



# **INSTRUCTIONAL PACKAGE**

PTH 221  
Pathology I

Effective Term  
Fall 2022/Spring 2023/Summer 2023

# INSTRUCTIONAL PACKAGE

## Part I: Course Information

Effective Term: Fall 2022

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:**

(Credit level [BIO 211](#) Minimum Grade of C or Credit level [BIO 211](#) Minimum Grade of TC) and (Credit level [BIO 210](#) Minimum Grade of C or Credit level [BIO 210](#) Minimum Grade of TC) and (Credit level [PSY 203](#) Minimum Grade of C or Credit level [PSY 203](#) Minimum Grade of TC) and (Credit level [MAT 110](#) Minimum Grade of C or Credit level [MAT 110](#) Minimum Grade of TC or Credit level [MAT 120](#) Minimum Grade of C or Credit level [MAT 120](#) Minimum Grade of TC)

### **REQUIRED MATERIALS:**

- Pathology for the Physical Therapy Assistant 2<sup>nd</sup> Ed., Goodman, C., Fuller, K. Elsevier. St. Louis, Missouri. 2017.
- The Rehabilitation Specialist's Handbook, Serge H Roy, Steve Wolf, and David Scalzitti, 2012 F.A. Davis

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, Scrubs

### **TECHNICAL REQUIREMENTS:**

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

2022-2023

myHGTC and college email access.

### **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 clinical 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\*:**

- 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 & SCHEDULE**

#### **Module # 1- Introduction to Pathology 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.
- 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.

### **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- Immunopathology, Oncology, and Chromosome Abnormalities**

Material(s) Covered: Chapters 4, 6, 14 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 neoplasias.
- 4) Compare benign and malignant tumors.
- 5) Determine the implications of neoplasia for physical therapy interventions.
- 6) Become familiar with various chromosome abnormalities and genetically linked diseases.
- 7) Identify the impact of antibiotic-resistant infections and emerging infections on the future of health care.
- 8) Determine the role of physical therapist/physical therapist assistant in providing physical therapy interventions for patients with hereditary conditions.

### **Module #4- Neurological Disorders**

Material(s) Covered: Section IV 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.

### **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- Endocrine, Metabolic, and Nutritional Disorders**

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- Infectious Diseases**

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 #8- Bone, Joint, and Soft Tissue Diseases and Disorders**

Material(s) Covered: Lecture PowerPoints, Chapter 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 #9- The Gastrointestinal, 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.
- 7) 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- Female and Male Reproductive System Conditions**

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

Assessment: 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 #11- The Geriatric Patient and the Pediatric Patient**

Material(s) Covered: Lecture PowerPoints, Section V (E12) 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 #12- Intensive Care**

- 1) Identify important lab tests and values in an acute or intensive care setting.
- 2) Identify equipment utilized in the acute or intensive care setting including IVs, drains, catheters.

***\*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	60%
Assignments	10%

Poster Project	8%
Class Participation	2%
<u>Comprehensive Final Exam</u>	<u>20%</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 [sstc@hgtc.edu](mailto:sstc@hgtc.edu) or self-schedule in the Penji iOS/Android app or at [www.penjiapp.com](http://www.penjiapp.com). Email [sstc@hgtc.edu](mailto: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.

### 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, 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 Coordinator*

Building 1100, Room 107A, Conway Campus

PO Box 261966, Conway, SC 29528-6066

843-349-5228

[Melissa.Batten@hgtc.edu](mailto: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**

*EEO and Title IX Coordinator*

Building 200, Room 212A, Conway Campus

PO Box 261966, Conway, SC 29528-6066

843-349-5212

[Jacquelyne.Snyder@hgtc.edu](mailto:Jacquelyne.Snyder@hgtc.edu)