

MIDSTATE COLLEGE
411 W. NORTHMOOR RD. PEORIA, IL 61614
(309) 692-4092 (800) 251-4299
Summer 2013

Course: HI 205 Pharmacology for Health Information

Credit: 4 Quarter Hours

Method of Delivery: eLearning

Course Description: An introduction to the principles of pharmacology, including drug terminology; drug origins, forms, and actions; routes of administration; as well as the use of generic name drugs, trade name drugs, and classifications of drugs to treat various body systems. This course will integrate the disciplines of pharmacology, HIT, coding and medical transcription assisting students to decipher specific drug categories applicable with certain disease processes, thereby, decreasing the number of medication errors within the healthcare documentation record. A research paper will enable students to learn about current pharmacological issues, such as ePrescribing and how it will specifically impact their chosen profession.

Prerequisite: HI100 Medical Terminology.

Text(s) & Manual(s): *Understanding Pharmacology for Health Professionals (4th ed.)*.

Author(s): Turley, S.M. (2010).

Publisher: Pearson Education/Upper Saddle River, NJ: Prentice Hall.

Companion Website: www.pearsonhighered.com/turley

Materials needed for this course:

Additional Supplies: Access to www.drugs.com and/or drug reference book(s) i.e. Physician Desk Reference.

Hardware/Software and Equipment: Access to computer for companion website.

Topics:

1. Introduction to Pharmacology.
2. The History of Drugs: An Overview.
3. Drug Legislation.
4. Drug Design, Testing, Manufacturing, and Marketing.
5. Drug Forms and Routes of Administration.
6. Steps in the Drug Cycle, Drug Effects, Drug Terminology, Systems of Measurement
7. The Prescription and ePrescribing.
8. Systems approach to medications specifically designed for each body system, i.e. dermatologic drugs, urinary tract drugs, GI drugs, musculoskeletal drugs, cardiovascular drugs, pulmonary drugs, ENT drugs, ophthalmic drugs, neurologic drugs, OB/GYN drugs, psychiatric drugs.
9. Analgesic drugs.
10. Anti-infective drugs.
11. Antifungal drugs.
12. Chemotherapy drugs.
13. Anesthetics.
14. Intravenous fluids and blood products.

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Learning Objectives: Upon completion of this course, the student will be able to:

1. Identify the various forms (tablet, liquid, lotion) in which drugs are manufactured and describe their advantages and disadvantages.
2. Compare and contrast the various routes of drug administration and describe the advantages and disadvantages for each.
3. Categorize the steps of the drug cycle and explain how a drug is affected or changed during each step.
4. Distinguish between local, systemic, therapeutic, allergic, and side effects of drugs.
5. Identify the trade names of common generic drugs used to treat each body system.
6. Illustrate various drug classifications in a systemic approach.
7. Define common drug abbreviations, including units of measurement.
8. Demonstrate the proper usage of drug reference materials.
9. Review the Companion Website to initiate lifelong learning by reading about the latest drug news and new drugs on the market.
10. Analyze ePrescribing and its proposed usage to decrease the number of medication errors.

Midstate Grading scale:

90 - 100	A
80 - 89	B
70 - 79	C
60 - 69	D
0 - 59	F

Midstate Plagiarism Policy:

Plagiarism is using another person's words, either by paraphrase or direct quotation, without giving credit to the author(s). Plagiarism can also consist of cutting and pasting material from electronic sources by submitting all or a portion of work for assignment credit. This includes papers, computer programs, music, sculptures, paintings, photographs, etc. authored by another person without explicitly citing the original source(s). These actions violate the trust and honesty expected in academic work. Plagiarism is strictly against the academic policy of Midstate College. Its seriousness requires a measured, forceful response which includes consequences for inappropriate and/or no citation.

In courses containing writing assignments, the College promotes the use of an electronic resource which compares the student's writing against previously submitted papers, journals, periodicals, books, and web pages. Students and instructors can use this service to reduce the incidence of plagiarism. This electronic resource has been found to conform to legal requirements for fair use and student confidentiality. It is able to provide a report to the student indicating the parts of the assignment that match

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Instructor: Terri Ferguson, RHIT

Midstate email: tjferguson@midstate.edu

I am your online instructor for this quarter, but it is not my voice you hear on the dictated lectures. If you have questions regarding assignments or lectures, don't hesitate to contact me by email or online in Joule. I will check email and be on Joule almost every day.

Policies and Procedures:

1. All work is to be **submitted on time**, unless unusual circumstances occur.
2. If you are unable to complete your assignments on time and wish to request an extension, you must request this **BEFORE** the Monday 8 AM deadline **with an appropriate excuse**. You must state the reason you need an extension. If approved, you should complete your work as soon as possible, with the next Monday at 8 AM being the deadline. If you submit late work, your late assignment grade will drop 10%. Late work will **NOT** be accepted without prior approval from the instructor. Discussion forums may never be made up; they are interactive and require participation during the week with your classmates.
3. Academic dishonesty is never tolerated and will be referred to the dean.
4. The final exam **must** be completed. Failure to do so will result in failure of the course.

Participation Requirements: Students will be expected to actively participate in Discussion Forums, after having begun the assigned readings, and be able to interject content related to learning objectives. Students are expected to participate in Discussion Forums **at least two different days** per week. The first Discussion Forum post should be **by Thursday evening at midnight**. Students are expected to use correct spelling and grammar. Please refer to the Student eLearning Guide for more information. Students are expected to complete a **Weekly Summary**. It is important that students do not fall behind in this class.

The policy for eLearning is that course materials are available to students at noon each Monday and that students have until 7:59 AM the following Monday morning to complete the previous week's material. Students are advised against waiting until the last minute or last day to submit their work for a variety of reasons. The discussion forums can be very beneficial learning tools in eLearning, if utilized to their greatest potential. It is difficult to have an effective and meaningful "discussion" if students wait to participate until the last minute. Please be fair to your fellow students and participate early and often.

*****Please review the syllabus each week for the specific assignment. If there are changes to the assignments, a note will be added to the Weekly Overview.**

RESEARCH PAPER:

1. Choose a topic of interest.
2. Type, double spaced, 2-page report with regards to your chosen topic.
3. List at least 3 references (again of a credible nature).
4. **Due date: Week 10.**
5. **Please utilize MLA formatting for your research paper. Please see page 7.**

Methods of evaluating student performance:

1. Pretest (no grade)
2. Homework; weekly assignments – 40%
3. Research Paper – 10%
4. Class Participation – 30%
5. Periodic Quizzes – 10%

6. Final Exam – 10%

Week-By-Week

Week One

Topics: Chapter 1: Introduction to Pharmacology and the History of Drugs
Chapter 2: Drug Design, Testing, Manufacturing, and Marketing

Objectives

Upon completion of this week's assignments, the student will be able to:

1. Have an understanding of the course contents.
2. Define the History of pharmacology; important milestones.
3. List Drug sources: historical and modern.
4. Differentiate between drug legislation/controlled substances.
5. Differentiate between the chemical, generic and trade names of medications.
6. Define different methodologies of drug testing and marketing strategies.

Assignments

READING ASSIGNMENT: Preface, Pages IX-XIV
A Note to Students, Pages XIX-XXI
Chapters 1 & 2, Pages 1-34

CHAPTER REVIEW: Complete questions listed below. Type as a word document and submit to the Assignment Drop Box.

Chapter 1, Pages 18-20, Quiz Yourself (odd numbers and #8) and Clinical Applications #4 only.
Chapter 2, Pages 33-34, Quiz Yourself (all) and Clinical Applications #1 only.

WEBSITE ACTIVITIES: www.pearsonhighered.com/turley

Week Two

Topics: Chapter 3: Drug Forms
Chapter 4: Routes of Administration and the Drug Cycle
Chapter 5: Using Drugs Therapeutically
Chapter 6: The Prescription

Objectives

Upon completion of this week's assignments, the student will be able to:

1. Identify various drug forms (capsules, ointment, etc.)
2. Identify the various routes of drug administration and the risks inherent with each mode of delivery.
3. Define the drug cycle from absorption through excretion.

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4. Differentiate between different drug effects; therapeutic, systemic, and idiosyncratic.
5. Identify types of prescriptions and describe the role of the pharmacist.

Assignments:

READING ASSIGNMENT: Chapters 3-6; pages 36-95

CHAPTER REVIEW: Complete questions listed below. Type as a word document and submit to the Assignment Drop Box.

Chapter 3, Pages 44-45, Quiz Yourself, 1-7, and Clinical Applications, all.
Chapter 4, Pages 61-63, Quiz Yourself, Evens, and Clinical Applications, all
Chapter 5, Pages 79-81, Quiz Yourself, Odds, and Clinical Applications, #2
Chapter 6, Pages 94-95, Quiz Yourself, Odds, and Clinical Applications, #1

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Week Three

Topics: Chapter 7: Urinary Drugs

Objectives

Upon completion of this week's assignments, the student will be able to:

1. Categorize Diuretic Drugs.
2. Identify Potassium supplements.
3. Differentiate Between Drugs Used to Treat Urinary Tract Infections.
4. Identify Urinary Analgesic Drugs.
5. Compare/Contrast Urinary Antispasmodic Drugs.
6. Recognize Drugs Used to Treat Overactive Bladder.
7. Select Drugs Used to Treat Benign Prostatic Hypertrophy.
8. Identify Drugs Used to Treat Erectile Dysfunction.

Assignment:

READING ASSIGNMENT: Chapter 7; pages 98-112

CHAPTER REVIEW: Complete questions listed below. Type as a word document and submit to the Assignment Drop Box.

Chapter 7, Pages 111-112, Quiz Yourself, all, and Clinical Applications, all.

ASSESSMENT #1

WEBSITE ACTIVITIES: www.pearsonhighered.com/turley

Week Four

Topics: Chapter 8: Gastrointestinal Drugs
Chapter 9: Musculoskeletal Drugs

Objectives:

1. List the pharmacologic actions and indications for generic and trade name drugs including drugs used to treat a myriad of GI and musculoskeletal disorders.
2. Identify muscle relaxants, NSAIDs, Cox-2 inhibiting agents and adverse reactions.

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3. Spell and pronounce correctly generic and trade name of GI and musculoskeletal drugs.

Assignments:

READING ASSIGNMENT: Chapters 8 and 9; pages 113-151

CHAPTER REVIEW: Complete questions listed below. Type as a word document and submit to the Assignment Drop Box.

Chapter 8, Pages 131-134, Quiz Yourself, Evens, and Clinical Applications, all.
Chapter 9, Pages 148-151, Quiz Yourself, all. (No Clinical Applications).

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Week Five

Topics: Chapter 10: Pulmonary Drugs
Chapter 11: Cardiovascular Drugs

Objectives:

1. List the pharmacological actions and indications for the following pulmonary and cardiovascular drugs (ACE inhibitors, Beta 2 antagonists, antihypertensive, inhaler/nebulizer bronchodilators.
2. Spell and pronounce correctly medications in each of the aforementioned drug classifications.
3. Identify mechanism of action for each medication with regard to anatomy and physiology of the cardiovascular and pulmonary systems.

Assignments:

READING ASSIGNMENT: Chapters 10 and 11; pages 152-194

CHAPTER REVIEW: Complete questions listed below. Type as a word document and submit to the Assignment Drop Box.

Chapter 10, Pages 164-167, Quiz Yourself, all, and Clinical Applications, #4 and 5.
Chapter 11, Pages 189-194, Quiz Yourself, all, and Clinical Applications, #2.

ASSESSMENT #2

WEBSITE ACTIVITIES: www.pearsonhighered.com/turley

Week Six

Topics: Chapter 12: Hematologic Drugs
Chapter 24: Emergency Drugs, Intravenous Fluids, and Blood Products

Objectives:

1. List the pharmacological actions and indications for the following hematologic drugs and emergency drugs, as well as blood products (anticoagulants, thrombolytic agents, platelet pheresis)
2. Spell medications in each of the aforementioned drug classifications.
3. Identify mechanism of absorption through excretion of aforementioned drug classifications.

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Assignments:

READING ASSIGNMENT: Chapters 12 and 24; pages 195-206 and 434-451

CHAPTER REVIEW: Complete questions listed below. Type as a word document and submit to the Assignment Drop Box.

Chapter 12, Pages 203-205, Quiz Yourself, all, and Clinical Applications, all.

Chapter 24, Pages 450-451, Quiz Yourself, all, and Clinical Applications, all.

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Week Seven

Topics: Chapter 13: Gynecologic and Obstetric Drugs
Chapter 22: Analgesic Drugs
Chapter 23: Anesthetic Drugs

Objectives:

1. List the pharmacological actions and indications for the following drug classifications (analgesic agents versus anesthetic properties).
2. Spell and pronounce correctly medications in each of the aforementioned drug classifications.
3. Differentiate between the different schedule drugs and their affinity for addiction properties.

Assignments:

READING ASSIGNMENT: Chapters 13, 22, and 23; pages 208-228, 402-423, and 425-433

CHAPTER REVIEW: Complete questions listed below. Type as a word document and submit to the Assignment Drop Box.

Chapter 12, Pages 226-227, Quiz Yourself, all. No Clinical Applications.

Chapter 22, Pages 420-423, Quiz Yourself, all. No Clinical Applications.

Chapter 23, Pages 432-433, Quiz Yourself, all. No Clinical Applications.

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Week Eight

Topics: Chapter 14: Endocrine Drugs
Chapter 15: Neurologic Drugs

Objectives:

1. List the pharmacological actions and indications for the following drug classifications: antiepileptic, drugs used to treat Alzheimer's, Parkinson's, Myasthenia Gravis, MS, Neuralgia and Neuropathy, insulin-requiring and non-insulin-requiring diabetes mellitus, hypo/hyperthyroidism.
2. Spell and pronounce correctly medications in each for the aforementioned drug classifications.
3. Learn how to work cohesively with student peers in an eLearning environment utilizing chat rooms as a methodology for communication.

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Assignments:

READING ASSIGNMENT: Chapters 14 and 15; pages 230-248 and 249-268

CHAPTER REVIEW: Complete questions listed below. Type as a word document and submit to the Assignment Drop Box.

Chapter 14, Pages 246-248, Quiz Yourself, all, and Clinical Applications, #3.

Chapter 15, Pages 266-268, Quiz Yourself, 1-10, and Clinical Applications, all.

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Week Nine

Topics: Chapter 16: Psychiatric Drugs

Objectives:

1. List the pharmacological actions and indications for the following drugs used to treat anxiety, neurosis, psychosis, depression, manic-depressive disorder, panic disorder, social anxiety disorder, PTSD, anorexia, bulimia, withdrawal from addiction, ADHD.
2. Spell and pronounce generic and trade names for commonly used psychiatric disease processes.

Assignments:

READING ASSIGNMENT: Chapter 16; pages 269-291

CHAPTER REVIEW: Complete questions listed below. Type as a word document and submit to the Assignment Drop Box.

Chapter 16, Pages 288-291, Quiz Yourself, 1-17 and Clinical Applications, all.

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Week Ten

Topics: Chapter 17: Dermatologic Drugs
Chapter 18: Ophthalmic Drugs
Chapter 19: Ears, Nose, and Throat Drugs

Objectives:

1. List the pharmacological actions and indications for the following drugs used to treat dermatologic, ophthalmic and ENT problems.
2. Spell and pronounce generic and trade names for commonly used dermatologic, ophthalmic and ENT drugs.
3. Determine the pharmacodynamics of the aforementioned drug categories and list common side effects associated with each one.

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Assignments:

Research paper due

RESEARCH PAPER: Submit paper to appropriate drop box.

READING ASSIGNMENT: Chapters 17, 18 and 19; pages 292-343

CHAPTER REVIEW: Complete questions listed below. Type as a word document and submit to the Assignment Drop Box.

Chapter 17, Pages 315-318, Quiz Yourself, evens, and Clinical Applications, #5.

Chapter 18, Pages 328-330, Quiz Yourself, 1-9, and Clinical Applications, #2.

Chapter 19, Pages 341-343, Quiz Yourself, all.

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Week Eleven

Topics: Chapter 20: Anti-infective and Antifungal Drugs

Objectives:

1. List the pharmacological actions and indications for the following drug classifications (sulfonamides, penicillins, cephalosporins, aminoglycosides, fluoroquinolones, macrolides and antifungal agents).
2. Spell and pronounce generic and trade names for commonly used anti-infectives and anti-fungal medications.
3. Define the different methodologies in determining what the best course of therapy is for a patient with an infectious disease (whether gram negative or gram positive)

Assignments:

READING ASSIGNMENT: Chapter 20; pages 346-372

CHAPTER REVIEW: Complete questions listed below. Type as a word document and submit to the Assignment Drop Box.

Chapter 20, Pages 368-372, Quiz Yourself, all, and Clinical Applications, #3.

WEBSITE ACTIVITIES: www.pearsonhighered.com/turley

Week Twelve

FINAL EXAM (Cumulative)

MLA Tip Sheet
Documentation and In-text Citation Guide

Internet Sources Documentation

The documentation for Internet sources varies a little bit depending on what type of Internet source you are using. Refer to the *Brief Handbook* for special or unusual Internet source types, but the basic set-up for all Internet sources is basically the same:

(Note the spacing and punctuation)

Author's name. "Title of Article." *Source* publication date. Retrieval date

hyperlink

Example:

Jones, Sam. "Rising Gas Prices Causing International Crisis." *MSNBC* 20 April 2006.

3 May 2006 <http://www.msnb.com>

1. The author's name is entered last name, first name.
2. The article title is in quotes and words in the title are correctly capitalized, even if original article has no quotes and nothing capitalized.
3. Period goes inside quotes.
4. Source is italicized and takes no period.
5. Publication date is written in military style and takes a period.
6. Retrieval date is written in military style and does not take a period.
7. When typing, let the text of the source wrap around to the second line on its own. When you are finished typing, tab the second (or third) lines over by using CTRL + TAB or a hanging indent.
8. After you type the hyperlink, hit the ENTER key to activate the hyperlink.
9. If the original source is missing an element, skip it. However, you will always have a source, a retrieval date, and a hyperlink.

Internet Citations

When you cite an Internet source in an essay, **you cannot use the parenthetical method**, which is reserved for sources with page numbers. Instead, you must refer to the source in the sentence.

Example (using the example source above):

According to Sam Jones, "Soaring gas prices have a trickle-down effect to all aspects of the economy."

Print Sources Documentation (magazines, newspapers, books)

The documentation for print sources varies a little bit depending on what type of print source you are using. Refer to the *Brief Handbook* for the different source types, but the basic set-up for all print sources is basically the same:

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(Note the spacing and punctuation)

Author's name. "Title of Article." *Source* publication date: page numbers.

Example:

Smith, John. "Nation Still Not Safe." *Time* 10 January 2002: 45-50.

Notice the following:

1. The author's name is entered last name, first name.
2. The article title is in quotes and words in the title are correctly capitalized, even if original article has no quotes and nothing capitalized.
3. Period goes inside quotes.
4. Source is italicized and takes no period.
5. Publication date is written in military style and takes a colon.
6. There is no retrieval date.
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According to Sam Jones, "Soaring gas prices have a trickle-down effect to all aspects of the economy."