



INSTRUCTIONAL PACKAGE

PNR 121
Fundamentals of Pharmacology

Effective Term
Summer 2023

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Part I: Course Information

Effective Term: Summer 2023

COURSE PREFIX: PNR 121

COURSE TITLE: Fundamentals of Pharmacology

CONTACT HOURS: 2.0

CREDIT HOURS: 2.0

RATIONALE FOR THE COURSE:

This is an introductory course to the concepts of pharmacology and medication administration. Emphasis is on calculation of dosages, administration of medications, and correct use of abbreviations. Effects of specific drugs are presented.

COURSE DESCRIPTION:

This course provides an introduction to basic pharmacology and beginning skills necessary to practice the nursing process related to safe medication administration.

PREREQUISITES/CO-REQUISITES:

Acceptance into the Practical Nursing Program

Co-requisites PNR 110, MAT 155 and BIO 210

(Please note: progression to PNR 120 is contingent upon previous successful completion within the specified time specified by the current HGTC college catalog, or current enrollment in these courses)

***Online/Hybrid** courses require students to complete the DLI Online Student Orientation prior to completing an online course. The DLI Online Student Orientation can be found in WaveNet, under the My Student tab.

REQUIRED MATERIALS:

Please visit the [BOOKSTORE](#) online site for most current textbook information. Use the direct link below to find textbooks.

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

ADDITIONAL REQUIREMENTS:

HGTC Student Picture ID Badge

Simple Calculator

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 matter of 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 prior to class and switch cell phone ringers to vibrate.

NETIQUETTE: 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: Course Learning Outcomes**COURSE LEARNING OUTCOMES and ASSESSMENTS*:**

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

1. Safety

Apply basic knowledge of safety related to pharmacotherapeutics.

2. Clinical Decision Making

Describe clinical decision making related to pharmacotherapeutics when providing nursing care in health care environments.

3. Teamwork and Collaboration

Discuss the roles of the health care team as it relates to pharmacotherapeutics.

4. Professional Behavior

5. Explain the importance of ethical and regulatory standards related to the handling and administration of pharmacotherapeutics.

6. Patient-Centered Care

Recognize the effect that age, gender, race, and weight have on pharmacotherapeutics within the human body.

STUDENT LEARNING OUTCOMES and ASSESSMENTS*:**Module One:****Content Covered:** Willihnganz, Gurevitz & Clayton: Ch's 1,2,3,4,5**Course Resources:**

- Willihnganz, Gurevitz & Clayton (2020). Clayton's Basic Pharmacology for Nurses; 19th ed.
- Daily Med. <https://dailymed.nlm.nih.gov/dailymed/>
- Evolve Resources for Clayton's Basic Pharmacology for Nurses

Assessment(s):

- Unit exams
- Math Test
- Evolve online assessments
- Kaplan Focused Review (KFR)

Learning Outcomes:

1. Understand drug definitions, standards, and information sources.
2. Identify basics of drug actions and interactions.
3. Discuss effects age and gender and ethnicity on drug absorption, distribution, metabolism, and excretion.
4. Discuss how the nursing process applies to pharmacology.
5. Describe the role of the nurse in patient and family education in relationship to prescribed medications.

Module Two:**Content Covered:** Willihnganz, Gurevitz & Clayton: Ch's: 6, 7, 8, 9, 10, 11**Course Resources:**

- Willihnganz, Gurevitz & Clayton (2020). Clayton's Basic Pharmacology for Nurses; 19th ed.
- Daily Med. <https://dailymed.nlm.nih.gov/dailymed/>
- Evolve Resources for Clayton's Basic Pharmacology for Nurses

Assessment(s):

- Unit exams
- Math Test
- Evolve online assessments
- Kaplan Integrated Testing (KIT).

Learning Outcomes:

1. Identify the legal and ethical considerations for medication administration.
2. Identify precautions used to ensure the right drug is prepared and given to the right patient.
3. List the seven rights of drug administration.

4. Identify and discuss various methods of medication administration including:

Percutaneous, Enteral, & Parenteral methods.

Module Three:

Content Covered: Willihnganz, Gurevitz & Clayton: Ch's: 12, 13, 14, 15, 16, 17, 18, 19

Course Resources:

- Willihnganz, Gurevitz & Clayton (2020). Clayton's Basic Pharmacology for Nurses; 19th ed.
- Daily Med. <https://dailymed.nlm.nih.gov/dailymed/>
- Evolve Resources for Clayton's Basic Pharmacology for Nurses

Assessment(s):

- Unit exams
- Math Test
- Evolve online assessments
- Kaplan Focused Reviews (KFR).

Learning Outcomes:

1. Identify and understand the mechanism of action, side effects and nursing management for drugs prescribed for: The autonomic and central nervous systems, sleep, neurodegenerative, mental health, seizure disorders & pain management.
2. Explain how drugs inhibit the actions of cholinergic and adrenergic fibers.
3. Review the actions/uses/adverse effects of adrenergic, cholinergic agents, and anticholinergic agents.
4. Cite nursing interventions that can be implemented as an alternative to administering a sedative-hypnotic medication.
5. Identify the antidote drug used for the management of benzodiazepine overdose.
6. Describe the expectations of the medications that are prescribed for the treatment of Parkinson's disease.
7. Explain the actions of the agents used in the treatment of Alzheimer's disease.
8. Cite the drug therapy used to treat anxiety disorders.
9. Identify adverse effects that may result from drug therapy used to treat anxiety.
10. Compare the mechanism of action of SSRIs with that of other antidepressant agents.
11. Cite the adverse effects of MAOIs, SNRIs, TCAs, and lithium.
12. Discuss the antipsychotic medications that are used for the treatment of psychoses.
13. Identify the drug classes used to treat seizure disorders.
14. Differentiate among the properties of opiate agonists, partial agonists and opiate antagonists.
15. Describe the pharmacologic effects of salicylates.

Module Four:

Content Covered: Willihnganz, Gurevitz & Clayton: Ch's 20, 21, 22, 23, 24, 25, 26, 27, 28

Course Resources:

- Willihnganz, Gurevitz & Clayton (2020). Clayton's Basic Pharmacology for Nurses; 19th ed.
- Daily Med. <https://dailymed.nlm.nih.gov/dailymed/>
- Evolve Resources for Clayton's Basic Pharmacology for Nurses

Assessment(s):

- Unit exams
- Math Test
- Evolve online assessments
- Kaplan Focused Review (KFR).

Learning Outcomes:

1. Identify and understand the mechanism of action, side effects and nursing management for drugs prescribed for: The cardiovascular system.
2. Identify the major risk factors for the development of metabolic syndrome.
3. Explain the treatment goals for type 2 diabetes management, lipid management, and hypertension management.
4. Discuss the drug management of the underlying diseases in patients with metabolic syndrome.
5. Discuss the primary approaches to treat lipid disorders.
6. Identify the classification of drugs used to treat dysrhythmias.
7. Cite common adverse effects that may be observed with the administration of antidysrhythmic drugs.
8. Describe the actions of the drug classifications used to treat angina pectoris.
9. Identify the systemic effects to expect when peripheral vasodilating agents are administered.
10. Explain the primary purposes of anticoagulant therapy.
11. Identify the actions of platelet inhibitors, anticoagulants, thrombin inhibitors, and fibrinolytic agents and the procedures to detect hemorrhage.
12. Identify the primary actions on heart failure of digoxin, angiotensin-converting enzyme inhibitors, angiotensin receptor blockers, and beta blockers.
13. Describe digoxin toxicity and ways to prevent it.
14. Describe the actions of diuretics and their effects on blood pressure and electrolytes.
15. Discuss the rationale for administering diuretics cautiously in the older population.

Module Five:

Content Covered: Willihnganz, Gurevitz & Clayton: Ch's: 29, 30

Course Resources:

- Willihnganz, Gurevitz & Clayton (2020). Clayton's Basic Pharmacology for Nurses; 19th ed.
- Daily Med. <https://dailymed.nlm.nih.gov/dailymed/>
- Evolve Resources for Clayton's Basic Pharmacology for Nurses

Assessment(s):

- Unit exams

- Math Test
- Evolve online assessments
- Kaplan Focused Review (KFR).

Learning Outcomes:

1. Identify and understand the mechanism of action, side effects and nursing management for drugs prescribed for: The respiratory system.
2. Explain the major actions of sympathomimetic, antihistaminic, and corticosteroid decongestants.
3. Distinguish the mechanisms of action of expectorants, antitussives, and mucolytic agents.
4. Discuss therapeutic effects and adverse effects for beta-adrenergic bronchodilator and anticholinergic bronchodilator therapy.

Module Six:

Content Covered: Willihnganz, Gurevitz & Clayton: Ch's: 31, 32, 33, 34

Course Resources:

- Willihnganz, Gurevitz & Clayton (2020). Clayton's Basic Pharmacology for Nurses; 19th ed.
- Daily Med. <https://dailymed.nlm.nih.gov/dailymed/>
- Evolve Resources for Clayton's Basic Pharmacology for Nurses

Assessment(s):

- Unit exams
- Math Test
- Evolve online assessments
- Kaplan Focused Review (KFR).

Learning Outcomes:

1. Identify and understand the mechanism of action, side effects and nursing management for drugs prescribed for: The digestive system.
2. Discuss the drug classifications and actions used to treat stomach disorders.
3. Identify the therapeutic classes of antiemetics.
4. Discuss therapeutic management of antiemetics for maximum benefit.
5. Identify the mechanism of action for the different classes of laxatives and describe medical conditions in which laxatives should not be used.

Module Seven:

Content Covered: Willihnganz, Gurevitz & Clayton: Ch's: 35, 36, 37, 38

Course Resources:

- Willihnganz, Gurevitz & Clayton (2020). Clayton's Basic Pharmacology for Nurses; 19th ed.
- Daily Med. <https://dailymed.nlm.nih.gov/dailymed/>
- Evolve Resources for Clayton's Basic Pharmacology for Nurses

Assessment(s):

- Unit exams
- Math Test

- Evolve online assessments
- Kaplan Focused Review (KFR).

Learning Outcomes:

1. Identify and understand the mechanism of action, side effects and nursing management for drugs prescribed for: The endocrine system.
2. Identify the major nursing considerations associated with the management of the patient with diabetes.
3. Describe the signs, symptoms and treatments and nursing interventions for hyperglycemia and hypoglycemia.
4. Identify the two classes of drugs used to treat thyroid disease.
5. Describe the signs, symptoms, treatment and nursing interventions for hyperthyroidism and hypothyroidism.
6. Discuss the normal actions of mineralocorticoids and glucocorticoids in the body.
7. Discuss the clinical uses and potential adverse effects associated with corticosteroids.
8. Discuss the uses of estrogens and progestins.

Module Eight:

Content Covered: Willihnganz, Gurevitz & Clayton: Ch's: 41, 42, 43, 44, 45, & 47

Course Resources:

- Willihnganz, Gurevitz & Clayton (2020). Clayton's Basic Pharmacology for Nurses; 19th ed.
- Daily Med. <https://dailymed.nlm.nih.gov/dailymed/>
- Evolve Resources for Clayton's Basic Pharmacology for Nurses

Assessment(s):

- Unit exams
- Math Test
- Evolve online assessments
- Kaplan Focused Review (KFR).

Learning Outcomes:

1. Identify and understand the mechanism of action, side effects and nursing management for drugs prescribed for: The urinary system, eye, cancer, musculoskeletal, infections, and herbal supplements and substance abuse.
2. Identify important nursing implementations associated with the drug therapy and treatment of diseases of the urinary system.
3. Discuss the medications used to treat glaucoma and other eye disorders.
4. Describe the role of targeted anticancer agents in treating cancer.
5. Identify the therapeutic response and the common and serious adverse effects from skeletal muscle relaxant therapy.

6. Explain the actions, effects, and adverse effects of classes of drugs used to treat infectious diseases: antimicrobial agents, allergic reaction, nephrotoxicity, ototoxicity, and hepatotoxicity.
7. Describe the interactions between commonly used herbal and dietary supplement products and prescription medications.

****Students – please refer to the Instructor’s Course Information sheet for specific information on assessments and due dates.***

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 are listed below.

EVALUATION*

Unit Exams	80%
Assignments/Quizzes/Kaplan	10%
Final Exam	10%
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	100%

Students must achieve a weighted exam average of 77 or greater on the unit tests and the final exam to pass the course. Grades will not be rounded.

****Other assignments, quizzes and Kaplan scores will be added to the grade once the 77 weighted average is achieved on the unit tests and final exam to calculate the overall grade.***

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

GRADING SYSTEM:

A = 100 – 90, B = 89- 80, C = 79 – 77, D = 76 – 69, F=Less than 69

I understand I must achieve a **weighted exam average of 77 or greater** on the theory components of the course in order to pass the course. The theory components are the unit exams and the final exam. The weighted average for all other assignments will be added after the weighted average of 77 is achieved on the unit exam and final exams to generate the final calculated grade.

Kaplan Testing:

There are two **Kaplan Focused Reviews (KFR)** that are required in this course. They are PN Basic Med Dosage Calc A and PN Pharmacology 1 A, NGN. To pass the PN Pharmacology 1 A, NGN and PN Basic Med Dosage Calc A you must obtain a benchmark score of at least 80% and complete remediation. You may attempt this as many times as needed to obtain the benchmark. Remediation for PN Pharmacology 1 A, NGN and PN Basic Med Dosage Calc A is only for the 1st attempt and is defined as one (1) minute per question (right and wrong) on the Kaplan website and complete a Kaplan Focused Review Remediation Sheet with explanation of each Incorrect answer. The PN Basic Med Dosage Calc A is not proctored but does have a due date. The PN Pharmacology 1 A, NGN will be proctored.

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. 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.

Part IV: Attendance

Horry-Georgetown Technical College maintains a general attendance policy requiring students to be present for a minimum of 80 percent (80%) of their classes in order 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 is obligated to withdraw the student and a student may not be permitted to reenroll. **Instructors define absentee limits for their class at the beginning of each term; please refer to the Instructor Course Information Sheet.**

For online and hybrid courses, check your Instructor's Course Information Sheet for any required on-site meeting times. Please note, 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 ssc@hgtc.edu or self-schedule in the Penji iOS/Android app or at www.penjiapp.com. Email ssc@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 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).



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 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.

STATEMENT OF EQUAL OPPORTUNITY/NON-DISCRIMINATION STATEMENT:

Horry-Georgetown Technical College prohibits discrimination and harassment, including sexual harassment and abuse, on the basis of 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 member of the college community, who believes that he/she is or has 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 with 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