

DOCTOR OF PHYSICAL THERAPY

Courses

DPT 130. Therapeutic Dosing. 3 Hours

This class examines the direct relationship of therapeutic dosage calculations in clinical science professions. Emphasis is on problem solving and dosage calculations routinely practiced in the clinical science professions. Transfer of basic mathematics skills into practical application is a key element of the class.

DPT 805. Functional Physiology I: Introduction to Pathology. 3 Hours

A small group, problem based learning course which focuses on the study of human physiological function of the major organ systems including clinical manifestations associated with pathophysiological conditions. Introduction of applied physiology and exercise physiology concepts in musculoskeletal, cardiovascular, and pulmonary function. Foundations of pharmacokinetics and pharmacodynamics are also studied in this course.

DPT 806. Functional Physiology II: Exercise Physiology. 2 Hours

Advanced concepts of applied physiology and exercise physiology concepts in musculoskeletal, cardiovascular, and pulmonary function are studied.

DPT 807. Wellness, Health, and Promotion in Physical Therapy. 2 Hours

This course focuses on the role of the physical therapist in health promotion, wellness, and prevention. The purpose of the course is to gain an understanding of fundamental concepts of health, wellness, screening for risk, and the theoretical bases underlying behavior change. These concepts will be applied to improving health and wellness in oneself. Using him or herself as the first patient, the student will learn how to assess risk for specific conditions, generate goals to decrease risk and increase health and wellness, develop and implement a plan to achieve his or her goals, and assess the results. Class sessions will be primarily small group discussion and lecture.

DPT 810. Professional Seminar I: Health Care. 2 Hours

Provides a comparative overview of health care systems and the role of physical therapy. Students learn about the APTA and the development of professional behaviors as they work on personal strategies for integration into the profession. Learning styles are presented and discussed within the context of clinical practice and professional development.

DPT 811. Professional Seminar II: Clinical Practice. 2 Hours

Designed to introduce the student to clinical practice. Students learn professional communication and documentation skills. Topics include the medical record, personnel supervision, scheduling, legal and ethical issues including sexual harassment, and the cost of service delivery.

DPT 815. Human Gross Anatomy. 7 Hours

Comprehensive course with lecture and human cadaver dissection, emphasizing the skeletal, muscle, and nervous systems. The aim is to provide a solid morphological basis for a synthesis of anatomy, physiology, and the physical therapy clinical sciences. The lab section involves dissection and identification of structures in the cadaver and the study of charts, models, radiographic anatomy, and projected materials.

DPT 818. Neuroscience. 5 Hours

This is a comprehensive course including clinical lab which covers neuroanatomy and physiology of the central, peripheral and autonomic nervous systems as they pertain to normal somatic function. Common disorders of the nervous system are also introduced. This course will use lecture, discussion questions, small group case work, anatomical specimens and models to study the functional and clinical anatomy and physiology of the central nervous system.

DPT 820. Movement Science. 3 Hours

Lecture-based course which integrates anatomy, biomechanics, and clinical theory related to normal and abnormal movement and function of the spine, trunk, and appendicular muscular system.

DPT 821. Introduction to Clinical Examination. 3 Hours

This course covers the essential components for conducting a physical therapy examination. Students learn basic examination skills such as taking a patient history and assessing pain, vital signs, posture, limb girth, sensation, reflexes and general function and fitness. The course emphasizes tests to measure joint motion (goniometry) and muscle strength (manual muscle testing).

DPT 825. Clinical Science V: Current Technology. 2 Hours

Designed to present the general principles of pharmacology in relation to physical therapy practice. Basic concepts of drug therapy, nomenclature, and drug safety are introduced. Pharmacokinetic principles including drug administration, absorption, distribution, action, and interaction are reviewed as they relate to physical therapy and rehabilitation.

DPT 840. Clinical Science I: Principles of Therapeutic Exercise. 2 Hours

This course presents foundational principles of therapeutic exercise as related to physical therapy rehabilitation. Specific principles will include types of exercises, loading, striated muscle contraction types, exercise adherence, compensations during movement, exercise prescription and exercise progression. Students will begin to develop clinical reasoning skills by applying these foundational principles through case based learning, laboratory experiences, and small group presentations.

DPT 841. Clinical Science II: Introduction to Medical Diagnostics. 2 Hours

Designed to provide knowledge and the appropriate screening tools necessary for examining and intervening with clients in the physical therapy setting. The medical examination/evaluation is presented including the patient interview, identification of red flags or risk factors, symptom investigation, and review of systems. Medical diagnostic modalities are discussed with focus on radiology, MRI, CT, diagnostic US, and EMG.

DPT 842. Clinical Science III: Modalities. 1 Hour

A comprehensive course including lab principles and practice of physical therapy modalities with focus on thermotherapy, cryotherapy and electrotherapy procedures. Problem-solving approach to clinical decision making is integrated into the application of modalities, including hydrotherapy, aquatic therapy, superficial and deep heat modalities, cold modalities, and electrotherapy procedures in patient populations across the life span.

DPT 844. Clinical Science IV: Applied Therapeutic Exercise. 1 Hour

This course focuses on the application of evidence-based therapeutic exercise for specific and highly complex patient populations including those with post-surgical, occupational, athletic, and medical considerations. Students will utilize rehabilitative technology and equipment to optimize exercise prescription and progression across the continuum of rehabilitation through lab and community-based experiences. Prerequisites: Successful completion of all UD DPT prerequisite courses.

DPT 846. Maturation Science I. 3 Hours

Comprehensive course including clinical lab, which is designed to examine human development and maturation from conception to aging. Emphasis is placed on the recognition of appropriate neurological, cognitive, motor, and psychosocial characteristics related to various states of growth, development, and maturation.

DPT 847. Maturation Science II. 1 Hour

Continuation of DPT 846 with further study of the maturational influences on therapeutic intervention. Students learn clinical examination and reasoning skills required for physical therapy intervention throughout the life span. Students are introduced to congenital developmental and age-related pathologies.

DPT 848. Maturation Science. 3 Hours

Comprehensive course including clinical lab, which is designed to examine human development and maturation from conception to aging. Emphasis is placed on the recognition of appropriate neurological, cognitive, motor, and psychosocial characteristics related to various states of growth, development, and maturation.

DPT 850. Acute, Emergency, and Medical Management of the Athlete. 2 Hours

Post-graduate course designed for acute and emergency physical therapy management of athletes. Content will include pre-participation medical screening, emergency response, primary and secondary on-field examination, physical therapy management of medical conditions, environmental factors in relation to athletic participation, and management of acute injuries. The purpose of this course is to prepare physical therapists for acute athlete management in the clinic and on field settings. Lectures will be delivered in an online, asynchronous format. Self study will also be an essential component of this course. Three live discussions will be held throughout the course online as well. Additionally, a lab intensive weekend will be required involving hands on experience of acute and emergency response skills. This will satisfy the Acute Management of Injury and Illness Course required to sit for the American Board of Physical Therapy Specialties (ABPTS) Sports Physical Therapy Specialist Certification Exam.

DPT 851. Principles of Strength, Conditioning, and Athletic Performance. 2 Hours

Post-graduate course designed to explore strength and conditioning factors on athletic performance. Content will include familiarization with strength and conditioning principles and vocabulary, periodization principles, performance assessment through functional tests, wearable trackers, and force plates, and discussion of both legal and illegal ergogenic aides in sport. Weekly online lectures will be delivered asynchronously through Canvas and self study through the MedBridge platform will also be required. Three live discussions will be held throughout the course online as well. Additionally, a lab intensive weekend will be required involving hands on experience including functional testing and hands on evaluation and treatment techniques.

DPT 852. Holistic Management of the Athlete. 2 Hours

Post-graduate course designed to explore rehabilitation of the athlete from multiple lenses. Content will include sports psychology, sports nutrition, identification/management of those with relative energy deficiency in sport, equipment needs for rehabilitation, injury prevention, or adaptation for those with differing abilities, and awareness of the unique needs of less traditional athletic activities. Weekly online lectures will be delivered asynchronously through Canvas and self study through the MedBridge platform will also be required. Three live discussions will be held throughout the course online as well. Additionally, a lab intensive weekend will be required involving hands on experience including functional testing and hands on evaluation, assessment, and treatment techniques.

DPT 853. Advanced Management of Lower Extremity Musculoskeletal Conditions. 2 Hours

Post-graduate course designed to provide advanced knowledge in the management of lower extremity orthopedic injuries. Content will include evaluation and treatment of lower extremity conditions, functional requirements in sport for lower extremities, analysis of sports specific movements, return to sport criteria/assessment, and imaging as it relates to the lower extremity. Weekly online lectures will be delivered asynchronously through Canvas and self study through the MedBridge platform will also be required. Three live discussions will be held throughout the course online as well. Additionally, a lab intensive weekend will be required involving hands on experience including functional testing and hands on evaluation and treatment techniques.

DPT 854. Advanced Management of Upper Extremity Musculoskeletal Conditions. 2 Hours

Post-graduate course designed to provide advanced knowledge in the management of upper extremity orthopedic injuries. Content will include evaluation and treatment of upper extremity conditions, functional requirements in sport for upper extremities, analysis of sports specific movements, return to sport criteria/assessment, and imaging as it relates to the upper extremity. Weekly online lectures will be delivered asynchronously through Canvas and self study through the MedBridge platform will also be required. Three live discussions will be held throughout the course online as well. Additionally, a lab intensive weekend will be required involving hands on experience including functional testing and hands on evaluation and treatment techniques.

DPT 855. Advanced Management of Head and Spinal Conditions. 2 Hours

Post-graduate course designed to provide advanced knowledge in the management of head, vestibular, and spinal injuries. Content will include acute/chronic management of concussion, headache, vestibular conditions, evaluation and treatment of common diagnoses of the spine, associated imaging, pelvic floor considerations, and post partum considerations. Weekly online lectures will be delivered asynchronously through Canvas and self study through the MedBridge platform will also be required. Three live discussions will be held throughout the course online as well. Additionally, a lab intensive weekend will be required involving hands on experience including functional testing and hands on evaluation and treatment techniques.

DPT 910. Professional Seminar III: Leadership & Management. 3 Hours

A seminar course with increased emphasis on business and management principles. Students will be asked to correlate didactic information learned to this point with information obtained from clinical fieldwork. Documentation review will be performed with emphasis on the management perspective. Updates on healthcare reform and impact on physical therapy as a business will be a focus area. Students will learn self-marketing techniques to optimize the employment search. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 911. Professional Seminar IV: Business & Marketing. 1 Hour

Seminar course designed to help the student formulate strategies for professional assessment and development post-graduation. Topics include professional values and responsibilities, expanding your professional options, continuing education, specialty certification, and advanced degrees. Each student participates in a comprehensive program evaluation and does a formal presentation of the graduate project. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 950. Clinical Rotation I: General Medicine/Neurology. 6 Hours

This clinical rotation in rehabilitation will provide full-time clinical exposure, allowing the student to integrate current knowledge and training with supervised patient care. Emphasis is on the continued development of clinical skills and reasoning, along with the development of interpersonal skills as a member of the health care team. Prerequisites: Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 951. Clinical Rotation I: General Medicine. 4 Hours

Six-week clinical rotation in general medicine to provide full-time clinical exposure, allowing students to integrate current knowledge and training with supervised patient care. Emphasis on continued development of clinical reasoning along with identification and utilization of appropriate clinical resources. Prerequisite(s): Successful completion of all coursework that precedes the rotation.

DPT 952. Clinical Rotation II: Neurology. 4 Hours

This eight-week clinical rotation in rehabilitation will provide full-time clinical exposure, allowing the student to integrate current knowledge and training with supervised patient care. Emphasis is on the continued development of clinical skills and reasoning, along with the development of interpersonal skills as a member of the health care team. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 953. Clinical Rotation III: Orthopedics. 6 Hours

This 12-week clinical rotation in orthopedics/sports medicine will provide full-time clinical exposure, allowing the student to integrate current knowledge and training with supervised patient care. Emphasis is on the continued development of clinical skills and reasoning, with increasing responsibility for independent decision making and clinical interaction. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 954. Clinical Rotation IV: Contract Clinical. 6 Hours

This final clinical rotation is designed to allow the student to continue developing clinical skills and reasoning in an area of special interest. Increasing independence in clinical practice is expected, with increased clinical responsibilities in the areas of program development and implementation, as well as administration and clinical management to include staff supervision. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 971. Examination and Intervention: General Medicine. 6 Hours

This course is designed to facilitate skill acquisition along with clinical reasoning and decision making related to physical therapy care and management of patients with general medicine pathology. Students learn physical therapy examination tests and measures and therapeutic interventions using a variety of teaching methods including direct instruction, inquiry-based learning and cooperative learning. Corequisites: DPT 981.

DPT 972. Examination and Intervention: General Medicine II. 3 Hours

This course is designed to facilitate advanced skill acquisition along with advanced clinical reasoning and decision making related to physical therapy care and management of patients with general medicine pathology. Students learn physical therapy examination tests and measures and therapeutic interventions using a variety of teaching methods including direct instruction, inquiry-based learning and cooperative learning.

DPT 973. Examination and Intervention: Neurology I. 6 Hours

This course is designed to facilitate skill acquisition along with clinical reasoning and decision making related to physical therapy care and management of patients with neurologic pathology. Students learn physical therapy examination tests and measures and therapeutic interventions using a variety of teaching methods including direct instruction, inquiry-based learning and cooperative learning. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 974. Examination and Intervention: Neurology II. 4 Hours

This course is designed to facilitate skill acquisition along with clinical reasoning and decision making related to physical therapy care and management of patients with pediatric pathology. Students learn physical therapy examination tests and measures and therapeutic interventions using a variety of teaching methods including direct instruction, inquiry-based learning and cooperative learning.

DPT 974A. Pediatrics I. 2 Hours

Designed to facilitate skill acquisition along with clinical reasoning and decision making as it relates to the physical therapy care and management of the pediatric patient. Students learn physical examination tests and measures along with therapeutic interventions appropriate for this population. Therapeutic procedures and protocols appropriate for these patients and taught with special consideration for patient/family needs and education.

DPT 974B. Pediatrics II - Examination and Intervention. 2 Hours

A continuation of Examination and Intervention Pediatrics I designed to facilitate skill acquisition along with clinical reasoning and decision making as it relates to the physical therapy care and management of the pediatric patient. Students learn physical examination tests and measures along with therapeutic interventions appropriate for this population. Therapeutic procedures and protocols appropriate for these patients and taught with special consideration for patient/family needs and education. Prerequisites: Successful completion of all UD DPT prerequisite courses.

DPT 975. Examination and Intervention: Orthopedics I. 6 Hours

Course description is currently unavailable. This laboratory course is designed to help the student develop clinical skills and reasoning essential to the examination, evaluation, and physical therapy intervention of orthopedic patients. Emphasis is focused on clinical reasoning and clinical skill development as they apply to common extremity and spine pathologies. Skills include: examination techniques, use of modalities, therapeutic exercise, soft tissue techniques, mechanical traction, and articular mobilization. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum. Corequisite(s): DPT 985.

DPT 976. Examination and Intervention: Advanced Musculoskeletal Topics. 4 Hours

This course is designed to facilitate skill acquisition along with clinical reasoning and decision making as it relates to the physical therapy care and management of orthopedic patients with complex musculoskeletal pathology and dysfunction. Students learn physical examination tests and measures along with therapeutic interventions appropriate for this population. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 977. Examination and Intervention: Advanced Physical Therapy I. 4 Hours

This course is designed to facilitate skill acquisition along with clinical reasoning and decision making as it relates to the physical therapy care and management of various advanced topics including cardiopulmonary rehabilitation, women's health issues, manual therapy strategies, electrotherapeutics as well as orthopedic, neurological, and pediatric therapeutic interventions. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 981. Seminar: General Medicine. 5 Hours

This course addresses comprehensive issues related to the pathology and physical therapy management, of the general medicine patient. A variety of teaching methods are used including direct instruction, inquiry-based learning, cooperative learning and small group problem-based learning.

DPT 982. Clinical Issues Seminar: General Medicine II. 3 Hours

This course addresses comprehensive issues related to the pathology and physical therapy management, of the advanced general medicine patient. A variety of teaching methods are used including direct instruction, inquiry-based learning, cooperative learning and small group problem-based learning.

DPT 983. Clinical Issues Seminar: Neurology. 5 Hours

This course addresses comprehensive issues related to the pathology and physical therapy management, of the neurologic patient. A variety of teaching methods are used including direct instruction, inquiry-based learning, cooperative learning and small group problem-based learning. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 984. Clinical Issues Seminar: Neurology II. 3 Hours

This course addresses comprehensive issues related to the pathology and physical therapy management, of the Pediatric patient. A variety of teaching methods are used including direct instruction, inquiry-based learning, cooperative learning and small group problem-based learning.

DPT 984A. Clinical Issues Seminar: Pediatrics I. 2 Hours

Presentation/discussion of comprehensive issues related to pathology and physical therapy management of the pediatric patient. Topics include treatment within a variety of settings including school-based, hospital-based, private practice, and home care; psychosocial issues relating to the patient and family; funding; documentation; and pharmacological management. A variety of teaching methods are used including direct instruction, inquiry-based learning, cooperative learning and small group problem-based learning.

DPT 984B. Pediatrics II - Clinical Issues Seminar. 1 Hour

A continuation of Clinical Issues Seminar Pediatrics I including presentation/discussion of comprehensive issues related to pathology and physical therapy management of the pediatric patient. Topics include treatment within a variety of settings including school-based, hospital-based, private practice, and home care; psychosocial issues relating to the patient and family; funding; documentation; and pharmacological management. A variety of teaching methods are used including direct instruction, inquiry-based learning, cooperative learning and small group problem-based learning. Prerequisites: Successful completion of all UD DPT prerequisite courses.

DPT 985. Clinical Issues Seminar: Orthopedics I. 5 Hours

This seminar course focuses on comprehensive and complex issues related to physical therapy management of the orthopedic patient, including: application of biomechanical principles to movement and therapeutic exercise; principles of conditioning; training and therapeutic exercise prescription and rehabilitation; physical therapy management of the post-operative patient; medical diagnostics; documentation; and clinical administration. Students will study the history of manual therapies and current philosophies of patient care. The student will also be given an opportunity to develop interpersonal communication and work ethic skills associated with project development and production and role playing patient simulations. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum. Corequisite(s): DPT 975.

DPT 986. Clinical Issues Seminar: Advanced Musculoskeletal Topics. 3 Hours

Seminar presenting/discussing comprehensive issues related to physical therapy management of the complex orthopedic patient with select axial musculoskeletal pathologies. Includes chronic pain management, medical diagnostics, surgical intervention for the spine, differential diagnosis, and age-related pathologies. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 987. Clinical Issues Seminar: Advanced Therapy. 3 Hours

Seminar/discussion on issues related to physical therapy care and the profession. Includes preventive health care programs, physical therapy consultation, burn and wound care management, industrial rehabilitation, and sports medicine. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 988. Clinical Practice Electives. 4 Hours

Clinical Education Workshops: Concentrated lecture/lab instruction in selected advanced physical therapy patient-care topics including: advanced orthopedics, Back to Golf, MET, manual therapy for lymphedema, advanced NDT, rehabilitation technology, advanced prosthetics, advanced handling for pediatric patients, and orthotic fabrication. Clinical Enrichment Seminars: This seminar/discussion course will address select issues related to physical therapy care and the profession. Topic areas include: cardiopulmonary rehabilitation, women's health issues, medical management of the complex acute care patient, treatment of patients with terminal illness, and the rehabilitation of patients with burns. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 991. Research I. 2 Hours

An introductory course on research methods and design. Emphasis is placed on introducing statistical models, use of statistical software, experimental design, and the development of critical reasoning skills for reading and evaluating current research literature. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 992. Research II. 2 Hours

Research methodology with an emphasis on clinical research applications, applied statistics and research design. Prerequisites: Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 993. Research III. 2 Hours

Upon successful completion of this course: the student will be able to critically appraise the literature with regards to psychometric qualities of diagnostic tests and clinical prediction rules, validation methods, and be familiar with basic epidemiological and multivariate statistics. A student will also be able to identify appropriate statistical methods for a given clinical research study. Prerequisite(s): Successful completion of all prior course work as outlined in the University of Dayton DPT curriculum.

DPT 996. Research Thesis. 1-10 Hours

Course credit for DPT student research.

DPT 999. Independent Study. 1-10 Hours

Independent study.