



# **INSTRUCTIONAL PACKAGE**

**AHS 147**

**Clinical Pharmacology**

Spring 2017

## INSTRUCTIONAL PACKAGE



### **PART I: COURSE INFORMATION**

Effective Term: Spring 2017

COURSE PREFIX: AHS 147

COURSE TITLE: Clinical Pharmacology

CONTACT HOURS: 3

CREDIT HOURS: 3

### **RATIONALE FOR THE COURSE:**

*AHS 147 is intended to introduce the student to basic and practical pharmacology. It is intended to prepare students for more advanced studies within the realm of pharmacologic practice.*

### **COURSE DESCRIPTION:**

This course is the study of a broad spectrum of drugs, their classification, physical and chemical properties, usage, and contraindication in clinical settings.

### **PREREQUISITES/CO-REQUISITES:**

None

### **REQUIRED MATERIALS:**

Guerra, T. (2016). *Memorizing Pharmacology: A Relaxed Approach*. Raleigh: Lulu Publishing

Watkins, C. (2013). *Pharmacology Clear & Simple*. Philadelphia: F.A. Davis Company

Please visit the Bookstore online site for most current textbook information. Use the direct link below to find textbooks.

<http://hortec.bncollege.com/webapp/wcs/stores/servlet/TBWizardView?catalogId=10001&langId=-1&storeId=51560>.

Enter the semester, course prefix, number and section when prompted and you will be linked to the correct textbook.

### **TECHNICAL REQUIREMENTS:**

Access to Desire2Learn (D2L), HGTC's student portal for course materials.

WaveNet and D2L email access.

Speakers & a microphone to record audio files.

### **CLASSROOM ETIQUETTE:**

#### **Use of technology:**

It is recognized that personal communication devices, including smart phones, can play a fundamental role in both education and urgent personal connections (for example, a school calling about a sick child). For this reason, use of such devices is permitted in the classroom, with specific reservations:

1. Please set all devices to 'silent' or 'vibrate' during instructional time.
2. Use of devices during testing is NOT allowed.
3. Please limit use of devices to urgent personal connections and educational purposes directly related to the course material being discussed.
4. If you receive an urgent text/call during class that requires immediate attention, please quietly excuse yourself from the classroom to respond to the call.
5. Please refrain from using 'ear buds' or continually using the device as a learning distraction. Professor retains the right to disallow the use of such devices should the policy become a distraction.
6. When on experiential rotations, students are expected to abide by the policies of that institution.

### **PLAGIARISM & CHEATING:**

Refer to the College catalog & Student handbook (<http://www.hgtc.edu/documents/policys/Chapt9.pdf>). The student may be assigned a failing grade for the course, or may be required by the professor to withdraw from the course and/or the pharmacy technology program. Such actions are deemed to be unprofessional behavior within this program and may be grounds for dismissal from the program.

### **Part II: Student Learning Outcomes**

- List three societies critical to the development and evolution of pharmacology.
- List four sources of drugs.
- List 10 drugs and record their sources.
- Discuss three examples of alternative medicine.
- List the four steps in the drug cycle and the effect on the body.
- Compare and contrast the usefulness of different drug resources.
- Differentiate between a side effect and an adverse reaction.
- List the seven rights of medication administration.
- Explain the various considerations of medication administration.
- Identify common abbreviations used in medicine administration.
- Outline special considerations when administering medications to the elderly and to children.
- Discuss the cultural effects on drug use.
- Describe the roles of the Occupational Safety and Health Administration (OSHA), Food and Drug Administration (FDA), and Drug Enforcement Administration (DEA) in patient safety.
- Discuss how drugs are developed.

- Distinguish between brand, generic, and trade names.
- Recognize the slang names for illegal drugs.
- Discuss why some drugs are controlled more strictly than others.
- Give an example of a drug from each controlled substances schedule and state why it is classified that way.
- Discuss the role of allied health professionals in recognizing and reporting impaired patients and professionals.
- Discuss precautions to ensure patient safety.
- Identify the parts of a legal prescription.
- Differentiate between three different types of medication orders.
- List which health-care providers are able to write prescriptions.
- Define abbreviations used in prescriptions
- Interpret labels safely.
- Discuss the impact of e-prescribing on health-care consumers.
- Calculate percents, ratios, and proportions.
- Solve problems for an unknown quantity
- Compare the four systems of measurement used for drug dispensing.
- State the basic units of measurement in the metric system.
- Use conversion methods for each system of measurement correctly and accurately.
- Demonstrate the successful use of the four methods for calculating drug dosages.
- Explain why certain calculations are considered special and which populations are affected.
- Explain how to reconstitute powdered medication and calculate the desired dosage.
- List the forms in which medications are manufactured for the enteral route.
- Differentiate how the different forms of drugs affect the body.
- Describe the possible enteral routes for administering medications.
- Distinguish between the solutions used in IV therapy.
- Differentiate between two primary routes of medication administration in the integumentary system and when each route would be chosen.
- Recall at least seven conditions affecting the integumentary system and medications used to treat them.
- Identify the key features of the musculoskeletal system.

- Discuss the importance of a healthy endocrine and nervous system to proper musculoskeletal functioning.
- Recall at least five muscular system disorders and one appropriate treatment for each.
- Discuss at least four bone/joint disorders and one appropriate treatment for each.
- Identify the two major branches of the nervous system.
- Identify four categories of medications used to treat pain and fever.
- Recall at least one category of medication used to treat anxiety, insomnia, sedation, and seizures.
- Identify at least one category of medication used to treat behavioral/emotional/mood disorders.
- Identify one medication commonly used to stabilize mood in bipolar disorder.
- Discuss medications used to treat psychosis and identify what other disorders they may be prescribed for.
- Recall at least one category of drug used to treat dementia and two categories of drugs used to treat Parkinson's disease.
- Compare and contrast the actions of local and general anesthetics.
- Discuss the impact on medication and the body that alcohol produces.
- List five parts of the eye and the function of each structure.
- Recall three conditions related to the eye requiring treatment with medications and an example of an appropriate medication.
- Classify parts of the ear as belonging to the external, middle, or inner ear and discuss the function of each part.
- Recall three conditions related to the ear requiring treatment with medication and an example of an appropriate medication.
- Discuss six of the major endocrine glands and their functions.
- Differentiate between hypothyroidism and hyperthyroidism, identifying the effects of each on the body and the medications used to treat each disorder.
- Contrast the three major disorders related to pancreatic function and discuss the medications used to treat each.
- Explain the proper way to handle, store, and administer insulin.
- Differentiate between adrenal gland insufficiency and oversecretion, and discuss the medications to treat each one.
- Discuss how the cardiovascular system functions.
- Describe two categories of medications used to treat angina, including their actions in the body.

- Describe four categories of medications used to treat clot formation, including their actions in the body.
- Describe a category of medication used to treat anemia, including its actions in the body.
- Describe four categories of medications used to treat hypertension, including their actions in the body.
- Describe four categories of medications used to treat cardiac arrhythmias, including their actions in the body.
- Describe two categories of medications used to treat congestive heart failure, including their actions in the body.
- Describe a category of medication used to treat shock, including its actions in the body.
- Describe three categories of medications used to treat hyperlipidemia, including their actions in the body.
- Discuss five categories of anti-inflammatory medications, when they are used, and their actions in the body.
- Differentiate between the six classifications of anti-infectives, their uses, and their actions in the body.
- Compare the four different types of acquired immunity a body develops and how they each occur.
- Identify at least three different types of antineoplastic medications, when each is used, and their actions in the body.
- Discuss the toxic effects that antineoplastic medications have on patients and health care workers, including the proper handling of both these medications and patient secretions.
- Discuss the actions of mast cell stabilizers, bronchodilators, anticholinergics, xanthines, and beta-adrenergic agonists used in the treatment of asthma and other respiratory disorders.
- Detail two medications that may be used to treat a viral respiratory illness.
- Compare and contrast antitussive and expectorant medications and when each is appropriate to use.
- Discuss tuberculosis, how it is treated, and why it has seen an increase in occurrence.
- Detail how the gastrointestinal system functions.
- Identify medication used to treat constipation.
- Identify medications used to treat diarrhea, explaining how the underlying cause should be treated.
- Identify medications used to treat nausea and vomiting.
- Compare the different types of medications used to treat gastroesophageal reflux disease (GERD) and gastric ulcers.
- Discuss medications used for gallstones, obesity, hemorrhoids, flatulence, stomatitis, and fungal and parasitic infections of the GI tract.
- Discuss how overdose is treated.

- Identify populations of patients needing nutritional supplements or those needing assistance digesting their food and how each of these are treated.
- Describe how contraceptives work.
- Discuss the relation of diuretics to electrolyte imbalances.
- Discuss the body's need for vitamins and minerals.
- Compare Eastern philosophy to Western philosophy in regard to medicine.

### **PART III: GRADING AND ASSESSMENT**

#### **EVALUATION OF REQUIRED COURSE MEASURES:**

Students' performance will be assessed and the weight associated with the various measures listed below:

#### **EVALUATION\***

Exams (4)	56% (14% each)
Quizzes (in class)	10%
Discussion Postings	10%
Pronunciation Assignments	10%
Cumulative Final Exam	<u>14%</u>
	100%

#### **Structure of Evaluation:**

**Exams:** The course has a total of 4 regular exams. Exam dates are absolute and may not be "made up" in the event of a student absence, whether excused or unexcused. The student retains the option, however, to replace the lowest single exam score with the cumulative final exam grade at the end of the semester, which may include a grade of 'zero' for any missed examination. A second absence for an exam will result in a 'zero' being recorded into the grade calculations. Please weigh your circumstances carefully when making preparations and/or alternate arrangements for examination periods. Absences should be reserved for dire and unavoidable circumstances.

**Discussion Postings:** Discussion postings are posted on D2L and are due as noted on the assignment. Assignments may be submitted at any time during the designated "window". Once the "window" has closed, however, no additional submissions may be made and uncompleted assignments will result in a grade of 'zero'. The lowest discussion posting grade will be dropped at the end of the semester.

**Pronunciation assignments:** Students will submit a recording on D2L for all pronunciation exercises. Assignments may be submitted at any time during the designated "window". Once the "window" has closed, however, no additional submissions may be made and uncompleted assignments will result in a grade of 'zero'. The lowest pronunciation grade will be dropped at the end of the semester.

**Quizzes:** Quizzes will be administered in class routinely throughout the semester as a means of gauging student progress. Quizzes may not be "made up" in the event of a student absence or tardiness during a

period when a quiz is administered, whether excused or unexcused. The student retains the option, however, to drop the two (2) lowest quiz grades at the end of the semester, which may include grades of 'zero' for missed quizzes. Beyond two missed quizzes, subsequent absences will result in a 'zero' being recorded into the corresponding grade calculations. Please weigh your circumstances carefully when making preparations and/or alternate arrangements for class periods. Absences should be reserved for dire and unavoidable circumstances. Quizzes may be administered at any time during the scheduled class period. You must be physically present in the classroom when the quizzes are distributed in order to take the quiz. This policy is followed to avoid unnecessary delays in the instructional period due to delays created by tardy students.

**Final Exam:** The final exam will be administered according to the HGTC exam calendar. Students are expected to make every effort to take the final examination at the scheduled time. Allowance for a "make up final" will be granted only with written documentation of extreme circumstances. In any case, the student should immediately contact the professor if he/she is unable to take the final examination due to extraordinary circumstances.

### **GRADING SYSTEM:**

The faculty and administration of HGTC are committed to enhancing your learning experience at the college through improved methods of instruction and support services. For information on student support services or questions about your curriculum, please refer to your Wave-net homepage. As part of the SACS Quality Enhancement Project, the college has developed a guided plan for success. Part of the effectiveness of this program is to identify and evaluate students who are not achieving the expected outcomes in class. ***Students receiving scores below 74% will be required to meet with their instructor to review the evaluation. Students identified as needing additional help will be referred to the academic center for study skills and tutoring.***

### **GRADING POLICY:**

The following scale will be used to assign final letter grades.

A	=	90 – 100
B	=	80 – 89
<u>C</u>	=	<u>70 – 79</u>
D	=	60 – 69
F	=	59 – 0

Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, be sure to talk with your instructor and financial aid counselor about the implications of that course of action. Ds, Fs, Ws, WFs and Is also negatively impact academic progression and financial aid status.

The Add/Drop Period is the first 5 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format courses. Please refer to the academic calendar for deadlines for add/drop (<http://www.hgtc.edu/academics/academiccalendars.html>). You must attend at least one meeting of all of your classes during that period. If you do not, you will be dropped from the course(s) and your Financial Aid will be reduced accordingly.



### **The Student Success and Tutoring Center (SSTC)**

The SSTC offers to all students the following **free** resources:

1. **Academic coaches** for most subject areas, **Writing Center Support**, and **college success skills**
2. **On-line student success and academic support resources**
  - a. **24/7 online academic tutoring assistance** (access in WaveNet)
  - b. **24/7 Online Resource Center (ORC)**
  - c. **Campus2Campus Virtual Appointments**
  - d. **Tips and tricks** for college life, studying, and learning (Facebook: **hgtsstc**)
3. **Other student resources and academic support**
  - a. **Resource guides** to improve college success skills
  - b. **Science models & other supplemental tools and textbooks**
  - c. **Workshops on college success skills and citation styles**
    - d. Study Skills, Test Anxiety, Time Management, etc.
    - e. APA, MLA, and Preventing Plagiarism
    - f. Check the EVENTS calendar in WaveNet for more information!



Visit the SSTC website: [www.hgtc.edu/sstc](http://www.hgtc.edu/sstc) and visit the student services tab in your WaveNet account to schedule appointments using TutorTrac. For more information, call: SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455. Room locations and Live Chat is available on the SSTC website.

### **Student Information Center: Wave-Net Central (WNC)**

WNC offers to all students the following **free** resources:

2. **Getting around HGTC:** General information and guidance for enrollment!
3. Use the **Online Resource Center (ORC)** for COMPASS support, technology education, and online tools
4. **Drop-in technology support or scheduled training** in the Center or in class
5. **In-person workshops and online tutorials** are available for:
  1. D2L & WaveNet,
  2. Microsoft Office Word, PowerPoint and Excel,
  3. Basic Computer Skills,
  4. Budgeting your Money, and more.
  5. Check the EVENTS calendar or the WNC Online Resource Center for more information!
6. **Additional services** such as reviewing Degree Works, scheduling tutoring, or scheduling testing center appointments, scanning and uploading documents, etc.



Visit the WNC website: [www.hgtc.edu/wavenetcentral](http://www.hgtc.edu/wavenetcentral). Live Chat and Center locations are posted on the website. Or please call one of the following locations: WNC Conway, 349-5182; WNC Grand Strand, 477-2076; and WNC Georgetown, 520-1473. View tips and tricks for college life, personal development and technology learning on their Facebook page (Facebook: **hgtcwnc**).

### **Attendance:**

Students are expected to limit absences to those that are absolutely unavoidable.

Per school policy, there are no “excused” absences. You will either be marked as present or absent. Horry-Georgetown Technical College maintains a general attendance policy requiring students to be present for a minimum of eighty percent (80%) of his/her classes in order to be eligible to receive credit. Students who exceed this allotment will be withdrawn from the course and the Pharmacy Technician Program.

### **Disability Services:**

HGTC is committed to providing an accessible environment for students with disabilities. Inquiries may be directed to Jocelyn Williams, Director of Student Development on the Conway Campus Jaime Davis, Counselor/Advisor on the Georgetown Campus or Jim Ratliff, Counselor on the Grand Strand Campus. These individuals will review documentation of the student’s disability and, in a confidential setting with the student, develop an educational accommodation plan.

Note: It is the student’s responsibility to self-identify as needing accommodations and to provide acceptable documentation. After a student has self-identified and submitted documentation of a disability, accommodations may be determined, accepted, and provided.

### **Title IX Requirements:**

The South Carolina Technical College System does not discriminate on the basis of race, color, gender, national or ethnic origin, age, religion, disability, marital status, veteran status, sexual orientation, gender identity, or pregnancy in educational programs and activities as required by Title IX. As outlined in the Violence Against Women Act, Horry Georgetown Technical College prohibits the offenses of domestic violence, dating violence, sexual assault, and stalking. Students who believe he or she has experienced or witnessed discrimination including sexual harassment, domestic violence, dating violence, sexual assault or stalking are encouraged to report such incidents to the Title IX Coordinators:

Dr. Melissa Batten, AVP of Student Affairs  
Building 1100, Room 107A, Conway Campus  
843-349-5228  
[Melissa.Batten@hgtc.edu](mailto:Melissa.Batten@hgtc.edu)

Jacquelyne Barrett, AVP of Human Resources  
Building 200, Room 212A, Conway Campus  
843-349-5212  
[Jacquelyne.Barrett@hgtc.edu](mailto:Jacquelyne.Barrett@hgtc.edu)

\*Faculty and Staff are required to report incidents to the Title IX Coordinators when involving students. The only HGTC employees exempt from mandatory reporting are licensed mental health professionals (only as part of their job description such as counseling services).