

# PHYSICAL THERAPY (PHYT)

## PHYT 5000 Gross Anatomy

[5 credit hours]

Students will study the structure of the human body using the structure-function relationship as the course paradigm. Musculoskeletal, vascular, and peripheral nervous system anatomy will be emphasized, as will the coordinated role of these structures, both locally and regionally, in producing movement of the axial skeleton and extremities. Competencies serve as a foundation for clinical science coursework, particularly in the musculoskeletal and neuromuscular areas of practice.

**Term Offered:** Summer

## PHYT 5020 Lifespan I

[2 credit hours]

The first of two, this course examines typical lifespan development from birth to adolescence. Emphasis is on theoretical constructs, gross motor development, physical therapy examination, diagnosis, prognosis and evaluation of findings. Also includes an overview of fine motor development, cognitive development, reflex development, interaction with families, public laws and child abuse.

**Term Offered:** Summer

## PHYT 5050 Analysis of Movement I

[2 credit hours]

This is the first of two courses that will integrate anatomy and biomechanics in order to gain an understanding of normal and abnormal human movement. In this course, foundational concepts will be introduced including biomechanical principles and tissue and muscle mechanics and applied to understanding movement of the upper extremity joints.

**Term Offered:** Summer

## PHYT 5060 Analysis of Movement II

[3 credit hours]

This is the second of two courses that will integrate anatomy and biomechanics in order to gain an understanding of normal and abnormal human movement. In this course biomechanical principles of human movement will be reviewed and applied to understanding movement of the spine, pelvis, and lower extremity joints. Concepts of human movement analysis will be introduced and applied to common functional movements such as standing, transferring, walking, stair negotiation, and running.

**Prerequisites:** PHYT 5000 with a minimum grade of C and PHYT 5050 with a minimum grade of C and PHYT 5350 with a minimum grade of C

**Term Offered:** Fall

## PHYT 5090 Neuroscience

[5 credit hours]

An introduction to the nervous system, including fundamental concepts in neuroanatomy and neurophysiology as they relate to human movement and basic bodily function mediated by the central and peripheral nervous systems. Emphasis is placed on the effects of neurological conditions (disease, injury, mental illness) relevant to physical therapy and functional performance. Basic clinical assessment skills of neurological impairments will integrate neuroscience information with clinical practice.

**Term Offered:** Spring

## PHYT 5110 Clinical Pathophysiology I

[3 credit hours]

Integrated study of physiological and pathophysiological processes that influence the human body at the cellular, organ and systemic levels. Emphasis on mechanisms of and clinical manifestations of common diseases with discussion of potential impact on the delivery of PT services. Content to serve as the basis for discussion of pharmacology in subsequent courses.

**Term Offered:** Fall

## PHYT 5120 Clinical Pathophysiology II

[1 credit hour]

Second of 2 courses that address the integrated study of normal physiological and pathophysiological processes in human body at cellular, organ, and systemic levels - emphasizes on clinical manifestations and impact on PT plan of care.

**Term Offered:** Summer

## PHYT 5130 Evidence Based Practice

[4 credit hours]

Introduction to the principles of measurement and research design, with an emphasis on critically evaluating the design of research studies relevant to clinical practice.

**Term Offered:** Fall

## PHYT 5270 Applied Exercise Physiology

[3 credit hours]

Exploration of exercise physiology principles as related to promotion of PT patients/clients' health and wellness. Emphasizes physiological and biochemical changes with exercise/training and exercise testing and prescription for PT patients/clients.

**Term Offered:** Spring

## PHYT 5280 Therapeutic Interventions I

[2 credit hours]

The theory and practice of physical therapy in the acute care setting as it relates to improvement of functional mobility, prevention of complications, and preparation for next level of care.

**Term Offered:** Spring

## PHYT 5290 Therapeutic Interventions II

[2 credit hours]

Study of the theoretical basis for, and the application of thermal, mechanical, and electrical modalities used for the PT management of clients. Emphasis is on evidence-based practice, critical thinking, and clinical decision-making using a case-based format, and review of the scientific literature will be used in determining the most appropriate use of modalities within a comprehensive PT plan of care.

**Term Offered:** Summer

## PHYT 5300 Principles of Therapeutic Exercise

[2 credit hours]

Application of scientific principles in anatomy, applied biomechanics, and exercise physiology to develop sound therapeutic exercise procedures. Emphasis on development of skills associated with therapeutic exercise for patients with musculoskeletal and/or general movement dysfunction. Students will learn how to use and apply a variety of common fitness and rehabilitation exercise apparatus and develop appropriate PT treatment plans that include exercise for a given patient problem.

**Term Offered:** Spring

**PHYT 5350 Introduction to Examination**

[2 credit hours]

Introduction to the physical examination process, including history-taking, systems review and screening. Emphasis on basic PT examination skills of the cardiovascular, musculoskeletal, and integumentary systems. Skills include: assessment of tolerance to functional activity (vital signs), posture, pain, peripheral pulses and edema; goniometry; and strength testing.

**Term Offered:** Summer**PHYT 5450 Foundations of Physical Therapy**

[2 credit hours]

Addresses the professional socialization process. Professional codes and guides of behavior will be discussed in relation to delivery of competent, ethical, legal and compassionate PT services. Topics include: therapeutic communication, cultural competency, stress management and conflict resolution. Introduction to basic principles of teaching and learning for the role of educator is included.

**Term Offered:** Fall**PHYT 5610 Orientation to Interprofessional Teaming**

[1 credit hour]

Orientation to the Graduate Certificate in Teaming in Early Childhood. Focus on individual competencies needed to work collaboratively to meet the needs of young children with disabilities and their families.

**Prerequisites:** SPED 5270 with a minimum grade of D-**Term Offered:** Summer**PHYT 5620 Leadership and Advocacy in Interprofessional Teaming**

[1 credit hour]

This second seminar in the Graduate Certificate in Teaming in Early Childhood focuses on skills and policies that promote best practices in teaming to support young children with disabilities.

**Prerequisites:** SPED 5270 with a minimum grade of D- and PHYT 5610 with a minimum grade of D-**Term Offered:** Summer, Fall**PHYT 5650 Pharmacology of Physical Therapy**

[1 credit hour]

Integrated study of pharmacology that presents the pharmacodynamics and pharmacotherapeutics of common classes of drugs. Drugs covered include: anti-inflammatory, analgesic, muscle relaxant, psychotropic, anti-microbial, and diabetic medications. Emphasis on indications, contraindications, adverse drug reactions, and the implications for physical therapy care.

**Term Offered:** Summer**PHYT 5750 Clinical Reasoning**

[1 credit hour]

Introduction to theoretical models that guide clinical decision making, including patient management, clinical reasoning, disablement, and evidence-based practice models. Documentation will be discussed as a tool to aid clinical reasoning.

**Term Offered:** Spring**PHYT 5850 Clinical Education Experience I**

[3 credit hours]

The first in a series four full-time, supervised clinical education experiences. Students are engaged in supervised practice in a 6-week integrated clinical education experience that emphasizes the early phases of development toward entry-level PT competencies in professional practice and patient management in either an inpatient or outpatient practice setting.

**Term Offered:** Summer**PHYT 5900 Medical Imaging**

[2 credit hours]

This course provides the student with the tools needed to interpret information obtained from the radiology report and apply it to management of the physical therapy patient. Musculoskeletal imaging is emphasized, but imaging for other body systems is also addressed. This course strengthens the student's competency to perform a comprehensive patient evaluation, establish a diagnosis and prognosis, develop a physical therapy plan of care, and to communicate and collaborate with other health care providers.

**Term Offered:** Spring**PHYT 6020 Lifespan II**

[2 credit hours]

The principles of normal aging including the physiological, functional, and psychosocial changes associated with aging, and a review of diseases and disorders common to the aging population.

**Term Offered:** Fall**PHYT 6100 Health Promotion**

[2 credit hours]

Discussion and application of the elements of health and wellness as described by Healthy People 2020. Emphasis on health assessment, obesity, physical activity, nutrition, complementary/alternative management, and behavior modification strategies.

**Term Offered:** Spring**PHYT 6170 Scholarly Project I**

[2 credit hours]

This course is intended to examine a physical therapy relevant question in a systematic and scholarly manner.

**Term Offered:** Summer**PHYT 6180 Scholarly Project II**

[2 credit hours]

This course is intended to explore physical therapy practice with the aim of creating new knowledge in a systematic and scholarly manner.

**Term Offered:** Spring**PHYT 6260 Cardiovascular-Pulmonary Physical Therapy**

[3 credit hours]

Integrative study of the role of PT in interdisciplinary management of patients with cardiovascular and/or pulmonary dysfunction. Application of skills associated with PT examination, evaluation, diagnosis, prognosis and interventions for patients with CV-P dysfunction.

**Term Offered:** Fall

**PHYT 6460 Teaching and Learning**

[2 credit hours]

Study of a physical therapist's role as educator of peers, patients and families, community members, and students in the clinical setting. Emphasis on instructional design, instructional strategies, teaching methods, and evaluation of learning.

**Term Offered:** Fall**PHYT 6500 Musculoskeletal Rehab I**

[3 credit hours]

First of two courses, focused on the synthesis of principles of pathophysiology and screening and examination of musculoskeletal system. Emphasis on pertinent special examination techniques, principles of evaluation, PT diagnosis and prognosis, and intervention for the upper and lower extremities. Case-based discussion of role of common M-S pharmacological management, radiographic procedures and findings, and interpretation of special tests for diagnostic purposes.

**Term Offered:** Fall**PHYT 6510 Musculoskeletal Rehab II**

[3 credit hours]

Second of two courses, continued discussion of the principles of pathophysiology and musculoskeletal examination, evaluation, PT diagnosis and prognosis, and intervention. Emphasis on spine and lower quarter biomechanical examination and evaluation as it relates to lumbopelvic dysfunction. Includes discussion of: pharmacological management of inflammation and pain, and synthesis of radiological findings (radiographs, MRI, CT scans), as they relate to rendering PT diagnosis and prognosis.

**Term Offered:** Spring**PHYT 6600 Neuromuscular Rehab I**

[3 credit hours]

The first of two courses that will integrate evidence-based rehabilitation concepts into the management of patients with common neuromuscular diseases. Contemporary theories of neurological rehabilitation, motor control, and motor learning are integrated with therapeutic exercise to address common impairments in clients. Examination, evaluation, plan of care development, and interventions for clients with cerebrovascular accident (stroke), spinal cord injury, and traumatic brain injury are emphasized.

**Term Offered:** Fall**PHYT 6610 Neuromuscular Rehab II**

[3 credit hours]

Second course in the series on rehabilitation of patients with neuromuscular diagnoses, including amputations, and neurodegenerative diseases. Emphasis on theories, philosophies, and the PT plan of care including examination, evaluation, and intervention strategies. Prostheses and orthoses prescription, application and training included.

**Term Offered:** Spring**PHYT 6620 Pediatric Rehabilitation**

[2 credit hours]

Principles of rehabilitation for pediatric clients with neuromuscular impairments and developmental disabilities. Preparation for physical therapy practice in pediatric settings using interdisciplinary family-centered practice; normal and abnormal development, standardized assessment, service-delivery settings, interventions, management strategies specific to pediatrics. Emphasis on essential pediatric core competencies and the PT Management including examination, evaluation, diagnosis/prognosis, and intervention strategies.

**Term Offered:** Spring**PHYT 6700 Professional Issues**

[1 credit hour]

Discussion of current events and issues faced by the profession of physical therapy as identified by the APTA and other pertinent sources, and as encountered during clinical education experiences.

**Term Offered:** Summer, Fall**PHYT 6720 Special Topics in Physical Therapy I**

[2 credit hours]

Intensive exploration of a topic related to physical therapy service delivery in advanced practice. The content of this course serves to deepen the student's study of clinical management in select topics.

**Term Offered:** Spring, Summer**PHYT 6730 Special Topics in Physical Therapy II**

[2 credit hours]

Intensive exploration of topics related to physical therapy service delivery in advanced practice. The course is designed to meet the student's special interests and professional goals. The content of this course serves to deepen the student's study of clinical management in select topics

**Term Offered:** Spring**PHYT 6740 Clinical Seminar I**

[2 credit hours]

The first of a series of two courses, this course emphasizes the application of clinical psychomotor skills, problem-solving and critical thinking for a variety of diagnoses and practice settings using patient scenarios including patients with movement dysfunction involving multiple body systems. An emphasis is placed on evidence-based decision-making, comprehensive evaluation, progressive intervention planning, and evaluation of one's own clinical reasoning processes and skills.

**Term Offered:** Fall**PHYT 6750 Clinical Seminar II**

[2 credit hours]

The second of a series of two courses, this course emphasizes the application of clinical psychomotor skills, problem-solving and critical thinking for a variety of diagnoses and practice settings using patient scenarios including patients with movement dysfunction involving multiple body systems. An emphasis is placed on evidence-based decision-making, comprehensive evaluation, progressive intervention planning, and evaluation of one's own clinical reasoning processes and skills.

**Term Offered:** Spring

**PHYT 6850 Clinical Education Experience II**

[5 credit hours]

The second in a series of four full-time, supervised clinical education experiences. Students are engaged in supervised practice in a 10 week clinical education experience that emphasizes development toward entry-level PT competencies in professional practice and patient management in an inpatient or outpatient practice setting.

**Term Offered:** Summer

**PHYT 6990 Independent Study in PT**

[0-4 credit hours]

In-depth exploration and study of clinically related problems or topic of interest. May be repeated for credit.

**Term Offered:** Spring, Summer, Fall

**PHYT 7050 Practice Management**

[2 credit hours]

Examination of management and supervisory issues encountered in contemporary physical therapy practice. Discussion will include identification, analysis, and resolution of issues that compromise the delivery of effective and efficient PT services in a variety of practice settings. Topics include: organizational structure and behavior, human resources, finance and operations management, and marketing.

**Term Offered:** Fall

**PHYT 7320 Medical Screening**

[1 credit hour]

Preparation to work within a collaborative medical model and application of threshold detection to recognize and identify impairments or "red flags" in medical screening that warrant contact with a physician or other health care provider. Patient cases illustrate important medical screening principles. Emphasis on an examination scheme to promote efficient, effective patient data collection and professional communication with patients, physicians and other health providers.

**Term Offered:** Summer

**PHYT 7890 Clinical Education Experience III**

[4 credit hours]

The third in a series of four full-time, supervised clinical education experiences. Students are engaged in supervised practice in a 8-week terminal clinical education experience that emphasizes development toward entry-level PT competencies in professional practice and patient management in an inpatient or outpatient practice setting.

**Term Offered:** Summer

**PHYT 7900 Clinical Education Experience IV**

[6 credit hours]

The fourth in a series of four full-time, supervised clinical education experiences. Students are engaged in supervised practice in a 12 week terminal clinical education experience that emphasizes development of entry-level PT competencies in professional practice and patient management in an inpatient, outpatient or specialized practice setting.

**Term Offered:** Spring, Fall

**PHYT 7990 Specialty Internship**

[4 credit hours]

Extended period of supervised, advanced clinical practice and/or formal experience in administrative or professional organizational environments, which is designed to meet the student's special interests and professional goals.

**Term Offered:** Spring, Fall