



## BASIC PHARMACOLOGY

Revision Date: 2/22/12

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**COURSE NUMBER:** AHS 121

**PREREQUISITE(S):** AHS 102, AHS 104

**CO-REQUISITE(S):** AHS 121

**COURSE DESCRIPTIONS:** This course covers the nature of drugs, their actions in the body and side effects.

**TEXTBOOK(S):** Woodrow, Ruth. Essentials of Pharmacology for Health Occupations. 6<sup>th</sup> Edition. Delmar Cengage, 2011

**REFERENCE(S):** None

**OTHER REQUIRED MATERIALS, TOOLS, AND EQUIPMENT:** Computer with Internet access, Internet Explorer 5.0 or higher or other current browser, java, word processing software (must be able to save Word format), and anti-virus software.

**METHOD OF INSTRUCTION:** Online

**GRADING SYSTEM:**

94	-	100	=	A
85	-	93	=	B
80	-	84	=	C
70	-	79	=	D
Below	-	70	=	F

**GRADE CALCULATION METHOD:**

Quizzes/Assignments	=	50%
Chapter Discussions	=	25%
Final Exam	=	<u>25%</u>
	=	100%

**CONFIDENTIALITY:** All students' e-mail addresses may be available to other students in the class. Although some assignments in an online course may encourage or require peer communication, the instructor will make every effort to

protect the confidentiality of any personal communication (for example, grades). However, you should recognize that e-mail and other electronic media are not secure; there is no guarantee of the privacy of your e-mail or other personal information.

**APPROPRIATE ONLINE BEHAVIOR:**

The use of Spartanburg Community College's website, e-mail service or course management software for creation and/or distribution of material not pertaining to course participation is prohibited and is grounds for dismissal according to College policy under "disruptive behavior." Such actions, include, but are not limited to:

- Inappropriate use of email and discussion boards for:
  - ✓ Harassment
  - ✓ Unlawful solicitation
  - ✓ "Spamming"
  - ✓ "Flaming"
- Use of online editing tools within the course management software to:
  - ✓ Create offensive material
  - ✓ Link to inappropriate materials

**ATTENDANCE POLICY:**

An electronic e-mail is required from each student to the instructor by the end of the drop/add period. At this time the instructor will drop the student from the course if it is not received.

The instructor in AHS 121 counts attendance as a minimum of one contact per week. Following the beginning of the semester, the week is defined as beginning at 12:01am on Sunday and ending at 12:00 midnight on the following Saturday. Contact includes communication with the instructor via email or logging into the online course to access study tools, take online assessments, submit assignments, and post messages on the discussion board.

Instructors maintain attendance records. However, it is the student's responsibility to withdraw from a course. A student who stops attending the online class and fails to initiate a withdrawal will remain on the class roster. *With this in mind, for every assignment, test or exam not completed while still enrolled in the course the student will receive a grade of zero and the final course grade will be calculated accordingly.*

Withdrawal Policy: During the first 75% of the course, a

student may initiate withdrawal and receive a grade of W. A student cannot initiate a withdrawal during the last 25% of the course. Extenuating circumstances require documentation and approval by the appropriate department head and academic dean.

**ACADEMIC CONDUCT:**

**ACADEMIC DISHONESTY:** Students are expected to uphold the integrity of the College's standard of conduct, specifically in regards to academic honesty. All forms of academic dishonesty including, but not limited to, cheating on assignments/tests, plagiarism, collusion, and falsification of information will call for disciplinary action. Disciplinary action imposed may include one or more of the following: written reprimand, loss of credit for assignment/test, termination from course, and probation, suspension, or expulsion from the College. For further explanation of this and other conduct codes, please refer to the Student Handbook.

**ACCOMMODATIONS:**

Students who need special accommodations in this class because of a documented disability should notify Student Disability Services. You may contact Student Disability Services by calling, (864) 592-4811, toll-free 1-800-922-3679; via email through the Spartanburg Community College web site at [www.sccsc.edu/SDS/](http://www.sccsc.edu/SDS/); or by visiting the office located in the Dan Lee Terhune Student Services Building, room 112 of the Spartanburg Community College campus. By contacting Student Disability Services early in the semester, students with disabilities give the College an opportunity to provide necessary support services and appropriate accommodations.

**COURSE OUTCOMES  
& OBJECTIVES:**

**Upon satisfactory completion of this course, the student will be able to:**

- I. Define general and specific pharmacology terms
  1. Differentiate among the following drug names: generic name, official name, trade name, and chemical name.
  2. Identify official drug standards/references and their uses.
  3. Define the following side effects: ototoxicity, nephrotoxicity, tinnitus, and photosensitivity.
  4. Differentiate between the various oral drug forms.
  5. Differentiate between the various parenteral drug forms.
  6. List the advantages and disadvantages of oral and parenteral drug forms.
  7. Identify common abbreviations and symbols used for medication orders.
  8. Compare and contrast the three systems of measurement.
  
- II. Define factors that influence the effects of drugs.
  1. Identify the five sources of drugs.
  2. Define the following terms: selective distribution, toxicity, placebo, synergism, potentiation, and antagonism
  3. Identify several variables that may affect the action of drugs
  4. Define the following undesirable drug effects: teratogenic effect, idiosyncrasy, tolerance, dependence, hypersensitivity, and anaphylactic reaction
  5. Differentiate between the following: drug actions and drug effects, systemic effects and local effects, loading dose and maintenance dose, and toxic dose and lethal dose.
  6. Define the following processes as they relate to the passage of drugs through the body and give conditions that may decrease the effectiveness of each: absorption, distribution, metabolism, and excretion.

- III. Identify fat-soluble and water-soluble vitamins.
  - 1. List vitamins and their sources, function, signs of deficiency, and symptoms of overdose if known.
  - 2. List minerals and their sources, function, side effects and signs of deficiency.
  - 3. Describe conditions that may require vitamin and/or mineral supplements.
  - 4. Identify the chemical symbol for each mineral.
  - 5. Explain the role of antioxidants in nutrition therapy.
  
- IV. Identify drugs that affect the skin and mucous membranes.
  - 1. Explain the factors that influence the absorption of skin medications.
  - 2. Classify drugs according to their actions: antipruritic, emollient, keratolytic, enzymatic, antifungal, anti-infective, or agents to treat acne.
  - 3. Identify the possible side effects of long-term topical corticosteroid therapy.
  - 4. Identify the indications and contraindications for topical corticosteroid therapy.
  - 5. Identify side effects, contraindications, and interactions for each category of ophthalmic medication.
  
- V. Identify drugs that affect the autonomic nervous system.
  - 1. Discuss the major effects of drugs on the autonomic nervous system.
  - 2. Define the effects of sympathetic stimulation.
  - 3. Identify adrenergic drugs, their uses and side effects.
  - 4. Identify adrenergic blocking agents and their effects.
  - 5. Identify cholinergic drugs, their uses and side effects.
  - 6. Identify cholinergic blocking agents and their side effects.

- VI. Identify antineoplastic drugs and understand their different modes of action.
1. Identify the characteristics associated with administration of antineoplastic drugs.
  2. Identify the six major groups of antineoplastic agents.
  3. Describe the side effects common to most of the antineoplastic agents.
- VII. Identify diuretics and other drugs that affect the urinary system
1. Understand the role of the kidney in selectively regulating output and its importance in drug excretion.
  2. Identify the different classes of diuretics and how they are used.
  3. Identify drugs used to treat various urinary tract infections and disorders.
  4. Discuss the action of drugs used to treat prostate hypertrophy.
- VIII. Identify the drug groups that affect the digestive system
1. Discuss the way the antisecretory agents and the antacids each reduce the acidity of the stomach.
  2. Identify drugs from the various categories of gastrointestinal drugs.
  3. Differentiate between the various types of laxatives according to use, side effects, contraindications, and interactions.
  4. Describe the side effects, contraindications, and interactions of antacids, antiulcer agents, antidiarrhea agents, antiflatulents, cathartics, and laxatives, and antiemetics.
- IX. Identify antibiotics, antivirals, and antifungals and the general uses of each
1. Identify serious side effects of antibiotics
  2. Distinguish between the different classes of antibiotics
  3. Identify common antiparasitic agents

4. Discuss the side effects of antiviral and antifungal agents.
  5. Identify side effects, contraindications, and interactions common to each category of anti-infectives.
- X. Identify drugs that affect the central nervous system
1. Differentiate between the narcotic and non-narcotic analgesics
  2. List the symptoms of drug dependence
  3. Identify the indications, contraindications, and side effects of the major analgesics, sedatives, and hypnotics.
  4. Explain the action of general anesthetic agents
  5. Identify drugs used to prevent and treat migraine headaches
  6. Identify the different types of epilepsy and the drugs used to treat each type
  7. Identify drugs used to treat attention deficit hyperactivity disorder
  8. Identify drugs used to treat Parkinson's disease
  9. Identify drugs used to treat Alzheimer's disease
  10. Identify the sources of chronic pain and the different types of treatment available
- XI. Categorize the most commonly used psychotropic medications according to the following five classifications: CNS stimulants, antidepressants, anxiolytics, antimanic, and antipsychotic medications.
1. Identify the purpose, action, side effects, interactions, and contraindications for psychotropic medications in common use
  2. Describe the physiological effects of prolonged alcohol use
  3. Describe treatment of acute and chronic alcoholism
  4. Identify drug addiction and habituation
  5. Identify the effects of three commonly used illegal drugs

- XII. Differentiate among the anti-inflammatory drugs, antirheumatic drugs, skeletal muscle relaxants, and drugs used to treat gout.
1. Describe the indications, side effects, and contraindications of muscle relaxants.
  2. Describe the indications, side effects, and contraindications of NSAIDs.
  3. Identify medications for osteoporosis prevention and treatment.
  4. Identify COX-2 inhibitor drugs.
- XIII. Describe the basic anatomy and physiology of the endocrine system.
1. Describe the therapeutic and adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the endocrine system.
  2. Identify the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the endocrine system.
  3. Explain the doses, dosage forms, and routes of administrations for prescription and nonprescription medications commonly used to treat diseases of the endocrine system.
- XIV. Describe the basic anatomy and physiology of the reproductive system.
1. Describe the therapeutic and adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the reproductive system.
  2. Identify the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the reproductive system.
  3. Explain the doses, dosage forms, and routes of administrations for prescription and nonprescription medications commonly used to treat diseases of the reproductive system.

- XV. Describe the basic anatomy and physiology of the cardiovascular system.
1. Describe the therapeutic and adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the cardiovascular system.
  2. Identify the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the cardiovascular system.
  3. Explain the doses, dosage forms, and routes of administrations for prescription and nonprescription medications commonly used to treat diseases of the cardiovascular system.
- XVI. Describe the basic anatomy and physiology of the respiratory system.
1. Describe the therapeutic and adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the respiratory system.
  2. Identify the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the respiratory system.
  3. Explain the doses, dosage forms, and routes of administrations for prescription and nonprescription medications commonly used to treat diseases of the respiratory system.
- XVII. Discuss drug therapy in older adults
1. Discuss that many drug interactions and toxic effects are caused by the addition of drugs and herbal remedies in the older adults
  2. Discuss that complicated drug schedules are often the reason for noncompliance in older adult patients
  3. Understand the necessity for and objective of home health care
  4. Become aware of the different medications given in the home setting