetaminophen | Quiz-Will cover week 3 and 4 |
<p>| 5    |          | Central Nervous System Drugs: Psychotherapeutic | Ch. 31 Antipsychotic Agents &amp; Their Use in | Quiz |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Chapters/Topics</th>
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<tbody>
<tr>
<td>June 11</td>
<td>Drugs; Drug Abuse</td>
<td>Schizophrenia&lt;br&gt;Ch. 32 Antidepressants&lt;br&gt;Ch. 33 Drugs for Bipolar Disorder&lt;br&gt;Ch. 34 Sedative-Hypnotic Drugs&lt;br&gt;Ch. 35 Management of Anxiety Disorders&lt;br&gt;Ch. 36 Central Nervous System Stimulants &amp; Attention-Deficit/Hyperactivity Disorder&lt;br&gt;Ch. 37 Drug Abuse I</td>
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<tr>
<td>June 18</td>
<td>Midterm Exam</td>
<td>50 questions</td>
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<td>June 25</td>
<td>Diuretics; Drugs that Affect Heart, Blood Vessels</td>
<td>Ch. 40 Diuretics&lt;br&gt;Ch. 42 Review of Hemodynamics&lt;br&gt;Ch. 43 Drugs Acting on the Renin-Angiotensin-Aldosterone System&lt;br&gt;Ch. 44 Calcium Channel Blockers&lt;br&gt;Ch. 45 Vasodilators&lt;br&gt;Ch. 46 Drugs for Hypertension</td>
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<tr>
<td>July 2</td>
<td>Diuretics; Drugs that Affect Heart, Blood Vessels</td>
<td>Ch. 47 Drugs for Heart Failure&lt;br&gt;Ch. 48 Antidysrhythmic Drugs&lt;br&gt;Ch. 49 Prophylaxis of Coronary Heart Disease&lt;br&gt;Ch. 50 Drugs for Angina Pectoris&lt;br&gt;Ch. 51 Anticoagulant, Antiplatelet &amp; Thrombolytic Drugs</td>
</tr>
<tr>
<td>July 9</td>
<td>Drugs for Endocrine Disorders; Women's Health; Men's Health; Immune System and Antiviral Agents</td>
<td>Ch. 56 Drugs for Diabetes Mellitus&lt;br&gt;Ch. 57 Drugs for Thyroid Disorders&lt;br&gt;Ch. 59 Drugs for Disorders of the Adrenal Cortex&lt;br&gt;Ch. 60 Estrogens &amp; Progestins&lt;br&gt;Ch. 65 Drugs for Erectile Dysfunction &amp; Benign Prostatic Hyperplasia&lt;br&gt;Ch. 66 Review of the Immune System&lt;br&gt;Ch. 92 Antiviral Agents I</td>
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Open June 20 from 5:00 pm to June 21 at 11:55 pm

No Assignment

Complete readings

Quiz—will cover week 7 and 8

Discussion board
<table>
<thead>
<tr>
<th></th>
<th>Ch. 93  Antiviral Agents II</th>
<th>Ch. 82  Basic Principles of Antimicrobial Therapy</th>
<th>Quiz</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Pharmacotherapy of Infectious Diseases</td>
<td>Ch. 83  Drugs that Weaken the Bacterial Cell Wall I</td>
<td></td>
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<tr>
<td>July 16</td>
<td>Ch. 84  Drugs that Weaken the Bacterial Cell Wall II</td>
<td>Ch. 85  Bacteriostatic Inhibitors of Protein Synthesis</td>
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<td></td>
<td>Ch. 86  Aminoglycosides</td>
<td>Ch. 87  Sulfonamides &amp; Trimethoprim</td>
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<td>Ch. 90  Miscellaneous Antimicrobial Drugs</td>
<td>Ch. 91  Antifungal Agents</td>
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<td></td>
<td>Respiratory Tract Drugs; Gastrointestinal Drugs; Antihistamines; Cancer</td>
<td>Ch. 69  Antihistamines</td>
<td>Case Studies</td>
</tr>
<tr>
<td>11</td>
<td>Ch. 75  Drugs for Asthma</td>
<td>Ch. 77  Drugs for Peptic Ulcer Disease</td>
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<td>July 23</td>
<td>Ch. 79  Other GI Drugs</td>
<td>Ch. 81  Drugs for Obesity</td>
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<td>Ch. 100  Basic Principles of Cancer Chemotherapy</td>
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<td></td>
<td>FINAL EXAM</td>
<td>60 questions</td>
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<td>12</td>
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<td>Open August 1 from 5:00 pm to August 2 at 11:55 pm</td>
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<td>July 30</td>
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