

Physical Therapy

Doctor of Physical Therapy (<https://catalog.und.edu/graduateacademicinformation/departmentalcoursesprograms/physicaltherapy/pt-dpt/>)

PT 512. Therapeutic Agents. 3 Credits.

Theory and application of various hydrotherapy, phototherapy, and thermotherapy modalities in Physical Therapy, including heat, light, sound, and water. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum.

PT 514. Case Management I. 2 Credits.

Integrates multiple aspects of case management, including examination, evaluation, diagnosis, prognosis, plan(s) of care, and intervention strategies. Evidence based clinical decision making and verbal and written communications relative to case management will be emphasized. Prerequisite: Registered in Professional Physical Therapy Curriculum. SS.

PT 519. Electrotherapy and Electrodiagnosis. 2 Credits.

Theory and application of therapeutic electrical currents, biofeedback, electromyography, and nerve conduction velocity in physical therapy. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum.

PT 521. Critical Inquiry I. 1 Credit.

Introduction to the collection of clinical data leading to a case study report. Prerequisite: Registered in Professional Physical Therapy Curriculum.

PT 524. Psychological Aspects of Disability. 2 Credits.

Readings and discussion course. Study of psychological coping mechanisms, reactions, and motivational factors pertinent to people with disabilities. Review of adjustment problems unique to specific disabilities and/or disease processes, including terminal illness. Prerequisite: Registered in Professional Physical Therapy Curriculum.

PT 527. Critical Inquiry II. 2 Credits.

Application, analysis, and evaluation of clinical decision-making components, strategies, and skills. Preparation and presentation of a clinical case study. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

PT 537. Strategies Early Intervention. 2 Credits.

This course is designed to review current practices in early intervention. Course materials will focus on characteristics of disabling conditions that influence growth and development of motor skills, cognition, and educational development. Emphasis will be on collaborative service provision with an interdisciplinary approach. Topics also covered include: current issues, assessment of the child/family unit, and legislative guidelines for service provision. Prerequisite: Registered in Professional Physical Therapy Curriculum.

PT 544. Pharmacology for Physical Therapists. 1 Credit.

Pharmacological principles and implications for the clinical treatment of patients referred to physical therapy. Fundamentals of drug classification, actions of drugs, physiological mechanisms, and drug therapeutic and adverse effects. Prerequisite: Registered in Professional Physical Therapy Curriculum. SS.

PT 552. Clinical Education III. 9 Credits.

The third in a sequence of four full-time clinical experiences in selected physical therapy provider centers throughout the United States. Prerequisite: Registered in Professional Physical Therapy Curriculum.

PT 553. Clinical Education IV. 9 Credits.

The fourth in a sequence of four full-time clinical experiences in selected physical therapy provider centers throughout the United States. Prerequisite: Registered in Professional Physical Therapy Curriculum.

PT 562. Readings:Physical Therapy. 1-4 Credits.

Review of current literature pertinent to Physical Therapy; critical examination of design, content, and validity of conclusions. Prerequisite: Registered in Professional Physical Therapy Curriculum. Repeatable to 4.00 credits.

PT 583. Critical Inquiry III. 1 Credit.

Introduction to research instruments including surveys, electrical and mechanical instrumentation critical to research methods. Includes discussion of validation, calibration, and reliability of instruments used in physical therapy research. Students develop a proposal for their scholarly projects and complete IRB use of human subject forms. Prerequisite: Registered in Professional Physical Therapy Curriculum.

PT 591. Research in Physical Therapy. 2 Credits.

Students develop the ability to effectively and accurately interpret and communicate results/clinical outcomes as a component of the written Scholarly Project. Frequent group and/or individual meetings with the advisor incorporate peer review discussion to facilitate student development of professional written and oral communication skills. Prerequisite: Registered in Professional Physical Therapy Curriculum. SS.

PT 592. Case Management II. 2 Credits.

Case management, with emphasis on the teaching and learning process and techniques targeted to promote and optimize physical therapy services, including advocacy. Strategies appropriate for conflict resolution are introduced. Professional development as a practitioner of physical therapy is emphasized through introduction and preliminary development of a portfolio. Prerequisite: Registered in Professional Physical Therapy Curriculum.

PT 602. Communication and Professionalism in Practice. 2 Credits.

Introduction and practice for students in their role as professionals in the health care setting. Emphasis is placed on professional core values, professional behaviors, ethics and interpersonal and interprofessional communication skills in the health care environment. Prerequisite: Registered in Professional Physical Therapy Curriculum. F.

PT 603. Applied Anatomy and Biomechanics I. 4 Credits.

This course will provide the anatomical and biomechanical knowledge to understand the human movement system and apply these concepts to the practice of physical therapy which includes the dissection of human cadavers. Anatomy and Biomechanics of the spine, pelvis, and lower extremity will be covered along with the basic structural and functional relationships of the musculoskeletal, integumentary, neuromuscular, and cardiovascular/pulmonary systems. Prerequisite: Registered in professional physical therapy curriculum. F.

PT 604. Gross Anatomy Lab I. 2 Credits.

Foundational science course that includes dissection of human cadavers. Basic structural and functional relationships of the musculoskeletal, integumentary, neuromuscular and cardiovascular/pulmonary systems are emphasized. Topographical and radiological correlations are utilized in combination with clinical correlations to enhance student learning. Prerequisite: Registered in professional physical therapy curriculum. F.

PT 605. Applied Anatomy and Biomechanics II. 4 Credits.

This course will provide the anatomical and biomechanical knowledge to understand the human movement system and apply these concepts to the practice of physical therapy which includes the dissection of human cadavers. Anatomy and Biomechanics of the back, neck, scapulothoracic, and upper extremities will be covered along with the basic structural and functional relationships of the musculoskeletal, integumentary, neuromuscular, and cardiovascular/pulmonary systems. Prerequisite: Registered in professional physical therapy curriculum. S.

PT 606. Gross Anatomy Lab II. 2 Credits.

Detailed dissections of musculoskeletal anatomy and peripheral neuroanatomy. This course is designed to provide the physical therapy student with an adequate foundation in the gross anatomy of the human body which will help them to: Understand the basic structural and functional relationships between the musculoskeletal, integumentary, neuromuscular, and the cardiovascular/pulmonary systems of the body. Prerequisite: Registered in professional physical therapy curriculum. S.

PT 607. Pathophysiology for Physical Therapists I. 3 Credits.

This course provides an overview of physiology and pathophysiology of systems for physical therapists. Associated health conditions, surgical interventions, the influences of co-morbidities and pharmaceutical interventions, and safety concerns are discussed with an application to physical therapy patient/client management. Prerequisite: Registered in professional physical therapy curriculum. F.

PT 608. Pathophysiology for Physical Therapists II. 3 Credits.

This course provides an overview of physiology and pathophysiology of systems for physical therapists. Associated health conditions, surgical interventions, the influences of co-morbidities and pharmaceutical interventions, and safety concerns are discussed with an application to physical therapy patient/client management. Prerequisite: Registered in professional physical therapy curriculum. On demand.

PT 609. Neuroscience for Clinical Practice I. 3 Credits.

Human neuroanatomy and neurophysiology with emphasis on motor theory and the sensory and motor systems involved in the acquisition and control of movement. Discussion of normal functions as well as the clinical signs and symptoms of pathological lesions affecting the nervous system. Applicable health conditions, impairments, and activity limitations of the nervous system relevant to current practice are introduced. Prerequisite: Registered in professional physical therapy curriculum. F.

PT 610. Neuroscience for Clinical Practice II. 3 Credits.

Human neuroanatomy and neurophysiology with emphasis on motor theory and the sensory and motor systems involved in the acquisition and control of movement. Discussion of normal functions as well as the clinical signs and symptoms of pathological lesions affecting the nervous system. Applicable health conditions, impairments, and activity limitations of the nervous system relevant to current practice are introduced. Prerequisite: Registered in professional physical therapy curriculum. S.

PT 611. Movement System Examination & Evaluation I. 3 Credits.

Integration of examination and evaluation techniques for diagnosis and prognosis of impairments and activity limitations of the human movement system. Emphasis is given to musculoskeletal and neurological examination and evaluation components. Prerequisite: Registered in professional physical therapy curriculum. F.

PT 612. Movement System Examination and Evaluation II. 3 Credits.

Integration of examination and evaluation techniques for diagnosis and prognosis of impairments and activity limitations of the human movement system. Emphasis is given to musculoskeletal and neurological examination and evaluation components. Prerequisite: Registered in professional physical therapy curriculum. S.

PT 615. Movement System Intervention I. 3 Credits.

This course integrates components of the movement system as it relates to human motor performance across the lifespan. This includes principles and applications of therapeutic intervention with integration of current evidence and clinical decision making to emphasize appropriate selection, instruction, and progression of physical therapy interventions. Prerequisite: Registered in professional physical therapy curriculum. F.

PT 616. Movement System Intervention II. 3 Credits.

This course integrates components of the movement system as it relates to human motor performance across the lifespan. This includes principles and applications of therapeutic intervention with integration of current evidence and clinical decision making to emphasize appropriate selection, instruction, and progression of physical therapy interventions. Prerequisite: Registered in professional physical therapy curriculum. S.

PT 617. Physical Therapy Case Application I. 2 Credits.

Application of information and clinical skills learned in concurrent and prior DPT coursework in small group discussion and pseudo-clinical setting. Prerequisite: Registered in professional physical therapy curriculum. F.

PT 618. Physical Therapy Case Application II. 2 Credits.

Application of information and clinical skills learned in concurrent and prior DPT coursework in small group discussion and pseudo-clinical setting. Prerequisite: Registered in professional physical therapy curriculum. S.

PT 620. Evidence Based Practice I. 2 Credits.

This course provides students with the foundational concepts related to critical thinking, logic of inquiry, applied statistics, and appropriate clinical research methodologies. Elements of the Patient/Client Management Model are introduced as they relate to diagnosis, prognosis, intervention, and outcomes. Prerequisite: Registered in professional physical therapy curriculum. S.

PT 622. Biophysical Agents. 2 Credits.

Theory and practice in the use of biophysical agents in rehabilitation. Prerequisite: Registered in professional physical therapy curriculum. SS.

PT 623. Management of the Pediatric Patient. 3 Credits.

This course is designed to provide students with the knowledge and skills they need to provide care to pediatric populations. This course refines and allows for the theoretical understanding and clinical application of pediatric physical therapy examination, evaluation, diagnosis, prognosis, intervention, and outcomes. Prerequisite: Registered in Professional Physical Therapy Curriculum. F.

PT 625. Evidence Based Practice II. 2 Credits.

This course encourages the use of the principles of evidence-based practice components, strategies, and skills, integrating clinical expertise, patients' preference/values, and research evidence to produce a therapeutic alliance during the first clinical experience. Students will apply the EBP process, and clinical decision making to a clinical case that will culminate into a formal presentation. Prerequisite: Registered in professional physical therapy curriculum. SS.

PT 626. Management of the Musculoskeletal System I. 2 Credits.

This course builds upon knowledge of anatomy, physiology, pathology, biomechanics, and therapeutic exercise to enhance the skills of examination, evaluation, and treatment of the human movement system. Emphasis will be given to movement system screening, physical therapy diagnoses, and clinical reasoning resulting in referral and/or modified physical therapy practice. Prerequisite: Registered in Professional Physical Therapy Curriculum. F.

PT 627. Integrated Clinical Experience. 1-4 Credits.

Short-term clinical experience to provide hands-on experience for students to apply knowledge learned during the first year of the professional program. Experiences will be set up in acute care, sub-acute care, long-term care, outpatient orthopedic, or a rural site. Prerequisite: Registered in Professional Physical Therapy Curriculum. Repeatable to 6.00 credits. SS.

PT 630. Foundations of Clinical Research. 1-2 Credits.

This course will explore various methods of physical therapy clinical research. Students will work with faculty through study coordination, data collection, data analysis, and scientific writing. Credits are variable and are negotiated with faculty. Prerequisite: Registered in professional physical therapy curriculum. Repeatable to 4.00 credits. F,S.

PT 631. Management of Neuromuscular Health Conditions. 4 Credits.

Integration of clinical evaluation, functional goals, and treatment planning for individuals with neurological and multiple musculoskeletal dysfunction. The primary focus is on rehabilitation skills including assessment, exercise, handling techniques, functional activities, equipment prescription, patient education, and ADLs, also incorporates community mobility and governmental services. Prerequisite: Registered in Professional Physical Therapy Curriculum. F.

PT 632. Leadership in Physical Therapy. 2 Credits.

Leadership is an integral skill in the development and success of personal and professional physical therapy practice. This course provides a roadmap to achieving excellence in leadership. Emphasis will be placed on exploring leadership of oneself, leadership of others, and leadership to the profession and society. Prerequisite: Registered in professional physical therapy curriculum. F.

PT 634. Acute Care Physical Therapy. 1 Credit.

Acute care physical therapy encompasses the knowledge and skills suitable to thoroughly examine and appropriately intervene with patients in medically compromised situations. Students will learn to provide safe, efficient and effective care for their patients in an acute care environment through the use of simulated patients and clinical scenarios. Prerequisite: Registered in professional physical therapy curriculum. SS.

PT 635. Management of the Older Adult Patient. 2 Credits.

Examine the factors and forces that affect quality of life in later years. The physiological, psychological, and sociological aspects of aging will be considered, including those influences in the cultural context that enhance and impede continued growth of the person. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

PT 638. Advanced Topics in Pediatrics. 3 Credits.

This course is designed to provide students with sequential and integrated learning experiences that prepare them to provide care to pediatric populations. This course is intended to provide a level of greater expertise and a more in-depth understanding of pediatric physical therapy practice. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

PT 640. Management of Cardiovascular and Pulmonary Systems. 3 Credits.

This course is designed to expand the theoretical understanding and clinical application of cardiopulmonary physical therapy examination, evaluation, diagnosis, prognosis, intervention and outcomes. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. F.

PT 641. Management of the Complex Patient. 3 Credits.

Facilitates the physical therapist's role as an interdependent practitioner working within a collaborative medical model. Utilizes case studies across a variety of clinical settings to examine the management of patient populations with one or more systems involvement including illness, injury, impairment, activity limitations and participation restrictions. Activities will focus on body systems screening for medical disease, selecting appropriate tests and measures, evaluation and prognosis, psycho-social considerations, and a comprehensive plan of care. Laboratory. Prerequisite: Registered in professional physical therapy curriculum. S.

PT 642. Practice Management in Physical Therapy. 3 Credits.

This course provides an overview of physical therapy practice management fundamentals. This includes the study of organizations, strategic planning, human resources, fiscal management, communications, and medical, legal, and ethical issues, as they relate to physical therapy practice and improved healthcare outcomes. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

PT 645. Medical Imaging for Physical Therapists. 2 Credits.

An introduction to medical imaging and an overview of its role in the health care delivery system. Topics include principles of medical imaging, imaging equipment, diagnostic imaging, and application of imaging principles to inform physical therapy care. Prerequisite: Registered in Professional Physical Therapy Curriculum. SS.

PT 646. Management of the Musculoskeletal System II. 2 Credits.

Theory and application of manual therapy skills for examination and intervention techniques, including thrust and nonthrust mobilizations/manipulations of the spine, pelvis, and associated areas. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

PT 649. Advanced Applied Anatomy/Clinical Kinesiology. 1 Credit.

Study of applied anatomy and its importance to research and clinical application, particularly as related to Physical Therapy. Prerequisite: Registered in Professional Physical Therapy Curriculum. F,S.

PT 650. Evidence Based Practice III. 2 Credits.

The purpose of this course is to provide students with the skills necessary to critically appraise research designs and research findings related to physical therapy practice. Prerequisite: Registered in Professional Physical Therapy Curriculum. SS.

PT 651. Clinical Immersion and Community Health. 4 Credits.

This course integrates effective communication strategies, fostering students' clinical skills by developing physical examination, critical thinking and reasoning skills, intervention design and clinical teaching for clients in a clinic/classroom setting. In addition, students are immersed in health prevention, promotion and wellness in community-based settings. Prerequisite: Registered in professional physical therapy curriculum. S.

PT 652. Clinical Experience I. 9 Credits.

Full-time, 9-week clinical experience in a selected physical therapy center throughout the United States. Prerequisite: Registered in Professional Physical Therapy Curriculum. F.

PT 653. Clinical Experience II. 9 Credits.

Full-time, 9-week clinical experience in a selected physical therapy center throughout the United States. Prerequisite: Registered in Professional Physical Therapy Curriculum. F.

PT 654. Clinical Experience III. 12 Credits.

Full-time, 12-week clinical experience in a selected physical therapy center throughout the United States. Prerequisite: Registered in professional physical therapy curriculum. S.

PT 655. Interprofessional Health Care. 1 Credit.

Students will gain knowledge of competency-based interprofessional team behaviors and clinical judgment through collaboration, creating an environment that promotes quality healthcare outcomes, diversity, and health equity. Prerequisite: Registered in Professional Physical Therapy Curriculum. F,S.

PT 659. Prevention, Wellness, and Health Promotion. 2 Credits.

The theory and practice of prevention of injury, maintenance and improvement of wellness, and promotion of health and healthy behaviors across the lifespan. Concepts are applied to the general, athletic, and industrial populations, with a view to interprofessional involvement in wellness optimization. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

PT 660. Teaching in Physical Therapy Practice. 1 Credit.

Principles and strategies for effective teaching in academic and clinical environments. Patient/client, peer, and professional presentations. Students will develop educational programming for a community audience. Prerequisite: Registered in professional physical therapy curriculum. SS.

PT 661. Professional Development. 1 Credit.

Targeted techniques will be employed to promote and optimize physical therapy services related to legislative and advocacy efforts. Professional development as a practitioner of physical therapy is emphasized through introduction and development of a professional portfolio. Prerequisite: Registered in professional physical therapy curriculum. SS.

PT 672. Teaching Experience in Physical Therapy. 1-4 Credits.

Supervised experience in University teaching in Physical Therapy. Projects in curriculum development, formulation of teaching/learning objectives, teaching materials, evaluation tools, and experience in competency-based learning environment. Prerequisite: Registered in Professional Physical Therapy Curriculum. Repeatable to 4.00 credits. F,S,SS.

PT 690. Directed Studies: Clinical Concepts in Physical Therapy. 1-12 Credits.

Individualized study of a particular area of interest for the student approved by his/her major advisor and supervised by preceptors with specialty and/or recognized expertise in the area of interest. Study may include library research, clinical research, discussion/seminars, projects, and directed clinical experience. Prerequisite: Registered in Professional Physical Therapy Curriculum. Repeatable to 12.00 credits. F,S,SS.

PT 691. Current Concepts in Physical Therapy. 1-4 Credits.

Research and independent study in a specialized area of Physical Therapy. Prerequisite: Registered in Professional Physical Therapy Curriculum. F,S,SS.

PT 692. Seminar in Physical Therapy. 1-4 Credits.

This course serves to focus student attention toward graduate study in Physical Therapy. Explore and discuss areas of interest for students and faculty. May repeat to 4 credits maximum. Prerequisite: Registered in Professional Physical Therapy Curriculum. Repeatable to 4.00 credits. S,SS.

PT 995. Scholarly Project. 1-2 Credits.

Students provide a final written and oral report to the faculty on the results of their collaborative Scholarly Project. The written component will be a scientific manuscript that conforms to the standards for submissions consistent with the School of Graduate Studies and Physical Therapy Journal. Prerequisite: Registered in Professional Physical Therapy Curriculum. Repeatable to 3.00 credits. F,S.

PT 996. Continuing Enrollment. 1-12 Credits.

Repeatable. S/U grading.

PT 997. Research III:Independent Study. 2 Credits.

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Undergraduate Courses for Graduate Credit

PT 409. Clinical Pathology I. 3 Credits.

Selected pathological conditions affecting the musculoskeletal system. Associated orthopedic diagnoses, surgical interventions, the influences of co-morbidities and pharmaceutical interventions, and safety concerns are discussed with an application to physical therapy patient/client management during orthopedic rehabilitation. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

PT 410. Clinical Pathology II. 3 Credits.

Selected pathological conditions of body systems, associated surgical interventions, the influence of co-morbidities, pharmaceutical interventions, and safety concerns are discussed with application to physical therapy patient/client management. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. SS.

PT 412. Biomechanics and Kinesiology. 4 Credits.

Biomechanics and kinesiology of musculature acting on the extremities and trunk. Clinical applications and evaluation of joint integrity and mobility, gait, range of motion and muscle performance. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

PT 413. Exercise in Health and Disease. 3 Credits.

Basic foundation for theoretical and practical application of exercise science principles for physical therapists. Exercise science principles are applied to healthy individuals and individuals with disease, impairments, and/or functional limitations. Examination and intervention procedures incorporate aerobic capacity/endurance, anthropometric characteristics, and muscle performance activities. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

PT 415. Motor Control. 3 Credits.

Lecture and laboratory work in therapeutic exercise to establish and maintain muscular control and coordination, including muscle re-education, facilitation, and relaxation. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum.

PT 417. Clinical Exam and Evaluation I. 4 Credits.

Emphasizes patient/client management elements of examination and evaluation. Emphasis is given to the musculoskeletal and neurological systems. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum.

PT 422. Anatomy for Physical Therapy. 5 Credits.

Detailed lectures and demonstrations on musculoskeletal anatomy and neuroanatomy. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum.

PT 423. Neuroscience for Physical Therapy. 4 Credits.

Structure and function of the human nervous system including pathophysiology and clinical applications relevant to physical therapy practice. Prerequisite: Registered in Professional Physical Therapy Curriculum. F.

PT 426. Manual Therapy I. 2 Credits.

Introduction to joint mobilization/manipulation techniques. Emphasis is on mobilization/manipulation as it relates to peripheral joints and soft tissues of the human body. Basic examination, evaluation, and intervention techniques for the spine are also presented. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.