



INSTRUCTIONAL PACKAGE

NUR 161

Basic Concepts of Pharmacology

Fall 2023, Spring 2024, Summer 2024

INSTRUCTIONAL PACKAGE

Part I: Course Information

Effective Term: 2022 - 2023

COURSE PREFIX: NUR 161

COURSE TITLE: Basic Concepts of Pharmacology

CONTACT HOURS: 2.0

CREDIT HOURS: 2.0

RATIONALE FOR THE COURSE:

This course is an integral component of the ADN curriculum of study. It is intended to expand the nursing student's knowledge and subsequent application of basic pharmacology concepts within contemporary nursing practice.

COURSE DESCRIPTION:

This course is an introductory study of pharmacotherapeutics, including drug classifications and clinical implications for clients.

PREREQUISITES/CO-REQUISITES:

Corequisites: NUR 101, BIO 210, ENG 101, MAT 110, MAT 120

REQUIRED MATERIALS:

Textbook:

Lilley, L. L., Collins, S.R. & Snyder, J. S. (2023). *Pharmacology and the nursing process* (10th Ed.). Elsevier Inc.

Online Program:

Student Resources on Elsevier/evolve website – see directions for access in D2L.

SherPath for Pharmacology (Lilley revised version, 9th edition) – Evolve Course

Medication Cards (purchased in the bookstore)

Kaplan Student Resources

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

[BOOKSTORE](#).

- 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 learning management system (LMS) used for course materials.
Access to myHGTC portal for student self-services.
College email access – this is the college's primary official form of communication.

STUDENT IDENTIFICATION VERIFICATION:

Students enrolled in online courses will be required to participate in a minimum of one (1) proctored assignment and/or one (1) virtual event to support student identification verification. Please refer to your Instructor Information Sheet for information regarding this requirement.

CLASSROOM ETIQUETTE:

As a courtesy to other students and your professor, please turn off cell phones and other communication/entertainment devices before class begins. If you are monitoring for an emergency, please notify your professor before class and switch your cell phone ringers to vibrate.

Refer to Student Code, I, General Rights of Students, F. Classroom Behavior in the Academic Catalog & Student Handbook

NETIQUETTE: THIS is the term commonly used to refer to conventions adopted by Internet users on the web, mailing lists, public forums, and in live chat focused on online communications etiquette. For more information regarding Netiquette expectations for distance learning courses, please visit [Online Netiquette](#).

Part II: Student Learning Outcomes

COURSE LEARNING OUTCOMES and ASSESSMENTS

LEARNING OUTCOMES:

Upon completion of the course, the student should be able to

1. SAFETY

Apply knowledge of pharmacotherapeutics to promote a safe healthcare environment.

2. CLINICAL DECISION-MAKING

Explore the process for effective clinical decision-making related to pharmacotherapeutics by considering multiple factors such as physical assessment findings and laboratory values.

3. TEAMWORK AND COLLABORATION

Discuss the impact of collaborative professional relationships on positive patient outcomes related to pharmacotherapeutics.

4. PROFESSIONAL BEHAVIORS

Explain the importance of ethical and regulatory standards for handling and administering pharmacotherapeutics.

5. PATIENT-CENTERED CARE

- Recognize the effect that age, gender, race, and weight have on pharmacotherapeutics within the human body.
- Formulate practical drug education information appropriate for diverse patient populations that address age, level of education and development, language, and cultural considerations.

Module # 1

Materials Covered: Instructional Package & Instructor Course Information Sheet
Course Calendar & Assignments
Evolve Online Resources (SherPath)
Chapter 1: Nursing Process

***Assessment(s):** Case study, EAQ, Group Activity, Assignments, Exams

Learning Outcomes

1. Articulate the course learning outcomes and progression of the course.
2. Locate online assignments, evolve online resources, and navigate the HGTC D2L site.
4. Identify the availability of faculty and how to reach course faculty.
5. List and articulate the 5 phases of the nursing process related to drug therapy.
6. Articulate the "Nine Rights" and other "Rights" associated with safe medication administration.
7. Discuss the professional responsibility and standard of practice for the professional nurse regarding medication administration.
8. Explain the importance of teamwork and collaboration in the safe administration of medications.

Module #2

Materials Covered: Chapter 2: Pharmacologic Principles
Chapter 3: Life Span Considerations
Chapter 4: Cultural, Legal, and Ethical Considerations

***Assessment(s):** Case study, EAQ, Group Activity, Assignments, Exams

Learning Outcomes:

1. Define standard terms used in pharmacology.
Polypharmacy, agonist, additive effects, blood-brain barrier, Cytochrome P-450, antagonist, classification, generic name, half-life, parent drug, peak effect, peak level, pharmacology, pharmacotherapeutics, receptor, synergistic effect, therapeutic index, teratogenic, trade name.
2. Explain the general concepts of pharmaceuticals and pharmacokinetics and their application to drug therapy and nursing.
3. Demonstrate an understanding of the various drug dose forms related to drug therapy.
4. Describe the process of pharmacokinetics (absorption, distribution, metabolism, and excretion).
5. Explain the influences of the patient's age on the effects of drugs and drug responses to ensure safe medication administration.

6. Provide examples of how age affects drug absorption, distribution, metabolism, and excretion across the lifespan.
7. Identify cultural factors (ethnicity and genetics) and gender that may influence an individual's response to medications and medication errors (physical and emotional).
8. Prepare a valid medication card that identifies classification, routes of administration, action, contraindications, important laboratory values, nursing responsibilities, and patient education.

Module #3

Material Covered: Chapter 5: Medication Errors: Preventing & Responding
Chapter 6: Patient Education and Drug Therapy
Chapter 7: OTC Drugs & Herbal & Dietary Supplements

***Assessment(s):** Case study, EAQ, Group Activity, Assignments, Exams

Learning Outcomes:

1. Define critical terms: adverse drug event, allergic reaction, medication error, alternative medicine, herbs, dietary supplement, iatrogenic effect, over the counter, affective domain, cognitive domain, psychomotor domain
2. Discuss the issues contributing to medication errors, the consequences of errors, and methods of response and prevention.
3. List the responsibilities of the nurse in drug therapy and describe the essential elements of a medication order, including the roles of the health care team.
4. Describe the role of the nurse and the patient in medication administration and prevention of medication errors.
5. Summarize the 3 learning domains (cognitive, affective, and psychomotor) and their importance in patient education.
6. Explain teaching and learning principles appropriate to patient education and drug therapy across the lifespan.
7. Explain the differences between prescription drugs, OTC drugs, herbals, and dietary supplements and the potential dangers with their use.
8. Explain the role of herbal, OTC, and dietary supplements in the integrative approach to nursing care and health care.
9. Discuss the importance of professional behavior when working with medication administration, prescription, and nonprescription medications within the clinical setting.

Module #4

Material Covered: Chapter 10: Analgesic Drugs
Chapter 44: Chapter 44: Anti-inflammatory & Anticancer Drugs

***Assessment(s):** Case study, EAQ, Presentation, Group Activity, Assignments, Exams

Learning Outcomes:

1. Define critical terms: acute pain, chronic pain, addiction, breakthrough pain, cancer pain, analgesic ceiling effect, opioid, tolerance, physical dependence, somatic pain, visceral pain, phantom pain, and salicylism.
2. Identify examples of drugs classified as nonopioids, opioids, and nonsteroidal anti-inflammatory medications.
3. Explain the mechanism of action, indication, routes of administration, contraindications, laboratory testing, common adverse reactions, toxicity, cautions, contraindications, and significant drug-drug interactions of opioids, nonopioids, and nonsteroidal anti-inflammatory drugs (NSAID).
4. Articulate a nursing care plan based on the nursing process for patients in pain related to anti-inflammatory, nonopioid, and opioid drug therapy.
5. Explain the necessary patient education for patients receiving opioids, nonopioids, and NSAIDs.
6. Explain the safety measures necessary in administering analgesics and anti-inflammatory medications across the lifespan.
7. Identify significant cultural assessment and factors when administering pain and anti-inflammatory medications.

Module #5

Material Covered: Chapter 12: Central Nervous System Depressants & Muscle Relaxants
Chapter 13: Central Nervous System Stimulants & Related Drugs
Chapter 14: Antiepileptic Drugs

***Assessment(s):** Case studies, Mastery quizzing, home/in-class assignments, exams

Learning Outcomes:

1. Define critical terms: serotonin syndrome, black box warning, hypnotic, sedative, barbiturate, benzodiazepines, gamma-aminobutyric acid (GABA), ergot alkaloids, migraine, anticonvulsants, antiepileptic drugs, electroencephalogram, epilepsy, focal

onset seizure, generalized onset seizure, status epilepticus, Tonic-Clonic seizures, a neurotransmitter.

2. Identify examples of drugs classified as Benzodiazepine, Barbiturate, muscle relaxant, Serotonin Receptor Agonist, Antidepressant, and Antiepileptic.
3. Explain the mechanism of action, indication, routes of administration, contraindications, laboratory testing, common adverse reactions, toxicity, cautions, contraindications, and significant drug-drug interactions associated with benzodiazepines, muscle relaxants, antidepressants, Serotonin Receptor Agonists, and antiepileptic medications.
4. Articulate a nursing care plan based on the nursing process for patients in pain related to benzodiazepines, muscle relaxants, antidepressants, Serotonin Receptor Agonists, and antiepileptic medications.
5. Articulate a nursing care plan based on the nursing process for a patient taking benzodiazepines, muscle relaxants, antidepressants, Serotonin Receptor Agonists, and antiepileptic medications.
6. Explain the necessary patient education for patients receiving benzodiazepines, muscle relaxants, antidepressants, Serotonin Receptor Agonists, and antiepileptic medications.
7. Explain the safety measures necessary in administering benzodiazepines, muscle relaxants, antidepressants, Serotonin Receptor Agonists, and antiepileptic drugs across the lifespan.
8. Identify significant cultural factors when administering benzodiazepines, muscle relaxants, antidepressants, Serotonin Receptor Agonists, and antiepileptic drugs.

Module #6

Material Covered: Chapter 22: Antihypertensive Drugs
Chapter 23: Antianginal Drugs
Chapter 24: Heart Failure Drugs

***Assessment(s):** Case studies, Mastery quizzing, home/in-class assignments, exams

Learning Outcomes:

1. Define critical terms: Hypertension, cardiac output, essential hypertension, orthostatic hypertension, secondary hypertension, atrial fibrillation, heart failure, inotropic, chronotropic, chronotropic.
2. List the criteria for the measure values for the hypertension categories.
3. Identify examples of drugs classified as Antihypertensives, anti-anginal, cardiac glycoside, Ca⁺ Channel Blocker, Beta Blocker, Angiotensin II Receptor Blocker, diuretics, Angiotensin-Converting Enzyme Blocker, Vasodilator.

4. Explain the mechanism of action, indication, routes of administration, contraindications, laboratory testing, common adverse reactions, toxicity, cautions, contraindications, and significant drug–drug interactions associated with Beta-adrenergic receptor blockers, Calcium channel blockers, Angiotensin-converting enzyme (ACE) blockers, Angiotensin II Receptor Blocker, nitroglycerine, cardiac glycosides.
5. Articulate a nursing care plan based on the nursing process for a patient taking antihypertensives, antianginal, and heart failure medications.
6. Explain the necessary patient education for patients receiving antihypertensives, antianginal, and heart failure medications.
7. Explain the safety measures necessary in administering antihypertensives, antianginal, and heart failure medications across the lifespan.
8. Identify significant cultural factors when administering antihypertensives, antianginal, and heart failure medications.

Module #7

Material Covered: Chapter 26: Coagulation Modifier Drugs
Chapter 27: Antilipemic Drugs

***Assessment(s):** Case studies, Mastery quizzing, home/in-class assignments, exams

Learning Outcomes:

1. Define critical terms: anticoagulant, antiplatelet, fibrinogen, antithrombin III, cholesterol, statins, triglycerides, hypercholesterolemia, coagulation, deep vein thrombosis, and hemostasis.
2. Comprehend the basics of the coagulation process and the impact of anticoagulants and antiplatelet drugs.
3. Identify examples of drugs classified as anticoagulants, antiplatelet, and antilipidemic.
4. Explain the mechanism of action, indication, routes of administration, contraindications, laboratory testing, common adverse reactions, toxicity, cautions, contraindications, and significant drug–drug interactions associated with coagulation modifier drugs and antilipidemic medications.
5. Articulate a nursing care plan based on the nursing process for a patient taking coagulation modifiers and antilipidemic medications.
6. Explain the necessary patient education for patients receiving coagulation modifiers and antilipemic medications.
7. Explain the safety measures necessary in administering coagulation modifiers and antilipemic medications across the lifespan.

8. Identify significant cultural factors when administering coagulation modifiers and antilipidemic medications.

Module #8

Material Covered:

Chapter 28: Diuretic Drugs

Chapter 50: Acid Control Drugs

Chapter 52: Antiemetic & Antinausea Drugs

***Assessment(s):**

Case studies, Mastery quizzing, home/in-class assignments, exams

Learning Outcomes:

1. Define critical terms: aldosterone, nephron, the loop of Henle, nonsteroidal antacid, hydrochloric acid, pepsin, mucous cells, antiemetic, emesis, chemoreceptor trigger zone (CTZ).
2. Compare differences between different classifications of diuretic drugs.
3. Identify examples of drugs classified as diuretic, acid-controlling, antiemetic, and antinausea medications.
4. Explain the mechanism of action, indication, routes of administration, contraindications, laboratory testing, common adverse reactions, toxicity, cautions, contraindications, and significant drug-drug interactions associated with a diuretic, acid controlling, antiemetic, and antinausea medications.
5. Articulate a nursing care plan based on the nursing process for a patient taking diuretic, acid-controlling, antiemetic, and antinausea medications.
6. Explain the necessary patient education for patients receiving diuretic, acid-controlling, antiemetic, and antinausea medications.
7. Explain the safety measures necessary in administering diuretic, acid-controlling, antiemetic, and antinausea medications across the lifespan.
8. Identify significant cultural factors when administering diuretic, acid-controlling, antiemetic, and antinausea medications.

Module #9

Material Covered: Chapter 31: Thyroid and Antithyroid Drugs
Chapter 32: Diabetic Drugs
Chapter 33: Adrenal Drugs

***Assessment(s):** Case studies, Mastery quizzing, home/in-class assignments, exams

Learning Outcomes:

1. Define critical terms: Euthyroid, hypothyroidism, thyroid-stimulating hormone, thyroxine, insulin, hyperglycemia, hypoglycemia, glucose, hemoglobin A1C, diabetes mellitus, corticosteroids, adrenal cortex
2. Contrast differences between type 1 and type 2 diabetes.
3. Explain and compare rapid, short, intermediate, and long-acting insulins regarding the onset of action, peak effect, and duration.
4. Explain the mechanism of action, indication, routes of administration, contraindications, laboratory testing, common adverse reactions, toxicity, cautions, contraindications, and significant drug-drug interactions associated with thyroid, diabetic, and adrenal medications.
5. Articulate a nursing care plan based on the nursing process for a patient taking thyroid, diabetic, and adrenal medications.
6. Explain the necessary patient education for patients receiving thyroid, diabetic, and adrenal medications.
7. Explain the safety measures necessary in administering thyroid, diabetic, and adrenal medications across the lifespan.
8. Identify significant cultural factors when administering thyroid, diabetic, and adrenal medications.

Module #10

Material Covered: Chapter 36: Antihistamines, Decongestants, Antitussives ...
Chapter 37: Respiratory Drugs

***Assessment(s):** Case studies, Mastery quizzing, home/in-class assignments, exams

Learning Outcomes:

1. Define critical terms: antihistamine, antitussive, decongestant, expectorating, adrenergic, asthma attack, COPD, lower respiratory tract, upper respiratory tract, status asthmaticus, allergen, alveoli.
2. List the classification of drugs used to treat respiratory conditions and pulmonary disorders.

3. Identify medications for rescue and maintenance therapy in treating pulmonary disorders.
4. Explain the mechanism of action, indication, routes of administration, contraindications, laboratory testing, common adverse reactions, toxicity, cautions, contraindications, and significant drug-drug interactions associated with respiratory conditions and pulmonary disease/disorders.
5. Articulate a nursing care plan based on the nursing process for a patient taking respiratory medications.
6. Explain the necessary patient education for patients receiving respiratory medications.
7. Explain the safety measures necessary in administering respiratory medications across the lifespan.
8. Identify significant cultural factors when administering respiratory medications across the lifespan

Module #11

Material Covered: Chapter 38: Antibiotics Part I
Chapter 39: Antibiotic Part II

***Assessment(s):** Case studies, Mastery quizzing, home/in-class assignments, exams

Learning Outcomes:

1. Define critical terms: antibiotic, antiseptic, bactericidal, bacteriostatic, beta-lactam, beta-lactamase, Clostridium difficile, community-acquired infection, resistance, superinfection, prophylactic therapy, definitive therapy, empiric therapy, infection, resistance, therapeutic.
2. List the classification of drugs used to treat bacterial infections.
3. Articulate the significance of antibiotic resistance and methods of prevention of antibiotic resistance.
4. Explain the mechanism of action, indication, routes of administration, contraindications, laboratory testing, common adverse reactions, toxicity, cautions, contraindications, and significant drug-drug interactions in antibiotic medications.
5. Articulate a nursing care plan based on the nursing process for a patient taking antibiotic medications.
6. Explain the necessary patient education for patients receiving antibiotic medications.
7. Explain the safety measures necessary in the administration of antibiotic medications.
8. Identify significant cultural factors when administering antibiotic medications across the lifespan.

Part III: Grading and Assessment

EVALUATION OF REQUIRED COURSE MEASURES/ARTIFACTS*

Students' performance will be assessed, and the weight associated with the various measures/artifacts is listed below.

EVALUATION*

Tests	80%
Assignments	10%
Quizzes (4%)	
Presentation/Teaching Sheet (6%)	
Final Exam (Comprehensive)	10%
	100%

To pass this course, students must achieve a weighted exam average of 77 or greater on the unit exams and the final exam.

* Quizzes and assignments will be added to the grade once the 77 average is achieved on the unit and final exams to calculate the overall theory grade.

**Students, please refer to the Instructor's Course Information Sheet for the specific number and type of evaluations.*

GRADING SYSTEM:

Because competency in nursing theory is a critical component for safe nursing practices, the grading scale for nursing is higher than for some other courses. The grading scale for nursing is:

A = 100 – 90

B = 89 – 80

C = 79 – 77

D = 76 – 60

F = 59 and below

Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, 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 ([ACADEMIC CALENDAR](#)). You must attend at least one meeting of all 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.

Part IV: Attendance

Horry-Georgetown Technical College maintains a general attendance policy requiring students to attend at least 80 percent (80%) of their classes to receive credit for any course. Due to the varied nature of courses taught at the college, some faculty may require up to 90 percent (90%) attendance. Pursuant to 34 Code of Federal Regulations 228.22 - Return to Title IV Funds, once a student has missed over 20% of the course or has missed two (2) consecutive weeks, the faculty are obligated to withdraw the student, and a student may not be permitted to re-enroll. **Instructors define absentee limits for their class at the beginning of each term; please refer to the Instructor Course Information Sheet.**

Check your Instructor's Course Information Sheet for any required on-site meeting times for online and hybrid courses. Please note that instructors may require tests to be taken at approved testing sites, and if you use a testing center other than those provided by HGTC, the center may charge a fee for its services.

Part V: Student Resources



THE STUDENT SUCCESS AND TUTORING CENTER (SSTC):

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

1. **Academic tutors** for most subject areas, **Writing Center support**, and **college success skills**.
2. Online **tutoring** and academic support resources.
3. Professional and interpersonal communication **coaching** in the EPIC Labs.

Visit the [Student Success & Tutoring Center](#) website for more information. To schedule tutoring, contact the SSTC at sstc@hgtc.edu or self-schedule in the Penji iOS/Android app or at www.penjiapp.com. Email sstc@hgtc.edu or call SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455, or go to the [Online Resource Center](#) to access on-demand resources.



STUDENT INFORMATION CENTER: TECH Central

TECH Central offers to all students the following **free** resources:

1. **Getting around HGTC:** General information and guidance for enrollment, financial aid, registration, and payment plan support!
2. Use the [Online Resource Center \(ORC\)](#) including Office 365 support, password resets, and username information.

3. **In-person workshops, online tutorials and more services** are available in Desire2Learn, Student Portal, Degree Works, and Office 365.
4. **Chat with our staff on TECH Talk**, our live chat service. TECH Talk can be accessed on the student portal and on TECH Central's website, or by texting questions to (843) 375-8552.

Visit the [Tech Central](#) website for more information. Live Chat and Center locations are posted on the website. Or please call (843) 349 – TECH (8324), Option #1.



HGTC LIBRARY:

Each campus location has a library where HGTC students, faculty, and staff may check out materials with their HGTC ID. All three HGTC campus libraries are equipped with computers to support academic research and related school work; printing is available as well. Visit the [Library](#) website for more information or call (843) 349-5268.

STUDENT TESTING:

Testing in an **online/hybrid** course and in **make-up exam** situations may be accomplished in a variety of ways:

- Test administered within D2L
- Test administered in writing on paper
- Test administered through Publisher Platforms (which may have a fee associated with the usage)

Furthermore, tests may have time limits and/or require a proctor.

Proctoring can be accomplished either face-to-face at an approved site or online through our online proctoring service. To find out more about proctoring services, please visit the [Online Testing](#) section of the HGTC's Testing Center webpage.

The **Instructor Information Sheet** will have more details on test requirements for your course.

DISABILITY SERVICES:

HGTC is committed to providing an accessible environment for students with disabilities. Inquiries may be directed to HGTC's [Accessibility and Disability Service webpage](#). The Accessibility and Disability staff will review documentation of the student's disability and, in a confidential setting with the student, develop an academic accommodation plan.

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

STATEMENT OF EQUAL OPPORTUNITY/NON-DISCRIMINATION STATEMENT:

Horry-Georgetown Technical College prohibits discrimination and harassment, including sexual harassment and abuse, based on race, color, sex, national or ethnic origin, age, religion, disability, marital or family status, veteran status, political ideas, sexual orientation, gender identity, or pregnancy, childbirth, or related medical conditions, including, but not limited to, lactation in educational programs and/or activities.

TITLE IX REQUIREMENTS:

All students (as well as other persons) at Horry-Georgetown Technical College are protected by Title IX—regardless of their sex, sexual orientation, gender identity, part- or full-time status, disability, race, or national origin—in all aspects of educational programs and activities. Any student, or other members of the college community, who believes that they are or have been a victim of sexual harassment or sexual violence may file a report with the college’s Chief Student Services Officer, campus law enforcement, or the college’s Title IX Coordinator, or designee.

*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).

INQUIRIES REGARDING THE NON-DISCRIMINATION/TITLE IX POLICIES:

Student and prospective student inquiries concerning Section 504, Title II, Title VII, and Title IX and their application to the College or any student decision may be directed to the Vice President for Student Affairs.

Dr. Melissa Batten, VP Student Affairs

Title IX, Section 504, and Title II Coordinator
Building 1100, Room 107A, Conway Campus
PO Box 261966, Conway, SC 29528-6066
843-349-5228
Melissa.Batten@hgtc.edu

Employee and applicant inquiries concerning Section 504, Title II, and Title IX and their application to the College may be directed to the Vice President for Human Resources.

Jacquelyne Snyder, VP Human Resources

Affirmative Action/Equal Opportunity Officer and Title IX Coordinator
Building 200, Room 205B, Conway Campus
PO Box 261966, Conway, SC 29528-6066
843-349-5212
Jacquelyne.Snyder@hgtc.edu