

# PHYSICAL THERAPY (PT)

## PT 505. Kinesiology I. 2 Credits.

This course introduces the basic principles of human movement. Forces and torques in static clinical free body diagrams are studied. Numerous problem-solving processes and skills are developed throughout the semester. The student learns to identify different muscle interactions and combinations. Students also study movement and movement patterns of the upper extremity, using an EMG recording system.

**Prerequisites:** None

**Offered:** Every year, Fall

## PT 505L. Kinesiology I Lab. 1 Credit.

Lab to accompany PT 505.

**Prerequisites:** None

**Offered:** Every year, Fall

## PT 507. Kinesiology II. 2 Credits.

Kinesiology II introduces the foundational principles of biomechanics with special emphasis on applications to the lower extremities. The course emphasizes joint structure and function of the lower extremity as well as the spine. Forces and torques in static clinical free body diagrams are expanded and dynamic motion is studied. Students utilize hands-on techniques to enhance understanding of muscle function and joint mechanics.

**Corequisites:** Take PT 507L.

**Offered:** Every year, Spring

## PT 507L. Kinesiology II Lab. 1 Credit.

Lab to accompany PT 507.

**Corequisites:** Take PT 507.

**Offered:** Every year, Spring

## PT 509. Clinical Decision Making I. 2 Credits.

This course is designed to integrate information from previous academic and clinical experiences. The APTA model of physical therapist practice, evidence informed practice, and the ICF model provide foundational frameworks to guide clinical decision making. An interactive, case-based approach is used to develop problem solving, and reinforce the principles of documentation.

**Prerequisites:** None

**Offered:** Every year, Spring

## PT 512. Human Anatomy I. 3 Credits.

This course presents the anatomical structures of the upper extremity, back, head and neck through lecture and human donor dissection experiences. Students analyze the relationship between structures, function and application to human movement. Clinical correlations between anatomy and pathology provide a foundation for clinical decision making. This course emphasizes collaboration in an active learning environment.

**Prerequisites:** None

**Offered:** Every year, Fall

## PT 512L. Human Anatomy Lab. 1 Credit.

Lab to accompany PT 512.

**Prerequisites:** None

**Offered:** Every year, Fall

## PT 513. Human Anatomy II. 2 Credits.

This course presents the anatomical structures of the lower extremity, thorax, abdomen and pelvis through lecture and human donor dissection experiences. Students analyze the relationship between structures, function, and application to human movement. Clinical correlations between anatomy and pathology provide a foundation for clinical decision making. This course emphasizes collaboration in an active learning environment.

**Prerequisites:** Take PT 512.

**Offered:** Every year, Spring

## PT 513L. Human Anatomy II Lab. 1 Credit.

Lab to accompany PT 513.

**Prerequisites:** None

**Offered:** Every year, Spring

## PT 516. Clinical Decision Making II. 1 Credit.

This case-based course provides students with an opportunity to integrate information from previous academic and clinical experiences. Using the ICF model, students reflect on in-class cases, standardized patient experiences and integrated clinical experiences to reinforce integration of multiple systems in a patient/client management model. These experiences and a cumulative practical assist students as they prepare for their first full-time clinical experience.

**Prerequisites:** None

**Offered:** Every year, Summer

## PT 517. Clinical Education Seminar. 1 Credit.

This course provides essential information for physical therapist students to enter full-time clinical experiences. The course informs students about assessment, documentation, and other responsibilities including compliance mandates for the clinical setting, expectations for service at the clinical site, and communication strategies and expectations for clinical performance in the context of patient centered care. Students are provided with strategies to enable them to succeed in their clinical experiences.

**Prerequisites:** None

**Offered:** Every year, Summer

## PT 518. Functional Neuroanatomy. 3 Credits.

This course presents the gross and developmental anatomy of the central nervous system, including major structures, landmarks and pathways. Normal motor control and postural control mechanisms are also explored. Emphasis is placed on the function of these structures with cases planned to illustrate the functional outcomes of pathology in these structures.

**Prerequisites:** None

**Offered:** Every year, Fall

## PT 519. Professional Issues in Physical Therapy I. 2 Credits.

This course introduces the learner to the evolution of the physical therapy profession. Students examine the roles and responsibilities of the physical therapist through exploration of the APTA core values and code of ethics, standards of practice, advocacy, and interprofessional collaboration. Students discuss health disparity and social determinants of health, and begin to explore cultural competence and cultural humility.

**Prerequisites:** None

**Offered:** Every year, Fall

- PT 528. Musculoskeletal I.** **3 Credits.**  
This course emphasizes integration of skills learned during foundational courses in the assessment and treatment of musculoskeletal diagnoses. The student will develop and utilize an evidence-informed approach to examine, evaluate, and develop a plan of care for patients with various musculoskeletal conditions of the cervical spine and upper quadrant.  
**Prerequisites:** None  
**Offered:** Every year, Spring
- PT 528L. Musculoskeletal I Lab.** **1 Credit.**  
Lab to accompany PT 528.  
**Corequisites:** Take PT 528.  
**Offered:** Every year, Spring
- PT 529. Musculoskeletal II.** **3 Credits.**  
This course continues to emphasize integration of skills learned during foundational courses in the assessment and treatment of musculoskeletal diagnoses. The student will develop and utilize an evidence-informed approach to examine, evaluate, and develop a plan of care for patients with various musculoskeletal conditions of the lumbar spine and lower quadrant.  
**Prerequisites:** None  
**Offered:** Every year, Summer
- PT 529L. Musculoskeletal II Lab.** **1 Credit.**  
Lab to accompany PT 529.  
**Corequisites:** Take PT 529.  
**Offered:** Every year, Summer
- PT 531. Acute Care and Cardiopulmonary Physical Therapy I.** **3 Credits.**  
This course provides the student with the foundational knowledge required for the management of patients with acute medical conditions with an emphasis on pulmonary, cardiac and vascular pathologies. Integrating information from anatomy, physiology and pathology, students learn to examine and evaluate patients in the acute care setting, document findings, design a plan of care and provide intervention.  
**Prerequisites:** None  
**Offered:** Every year, Summer
- PT 531L. Acute Care Cardiopulmonary Lab I.** **1 Credit.**  
Lab to accompany PT 531.  
**Corequisites:** Take PT 531.  
**Offered:** Every year, Summer
- PT 548L. Physical Agents Lab.** **1 Credit.**  
This course provides students with the foundational knowledge and skills to utilize therapeutic physical modalities of superficial and deep heat, cold, electrotherapy, electromagnetic, mechanical, and light energies to complement other therapeutic interventions to optimize patient outcomes. Case vignettes are utilized to facilitate problem-solving, and integration of theory and evidence.  
**Prerequisites:** None  
**Offered:** Every year, Spring
- PT 550. Physical Therapy Process I.** **2 Credits.**  
This course introduces students to the theory and practice of foundational physical therapy skills used in the patient/client Examination component of the Physical Therapist Patient/Client Management Model. Students are introduced to clinical decision-making frameworks and documentation of findings.  
**Prerequisites:** None  
**Offered:** Every year, Fall
- PT 550L. Physical Therapy Process I Lab.** **1 Credit.**  
Lab to accompany PT 550.  
**Corequisites:** Take PT 550.  
**Offered:** Every year, Fall
- PT 551. Physical Therapy Process II.** **3 Credits.**  
This course utilizes the Physical Therapist Patient/Client Management Model to build upon and integrate examination skills developed in Physical Therapy Process I. Examination skills are progressed and integrated into the appropriate selection and safe application of physical therapy interventions used across multiple settings and patient/client populations.  
**Corequisites:** Take PT 551L.  
**Offered:** Every year, Spring
- PT 551L. Physical Therapy Process II Lab.** **1 Credit.**  
Lab to accompany PT 551.  
**Corequisites:** Take PT 550.  
**Offered:** Every year, Spring
- PT 559. Pathophysiology & Pharmacology I.** **4 Credits.**  
This hybrid course integrates foundational material with disease-specific content regarding the cardiovascular, pulmonary, gastrointestinal, hematological, hepatic and endocrine systems. Students will integrate information on the pharmacological management of disorders of these systems and explore how medications and their potential side effects may impact physical therapy evaluation and intervention. Active learning strategies will be utilized to help students interpret relationships between pathophysiology, pharmacology, and clinical presentation to make safe and effective clinical decisions.  
**Prerequisites:** None  
**Offered:** Every year, Summer
- PT 569. Education/Community Health/Wellness.** **2 Credits.**  
This course provides the students with the foundational knowledge of wellness, disease prevention and health promotion within a community setting. Students develop an appreciation for person-centered approaches to behavioral change and patient/client education. Health literacy and health promotion program development are explored, especially as they relate to physical therapy practice.  
**Prerequisites:** None  
**Offered:** Every year, Fall
- PT 600. Pathophysiology and Pharmacology II.** **4 Credits.**  
This course builds upon foundational sciences and integrates foundational material with disease specific content regarding pathologies of the nervous system, including oncological and infectious diseases. This course also builds upon the pharmacology taught in PT 559. The students will have qualitative and quantitative understanding of the diseases and associated medications and their effects on physical therapist examination and intervention strategies.  
**Prerequisites:** Take PT 559.  
**Offered:** Every year, Spring
- PT 628. Acute Care and Cardiopulmonary II.** **2 Credits.**  
This course integrates and builds upon knowledge acquired in the foundational curriculum to examine, evaluate and treat patients with cardiovascular, pulmonary, and integumentary dysfunction across the lifespan. Students prioritize examinations, select evidence-based interventions, manage lines and equipment, monitor hemodynamics and demonstrate competency in making clinical decisions for more complex patients. Students explore the impact of critical illness, systemic disease and interprofessional collaboration on patient outcomes.  
**Prerequisites:** None  
**Offered:** Every year, Spring

**PT 628L. Acute Care and Cardiopulmonary II Lab.****1 Credit.**

Lab to accompany PT 628.

**Prerequisites:** None**Offered:** Every year, Spring**PT 652. Professional Issues in Physical Therapy II.****1 Credit.**

In this course, students explore and analyze current areas of growth and vision for the physical therapy profession. Students grow their knowledge of professional advocacy and explore the legislative process within the APTA. Students evaluate health equity and health disparities in relation to social determinants of health and examine a physical therapist's role in population health.

**Prerequisites:** None**Offered:** Every year, Summer**PT 653. Neurorehabilitation I.****3 Credits.**

This course presents a framework for integrating the assessment and treatment techniques appropriate for adults with various neurological conditions. Students learn assessment procedures based on evaluation of normal movement, abnormal movement and function. The course includes laboratory instruction where students develop comprehensive examination techniques, plan and prioritize appropriate goals and interventions, and hypothesize outcomes through case-based modeling and integrated clinical experiences.

**Corequisites:** Take PT 653L.**Offered:** Every year, Spring**PT 653L. Neurorehabilitation I Lab.****1 Credit.**

Lab to accompany PT 653.

**Corequisites:** Take PT 653.**Offered:** Every year, Spring**PT 654. Neurorehabilitation II.****3 Credits.**

This course is designed as a continuation of Neurorehabilitation I. Lecture and lab topics include continued framework development of evaluation and innovative treatment approaches for adults with various neurological conditions. Students are required to integrate and synthesize knowledge gained from current and previous coursework. During the lecture and lab, students continue to develop complex comprehensive evaluation techniques, plan appropriate treatments, and hypothesize outcomes through case-based modeling and integrated clinical experiences.

**Corequisites:** Take PT 654L.**Offered:** Every year, Fall**PT 654L. Neurorehabilitation II Lab.****1 Credit.**

Lab to accompany PT 654.

**Corequisites:** Take PT 654.**Offered:** Every year, Summer**PT 657. Imaging for Physical Therapists.****2 Credits.**

This course introduces the student to imaging principles and techniques as applied to musculoskeletal, neurologic and cardiovascular and pulmonary systems. The integration of imaging in terms of examination, evaluation and patient management is explored within the scope of practice. The course emphasizes radiographic anatomy, common normal variants and some pathological and traumatic conditions. In addition to standard radiographic techniques, other imaging and special techniques are discussed.

**Prerequisites:** None**Offered:** Every year, Fall**PT 658. Differential Diagnosis.****3 Credits.**

This course integrates clinical experience with systems-based knowledge (musculoskeletal, cardiopulmonary, and neurologic) to develop a more complex framework for clinical decision making. Students develop methods of identifying signs and symptoms of diseases and differentiating patient presentations to render examination and referral judgments. Throughout the course, the student engages in clinical and didactic self-reflection to monitor and evaluate judgements based on patient interview and objective examination.

**Prerequisites:** None**Offered:** Every year, Spring**PT 661. Administration and Leadership in Physical Therapy.****3 Credits.**

This course provides students with the theory, skills, and applications for physical therapy administration including reimbursement models and documentation requirements in various practice settings across the United States healthcare delivery system. Students explore leadership roles and responsibilities and the consultative model of physical therapy. A case-based model is utilized to facilitate problem-solving and synthesize knowledge to address contemporary healthcare issues.

**Prerequisites:** None**Offered:** Every year, Summer**PT 666. Capstone I.****2 Credits.**

This is the first in a 3-course series culminating in an original project to be disseminated to peers, faculty, and clinical/community partners. Students work in small groups under the supervision of a capstone project capstone advisor in an area of Clinical Outcomes, Scholarship of Teaching and Learning, or Community, Health, & Social Responsibility. Students apply foundational information about the scientific process to identify the purpose and methods of the project and write a justification including review of the literature.

**Prerequisites:** None**Offered:** Every year, Spring**PT 668. Psychosocial Aspects of Physical Disability.****2 Credits.**

This course presents students with the knowledge of psychosocial dimensions that influence recovery from a physical disability. Stages of adaptation, loss and grief, motivation, confidence, and motivational interviewing techniques are explored to provide person-centered interventions for positive patient outcomes. A case-based model is used to facilitate problem solving and synthesis knowledge of psychological disorders and mental health issues in order to modify a plan of care.

**Prerequisites:** None**Offered:** Every year, Summer**PT 671. Clinical Education Experience I.****4 Credits.**

This clinical experience is designed to facilitate the development of skill in the examination, evaluation and treatment of inpatients or outpatients with a variety of musculoskeletal and/or general medical/surgical diagnoses. Students are expected to demonstrate appropriate professional behaviors and develop effective communication skills with patients/clients, families/caregivers, and health care professionals. Prerequisites include successful completion of 3 semesters of academic coursework. HIPAA and OSHA training and CPR certification are required.

**Prerequisites:** None**Offered:** Every year, Fall

**PT 675. Normal/Abnormal Gait.****1 Credit.**

This online course provides an overview of normal gait with an emphasis on kinematic and kinetic analysis of the gait cycle. Gait analysis techniques including motion analysis, dynamic electromyography, force plate recordings, and measurement of stride characteristics are presented.

**Prerequisites:** None**Offered:** Every year, Summer**PT 676. Capstone II.****1 Credit.**

This is the second in a 3-course series culminating in an original project to be disseminated to peers, faculty, and clinical/community partners. Students work in small groups under the supervision of a capstone project capstone advisor in an area of Clinical Outcomes, Scholarship of Teaching and Learning, or Community, Health, & Social Responsibility. Students apply the scientific process to implement the project, modify the project as necessary, and plan for dissemination of the outcome.

**Prerequisites:** None**Offered:** Every year, Summer**PT 685. Evidence in Practice.****2 Credits.**

This course provides students with the foundational skills and knowledge needed to acquire, interpret, appraise, and integrate various types of primary and secondary research to inform physical therapy practice. Students will select one or two articles from their literature search and critically appraise these.

**Prerequisites:** None**Offered:** Every year, Fall**PT 686. Scholarly Inquiry I.****2 Credits.**

This course, a continuation of PT 685, Evidence in Practice, allows students to investigate a specific topic of interest. Students will develop a PICO question and investigate current literature with critical appraisal of research designs specific to the topic of inquiry. The student will demonstrate depth and breadth of understanding by creating a paper with a thorough literature review, an examination of current research methods, and a discussion of areas of insufficiency related to their topic.

**Prerequisites:** None**Offered:** Every year, Spring**PT 687. Scholarly Inquiry II.****2 Credits.**

This course is a collaborative seminar following Scholarly Inquiry I to engage students with peers and faculty through scientific writing, research methods, statistical analysis, and discussion as students continue to explore their specific topics of interest.

**Prerequisites:** None**Offered:** Every year, Summer**PT 730. Musculoskeletal III.****2 Credits.**

This course builds upon the framework of musculoskeletal I and II. Lecture and lab topics include continued framework development of evaluation and contemporary treatment approaches including thrust manipulation for clients with musculoskeletal conditions. Students are required to integrate and synthesize knowledge gained from current and previous coursework. During the lecture and lab, students continue to develop comprehensive examination techniques, implement appropriate interventions, and hypothesize outcomes through case-based modeling.

**Prerequisites:** None**Offered:** Every year, Fall**PT 730L. Musculoskeletal III Lab.****1 Credit.**

Lab to accompany PT 730.

**Prerequisites:** None**Offered:** Every year, Fall**PT 736. Pediatric Rehabilitation.****3 Credits.**

This course presents information needed for the physical therapy student to complete a thorough examination and evaluation of a child with neurological and/or orthopedic diagnoses. Upon completion of the examination, students are able to generate an accurate diagnosis, prognosis and an appropriate plan of care for these patients. Relevant theory and practical learning experiences are provided for the student to develop the knowledge and skills necessary for applying an evidence-based physical therapy intervention strategy for the physical therapy plan of care.

**Prerequisites:** None**Offered:** Every year, Summer**PT 736L. Pediatric Rehabilitation Lab.****1 Credit.**

Lab to accompany PT 736.

**Prerequisites:** None**Offered:** Every year, Summer**PT 744. Physical Therapy Skills Elective.****2 Credits.**

This course is a required therapy skills course in which students choose topics focusing on specific areas of concentration or advanced skill. All sections of the course use the essential elements of PT practice as an organizing framework and incorporate the review and practical application of recent literature. Students take three sections of electives.

**Prerequisites:** None**Offered:** Every year, Fall and Summer**PT 767. Capstone III.****2 Credits.**

This is the third in a 3-course series culminating in an original project to be disseminated to peers, faculty, and clinical/community partners. Students work in small groups under the supervision of a capstone project capstone advisor in an area of Clinical Outcomes, Scholarship of Teaching and Learning, or Community, Health, & Social Responsibility. Students apply the scientific process to complete project and disseminate the outcome through a presentation and a written report.

**Prerequisites:** None**Offered:** Every year, Fall**PT 769. Professional Practice.****2 Credits.**

This course features advanced active learning and application of education theories to assist students in continuing to refine and employ their cognitive framework for transition from student to professional Physical Therapy practice. The class includes integration of lifelong learning process and advanced clinical decisions in all areas of professional PT practice. Students analyze their clinical decision making and reflect on professional development to explore contemporary themes and problems.

**Prerequisites:** Successful completion of all previously sequenced coursework required.**Offered:** Every year, Fall**PT 770. DPT Capstone.****1 Credit.**

Students work in small groups in an area of Clinical Outcomes, Scholarship of Teaching and Learning, or Community, Health, & Social Responsibility. Students apply the scientific process to solidify their conclusion portion of a final manuscript for relevance and clinical application. All students will disseminate through varied forms of presentation.

**Prerequisites:** None**Offered:** As needed, Fall

**PT 781. Clinical Education Experience II. 6 Credits.**

This clinical experience facilitates the development of skill in the examination, evaluation and treatment of patients with a variety of diagnoses with patients across the lifespan. Students are expected to demonstrate appropriate professional behaviors and develop effective communication skills with patients/clients, families/caregivers, and health care professionals. Students must be in good academic standing, provide evidence of CPR certification, HIPAA and OSHA training, and comply with all programmatic and site health requirements to participate in experiential learning.

**Prerequisites:** None

**Offered:** Every year, Spring

**PT 782. Clinical Education Experience III. 6 Credits.**

This clinical experience facilitates the progression to entry-level proficiency in the examination, evaluation, and treatment of patients with a variety of diagnoses with patients across the lifespan. Students are expected to demonstrate appropriate professional behaviors and develop effective communication skills with patients/clients, families/caregivers, and health care professionals. Students must be in good academic standing, provide evidence of CPR certification, HIPAA, and OSHA training, and comply with all programmatic and site health requirements to participate in experiential learning.

**Prerequisites:** None

**Offered:** Every year, Summer