

PHYSICAL THERAPY (PT)

PT 503 Human Anatomy 6 sem. hrs.

Human Anatomy is a foundational course in normal human anatomy, both gross anatomy and surface anatomy, using a regional approach. Classroom and laboratory experiences are designed to promote methods of learning that minimize memorization. Incorporation of basic biomechanical principles enhances learning by association. Emphasis is given to the neuromusculoskeletal system and is presented as consistent with physical therapy clinical practice.

PT 503L Human Anatomy: Lab 0 sem. hrs.

PT 504 Foundations of Neuroscience 4 sem. hrs.

This course is designed to expand on previous science courses in order to provide a more in-depth understanding of the structure and function of the human nervous system in normal and pathological conditions. Material presented in this course provides the foundational science background for future applied courses related to physical therapy management of patients with conditions affecting the neuromuscular system. The course presents classroom and laboratory learning experiences that build from an understanding of basic nervous system functions at molecular and cellular levels to more complex functions involving whole systems. Structural changes in the nervous system are related to functional changes that occur during development, following injury, and with aging. A problem/ case study approach to learning is emphasized in order to further develop the student's critical inquiry and clinical decision-making abilities.

PT 504L Found of Neuroscience Lab 0 sem. hrs.

PT 506 Foundations of Pharmacology 2 sem. hrs.

This course presents the foundational concepts of pharmacology emphasizing basic mechanisms of drug action such as pharmacokinetics, pharmacodynamics and pharmacotherapeutics. Drug classes illustrated using prototypic drugs. Examples drawn from various body systems.

PT 511 Foundations of Clin Science 4 sem. hrs.

This course introduces the student physical therapist to the process of clinical examination including problem solving and clinical decision-making as well as introduction to foundational interventions. Using the Guide to Physical Therapist Practice the course focuses on physical therapy examination, evaluation, and basic treatment interventions as preparation for individuals with functional limitations related to movement. The course includes an introduction to examination techniques (tests and measures) common to the evaluation process (history, upper and lower quarter screens). Instruction also includes foundational intervention techniques and concepts such as patient communication and documentation; transfers; gait training with assistive devices; body mechanics; positioning and draping integral to examination and intervention; range of motion and manual muscle testing assessments; electrotherapeutic and heat/cold physical agents.

PT 5151A Biomechanics I 2 sem. hrs.

Material in this course includes 1) the basic principles of biomechanics related to stability and movement; 2) biomechanics of biologic structures and function of the musculoskeletal system, with in depth description of the structural and functional features of major joints of the human body; and 3) an introduction to human movement analysis.

PT 5151B Biomechanics II 2 sem. hrs.

Second foundational science course in Biomechanics. Material in this course includes 1) biomechanics of biologic structures and function of the musculoskeletal system, with in depth description of the structural and functional features of major joints of the human body; 2) human movement analysis.; and 3) normal human gait.

PT 603 Human Anatomy 6 sem. hrs.

Human Anatomy is a foundational course in normal human anatomy, both gross anatomy and surface anatomy, using a regional approach. Classroom and laboratory experiences are designed to promote methods of learning that minimize memorization. Incorporation of basic biomechanical principles enhances learning by association. Emphasis is given to the neuromusculoskeletal system and is presented as consistent with physical therapy clinical practice.

PT 603L Human Anatomy: Lab 0 sem. hrs.

PT 604 Foundations of Neuroscience 4 sem. hrs.

This course is designed to expand on previous science courses in order to provide a more in-depth understanding of the structure and function of the human nervous system in normal and pathological conditions. Material presented in this course provides the foundational science background for future applied courses related to physical therapy management of patients with conditions affecting the neuromuscular system. The course presents classroom and laboratory learning experiences that build from an understanding of basic nervous system functions at molecular and cellular levels to more complex functions involving whole systems. Structural changes in the nervous system are related to functional changes that occur during development, following injury, and with aging. A problem/ case study approach to learning is emphasized in order to further develop the student's critical inquiry and clinical decision-making abilities.

PT 604L Found of Neuroscience:Lab 0 sem. hrs.

PT 605 Motor Learning/Motor Control 3 sem. hrs.

This course is a foundational course applicable to entry-level physical therapy practice pertaining to acquiring, controlling, and perfecting movement skill. The course will explore the application of the principles of motor control and motor learning as they apply to healthy individuals and those individuals with a variety of physical therapy impairments. In addition, students will explore motor control across development with an emphasis on reflexes and functional postures; general motor learning principles specific to the pediatric population will be introduced. This foundational knowledge will form a framework for both assessment and treatment of the neurologically involved child or adult and serve as a transitional course to expand on prior knowledge of neuroscience, therapeutic activities, and therapeutic exercise in preparation for subsequent course work.

PT 606 Foundations of Pharmacology 2 sem. hrs.

This course presents the foundational concepts of pharmacology emphasizing basic mechanisms of drug action such as pharmacokinetics, pharmacodynamics and pharmacotherapeutics. Drug classes illustrated using prototypic drugs. Examples drawn from various body systems.

PT 608 Found of Clinical Exercise 4 sem. hrs.

This course examines in depth the mechanisms of muscle function, the principles of therapeutic exercise, and the practical application of exercise. The basic skills of clinical interventions including range of motion, stretching and flexibility, strengthening (strength, endurance and power training), balance, and aerobic training will be covered in depth. This information will prepare the student to critically think about, evaluate, and implement a plan of care for paper and live patients involving a variety of diagnoses on PT 613 and PT 614.

PT 611 Foundations of Clin Science 4 sem. hrs.

This course introduces the student physical therapist to the process of clinical examination including problem solving and clinical decision-making as well as introduction to foundational interventions. Using the Guide to Physical Therapist Practice the course focuses on physical therapy examination, evaluation, and basic treatment interventions as preparation for individuals with functional limitations related to movement. The course includes an introduction to examination techniques (tests and measures) common to the evaluation process (history, upper and lower quarter screens). Instruction also includes foundational intervention techniques and concepts such as patient communication and documentation; transfers; gait training with assistive devices; body mechanics; positioning and draping integral to examination and intervention; range of motion and manual muscle testing assessments; electrotherapeutic and heat/cold physical agents.

PT 612 PT Mgmt of Mus-Skel Impair I 3 sem. hrs.

This course is the first in a series of three courses on evaluation and treatment of general musculoskeletal conditions. All relevant physiologic, anatomic, pathologic, medical and therapeutic concepts related to general musculoskeletal conditions are integrated into this course. Information in this course includes the general physical therapy evaluation process, basic pathology, tissue injury and the healing process, and the integration of previous information covered in the curriculum. The course utilizes classroom and laboratory experiences to expose the student to simple problems in order to begin to develop the clinical reasoning skills required in entry-level practice. Emphasis is on basic evaluation technique in orthopedic and manual physical therapy and the implementation of therapeutic intervention techniques learned in other courses. This course provides the foundation for PT 613 and PT 614.

PT 613 PT Mgmt of Mus-Skel Impair II 5 sem. hrs.

An integrated approach to the study of all relevant physiologic, anatomic, pathologic, medical and therapeutic concepts related to entry-level physical therapy practice. The course is the second course in the continuation Musculoskeletal Impairments series and includes the physical therapy evaluation process, physical therapeutic intervention techniques and procedures, and patient care plan development for spinal impairments and upper quarter. This course is to build on foundational skills in neuro-musculoskeletal assessment. The course presents classroom and laboratory experiences to develop simple to complex problems to assist the student in developing the necessary clinical reasoning and clinical skills. Emphasis is on basic evaluation techniques in orthopedic and manual physical therapy with an introduction to special test diagnostic accuracy and interpretation. It provides the foundation for selection of appropriate assessment and treatment planning in orthopedics. Students learn an evidence-based approach to screening, examination, and evaluation which all involve a critical thinking process to establish an orthopedic impairment based physical therapy diagnosis.

PT 614 PT Mgmt of Mus-Skel Impair III 5 sem. hrs.

An integrated approach to the study of all relevant physiologic, anatomic, pathologic, medical and therapeutic concepts related to entry-level physical therapy practice regarding the upper and lower extremity. The course is a continuation of PT 612/613, Musculoskeletal Impairments I/II and includes the physical therapy evaluation process, physical therapeutic intervention techniques and procedures, and patient care plan development. The course presents classroom and laboratory experiences building from simple to complex problems to assist the student in developing the necessary competencies in physical therapy. Emphasis is on basic evaluation techniques in orthopedic and manual physical therapy with an introduction to special test diagnostic accuracy and interpretation. It provides the foundation for selection of appropriate assessment and treatment planning in orthopedics. Students refine their approach to screening, examination, and evaluation of extremity impairments with integration of spinal screening. This involves the critical thinking process to establish an orthopedic impairment based physical therapy diagnosis and subsequent treatment plan.

PT 6151A Biomechanics I 2 sem. hrs.

Material in this course includes 1) the basic principles of biomechanics related to stability and movement; 2) biomechanics of biologic structures and function of the musculoskeletal system, with in depth description of the structural and functional features of major joints of the human body; and 3) an introduction to human movement analysis.

PT 6151B Biomechanics II 2 sem. hrs.

Second foundational science course in Biomechanics. Material in this course includes 1) biomechanics of biologic structures and function of the musculoskeletal system, with in depth description of the structural and functional features of major joints of the human body; 2) human movement analysis.; and 3) normal human gait.

PT 701 Professional Issues I 1 sem. hr.

This course is an introduction to the profession of physical therapy. Distinguishing factors of a profession, including the history of the profession and responsibilities of health care professionals are covered. Students are introduced to national, state and regional professional organizations. The topics of legal and ethical considerations are also covered. Students are guided through the discovery of practice expectations and the growth of the profession over the past century. Students are also expected to participate in professional development activities.

PT 702 Professional Issues II 1 sem. hr.

The course is designed to prepare the student physical therapist for clinical practice. Students build upon knowledge and skills gained in Professional Issues I. Students are introduced to the roles of various participants in clinical practice and the assessment tools utilized during clinical education. Issues related to legal and ethical clinical practice are covered.

PT 703 Professional Experience I 4 sem. hrs.

This is the first of four clinical education experiences within the curriculum. Professional Experience I introduces the student to the general organization of a physical therapy practice that pertains to the care of individuals with musculoskeletal dysfunction either in an inpatient or outpatient setting. Students are responsible, under the direct guidance of a licensed clinical mentor, for the examination, evaluation, diagnostic, prognostic and intervention components for patient care. The specific content will vary depending upon the learning experiences available and the perceived or declared readiness of each student.

PT 704 Professional Experience II 4 sem. hrs.

This is the second of four clinical education experiences within the curriculum. Professional Experience II provides the student the opportunity to participate in a physical therapy practice that pertains to the care of varied individuals across the lifespan. Primary emphasis is on those who experience acute or chronic neurological dysfunctions and/or acute cardiopulmonary and/or integumentary dysfunctions. Professional Experience II primarily occurs in an inpatient acute, post-acute or rehabilitation settings. Some students may participate in an outpatient neurological or general medicine rotation. Under the direct guidance of a licensed physical therapist/clinical mentor, students are responsible for the examination, evaluation, diagnostic, prognostic and intervention components for patient care. Students are expected to function as part of a multi-disciplinary team and to participate in practice management activities. The specific content will vary depending upon the learning experiences available and the perceived or declared readiness of each student.

PT 705 Professional Experience III 5 sem. hrs.

This is the third of four clinical education experiences within the curriculum. Professional Experience III provides the student the opportunity to participate in a physical therapy practice that pertains to the care of individuals across the lifespan, with emphasis on those who experience acute or chronic neurological, and/or cardiopulmonary dysfunctions. Professional Experience III primarily occurs in an inpatient acute, sub-acute, or rehabilitation practice setting. Some students may participate in an outpatient pediatric or a community based neurological rotation or a combined inpatient/outpatient rotation. Students are responsible, under the direct guidance of a licensed clinical instructor/clinical mentor, for the examination, evaluation, diagnostic, prognostic and intervention components for patient care. Students are expected to function as part of a multi-disciplinary team, and participate in practice management activities. The specific content will vary depending upon the learning experiences available and the perceived or declared readiness of each student.

PT 706 Professional Experience IV 6 sem. hrs.

This is the fourth and final clinical education experience within the curriculum. Professional Experience IV is scheduled after the completion of all didactic coursework in the basic, behavioral and clinical science courses. This course provides the student the opportunity to participate in a physical therapy practice that pertains to the care of individuals across the lifespan who experience neuromusculoskeletal, cardiopulmonary, or integumentary dysfunctions. Practice settings may vary based upon a student's clinical interests. Students may also be given the opportunity to focus on an area of interest involving either a specialized patient population (i.e. geriatrics, pediatrics), practice management or clinical research application. During this experience, students have the opportunity to function behaviorally as would professional physical therapists, with the exception that the clinical instructor is responsible for the student's provision of service and monitors the student's decision-making process during the examination, evaluation, diagnostic, prognostic and intervention components for patient care. Students are expected to function as part of a multi-disciplinary team, and participate in practice management activities. The specific content will vary depending upon the learning experiences available and the perceived or declared readiness of each student.

PT 710 Health Care Business Mgmt I 2 sem. hrs.

The course is the first course addressing health care business management issues impacting physical therapy practice. Students are introduced to special topics related to access, cost and quality of care. Particular emphasis is on the United States Health Care delivery system, the continuum of care, reimbursement, interdisciplinary team management, direct access and autonomous practice.

PT 711 Health Care Business Mgmt II 2 sem. hrs.

This course provides the student with an enhanced view of the healthcare system in the United States. The primary aim is to ensure that students are prepared to enter the healthcare system with an ability to contribute in the administration of contemporary and ethical physical therapist practice. The course includes requisite knowledge and application activities to develop an appreciation of public health, including a working understanding of health promotion and wellness as well as a physical therapist's role in primary prevention. Activities are included to enhance the learners' appreciation of a variety of health care professionals and their respective roles in modern interdisciplinary patient care. Students will also acquire an awareness of business principles, including resource and financial management principles required for the administration of a physical therapist practice.

PT 712 Community Health in PT 3 sem. hrs.

This course introduces the concept of community health care in relation to physical therapist practice. Physical therapists role in health prevention, promotion and wellness across the lifespan in community based and non-traditional settings are addressed. Students develop a community health program that meets a community need that prepares them for their role as primary health care providers. Students also prepare for the role of clinical teaching.

PT 713 Service Project 1 sem. hr.

A commitment to community service is an inherent part of the mission at Walsh University and the Physical Therapy program. Students provide direct community service as part of their academic experience within the physical therapy curriculum. During this course, students deliver the community program that was approved during semester 7 in conjunction with PT 712 Community Health in Physical Therapy.

PT 720 Research Methodology I 3 sem. hrs.

This course is designed to introduce students to the research process. Taught from an epidemiological perspective, learners within the course will appreciate different types of study design and the hierarchy of evidence. This course will also introduce students to the interpretation of descriptive and inferential statistics including effect sizes. Students will apply their knowledge by being immersed in the research process through the completion of a systematic review of the literature. This process will provide students with experience in the searching for relevant literature, using various sources of information and technology, working with a health sciences librarian, and writing scientifically with the oversight of a faculty member.

PT 721 Research Methodology II 2 sem. hrs.

Taught from an epidemiological perspective, learners will be exposed to different types of data and statistical analyses. Through this, students will develop the ability to interpret statistical results and inferences that can be drawn from various types of analyses. This course further immerses students in the research process with the intention of developing the skills needed to synthesize research findings and write scientifically. Students will complete the scholarly project that was initiated in PT720 (a systematic review of the literature), with the intention of submission to a peer-reviewed venue.

PT 722 Research Methodology III 1 sem. hr.

This course teaches students to critically appraise and evaluate sources of research evidence. Within this process, students will develop the ability to discern the applicability of research findings to specific patient populations and to the practice of physical therapy. This will contribute to the development of a deeper appreciation for evidence based and evidence informed practice.

PT 723 Research Methodology IV 2 sem. hrs.

This course is designed to improve a student's ability to present scholarly work in a professional, effective, and interesting manner. The course will discuss written, verbal, and demonstrative methods of disseminating research deliverables within professional venues. Students will complete the groups' research projects and present their works at the Physical Therapy Program Research Symposium.

PT 730 PT Mgmt of Neuro-Mus Impair I 6 sem. hrs.

This course is the first within a series of two neurological courses presenting an integrated approach to relevant physiologic, anatomic, theoretical, medical, and therapeutic concepts related to entry-level neurologic physical therapist practice in both adult and pediatric populations. The two Physical Therapy Management of Neuromuscular Impairment courses will operate from a top-down model across the neural axis, focusing initially on central nervous system diagnoses of cortical dysfunction, injury, and recovery. Students will gain knowledge, skills, and the capacity for the clinical reasoning necessary to complete a comprehensive neuromuscular examination and develop a comprehensive plan for intervention based on current motor control and learning theories. Pediatric content is interwoven within the course.

PT 731 PT Mgmt of Neuro-Mus Impair II 6 sem. hrs.

This course is the second within a series of two neurological courses presenting an integrated approach to relevant physiologic, anatomic, theoretical, medical, and therapeutic concepts related to entry-level neurologic physical therapist practice in both adult and pediatric populations. It is a direct extension of PT 730 (Physical Therapy Management of Neuromuscular Impairments I), continuing with diagnoses along the neural axis, progressing from the central nervous system and moving to more of a focus on peripheral nervous system dysfunction. Students will continue to gain fundamental knowledge to develop the clinical reasoning and critical thinking necessary to complete a detailed neuromuscular examination and develop a comprehensive plan for intervention based on current motor control and learning theories. Pediatric content is interwoven within the course.

PT 732 PT Mgmt Multi System Impairment 4 sem. hrs.

Many patients that Physical Therapists encounter often have multiple systems that are impaired that ultimately affect their functional capabilities. This course integrates the many areas that have been discussed previously in the curriculum and aims to help the student focus their management strategies in the areas of medical screening and differential diagnosis. Complex patient cases involving multi-systems will be utilized throughout the course and the student will be responsible for demonstrating sound decision making processes based on best available evidence. In essence this course will help prepare the student physical therapist for autonomous practice

PT 734 PT Mgmt Cardio/Respir Impair I 4 sem. hrs.

An integrated approach to the study of all relevant anatomic, physiologic, pathological, medical and therapeutic (invasive and surgical) concepts related to physical therapy practice in the area of cardiovascular, pulmonary, endocrine (diabetes) and integumentary impairments. The course includes commonly used physical therapy examination and therapeutic techniques and procedures, along with patient-care program development focused on the inpatient setting. Emphasis is placed on thorough review of medical history to help ensure safety during patient care.

PT 735 PT Mgmt Cardio/Respir Impair II 5 sem. hrs.

An integrated approach to the study of all relevant physiologic, anatomic, pathological, medical and therapeutic concepts related to physical therapy practice in the area of cardiovascular, pulmonary, integumentary, endocrine, hematology, immunology, oncology, genitourinary and gastrointestinal impairments. The course includes the physical therapy diagnostic process, physical therapeutic techniques and procedures, and patient-care program development. The course presents classroom and laboratory experiences building from simple to complex problems to assist the student in developing the competencies necessary for practice as a generalist in physical therapy. Experiences related to psychological, social, cultural, economic, and vocational aspects of illness and disability are included. Concepts are cumulative throughout the system(s) and continued enrollment depends upon mastery and use of previous concepts.

PT 736 Capstone Sem: Clin Decis Making 2 sem. hrs.

The capstone course is usually taken in the final year of a program and is designed to showcase a student's comprehensive knowledge of the subject they have studied in various courses over their academic career. The course is sectioned into critical parts of the DPT's profession from graduation of entry level into their professional career, NPTE and jurisprudence examinations, professional development and professional advocacy.

PT 740 Special Topics 1 sem. hr.

This elective course involves advanced study (beyond entry level) of selected examination and/or intervention techniques. Topics vary from semester to semester and from year to year.

PT 74001 Special Topics: Pediatrics 2 sem. hrs.

This course is designed to provide an overview of general pediatric practice, including developmental parameters and legal historical perspectives. It will progress through a foundational basis for pediatric premises and proceed to an overview of assessment, evaluation, and intervention approaches for specific diagnoses in the specialty practice with pediatric patients. While depth of all diagnoses will not be explored, different case studies will be used to clarify the contextual basis of evidence based practice across settings and within relevant services provision models. This class will build on the pediatric diagnoses and evaluation/intervention process covered in neurologic rehabilitation PT 730 & PT 731.

PT 74006 Special Topics: Diag Img 1 sem. hr.

This course includes the study of the common diagnostic and therapeutic imaging studies such as radiographs, CAT, MRI, and musculoskeletal imaging as they pertain to patient/client management in physical therapy.

PT 742 Life Span 3 sem. hrs.

Life Span prepares students to understand the physical, social, emotional and intellectual growth and development throughout the life span. Instructional content includes child development theories and research; adulthood; geriatrics; and death and dying.