Physical Therapy (PT)

PT 440. Introduction to the Theory and Practice of Physical Therapy in the United States. 0-20 hours.
International students further develop and apply learning from their physical therapy curriculum in an academic training environment that fosters learning, inquiry, critical thinking, and global awareness of contemporary physical therapy practice. Course Information: Satisfactory/Unsatisfactory grading only. No graduation credit. Field work required. Prerequisite(s): Successful completion of all previous didactic and fieldwork courses required by the home institution, and a letter of recommendation from a PT faculty member at the home institution; and English proficiency. Restricted to visiting physical therapy students from international universities. Class Schedule Information: To be properly registered, student must enroll in one Lecture-Discussion and one Laboratory.

PT 496. Independent Study. 1-4 hours.
Open to undergraduate, graduate and professional program students to provide exposure and experience to the field of rehabilitation sciences in the classroom, clinic, research and/or community. Course Information: May be repeated for a maximum of 8 hours. Prerequisite(s): Consent of the Instructor.

PT 502. Measuring Motor Development and Function. 3 hours.
Psychometric characteristics of standardized tests of motor development and function. Survey of tests, test evaluation, interpretation of test scores, and application to clinical practice. Course Information: Prerequisite(s): Consent of the instructor and a graduate-level course in statistics.

PT 503. Analysis of Motor Development. 3 hours.
Sensorimotor development in children, relating changes to maturation, skill acquisition, motor learning, environmental influences and individual differences. Includes critical review of current literature. Course Information: Prerequisite(s): Consent of the instructor. Recommended background: Prior experience in or knowledge of child development. Course is targeted to graduate and professional students pursuing health-related degrees.

PT 504. Assessment of Developmental Processes in Infancy. 2 hours.
Motor and behavioral competencies of the newborn, both term and preterm. Assessment of behavior and motor dysfunction in infants; analysis of the literature on intervention. Course Information: Prerequisite(s): Consent of the instructor and credit or concurrent registration in a graduate-level course in statistics.

PT 505. Advances in Rehabilitation Sciences I. 3 hours.
Highlights the advances in the knowledge in rehabilitiation of neurological, pediatric and geriatric populations. Provides exposure to methods of assessment, treatment and outcome measurements, and basic understanding of recovery of functions. Course Information: Prerequisite(s): Graduate or professional standing; and consent of the instructor.

PT 506. Advances in Rehabilitation Sciences II. 3 hours.
Highlights advances in knowledge in non-pharmacological management of pain and rehabilitation of orthopedic and cardiopulmonary populations. Covers assessment, treatment and outcome measurements, and basic understanding of recovery of functions. Course Information: Prerequisite(s): Graduate or professional standing; and consent of the instructor.

PT 510. Control of Posture and Locomotion. 2 hours.
Provides an analysis of normal and developmental aspects of posture, balance and gait. In addition, assessment and rehabilitation of posture, balance and gait will be discussed through the use of current literature in the field. Course Information: Prerequisite(s): Consent of the instructor.

PT 511. Therapeutic Intervention. 3 hours.
Provides clinicians with an approach to integrate research into practice. The goal is to acquire skills to evaluate therapeutic interventions in the literature and in practice. Course Information: Prerequisite(s): Consent of the instructor.

PT 520. Mechanics of Joint Dysfunction. 3 hours.
Principles of mechanics applied to pathology of joint components; mechanical and neurological implications of extremity and spinal joint dysfunction; critical review of pertinent literature. Course Information: Prerequisite(s): PT 519. Class Schedule Information: To be properly registered, students must enroll in one Laboratory-Discussion and one Lecture.

PT 521. Biomechanics of Locomotor Dysfunction. 3 hours.
Principles of mechanics applied to the study of human movement and walking pattern. Kinematic and kinetic analysis of normal and pathological deviations. Course Information: Prerequisite(s): Human Physiology and Anatomy I or equivalent courses and consent of instructor.

PT 529. Science in Practice Seminar I. 3 hours.
Introduction to methods of scientific inquiry as applied to clinical problem solving in physical therapy. Critique of physical therapy research. Course Information: Same as PT 629. Prerequisite(s): Successful completion of first semester of the Doctor of Physical Therapy program or consent of the instructor.

PT 531. Musculoskeletal Dysfunction I. 5 hours.
PT 531 is the second of two musculoskeletal courses for students to learn about examination and physical therapy interventions for the individual with musculoskeletal disorders of the upper and lower extremities. Course Information: Same as PT 631. Prerequisite(s): PT 531: Successful completion of a physical therapy program from a university outside the United States. Consent of Instructor required. Class Schedule Information: To be properly registered, students must enroll in one Lecture-Discussion and one Laboratory-Discussion.

PT 532. Musculoskeletal Dysfunction II. 5 hours.
Physical Therapy management of the individual with musculoskeletal disorders of the head, neck and spine and includes examination and evaluation, diagnosis, prognosis, and intervention. Course Information: Same as PT 632. Prerequisite(s): Successful completion of a physical therapy program at a university outside the United States. Consent of Instructor required. Class Schedule Information: To be properly registered, students must enroll in one Laboratory-Discussion and one Lecture-Discussion.

PT 533. Neuromuscular Dysfunction I. 5 hours.
Management of clients with neuromuscular disorders. Pathophysiology, risk factors, medical/surgical management of disorders of the neuromuscular system. Examination, evaluation, diagnosis, prognosis, and intervention, with emphasis on pediatrics. Course Information: Same as PT 633. Prerequisite(s): Successful completion of first semester of the Doctor of Physical Therapy program or consent of the instructor. Class Schedule Information: To be properly registered, students must enroll in one Laboratory-Discussion and one Lecture-Discussion.

PT 534. Neuromuscular Dysfunction II. 5 hours.
Examination, assessment, development of goals and intervention plans for persons with neuromuscular disorders. Principles of motor learning, control and development. Medical/surgical management and risk factors. Course Information: Same as PT 634. Prerequisite(s): Successful completion of first year and first semester of second year of the Doctor of Physical Therapy program or consent of the instructor. Class Schedule Information: To be properly registered, students must enroll in one Laboratory-Discussion and one Lecture-Discussion.

PT 540. Principles and Practices of Health Promotion and Disease Prevention. 4 hours.
Focuses on the major causes of premature morbidity and mortality, theoretical determinants of health and health-related behaviors from the individual to the environment and theoretically grounded intervention strategies for risk reduction. Course Information: Extensive computer use required. Prerequisite(s): Consent of the instructor. Class Schedule: To be properly registered, students must enroll in one Lecture and one Discussion.

PT 541. Theoretical Applications of Technology in Health Promotion and Health Care. 4 hours.
Introduces students to the general use and overall value of information and communication technology in health and health care settings. Special attention will be paid to the role of theory in technological learning and usage. Course Information: Extensive computer use required. Prerequisite(s): Consent of the instructor.

PT 542. Applied Health Communications and Content Marketing. 4 hours.
Provides students with a critical understanding of the role of print, broadcast, and online media in health promotion and disease prevention with specific focus on designing, implementing, and evaluating content marketing campaigns. Course Information: Extensive computer use required. Prerequisite(s): Consent of the instructor. Class Schedule Information: To be properly registered, students must enroll in one Lecture and one Discussion.

PT 550. Teaching Approaches and Strategies. 2 hours.
Describes and discusses evidence-based teaching approaches and provide the opportunity to develop and assess active teaching strategies for the classroom and clinic that are learner-centered and outcomes-based. Course Information: Prerequisite(s): Graduate standing.

PT 555. Cardiovascular Imaging and Research Methods I. 2 hours.
Teaches students to understand the principal aspects of cardiac and vascular imaging modalities including physical principles, instrumentation, cardiovascular anatomy/physiology and pathophysiology. Course Information: Same as CEP 655. Recommended background: Human Anatomy, Human Physiology, or Human Biology at the undergraduate or graduate level coursework. Class Schedule Information: To be properly registered, students must enroll in one Lecture and one Laboratory.

PT 556. Cardiovascular Imaging. 2 hours.
Teaches the skills and knowledge to conduct cardiac and vascular imaging studies using advanced tools and techniques such as transesophageal echocardiography, contrast ultrasound, image analysis, archiving and retrieval. Course Information: Same as CEP 656. Prerequisite(s): CEP 655. Recommended Background: Human Anatomy, Human Physiology, or Human Biology at the undergraduate or graduate level coursework. Class Schedule Information: To be properly registered, students must enroll in one Lecture and one Laboratory.

PT 557. Ultrasound Clinical Rotation I. 3 hours.
Students will acquire the clinical skills and knowledge to conduct cardiac and vascular imaging studies and interpret the clinical finding and cardiovascular structural and functional parameters revealed by such imaging techniques. Course Information: Same as CEP 657. Prerequisite(s): CEP 655; and consent of the instructor. Recommended background: Human Anatomy, Human Physiology, or Human Biology at the undergraduate or graduate level coursework.

PT 558. Ultrasound Clinical Rotation II. 3 hours.
Students will acquire the clinical skills and knowledge to conduct cardiac and vascular imaging studies and interpret the clinical finding and cardiovascular structural and functional parameters revealed by such imaging techniques. Course Information: Satisfactory/Unsatisfactory grading only. Same as CEP 658. Prerequisite(s): CEP 656 and CEP 657; and consent of the instructor. Recommended background: Human Anatomy, Human Physiology, or Human Biology at the undergraduate or graduate level coursework.

PT 562. Neuroplasticity and Rehabilitation. 2 hours.
A review of evidence and mechanisms underlying neuroplasticity from a neural-behavioral perspective. Emphasis is on the adult brain and neuroplasticity related to learning and aging, and brain repair with focus on rehabilitation after brain injury. Course Information: Prerequisite(s): Consent of the instructor. Recommended background: NEUS 501 and PT 605 and KN 252 and PSCH 184.

PT 563. Research Methods in Rehabilitation Sciences. 3 hours.
Provides students with foundational skills in clinical research including: formulation of research questions, research designs, and review of outcome measures. Students will develop a research study proposal. Course Information: Prerequisite(s): Consent of the instructor and any graduate-level statistics course.

PT 570. Planning and Evaluating Intervention Programs in Various Settings. 3 hours.
Planning, implementation, and evaluation of services for children with special needs. Emphasis on conceptual frameworks in human development and family systems. Program planning and evaluation. Course Information: Prerequisite(s): Consent of the instructor. Recommended background: Prior experience or knowledge of child development.

PT 571. Biomechanics of Normal and Abnormal Movement. 3 hours.
Principles of statics and dynamics exemplified by human movements. Examination of muscle mechanics, joint forces, stability. Redundancy and intersegmental interactions in multijoint movements. Course Information: Same as KN 571. Prerequisite(s): Consent of the instructor.

PT 572. Psychology of Motor Control and Learning. 3 hours.
Advanced principles of the control and acquisition of complex, voluntary skills. Course Information: Same as KN 572. Prerequisite(s): KN 372; or consent of the instructor.

PT 573. Instrumentation for Rehabilitation Sciences Research. 3 hours.
Introduction to data acquisition and signal processing theory and techniques, covering basic rehabilitation sciences research techniques, including motor capture system, electromyograms, Doppler ultrasound, skin blood flow and oxygen saturation. Course Information: Extensive computer use required.

PT 574. Instrumentation for Motor Control Research. 3 hours.
Introduction to oscilloscopes, amplifiers, filters, and transducers. Origin and processing of electromyograms. Motion capture and processing techniques. Course Information: Same as KN 574. Prerequisite(s): KN 571 or PT 571.

PT 580. Advanced Clinical Reasoning in Orthopedic Manual Physical Therapy I: Extremities. 2 hours.
Designed to promote clinical reasoning and understanding of the research literature for enhancement of evidenced based clinical practice with an emphasis on extremity joint dysfunction.

PT 581. Advanced Clinical Reasoning in Orthopedic Manual Therapy II: Spine. 2 hours.
Designed to promote clinical reasoning and understanding of the research literature for enhancement of evidenced-based clinical practice with an emphasis on spinal joint dysfunction.

PT 582. Advanced Manipulation and Orthopedic Manual Physical Therapy I: Extremities. 3 hours.
Designed to provide an evidenced-based approach toward evaluation and management of peripheral musculoskeletal disorders, including thrust and non-thrust manipulation. Course Information: Prerequisite(s): Must be a U.S. licensed physical therapist.

PT 583. Advanced Manipulation and Orthopedic Manual Physical Therapy II: Spine. 3 hours.
Designed to provide an evidenced-based approach toward evaluation and management of spinal musculoskeletal disorders, including thrust and non-thrust manipulation. Course Information: Prerequisite(s): Must be a U.S. licensed physical therapist.

PT 584. Clinical Mentorship I: Extremities. 1-3 hours.
Physical therapy practice under the tutelage of a mentor. Students will apply and master skills, techniques and reasoning methods learned in the didactic coursework. Emphasis is on peripheral musculoskeletal disorders. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated to a maximum of 3 hours. Prerequisite(s): Instructor approval required; must be a U.S. licensed physical therapist. Limited to students enrolled in Orthopedic Manual Physical Therapy Fellowship program.

PT 585. Clinical Mentorship II: Spine. 1-3 hours.
Physical therapy practice under the tutelage of a mentor. Students will apply and master skills, techniques and reasoning methods learned in the didactic coursework. Emphasis is on spinal musculoskeletal disorders. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated to a maximum of 3 hours. Prerequisite(s): Instructor approval required; must be a U.S. licensed physical therapist. Limited to students enrolled in Orthopedic Manual Physical Therapy Fellowship program.

PT 586. Physical Therapy Residency Mentorship. 2-4 hours.
Students will learn to apply and develop advanced skills in a specialized clinical environment that fosters learning, inquiry, and critical/creative thinking through mentorship of experienced clinicians. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated to a maximum of 10 hours. Prerequisite(s): Students must have successfully completed each of the following: 1. Successfully graduated from an entry-level DPT program. 2. Be licensed to practice as a physical therapist in the State of Illinois or be scheduled to sit for the board exam. 3. Students scheduled to sit for the board exam must pass the exam on their first attempt or will be withdrawn from the class.

PT 587. Post Professional Residency: Clinical Educator Practicum. 1-5 hours.
Designed for students in the Clinical Educator Track-Post-Professional Physical Therapy Residency to become proficient in: developing/delivering lectures, running/assisting in labs and becoming clinical educators for PT and PTA students. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated to a maximum of 10 hours. Prerequisite(s): Students must have successfully completed each of the following: 1. Successfully graduated from an entry-level DPT program. 2. Be licensed to practice as a physical therapist in the State of Illinois or be scheduled to sit for the board exam. 3. Students scheduled to sit for the board exam must pass the exam on their first attempt or will be withdrawn from the class.

PT 591. Special Topics in Rehab Science Lecture-Discussion. 1-5 hours.
Selected topics of interest related and tangential to rehab science, education, health, wellness, prevention and health policy. Course Information: Prerequisite(s): Consent of the instructor.

PT 592. Special Topics in Rehab Science Lecture and Laboratory. 0-5 hours.
Selected topics of interest related and tangential to rehab science, education, health, wellness, prevention and health policy. Course Information: May be repeated for a maximum of 8 hours of credit. If the topics vary, students may register for more than one section per term. Prerequisite(s): Consent of the instructor. Recommended background: Education, Nutrition, Kinesiology, Rehabilitation Science or Physical Therapy.

PT 594. Special Topics in Rehabilitation Sciences. 1-4 hours.
Selected topics of interest within physical rehabilitation specialty areas. Particular attention is given to topics of importance on evidence-based strategies in physical rehabilitation. Course Information: May be repeated to a maximum of 8 hours if topics vary. Students may register in more than one section per term. Prerequisite(s): Consent of the instructor.

PT 595. Seminar in Rehabilitation Sciences. 1 hour.
Topics of current interest in physical rehabilitation sciences. Includes discussions of current research and important new developments in the specific disciplines. Course Information: Satisfactory/Unsatisfactory grading only. Prerequisite(s): Consent of the instructor.

PT 596. Independent Study. 1-4 hours.
For graduate students who wish to pursue independent study not related to their project/thesis research. Course Information: May be repeated to a maximum of 8 hours. Students may register in more than one section per term. Prerequisite(s): Consent of the instructor.

PT 597. Project in Rehabilitation Sciences. 0-9 hours.
Supervised practicum in laboratory or field setting in which recent research findings are applied, tested, and evaluated. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated. Prerequisite(s): Graduate or professional standing, and consent of the adviser and director of graduate studies.

PT 598. Research in Rehabilitation Sciences. 0-16 hours.
Indpendent research in one area of rehabilitation sciences directed by a faculty member. Course Information: Satisfactory/Unsatisfactory grading only. Prerequisite(s): Foundation courses in research methods and graduate level statistics and consent of the instructor.