

# PHYSICAL THERAPY (PT)

## **PT 502. Introduction to Clinical Decision Making. 3 Credits.**

This course integrates information from previous course work through reinforcement of the patient/client management model. The ICF model is introduced and is used as an organizing framework. This interactive case-based course guides students through a series of video, standardized and real-life patient scenarios. Principles of evidence-based practice are introduced. This case-based learning experience allows the student to gain a basic understanding of patient management in preparation for clinical course work.

**Offered:** Every year, Spring

## **PT 503L. Physical Therapy Process I Lab. 2 Credits.**

This course introduces students to the theory and practice of foundational physical therapy skills, such as body mechanics, functional mobility training, measurement of vital signs, goniometry and muscle testing of the upper extremity. Students learn appropriate use of medical terminology, and are introduced to taking a patient history and documentation.

**Offered:** Every year, Fall

## **PT 504L. Physical Therapy Process II Lab. 4 Credits.**

This course continues to develop foundational physical therapy skills, such as goniometry and manual muscle testing for the spine and lower extremities. Basic tests and measures for pain, posture, sensation, skin integrity and gait are introduced. Students also learn appropriate application of thermal modalities.

**Offered:** Every year, Spring

## **PT 505. Kinesiology I. 3 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. Course includes a lab component.

**Prerequisites:** Take MA 141.

**Offered:** Every year, Fall

## **PT 505L. Kinesiology I Lab. 0 Credits.**

Lab to accompany PT 505.

**Offered:** Every year, Fall

## **PT 506. Kinesiology II. 2 Credits.**

Students study movement and movement patterns of the lower extremity and trunk, including normal gait. Both the kinematics and the kinetics at the hip, knee and ankle are emphasized, especially in relationship to the closed kinetic chain. Dynamic motion is introduced and becomes the central focus for this semester. Course includes a lab component.

**Prerequisites:** Take PT 505.

**Offered:** Every year, Spring

## **PT 506L. Kinesiology II Lab. 0 Credits.**

Lab to accompany PT 506.

**Offered:** Every year, Spring

## **PT 512. Human Anatomy I. 4 Credits.**

This course presents the anatomical structures of the upper extremity, back, head and neck through lecture and human donor dissection experiences. Students will 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. Course includes a lab component.

**Prerequisites:** Take BIO 211 BIO 212.

**Offered:** Every year, Fall

## **PT 512L. Human Anatomy Lab. 0 Credits.**

Lab to accompany PT 512.

**Offered:** Every year, Fall

## **PT 513. Human Anatomy II. 3 Credits.**

This course presents the anatomical structures of the pelvis, lower extremity and body cavities through lecture and human donor dissection experiences. Students will 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. Course includes a lab component.

**Prerequisites:** Take PT 512.

**Offered:** Every year, Spring

## **PT 513L. Human Anatomy II Lab. 0 Credits.**

Lab to accompany PT 513.

**Offered:** Every year, Spring

## **PT 514. Neuroanatomy I. 2 Credits.**

This course presents the gross anatomy and development of the central nervous system. Major structures and landmarks within each major brain vesicle and spinal cord are covered.

**Prerequisites:** Take BIO 211 BIO 212.

**Offered:** Every year, Fall

## **PT 515. Neuroanatomy II. 2 Credits.**

This course deals with the function of the systems and structures covered in PT 514 including major efferent and afferent pathways. Emphasis is placed on the motor control mechanisms for posture and movement and their involvement in common neuropathologies treated by a physical therapist.

**Prerequisites:** Take PT 514.

**Offered:** Every year, Spring

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

This course provides the foundation for physical therapist students to enter full-time clinical experiences. The course informs students about expectations for clinical performance, compliance mandates for the clinical setting, communication strategies, and expectations for service at the clinical site. Students are introduced to concepts about cultural sensitivity and humility and strategies for success during clinical experiences.

**Offered:** Every year, Summer

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

This course presents the foundations of the physical therapy profession. Students explore the roles of the American Physical Therapy Association, including practice issues, professional skills and behaviors, the profession's Code of Ethics and Core Values. The roles of the physical therapist in the health care system and the community is discussed. The roles and responsibilities of the professions in the health care team are explored.

**Offered:** Every year, Fall

- PT 520. Pathophysiology I.** **3 Credits.**  
This course integrates material taught in the foundational courses with disease-specific content regarding the cardiovascular, pulmonary, gastrointestinal, hematological, hepatic, and endocrine systems. Active learning strategies will help the student interpret relationships between pathophysiology and clinical presentation in order to make safe and effective clinical decisions within physical therapy examination and intervention strategies.  
**Offered:** Every year, Summer
- PT 523. Applied Pharmacology I.** **1 Credit.**  
This course allows the student to identify and discuss the impact of drug therapy on patients receiving physical therapy. Students will integrate this information into patient/client management. Specifically, students look at medications utilized for cardiovascular, pulmonary disease processes, and pain management.  
**Offered:** Every year, Summer Online
- PT 528. Musculoskeletal I.** **4 Credits.**  
This course begins to integrate information from foundational courses. The student learns to use an evidence-informed approach to examine, evaluate and establish a plan of care for patients with various musculoskeletal conditions. Emphasis is placed on patients with conditions affecting the shoulder, elbow, wrist/hand, hip and knee regions of the body. Course includes a lab component.  
**Offered:** Every year, Spring
- PT 528L. Musculoskeletal I Lab.** **0 Credits.**  
Lab to accompany PT 528.  
**Corequisites:** Take PT 528.  
**Offered:** Every year, Spring
- PT 529. Musculoskeletal II.** **4 Credits.**  
This course begins to integrate information from foundational courses. The student learns to use an evidence-informed approach to examine, evaluate and establish a plan of care for patients with various musculoskeletal conditions. Emphasis is placed on patients with conditions affecting the spine and foot/ankle regions of the body. Course includes a lab component.  
**Offered:** Every year, Summer
- PT 529L. Musculoskeletal II Lab.** **0 Credits.**  
Lab to accompany PT 529.  
**Corequisites:** Take PT 529.  
**Offered:** Every year, Fall and Summer
- PT 531. Acute Care and Cardiopulmonary Physical Therapy I.** **4 Credits.**  
This course provides the student with a broad background in the management of patients with acute medical problems with an emphasis on pulmonary, cardiac and dermatological pathologies. Integrating information from anatomy, physiology and pathology, students learn to examine, evaluate and establish a plan of care for patient with acute medical problems. This course includes a lab component.  
**Offered:** Every year, Summer
- PT 531L. Acute Care Cardiopulmonary Lab I.** **0 Credits.**  
Lab to accompany PT 531.  
**Corequisites:** Take PT 531.  
**Offered:** Every year, Summer
- PT 548L. Physical Agents Lab.** **1 Credit.**  
This course provides the student with the foundational knowledge and skills to utilize electrotherapeutic and light physical agents to complement other therapeutic interventions to optimize patient outcomes. A case-based approach is utilized to facilitate problem solving, and integration of theory and evidence.  
**Offered:** Every year, Summer
- PT 569. Education/Community Health/Wellness.** **2 Credits.**  
This course presents the foundations of wellness, disease prevention and health promotion within a community setting. The social determinants of health are explored, especially as they relate to the unique role of physical therapists in community practice. Students develop an appreciation for diversity and its possible influence on health behaviors.  
**Offered:** Every year, Fall
- PT 599. Independent Study.** **1-3 Credits.**  
**Offered:** As needed
- PT 626. Pathophysiology II.** **3 Credits.**  
This course presents a comprehensive investigation of common neurological disorders in the pediatric and adult population. A brief review of neural development and maturation is provided as a foundation for understanding specific cellular and system responses to neuronal injury or cell death. For selected neurological disorders the disease process is presented in terms of known pathology, known or potential etiology and risk factors, clinical manifestations, and medical management.  
**Offered:** Every year, Spring
- PT 627. Applied Pharmacology II.** **1 Credit.**  
This course is a continuation of Pharmacology to introduce the physical therapist student to the chemical agents that many patients are taking. This course allows the student to understand how drug therapy can affect patients receiving physical therapy and how physical therapy intervention strategies may need to be modified. Specific medications utilized in the treatment of cancer, neurologic conditions, endocrine dysfunction, antimicrobials and role of CAMs are covered.  
**Offered:** Every year, Spring Online
- PT 628. Acute Care and Cardiopulmonary II.** **3 Credits.**  
This course builds on PT 531 for the evaluation, treatment planning and intervention of the patient with cardiopulmonary dysfunction. Students examine cardiopulmonary changes present over the lifespan and interventions. Management of patients in specialized units such as transplant, neonatal and pediatric units are explored, as part of an interprofessional team. Goal setting and discharge planning are examined. Students explore cardiopulmonary issues present in treating the population with bariatric impediments.  
**Offered:** Every year, Spring
- PT 628L. Acute Care and Cardiopulmonary II Lab.** **0 Credits.**  
Lab to accompany PT 628.  
**Offered:** Every year, Spring
- PT 652. Professional Issues in Physical Therapy II.** **1 Credit.**  
This course introduces students to the current issues facing the physical therapy profession. Topics include professional trends and professionalism, risk management, workforce trends including minority and cultural impacts to care, education trends, legal and ethical issues. The course addresses physical therapy concerns related to state and federal legislation, governance and advocacy for patients and the profession.  
**Offered:** Every year, Spring

- PT 653. Neurorehabilitation I. 4 Credits.**  
 This course presents a framework for integrating the assessment and treatment 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 will develop comprehensive evaluation techniques, plan and prioritize appropriate goals, treatments, and hypothesize outcomes through case based modeling and integrated clinical experiences.  
**Corequisites:** Take PT 653L.  
**Offered:** Every year, Spring
- PT 653L. Neurorehabilitation I Lab. 0 Credits.**  
 Lab to accompany PT 653.  
**Corequisites:** Take PT 653.  
**Offered:** Every year, Spring
- PT 654. Neurorehabilitation II. 4 Credits.**  
 This course is designed as a continuation of PT 653 Neurorehabilitation I. Lecture and lab topics include continued framework development of evaluation of and innovative treatment approaches for adults with various neurological conditions. Students are required to integrate and synthesize knowledge gained from current and previous course work. During the lecture and lab, students will continue to develop comprehensive evaluation techniques, plan appropriate treatments, and hypothesize outcomes through case based modeling and integrated clinical experiences.  
**Corequisites:** Take PT 654L.  
**Offered:** Every year, Summer
- PT 654L. Neurorehabilitation II Lab. 0 Credits.**  
 Lab to accompany PT 654.  
**Corequisites:** Take PT 654.  
**Offered:** Every year, Summer
- PT 657. Diagnostic Imaging for Physical Therapists. 2 Credits.**  
 This course introduces the student to diagnostic imaging principles and techniques as applied to musculoskeletal, neurologic and cardiovascular and pulmonary systems examination, evaluation and management. The course emphasizes radiographic anatomy, common normal variants and pathological and traumatic conditions. In addition to standard radiographic techniques, other imaging and special techniques are discussed. The course is organized by body systems: musculoskeletal, cardiovascular and pulmonary and neurologic as well as a session on technologic advances.  
**Offered:** Every year, Summer
- PT 658. Differential Diagnosis. 3 Credits.**  
 This course provides students with methods of identifying signs and symptoms of diseases and differentiating between those that are musculoskeletal and those that are systemic conditions. Throughout the course, the student learns to correlate the findings from the patient's personal and family history, the physical therapy interview and the objective examination. This course provides the student with reference for determining when patients should be referred to a physician.  
**Offered:** Every year, Summer
- PT 661. Administration and Leadership in Physical Therapy. 3 Credits.**  
 Students learn components of PTs as manager or consultant in the current health care delivery system. The organization, administration and management of a department is emphasized through topics such as: principles of management, types of supervision/managerial styles, program planning and decision-making, policy development, quality assurance, utilization review, reimbursement, budget preparation, regulating agencies and managed care, legal issues and risk management, and consumer satisfaction. Professional topics include career-planning strategies such as resume writing and leadership development.  
**Offered:** Every year, Summer
- PT 661L. Administrative and Management Lab Physical Therapy Lab. 1 Credit.**  
 Students learn components of PTs as manager or consultant in the current health care delivery system. The organization, administration and management of a department is emphasized through topics such as: principles of management, types of supervision/managerial styles, program planning and decision-making, policy development, quality assurance, utilization review, reimbursement, budget preparation, regulating agencies and managed care, legal issues and risk management, and consumer satisfaction. Professional topics include career-planning strategies such as resume writing and leadership development.  
**Offered:** Every year, Summer
- PT 664. Neurological Rehabilitation I. 4 Credits.**  
 This course presents physical therapy examination and treatment procedures for adults with neurological impairments. Assessment procedures include the evaluation of normal movement, abnormal movement, functional mobility and other specific neurological deficits. The semester includes laboratory instruction and practice in neurological treatment techniques. During the course, the student performs a comprehensive evaluation of an adult with neurological impairments, plans appropriate treatment and writes a comprehensive case study.  
**Offered:** Every year, Spring
- PT 664L. Neurological Rehabilitation Lab I. 0 Credits.**  
 Lab to accompany PT 664.  
**Offered:** Every year, Spring
- PT 665. Neurological Rehabilitation II. 4 Credits.**  
 This course is designed as a continuation of PT 664. Lecture and lab topics include PNF, vestibular evaluation and treatment, balance disorders and falls in the elderly. Upon completion of this course, the student performs a comprehensive examination and evaluation of an adult with a neurological diagnosis, develops a plan of care and documents the aforementioned through a comprehensive case study. Exams require students to synthesize knowledge gained from current and previous courses.  
**Offered:** Every year, Summer
- PT 665L. Neurological Rehabilitation Lab II. 0 Credits.**  
 Lab to accompany PT 665.  
**Offered:** Every year, Summer

- PT 666. Capstone I.** **2 Credits.**  
This is the first of a three-course series culminating in a project that will contribute to the body of knowledge in physical therapy. The goals for the capstone project are: 1) to identify the purpose of the project and write a detailed justification to include a thorough review of the literature (PT 666); 2) to develop a detailed description of the project (PT 666); 3) to implement the project (PT 676 & PT 767); and 4) to report on the project and disseminate the outcome (PT 767).  
**Offered:** Every year, Spring
- PT 668. Psychosocial Aspects of Physical Disability.** **2 Credits.**  
The course addresses psychosocial dimensions of physical therapy interventions from therapist and client perspectives. Students practice clinical reasoning. Topics include: humanistic philosophy as part of psychological rehabilitation; physical/psychological variables that influence recovery; the clinical reasoning process of the therapeutic relationship and client-centered practice; psychological influences on rehabilitation and adaptation including stress and trauma; typical mental health conditions; behavioral management of difficult persons and situations including suicidality, abuse and mental illness; and sexuality and disability-intervention strategies.  
**Offered:** Every year, Spring
- PT 668L. Psychosocial Aspects of Physical Disability Lab.** **0 Credits.**  
Lab to accompany PT 668.  
**Offered:** Every year, Spring
- PT 671. Clinical Education I.** **4 Credits.**  
Students are assigned to a full-time, 10-week clinical internship, which provides an understanding of the continuum of care. Students are involved in evaluating, developing and implementing treatment for clients with various musculoskeletal, neuromuscular and cardiopulmonary dysfunctions. They continue to develop their professional and interpersonal skills through interactions with clients, families and other health professionals. Successful completion of this clinical experience is required for continuing in the program. This course is graded on a pass/fail basis.  
**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. Physical therapy treatment approaches for patients with abnormal gait are introduced.  
**Offered:** Every year, Fall
- PT 676. Capstone II.** **1 Credit.**  
This is the second of a three-course series culminating in a project that will contribute to the body of knowledge in physical therapy. The goals for the capstone project are: 1) to identify the purpose of the project and write a detailed justification to include a thorough review of the literature (PT 666); 2) to develop a detailed description of the project (PT 666); 3) to implement the project (PT 676 & PT 767); and 4) to report on the project and disseminate the outcome (PT 767).  
**Offered:** Every year, Summer
- PT 685. Evidence in Practice.** **2 Credits.**  
This course provides students with the skills and knowledge needed to read, interpret and appraise the quality of various types of primary (intervention, prognosis and diagnosis studies) and secondary (systematic reviews and clinical practice guidelines) research. Topics include psychometric properties of outcome measures, research design, hypothesis testing and ethics in research. Learning experiences include completion of online tutorials and assignments, and participation in student-led small group discussions of current evidence.  
**Offered:** Every year, Fall
- PT 730. Musculoskeletal III.** **3 Credits.**  
This course builds on information taught in Musculoskeletal I and II and is designed to allow student to use an evidence-based approach to appropriately evaluate and establish a treatment plan, including ergonomics, body mechanics, manipulation and kinesiology taping, for patients with various musculoskeletal conditions. The student is taught to generate an evidence-based diagnosis, prognosis and plan of care to treat physical therapy clients with musculoskeletal dysfunction of the spine, hip, knees, ankle, shoulder, elbow and temporomandibular joint.  
**Offered:** Every year, Fall
- PT 730L. Musculoskeletal III Lab.** **0 Credits.**  
Lab to accompany PT 730.  
**Offered:** Every year, Fall
- PT 736. Pediatric Rehabilitation.** **4 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.  
**Offered:** Every year, Fall
- PT 736L. Pediatric Rehabilitation Lab.** **0 Credits.**  
Lab to accompany PT 736.  
**Offered:** Every year, Fall
- PT 740. Prosthetics and Orthotics.** **2 Credits.**  
This course is the study of the examination and treatment of individuals with prosthetic and orthotic devices. The focus is on the lower extremity and gait. The course provides the students with the necessary skills to thoroughly examine and treat patients with lower extremity prosthetic or orthotic devices.  
**Offered:** Every year, Fall
- PT 740L. Prosthetics and Orthotics Lab.** **0 Credits.**  
Lab to accompany PT 740 Prosthetics and Orthotics.  
**Offered:** Every year, Fall
- PT 744. Physical Therapy Skills Elective.** **2 Credits.**  
This course is a required therapy skills course in which students can choose a section focusing on a specific area of concentration from one of the four main practice areas of physical therapy: neuromuscular, musculoskeletal, cardiopulmonary or integumentary. 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.  
**Offered:** Every year, Fall

**PT 759. PBL Advanced Clinical Decision-Making. 3 Credits.**

This course features problem-based learning activities and education theories to assist students in continuing to refine and employ their cognitive framework for Physical Therapy practice. The class includes integration and synthesis of client information from all areas of PT practice. Students analyze their clinical decision making within the context of case-based problem solving, evidence informed practice, and formulation of client-centered plans of care along the continuum of care.

**Offered:** Every year, Fall

**PT 767. Capstone III. 2 Credits.**

This is the third of a three-course series culminating in a project that will contribute to the body of knowledge in physical therapy. The goals for the capstone project are: 1) to identify the purpose of the project and write a detailed justification to include a thorough review of the literature (PT 666); 2) to develop a detailed description of the project (PT 666); 3) to implement the project (PT 676 & PT 767); and 4) to report on the project and disseminate the outcome (PT 767).

**Offered:** Every year, Fall

**PT 781. Clinical Internship II. 6 Credits.**

This full-time clinical internship allows students to pursue in-depth practice in areas of interest and gain a variety of clinical experiences. Students practice learned skills in all aspects of care including specialty areas, varied settings including but not limited to acute care, neurological rehabilitation, pediatrics and advanced orthopedic physical therapy. Sequenced objectives ensure progression to entry-level skills and professional behaviors. This course is graded on a pass/fail basis.

**Offered:** Every year, Spring

**PT 782. Clinical Internship III. 6 Credits.**

This final full-time clinical experience is the culmination of the physical therapy program, and prepares students for practice as graduate physical therapists. Students are required to achieve entry-level proficiency in all aspects of practice in a wide variety of clinical settings, including but not limited to acute care, advanced orthopedics, neurological rehabilitation, and pediatric physical therapy. This course is graded on a pass/fail basis.

**Offered:** Every year, Summer