



INSTRUCTIONAL PACKAGE

PTH 221
Pathology 1

Effective Term
Fall 2024/Spring 2025/Summer 2025

INSTRUCTIONAL PACKAGE

Part I: Course Information

Effective Term: Fall 2024/Spring 2025/Summer 2025

COURSE PREFIX: PTH 221

COURSE TITLE: Pathology I

CONTACT HOURS: 2/week

CREDIT HOURS: 2

RATIONALE FOR THE COURSE:

This course introduces the student to the basic pathophysiology of the body. It addresses the functional changes that accompany a particular injury, syndrome, or disease and how the body responds to the unexpected or undesired changes across the life-span commonly seen in the physical therapy setting.

COURSE DESCRIPTION:

This course is an introduction to basic pathophysiology of the body with the emphasis on the body's reaction to disease and injury.

PREREQUISITES/CO-REQUISITES:

Prerequisites: BIO 211 and BIO 210 and (MAT 110 or MAT 120) Corequisites: PSY 203

REQUIRED MATERIALS:

- Pathology for the Physical Therapist Assistant 3rd Ed., Goodman, C., Fuller, K. Elsevier. St. Louis, Missouri. 2024.
- The Rehabilitation Specialist's Handbook 4th Ed., Serge H Roy, Steve Wolf, and David Scalzitti, 2013 F.A. Davis
- Scrubs

Please visit the [BOOKSTORE](#) online site for most current textbook information.

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

ADDITIONAL REQUIREMENTS:

Laptop

TECHNICAL REQUIREMENTS:

Access to Desire2Learn (D2L), HGTC's learning management system (LMS) used for course materials. Access to myHGTC portal for student self-services.

2024-2025

College email access – this is the college’s primary official form of communication.

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.

Part II: Student Learning Outcomes

Program Learning Outcomes:

After successful completion of the Horry-Georgetown Technical College Physical Therapist Assistant Program the graduate will be able to achieve the program learning outcomes. The student is advised to view the program learning outcomes in the Student Handbook. Reviewing the outcomes will assist the student in understanding how the terminal course objectives achieve the program learning outcomes.

COURSE LEARNING OUTCOMES and ASSESSMENTS*:

After successful completion of this course, the student will be able to meet the following terminal behavior outcomes:

- 1) Define common prefixes, suffixes, and terminology in describing the pathology of disease or condition.
Assessment: Comprehensive Final Exam
- 2) Compare and contrast the normal healing process for human tissues.
Assessment: Comprehensive Final Exam
- 3) Discuss how the patients/clients body systems are affected across the lifespan.
Assessment: Comprehensive Final Exam
- 4) Compare and contrast pathologies or conditions with regards to anatomy, contributing factors, clinical presentation, diagnostic tests and procedures, management, assessment, and long-term effects on the following systems: Immune, Integumentary, Endocrine/Metabolic, Neurological, Gastrointestinal, Renal, Urologic, Male and Female Reproductive.
Assessment: Comprehensive Final Exam

STUDENT UNIT LEARNING OUTCOMES PER MODULE

After successful completion of the classroom activity, the student will be able to meet the following instructional objectives:

*Modules can change per discretion of the instructor.

Module # 1- Introduction to Concepts of Pathology; Problems Affecting Multiple Systems; and Pharmacology

Material(s) Covered: Chapter 1-2 Pathology for the Physical Therapist Assistant

Assessment: Lecture Exam

- 1) Define the concepts of pathology, clinical pathology, and pathogenesis.
- 2) Define the similarities and differences between the terms: health and illness.
- 3) Compare and contrast disease stages between acute and chronic.

2024-2025

- 4) Identify common prefixes and suffixes to assist with recognition of pathological conditions.
- 5) Describe the International Classification of Functioning, Disability, and Health.
- 6) Identify the role of the PTA in health promotion and disease prevention throughout the lifespan.
- 7) Compare the routes of administration of pharmacological interventions.
- 8) Identify common drug names, classes, and suffixes.
- 9) Compare and contrast drug classifications based on their indications for specific pathologies.
- 10) Identify the role of the PTA in understanding the side effects of medications when performing physical therapy interventions.
- 11) Identify the hierarchy of evidence used in various types of research for evidence-based practice.
- 12) Define research terms validity, reliability, statistical significance, and clinical significance.

Module #2 - Injury, Inflammation, and Healing

Material(s) Covered: Chapter 3 Pathology for the Physical Therapist Assistant

Assessment: Lecture Exam

- 1) Describe the physiological mechanisms of injury at the cellular level, including necrosis and the inflammatory response.
- 2) Describe the physiology of cellular and tissue repair.
- 3) Identify the phases of wound healing.
- 4) Explain the complications of wound healing.
- 5) Analyze how physical therapy can be used to reduce inflammation and facilitate wound healing.
- 6) Describe the healing process for bone, ligaments, tendons, and muscle.
- 7) Discuss various pain-control theories.

Module #3- The Immune System; and Oncology

Material(s) Covered: Chapters 4 and 6 Pathology for the Physical Therapist Assistant

Assessment: Lecture Exam

- 1) Describe the physiological mechanisms of the immune response.
- 2) Identify the role vaccination plays in defense against infectious disease.
- 3) State the causes, classification, and medical treatment for neoplasia's.
- 4) Compare benign and malignant tumors.
- 5) Determine the implications of neoplasia for physical therapy interventions.

Module #4- Infectious Disease

Material(s) Covered: Chapter 5 Pathology for the Physical Therapist Assistant

Assessment: Lecture Exam

- 1) Delineate the pathology and transmission of various types of hepatitis.
- 2) Describe the pathological mechanisms of various sexually transmitted diseases (STDs) including AIDS/HIV.
- 3) Discuss physical therapy interventions for people with AIDS/HIV.
- 4) Analyze the significance of the pathology and transmission of hepatitis to the physical therapist assistant.
- 5) Describe the pathology of various vector-borne infectious diseases in the United States.
- 6) Describe the pathology of other infectious diseases and their relationship to health-care employees.
- 7) Determine the role of physical therapy intervention in the management of people with infectious diseases.
- 8) Apply protective measures to prevent contraction and spread when managing individuals with infectious diseases.

Module #5- The Integumentary System

Material(s) Covered: Chapter 7 Pathology for the Physical Therapist Assistant

Assessment: Lecture Exam

- 1) Describe the structure, anatomy, and physiology of skin.
- 2) Identify the mechanical mechanisms of burns.
- 3) Describe the pathological mechanisms of burns and other skin conditions.
- 4) Determine the classification of burns.
- 5) Analyze the relevance of the rule of nines in the medical management of patients with burns.
- 6) Discuss the physical therapy intervention for patients with various skin conditions.

Module #6- The Endocrine and Metabolic Systems

Material(s) Covered: Chapter 8 Pathology for the Physical Therapist Assistant

Assessment: Quiz, Lecture Exam

- 1) Review the anatomy and physiology of the endocrine system.
- 2) Describe the pathological mechanisms of endocrine diseases, metabolic diseases, and nutritional disorders.
- 3) Discuss the physical therapy interventions for patients with diabetes mellitus and other endocrine, metabolic, and nutritional disorders.
- 4) Determine the role of the physical therapist assistant working with patients with endocrine, metabolic, and nutritional disorders.
- 5) Apply contraindications, precautions, and special indications for physical therapist/physical therapist assistant intervention for patients with diabetes mellitus and other endocrine, metabolic, and nutritional disorders.

Module #7- Hematologic System

Material(s) Covered: Lecture PowerPoints, Chapter 10 Pathology for the Physical Therapist Assistant

Assessment: Lecture Exam

- 1) Identify the basic components of blood.
- 2) Define the common signs and symptoms associated with hematologic disorders.
- 3) Recognize common diseases affecting people with hematologic disorders.
- 4) Delineate the role of physical therapy interventions in the management of people with hematologic disorders.
- 5) Describe the contraindications, precautions, and special considerations for physical therapist/physical therapist assistant interventions for patients with hematologic disorders.

Module #8- The Hepatic, Pancreatic, and Biliary Systems

Material(s) Covered: Lecture PowerPoints, Chapter 12 Pathology for the Physical Therapist Assistant

Assessment: Lecture Exam

- 6) Identify the anatomy and physiology of the hepatic, pancreatic, and biliary systems.
- 7) Define the signs and symptoms associated with hepatic, pancreatic, and biliary systems diseases.

- 8) Describe pathological mechanisms of common diseases affecting the hepatic, pancreatic, and biliary systems.
- 9) Recognize the impact of the hepatic, pancreatic, and biliary system on other body systems.
- 10) Delineate the role of physical therapy interventions in the management of people with hepatic, pancreatic, and biliary system diseases.
- 11) Describe the contraindications, precautions, and special considerations for physical therapist/physical therapist assistant interventions for patients with hepatic, pancreatic, and biliary system diseases.

Module #9- The Gastrointestinal System; the Renal and Urologic Systems

Material(s) Covered: Section V (E4-E5) Pathology for the Physical Therapist Assistant

Assessment: Lecture Exam

- 1) Review the anatomy and physiology of the digestive, renal, and urinary systems.
- 2) Discuss the pathological mechanisms of common diseases of the digestive, renal, and urinary systems.
- 3) Describe diagnostic tests for diseases of the digestive, renal, and urinary systems.
- 4) Determine physical therapy intervention for patients with digestive, renal, and urinary system diseases.
- 5) Delineate the role of physical therapy intervention in the management of people with digestive, renal, and urinary system diseases.
- 6) Analyze the contraindications, precautions, and special considerations for physical therapist/physical therapist assistant interventions for patients with urinary, renal, and digestive system diseases.

Module #10- Genetic and Developmental Disorders

Material(s) Covered: Lecture PowerPoints, Chapter 14 Pathology for the Physical Therapist Assistant

Assessment: Lecture Exam

- 1) Become familiar with various chromosome abnormalities and genetically linked diseases.
- 2) Identify the impact of antibiotic-resistant infections and emerging infections on the future of health care.
- 3) Determine the role of physical therapist/physical therapist assistant in providing physical therapy interventions for patients with hereditary conditions.

Module #11- Female and Male Genital/Reproductive Systems

Material(s) Covered: Section V (E9-E10) Pathology for the Physical Therapist Assistant

Assessment: Take Home Quizzes; Lecture Exam

- 1) Review the anatomy and physiology of the female and male reproductive systems.
- 2) Discuss the physiological changes of the female during pregnancy.
- 3) Describe the stages of labor and the common complications of labor and pregnancy.
- 4) Discuss the pathological mechanisms of common pregnancy-related conditions, menopause, and female reproductive diseases.
- 5) Discuss the pathological mechanisms of male reproductive diseases.
- 6) Determine the role of physical therapy interventions for females and males with reproductive-related conditions and diseases.
- 7) Analyze the contraindications and precautions relevant to physical therapist/physical therapist assistant intervention for patients with female and male reproductive diseases.

- 8) Determine the contraindications and precautions for physical therapy interventions for women during pregnancy.

Module #12- The Geriatric Patient and The Pediatric Patient

Material(s) Covered: Lecture PowerPoints, Pathology for the Physical Therapist Assistant

Assessment: Assignment and Written Exam

- 1) Define the terms geriatrics, geriatric medicine, and gerontology.
- 2) Name theories related to the aging process.
- 3) Determine the issues related to the association of aging and altered balance abilities.
- 4) List some commonly occurring diagnoses in older people.
- 5) Determine the physical therapy interventions used for older people with specific diagnoses.
- 6) Describe factors that increase the risk of malnutrition in the older population.
- 7) Apply some special concepts of physical therapy interventions for end-of-life care.
- 8) Explain the use of the Apgar score to objectively report the health of an infant at birth.
- 9) Define and explain the infant primitive reflexes and postural reactions that occur during human growth and development.
- 10) Discuss normal gross motor and fine motor skill development from newborn to adolescence.
- 11) Identify common pathologies and physical therapy interventions in a pediatric population that have not been covered in previous modules (Hip Dysplasia, Talipes Equinovarus, Osteogenesis Imperfecta, Ehler's Danlos Syndrome, Fractures, etc.).
- 12) Outline successful methods in maintaining attention during interventions in a pediatric population.
- 13) Discuss the Individuals with Disabilities Education Improvement Act (IDEA) and the implications for physical therapy services for the pediatric population.
- 14) Define child abuse and neglect and recognize the signs that a child or parent may portray.

Module #13- Pathology of the Musculoskeletal System

Material(s) Covered: Lecture PowerPoints, Chapter 15-17 Pathology for the Physical Therapist Assistant

Assessment: Lecture Exam

- 1) Review the anatomy and physiology of the musculoskeletal system.
- 2) Compare and contrast joint diseases including OA, septic arthritis, hemolytic arthritis, gout, lyme and spondylo- pathologies.
- 3) Compare and contrast diseases of the bone including osteoporosis, osteopenia, Rickets, osteomalacia, Legg Calves Perthes Disease, SCFE, Paget's, Osteomyelitis, etc.
- 4) Compare and contrast diseases of the bone caused by tumors versus genetic inheritance.
- 5) Identify common inflammatory joint pathologies, their pathological mechanisms and patient presentations including RA, Ankylosing Spondylitis, Psoriatic Arthritis.
- 6) Identify the causes of connective tissue diseases.
- 7) Identify the pathological mechanisms and patient presentations for connective tissue diseases.

Module #14- Pathology of the Nervous System

Material(s) Covered: Chapters 18-25 Pathology for the Physical Therapist Assistant

Assessment: Lecture Exam

- 1) Review the anatomy and physiology of the central nervous system.
- 2) Review the anatomy and physiology of the peripheral nervous system.
- 3) Describe central nervous system and peripheral nervous system diseases and conditions.
- 4) Identify specific medical tests used for people with neurological conditions.
- 5) Determine specific physical therapy interventions used for people with neurological conditions.

****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*

Lecture Exams	50%
Assignments	10%
Poster Project	8%
Class Participation	2%
<u>Comprehensive Final Exam</u>	<u>30%</u>
	100%

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

GRADING SYSTEM:

A= 90%-100%
 B= 80%-89%
 C= 75%-79%
 D= 69%-74%
 F= below 68%

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 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.



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 Services staff will review documentation of the student's disability and, in a confidential setting with the student, engage in an interactive process to 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. Students will need to reach out to the Accessibility and Disability Services staff each semester to renew their accommodations.

COUNSELING SERVICES:

HGTC Counseling Services strives to optimize student success through managing personal and academic concerns that may interfere with achieving educational goals. Staff are available to every student for assistance and guidance on personal matters, academic concerns and other areas of concern. HGTC offers free in-person and telehealth counseling services to students. For more information about counseling services, please reach out to counseling@hgtc.edu or visit the website the [Counseling Services webpage](#).

STATEMENT OF EQUAL OPPORTUNITY/NON-DISCRIMINATION STATEMENT:

Horry-Georgetown Technical College shall not discriminate in employment or personnel decisions or in student admissions or in student decisions, or in all other segments of the College community 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 the educational programs and activities which it operates, and the college is prohibited from discrimination in such manner by applicable laws. Practices and requirements for nondiscrimination extend to the enrollment of students in programs and activities of the College and employment by the College.

All inquiries regarding the federal laws as they relate to discrimination on the basis of sex may be directed to Tamatha Sells, Title IX Coordinator, Horry-Georgetown Technical College, Building 1100C, Room 107B, 2050 Hwy 501 E, PO Box 261966, Conway, SC 29528-6066, 843-349-5218, tamatha.sells@hgtc.edu or to the US Department of Education Office of Civil Rights. (Telephone: 800-421-3481/Email: OCR@ed.gov).

Other employee and applicant inquiries concerning the federal laws and their

application to the College may be directed to Jacquelyne Snyder, Vice President, Human Resources and Employee Relations & the College's Affirmative Action/Equal Opportunity Officer, Horry-Georgetown Technical College, Building 200C, Room 205B, 2050 Hwy 501 E, PO Box 261966, Conway, SC 29528-6066, 843-349-5212, jacquelyne.snyder@hgtc.edu.

Other student and prospective student inquiries concerning the federal laws and their application to the College or any student decision may be directed to Dr. Melissa Batten, Vice President, Student Affairs, Section 504 & Title II Coordinator Horry-Georgetown Technical College, Building 1100C, Room 107A, 2050 Hwy 501 E, PO Box 261966, Conway, SC 29528-6066, 843-349-5228, melissa.batten@hgtc.edu.

TITLE IX REQUIREMENTS:

Title IX of the Education Amendments of 1972 protects students, employees, applicants for admission and employment, and other persons from all forms of sex discrimination.

HGTC prohibits the offenses of domestic violence, dating violence, sexual assault, and stalking and will provide students, faculty, and staff with necessary information regarding prevention, policies, procedures, and resources.

Any student, or other member of the college community, who believes that they have been a victim of sexual harassment, domestic violence, dating violence, sexual assault, or stalking may file a report with the college's Title IX Coordinator or campus law enforcement*.

*Faculty and Staff are required to report these incidents to the Title IX Coordinator 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).

For more information, contact Tamatha Sells, Title IX Coordinator, Conway Campus, Building 1100C, Room 107B, 843-349-5218, tamatha.sells@hgtc.edu.

PREGNANCY ACCOMMODATIONS

Under Title IX, colleges must not exclude a pregnant student from participating in any part of an educational program. Horry-Georgetown Technical College is committed to ensuring that pregnant students receive reasonable accommodations to ensure access to our educational programs.

Students should advise the Title IX Coordinator of a potential need for accommodations as soon as they know they are pregnant. It is extremely important that communication between student, 2024-2025

instructors, and the Title IX Coordinator begin as soon as possible. Each situation is unique and will be addressed individually.

Title IX accommodations DO NOT apply to Financial Aid. Financial Aid regulations do not give the College any discretion in terms of Financial Aid eligibility.

Certain educational programs may have strict certification requirements or requirements mandated by outside regulatory agencies. Therefore, in some programs, the application of Title IX accommodations may be limited.

To request pregnancy accommodations, please complete the [**Pregnancy Intake Form**](#).