

PEAC300

Lifeguarding

Instruction in accident prevention, aquatic faci

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Water Safety Instructor

Instruction in techniques for teaching American Red Cross swimming courses. Current CPR certification required. Swimming pretest required. *Spring*

PEAC389

WSI Internship

Students who have a current American Red Cross Water Safety Instructor's Certification or equivalent can take advantage of this opportunity. Participants will teach and organize a class of students for the Learn-To-Swim program. Teachers will be expected to provide lesson plans and teach all the required lessons. *Fall, Spring, S/U.*

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PHYSICAL THERAPY

Physical Therapy Department
 Andrews University
 Berrien Springs, MI 49104-0420
 (269) 471-AUPT or 800-827-AUPT
 FAX: (269) 471-2866
<http://www.andrews.edu/PHTH/>
 Admissions Fax: (269) 471-2867
 Admissions Email: pt-info@andrews.edu

Faculty

Wayne L. Perry, *Chair*
 A. Lynn Millar, *Assistant Director*
 John C. Banks
 Kathy A. Berglund, *Postprofessional Director*
 John Carlos, Jr.
 Elizabeth Oakley
 Lee E. Olson
 David P. Village

Academic Credits

Credits

BHS: Bachelor of Health Science
 (Interim degree for DPT students)

Physical therapy is a health profession dedicated to evaluating, treating, and preventing physical injury and disease. Physical therapists design and implement the necessary therapeutic interventions to promote fitness, health and improve the quality of life in patients. They also become active in consultation, education and research.

Physical therapists work closely with their client's family, physician, and other members of the medical team to help their client return to their home environment and resume activities and relationships of normal daily living.

Academic Calendar. Contact the Physical Therapy Department for academic dates.

GRADUATE PROGRAMS

Doctor of Physical Therapy (DPT)

This three-year program begins after a student completes 92 semester credits of college prerequisites. A previous college degree is not required. Students without a bachelor's degree may earn a Bachelor of Health Science (BHS) after the first year in the professional program and will earn the DPT degree upon successful completion of the program.

PROGRAM ACCREDITATION

The DPT program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE)*. After receiving the DPT degree graduates may apply to take the state board examination in the state of their choice.

* 1111 North Fairfax, Alexandria, VA 22314

INFORMATION/APPLICATION PACKETS

Please call 1-800-827-2878, email pt-info@andrews.edu or visit www.pt.andrews.edu for packets, which describe admission requirements and provide all necessary forms for the DPT profes-

COURSES

(Credits)

See inside front cover for symbol code.

Written permission from the Chair of the Physical Therapy program is required for non-physical therapy students to enroll in PTH/PHTH courses.

PHTH120 S (2)

Introduction to Physical Therapy

An introduction to the profession of physical therapy with an overview of duties and responsibilities physical therapists perform. Partially fulfills the clinical observation prerequisites for admission to the professional program. Students must have their own transportation for the clinical observation.

PHTH360 S (1-4)

Topics in _____

Selected topics in physical therapy. Permission of department chair required. Repeatable. Specific prerequisites may be required for some subject areas.

PHTH417 S (3)

Human Anatomy

Comprehensive study of human anatomy covering all systems of head, neck, trunk, and extremities. A solid morphological basis for a synthesis of anatomy, physiology, and clinical sciences provided. Dissection and identification of structures in the cadaver, and the study of charts, models, and prosected materials. Prerequisites: BIOL111, 112 or BIOL165, 166 or equivalent. See instructor for additional requirements. Corequisite: PTH427.

PHTH427 S \$ (1)

Human Anatomy Laboratory

Study of the prosected extremity, head and neck anatomy, and dissection of the abdominal and thoracic organ systems. Prerequisites: same as for PTH417. Corequisite: PTH417.

PHTH590 S (1-4)

Topics in _____

Selected topics in physical therapy. Permission of department chair required. Repeatable. Specific prerequisites may be required for some subject areas.

PHTH648 S (1-4)

Workshop

PHTH690 S (1-4)

Workshop

Individualized study and/or research in a specialized area under the guidance of an instructor. Permission from the department chair required prior to registration. Repeatable to 8 credits.

PTH400 (4)

Anatomy

A comprehensive study of human anatomy with emphasis on the nervous, skeletal, muscle, and circulatory systems. Introduction to basic embryology and its relation to anatomy and the clinical sciences concludes the course. Provides a solid morphological basis for a synthesis of anatomy, physiology, and the physical therapy clinical sciences. Corequisite: PTH410.

PTH410 (3)

Anatomy Laboratory

Dissection and identification of structures in the cadaver supplemented with the study of charts, models, prosected materials and

radiographs are used to identify anatomical landmarks and configurations. Corequisite: PTH400.

PTH415 (3)

PT Assessment Skills

Introduction to assessment principles and examination skills utilized in all areas of physical therapy. The *Guide to Physical Therapy Practice* is referenced for the basic skills required in the assessment, intervention and documentation guidelines. Corequisite: PTH425.

PTH416 (3)

Pathokinesiology

The study of human movement including an introduction to the basic concepts of biomechanics with an emphasis on human joint/muscle structures and function, advancing to analysis of body mechanics, normal gait analysis, and pathological movement analysis. Joint abnormalities will be identified using radiographs, related to the resultant movement dysfunction. Prerequisites: PTH400 and 410. Corequisite: PTH426.

PTH418 (2)

General Medicine

Clinical techniques applied to the examination, evaluation, treatment, and discharge planning of patients in general medical and acute-care. Emphasis on physical therapy intervention with relevant factors, management of pain and physical complications during medical treatment, and examination and treatment of special populations including wound and burn care. Corequisite: PTH428.

massage, as well as specific electrotherapy and mechanotherapy treatments and assessment of physiological responses to those treatments. Corequisite: PTH420.

PTH440 (3)

Pathophysiology I

Sequence studying disease processes affecting major body systems and the resulting anatomical and pathophysiological changes. Clinical presentations and pharmacological treatment of patients with those disease processes are presented, as well as diagnostic tests and laboratory values used to identify pathological conditions. Prerequisites: PTH400 and 410.

PTH445 (2)

Neuroscience

Basic anatomy and functions of the central and peripheral nervous systems and their related structures. Pathways of the central and peripheral nervous system are examined along with a detailed study of each of the 12 pairs of cranial nerves. Prerequisites: PTH400 and 410. Corequisite: PTH455.

PTH450 (1)

Neurology of Motor Control

An introduction to the function and interaction of the primary areas of the nervous system involved in controlling human movement, including the cortex, spinal cord, peripheral receptor system, basal ganglia, cerebellum, and the vestibular systems. Students are introduced to terminology and concepts associated with both normal function and pathology in these areas.

PTH455 (1)

Neuroscience Laboratory

Study of the prosected central and peripheral nervous tissues, models, and charts. Imaging will be used to compare normal to abnormal CNS presentation. Prerequisites: PTH400 and 410. Corequisite: PTH445.

PTH457 (2)

Orthopedic Medicine

Medical lectures covering selected topics in orthopedics, including common orthopedic diseases and the use of diagnostic testing and imaging in the orthopedic field.

PTH460 (2)

Topics in Comparative Religion

This course surveys the major religious traditions of the world. Study includes an overview of origins; major philosophical and theological underpinnings; typical aspects of worship and ethics; and major social, cultural, and political influences. Study is done from a consciously Christian framework.

PTH495 (1-4)

Independent Study/Readings/Research/Projects

Permission of department chair required prior to registration for all independent work. Repeatable to 8 credits.

PTH500 (2)

Doctoral Colloquium

A degree orientation which will include portfolio development and assessment, development of the degree contract, usage of James White Library system, and introduction to the *Guide to Physical Therapy Practice*.

PTH507

- PTH548** (3)
NAIOMT Level IV: High Velocity Manipulation
 Instructs the student on the indications and contraindications, as well as the safe and effective application of spinal, pelvic, and costal manipulation techniques. Prerequisites: PTH546 and 547.
- PTH549** (3)
Principles of Contemporary Leadership
 Theory and application of complexity sciences to organizational management; exploration of key leadership roles and changing paradigms; presentation of methods to maximize personal and professional life.
- PTH550** (1–4)
NAIOMT Supervised Clinical Practice
 Using a 3-to-1 model, students will be required to do a minimum of 60 supervised clinical hours applying hands-on techniques with patients under the supervision of a certified NAIOMT clinical instructor, FAAOMPT, or other approved instructors. These hours can be split up into two 30-hour blocks, or other increments as agreed upon by the student and CI. No less than 15 hours can be registered for at any given time.
- PTH556** (2)
NAIOMT: Pelvic Girdle
 Lecture/lab course focused on detailed examination and treatment of the pelvic girdle. Emphasis is placed on a biomechanical model of testing and treating clinical dysfunction and pain.
- PTH557** (2)
NAIOMT: Thoracic Spine
 Lecture/lab course studying the thoracic spine as a source of spinal dysfunction. Emphasis is placed on a biomechanical model for detailed examination and treatment of the thoracic spine and costovertebral dysfunction.
- PTH558** (3)
NAIOMT: Post Motor Vehicle Accident Cervical Dysfunction
 Lecture/lab course focused on examination and treatment of the patient with cervical trauma following an MVA. Emphasis is placed on developing a safe, effective and progressive examination and treatment program based on anatomical, histological and biomechanical changes resulting from the MVA trauma.
- PTH589** (1–2)
Professional Seminar
- PTH590** (1–12)
Topics in _____
 Selected topics in physical therapy. Permission of department chair required. Repeatable. Specific prerequisites may be required for some subject areas.
- PTH601** (2)
Orthopedics I
 Presentation of fundamental physical therapy knowledge in the assessment and intervention of a patient with both acute and chronic conditions of the extremities. Screening of the cervical and lumbar spine prior to tests is covered, progressing to complete assessment and treatment of extremity joint pathologies. Diagnostic tests and results pertinent to the orthopedic patient are related to a physical therapy differential diagnosis. Corequisite: PTH611.
- PTH602** (2)
Orthopedics II
 A continuation of the presentation of information regarding orthopedic pathology of the spine with emphasis on treatment techniques for the different pathologies from a physician and physical therapist's perspective. A decision making model focusing on a differential diagnosis is incorporated throughout the course. Corequisite: PTH612.
- PTH610** (2)
Therapeutic Exercise
 Examines the systemic responses to exercise as related to both an acute nature and in response to training. Specific pathological conditions are discussed in relation to exercise testing and prescription, and a clinical decision making process is presented for working with additional pathological conditions. Corequisite: PTH620.
- PTH611** (2)
Orthopedics I Laboratory
 Clinical application and practice in the special techniques to assess and treat acute and chronic orthopedic pathologies of the extremities and spine. Corequisite: PTH601.
- PTH612** (2)
Orthopedics II Laboratory
 Designed for practice of the special techniques required in

- PTH625** (1)
Cardiopulmonary
Lectures covering selected topics in cardiopulmonary medicine, focusing on clinical presentation, diagnostic tests, and medical and physical therapy interventions. Corequisite: PTH635.
- PTH627** (1)
Orthotics and Prosthetics
Prosthetic management of upper- and lower-limb amputee, orthotic management of patients with disabilities requiring orthotic intervention, and application/management of orthotic-traction devices. Corequisite: PTH637.
- PTH630** (2)
Clinical Research
Introduces the student to basic concepts of biostatistics and research design and the formulation of evidence based practice theories.
- PTH632** (1)
Research Statistics Laboratory
Practice in the computation of statistical data using appropriate formulas. Practical applications of techniques in research and statistical computations including probability, normal distribution, Chi Square, correlations, and linear regressions. Corequisite: PTH622.
- PTH635** (1)
Cardiopulmonary Laboratory
Emphasis on physical therapy assessment and intervention with cardiac and pulmonary patients. Practice of relevant techniques, such as stress testing, percussion, pulmonary function tests and breathing techniques, as well as other techniques identified in the *Physical Therapy Guide to Practice*. Corequisite: PTH625.
- PTH637** (1)
Orthotics and Prosthetics Laboratory
Practice of the physical therapy techniques required in the application of orthotic and prosthetic devices. Special attention given to gait and function. Selected topics such as wheelchair modifications, miscellaneous ortho-rehab apparatus, and other assistive/adaptive devices included. Corequisite: PTH627.
- PTH640** (2)
Pediatrics
An overview of embryologic development, followed by normal infant/child development to 5 years of age with an emphasis on motor development. Identification of assessment techniques for infants and children with normal and abnormal development. Description of various pediatric pathologies encountered in physical therapy with appropriate corresponding assessment and treatment approaches. Corequisite: PTH650.
- PTH645** (4)
Physical Therapy Administration and Leadership
A study of the organizational structures, operations, and financing of healthcare delivery institutions and an examination of the organization and interrelationship of their professional and support elements. Application of current health care management strategies and theory are related to the acute-care facility and independent practice.
- PTH646** (2–3)
Spirituality in Healthcare
A discussion of spiritual values from a Christian perspective, how faith and spirituality facilitate the healing process, and how these can be incorporated into patient care. Attention will be given to discerning and addressing the spiritual needs of patients/clients, family members, and ancillary medical staff in a professional environment.
- PTH647** (2)
Differential Diagnosis
Analysis of the decision making process, with special focus on clinical guidelines, *Physical Therapy Guide to Practice*, and differential diagnosis. Differential diagnosis is addressed through comparison of systemic signs and symptoms, as well as appropriate diagnostic tests which may indicate involvement of a problem outside of the scope of PT practice.
- PHTH648** S (1–4)
Workshop
- PTH650** (2)
Pediatrics Laboratory
Practice of physical therapy assessment of the infant/child that address different developmental domains. Practice in the special techniques required in assessment and treatment of pediatric patients diagnosed with selected pathologies. Introduces current treatment approaches, such as Neurodevelopmental Treatment (NDT), with their effects on treatment goals. Corequisite: PTH640.
- PTH651** (2)
Neurology I
Review of basic neurophysiological mechanisms specific to nervous system dysfunction, related to clinical concepts in treatment of conditions affecting the nervous system, such as spinal cord injury, head injury, stroke, and selected peripheral pathologies. Emphasis on comparing and contrasting facilitation techniques. Corequisite: PTH661.
- PTH652** (2)
Neurology II
Continuation of PTH651 Neurology I, focusing on assessment and intervention with selected neurologic conditions. Common treatment techniques are compared with rationale for use of each. Prerequisite: PTH651. Corequisite: PTH662.
- PTH661** (2)
Neurology I Laboratory
Clinical application, rehabilitation practice, and techniques applied to nervous system dysfunction. Intervention techniques for conditions affecting the nervous system, such as spinal cord injury, head injury, stroke, and selected peripheral pathologies. Corequisite: PTH651.
- PTH662** (2)
Neurology II Laboratory
Clinical application, rehabilitation practice, and techniques applied to basic physiological and neurophysiological mechanisms specific to nervous system dysfunction. Focus on techniques appropriate for use with neurologic patients and evaluation of patient response

the guidance of an instructor. Permission from the department chair required prior to registration. Repeatable to 8 credits.

PTH697 (2)
Independent Learning Contract

The student, working with their advisor and following degree/course guidelines, will develop an independent 40-hour learning contract with a qualified clinical specialist to facilitate intensive focused clinical training in a field of study of their choosing.

PTH710 (2)
Advanced Concepts in Neurology

Advanced education in theory and clinical practice in the treatment of neurological dysfunction. Theories and clinical areas covered may include Neuro Developmental Technique (NDT), Motor Relearning Program (MRP), and other selected approaches. Focuses primarily on helping the student achieve advanced skills in transition from theory to clinical practice. Corequisite: PTH720.

PTH715 (2)
Advanced Concepts in Pediatrics

Advanced assessment and intervention strategies for the pediatric patient. Corequisite: PTH725.

PTH717 (2)
Advanced Concepts in Aquatic & Alternative Medicine

the taxonomies of learning, learning styles, multiple intelligence, and educational technology.

PTH749 (1)

Advanced Concepts in Women's Health Laboratory

Advanced practice and application of clinical skills required in the physical therapy assessment and intervention of women's health.