

LAST REVIEW: 2009-2010 **NEXT REVIEW:** 2014-2015 **STATUS:** A

COURSE TITLE: Basic Pharmacology for the PT Assistant

COMMON COURSE NUMBER: PHT 1350

CREDIT HOURS: 1

CONTACT HOUR BREAKDOWN

CLOCK HOURS:

Lecture: 16

Lab:

Clinic:

Other:

PREREQUISITE(S): PHT 1300

COREQUISITE(S):

PRE/COREQUISITE(S): PHT 1211

COURSE DESCRIPTION:

Course introduces concepts of basic pharmacology and presents pharmacological agents dispensed for conditions commonly seen in physical therapy. Drug responses and interactions as they relate to patient response are discussed.

UNIT TITLES

- 1.0 Principles of Pharmacology
- 2.0 Dermatologic Drugs
- 3.0 Gastrointestinal Drugs
- 4.0 Musculoskeletal Drugs
- 5.0 Cardiovascular Drugs
- 6.0 Pulmonary Drugs
- 7.0 Drugs Used to Treat Diabetes
- 8.0 Neurological Drugs
- 9.0 Analgesic Drugs
- 10.0 Anti-Infective Drugs
- 11.0 Anesthetics
- 12.0 Intravenous Fluids and Blood Products

ASSESSMENT:

Please provide a brief description (250 characters maximum) that details how students will be assessed on the course outcomes.

1. **Announced and unannounced quizzes and Unit examinations:**
2. **Midterm and/or Final Exam (cumulative/comprehensive);**
3. **Assessment of reading and online assignments via submission of homework projects;**
4. **Participation in Discussion Forums on the e-learning site**
5. **Completion of Case Study Reviews, Grand Rounds or other projects (group or individual) as assigned**

**** Complete the following only if course is seeking general education status ****

GENERAL EDUCATION Competencies and Skills *:

Please highlight in green font all Competencies/Skills from the list below that apply to this course. In the box to the right of the Competency/Skill, enter all specific learning outcome numbers (i.e. 1.1, 2.7, 5.12) that apply.

1. Read with critical comprehension	
2. Speak and listen effectively	
3. Speak and listen effectively	
4. Think creatively, logically, critically, and reflectively (analyze, synthesize, apply, and evaluate)	
5. Demonstrate and apply literacy in its various forms: (highlight in green ALL that apply) (1. technological, 2. informational, 3. mathematical, 4. scientific, 5. cultural, 6. historical, 7. aesthetic and/or 8. environmental)	
6. Apply problem solving techniques to real-world experiences	
7. Apply methods of scientific inquiry	
8. Demonstrate an understanding of the physical and biological environment and how it is impacted by human beings	
9. Demonstrate an understanding of and appreciation for human diversities and commonalities	
10. Collaborate with others to achieve common goals.	
11. Research, synthesize and produce original work	
12. Practice ethical behavior	

13. Demonstrate self-direction and self motivation	
14. Assume responsibility for and understand the impact of personal behaviors on self and society	
15. Contribute to the welfare of the community	

* *General Education Competencies and Skills endorsed by '05-'06 General Education Task Force*

Common Course Number: PHT 1350

UNITS

Unit 1 Principles of Pharmacology

General Outcome:

1.0 The student will be able to provide an overview of pharmacology as a science.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

- 1.1 Define pharmacology, drug, pharmacodynamics, and pharmacokinetics.
- 1.2 Briefly trace the development of pharmacology up to and including current trends.
- 1.3 Consider the relevancy of pharmacology to various aspects of society.
- 1.4 List commonly used reference sources for drug information.
- 1.5 List common abbreviations used in the prescribing drugs.
- 1.6 Discuss the process involved in the development and approval of a drug.
- 1.7 Describe the Controlled Substance Act.
- 1.8 Define various pharmaceutical preparations.
- 1.9 Detail the components of a prescription.
- 1.10 List factors that influence drug response
- 1.11 Discuss methods by which drugs are altered and eliminated by the body.
- 1.12 Discuss receptor versus non-receptor models of drug interaction.

Common Course Number: PHT 1350

Unit 2 Dermatologic Drugs

General Outcome:

2.0 The student will be able to describe the therapeutic actions of dermatologic drugs with specific drug references.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

- 2.1 Describe the therapeutic actions of specific drugs used to treat a variety of dermatologic conditions.
- 2.2 Identify several specific dermatologic drugs including the condition each treats.
- 2.3 Define the various categories of drugs used to treat dermatological conditions.
- 2.4 Discuss several considerations for the PT Assistant regarding this category of drugs.

Common Course Number: PHT 1350**Unit 3 Gastrointestinal Drugs*****General Outcome:***

- 3.0 The student will be able to describe the therapeutic actions of gastrointestinal drugs with specific drug references.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

- 3.1 Review the digestive system.
- 3.2 Describe the purpose of anti-secretory agents, antacids, digestants, carminatives, emetics, and antiemetics.
- 3.3 List the various types of cathartics and give an example of each type.
- 3.4 List drugs that are used as antidiarrheals.
- 3.5 Discuss several considerations for the PT Assistant regarding this category of drugs.

Common Course Number: PHT 1350

Unit 4 Musculoskeletal Drugs

General Outcome:

- 4.0 The student will be able to describe the therapeutic actions of musculoskeletal drugs with specific drug references.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

- 4.1 Differentiate between the two categories of anti-inflammatory drugs.
- 4.2 Identify the drugs that are commonly used to induce skeletal muscle relaxation.
- 4.3 Review drugs used to treat orthopedic conditions, arthritis, gout and osteoporosis.
- 4.3 Identify the drugs used to treat conditions in which neuralgia occurs.
- 4.4 Discuss how psychotropic drugs affect the musculoskeletal system.
- 4.5 Describe the properties of non-steroidal anti-inflammatory agents.
- 4.6 Discuss several considerations for the PT Assistant regarding this category of drugs.

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Unit 5 Cardiovascular Drugs

General Outcome:

- 5.0 The student will be able to describe the therapeutic actions of cardiovascular drugs with specific drug references.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

- 5.1 Review the function of the circulatory system.
- 5.2 Identify drugs commonly used to treat congestive heart failure, angina, myocardial infarction, arrhythmias and hypertension.
- 5.3 Identify digitalis preparations.
- 5.4 State the action of digitalis.
- 5.5 List the side effects of digitalis toxicity.
- 5.6 Explain the therapeutic actions of drugs used to treat congestive heart failure, angina, myocardial infarction, arrhythmias and hypertension.
- 5.7 Identify drugs used to hasten the process of coagulation
- 5.8 Discuss the use of anti-coagulants.
- 5.9 Discuss several considerations for the PT Assistant regarding this category of drugs.

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Unit 6 Pulmonary Drugs

General Outcome:

- 6.0 The student will be able to describe the therapeutic actions of pulmonary drugs with specific drug references.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

- 6.1 Review the respiratory system.
- 6.2 Discuss the action of respiratory stimulants and give examples.
- 6.3 Identify key drug groups that produce respiratory depression.
- 6.4 Define expectorant and bronchodilators with a discussion of their administration.
- 6.5 Identify common side effects produced by bronchodilators.
- 6.6 Discuss several considerations for the PT Assistant regarding this category of drugs.

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Unit 7 Drugs Used to Treat Diabetes

General Outcome:

- 7.0 The student will be able to describe the therapeutic actions of drugs used to treat diabetes drugs with specific drug references.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

- 7.1 Review the pathology of diabetes.
7.2 List the types of insulin that are used to treat diabetes and their specific administration.
7.3 Discuss several considerations for the PT Assistant regarding this category of drugs.

Common Course Number: PHT 1350

Unit 8 Neurological Drugs

General Outcome:

- 8.0 The student will be able to describe the therapeutic actions of neurological drugs with specific drug references.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

- 8.1 Review the function of the CNS.
8.2 Describe the therapeutic actions of drugs used to treat epilepsy, Parkinson's disease, Alzheimer's disease, myasthenia gravis, insomnia and attention deficit disorder.
8.3 List commonly used drugs for the conditions listed in 8.2
8.4 Discuss several considerations for the PT Assistant regarding this category of drugs.

Common Course Number: PHT 1350**Unit 9 Analgesic Drugs*****General Outcome:***

9.0 The student will be able to describe the therapeutic actions of analgesic drugs with specific drug references.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

- 9.1 Describe the therapeutic effects of narcotic analgesics, centrally acting analgesics, and non-narcotic analgesics.
- 9.2 Identify the specific drugs which are used to treat conditions such as migraines, narcotic addictions and narcotic overdoses.
- 9.3 Discuss several considerations for the PT Assistant regarding this category of drugs.

Common Course Number: PHT 1350**Unit 10 Anti-Infective Drugs*****General Outcome:***

10.0 The student will be able to describe the therapeutic actions of anti-infective drugs with specific drug references.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

- 10.1 Describe the therapeutic actions of sulfonamides, penicillins, cephalosporins, aminoglycosides, tetracyclines and other antibiotic drugs.
- 10.2 Discuss anti-viral drugs.
- 10.3 List examples of the types of infections that drugs in this category can effectively treat.
- 10.4 Discuss several considerations for the PT Assistant regarding this category of drugs.

Common Course Number: PHT 1350**Unit 11 Anesthetics*****General Outcome:***

11.0 The student will be able to describe the therapeutic actions of anesthetic drugs with specific drug references.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

11.1 Define anesthesia.

11.2 Differentiate between topical anesthesia, local anesthesia, nerve blocks, spinal anesthetics and general anesthetics.

11.3 Discuss several considerations for the PT Assistant regarding this category of drugs.

Common Course Number: PHT 1350**Unit 12 Intravenous Fluids and Blood Products*****General Outcome:***

12.0 The student will be able to describe the therapeutic actions of intravenous fluids and blood products with specific drug references.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

- 12.1 List several categories of intravenous fluids and blood products.
- 12.2 Discuss the therapeutic actions of various intravenous fluids and blood products.
- 12.3 Identify specific drugs that are used in for intravenous fluid therapy.
- 12.4 Identify specific blood and blood cellular products and their uses.
- 12.5 Discuss several considerations for the PT Assistant regarding this category of drugs.