

# PT - PHYSICAL THERAPY

## PT 5010 Clinical Applications I Cr. 1

First part-time supervised clinical experience for physical therapy students. Orientation to clinical education; practice to develop professional behaviors, observation skills, communication, basic examination and intervention. Two half-days per week in seven-week term. Offered Winter.

**Prerequisite:** PT 5320 (may be taken concurrently) with a minimum grade of C- and PT 5020 (may be taken concurrently) with a minimum grade of C-

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$50

## PT 5020 (WI) Foundations of Physical Therapy Cr. 2

Sociological and historical background of the PT profession. Professional behavior, patient care interaction and medical terminology. Basic physical therapy care procedures, documentation, patient education, care in medical emergencies. Offered Fall.

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$55

## PT 5030 Basic Patient Care in Physical Therapy Cr. 2

Introduction to the basic skills necessary for patient care and provide a foundation to the theory and practice of basic patient care procedures for the Physical Therapist. Offered Fall.

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in a Doctor of Physical Therapy degree; enrollment limited to students in the Pharmacy and Health Sciences.

## PT 5070 Clinical Applications II Cr. 2

Second part-time supervised clinical experience for physical therapy students. Orientation to clinical education including basic and intermediate examination and intervention skills, professional behavior, communication, documentation. Offered Fall.

**Prerequisite:** PT 5010 (may be taken concurrently)

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

## PT 5100 Therapeutic Exercise I Cr. 3

Foundational course designed to focus on the principles and techniques of therapeutic exercise for patients with pathological conditions to the neuromusculoskeletal system. Students will develop and administer treatment plans for specific patient problems and progress treatment plans based on patient condition and response to treatment. Offered Fall.

**Prerequisite:** PT 5430 and PT 5500

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$50

## PT 5120 Human Growth and Development Cr. 2

Theories and basic principles in prenatal, physical, sensorimotor, perceptual, cognitive, social, emotional and language growth and development. Implications for physical therapy evaluation and treatment of children with developmental disabilities. Offered Winter.

**Prerequisite:** PT 5020

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$10

## PT 5300 Surface Anatomy Cr. 2

Laboratory-based course teaching skills for soft tissue palpation, identification of surface anatomy landmarks, soft tissue mobilization and massage. Offered Fall.

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

## PT 5320 Basic Examination and Evaluation Procedures Cr. 3

Lecture and laboratory experience focusing on principles and procedures of foundational medical screening, physical therapy differentiation, and clinical reasoning and decision-making skills; basic principles and techniques for posture, integumentary, neurological, range of motion, and strength examination and evaluation, documenting progress and outcome, and the continued development of patient care skills. Offered Winter.

**Prerequisite:** PT 5200 (may be taken concurrently) with a minimum grade of C- and PT 5300 (may be taken concurrently) with a minimum grade of C- and PT 5400 (may be taken concurrently) with a minimum grade of C- and PT 5500 (may be taken concurrently) with a minimum grade of C-

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$10

## PT 5400 Neurosciences for Health Care Professionals Cr. 3

Study of the human central nervous system; emphasis on sensory and motor systems and structures that contribute to normal movement. Offered Fall.

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$50

**Equivalent:** OT 5400

## PT 5430 Clinical Medicine Cr. 4

Disease processes, and medical and surgical interventions. Role of physical therapy as part of comprehensive multi-disciplinary health care team. Offered Spring/Summer.

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

## PT 5500 Kinesiology and Biomechanics Cr. 3

Normal movement and biomechanics applied to the human body. Offered Winter.

**Prerequisite:** PT 5200 with a minimum grade of C- and PT 5210 with a minimum grade of C- and PT 5400 with a minimum grade of C-

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$10

## PT 5505 Clinical Applications of Human Anatomy Cr. 3

Knowledge of basic human anatomy for students in health science professional programs; foundation for further study in clinical sciences. Offered Winter.

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Equivalent:** OT 5505

## PT 5510 Clinical Applications of Human Anatomy: Laboratory Cr. 1

Examination of prosections, dissection of human cadavers; didactic study. Offered Fall.

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$220

**Equivalent:** OT 5510

**PT 5650 Pathophysiology for Health Sciences Cr. 3**

Fundamental knowledge of the nature of disease for the health sciences student; physiologic and morphologic changes accompanying disease processes; mechanisms of repair and recovery. Offered Winter.

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Equivalent:** OT 5650, RT 5650

**PT 5660 Pathokinesiology Cr. 3**

Continuation of P T 5500 designed to teach the biomechanical and kinesiological principles of human movement as related to anatomical and neuroanatomical structure. Analysis of pathological motion and pathokinesiology of selected joints will be included. Offered Spring/Summer.

**Prerequisite:** PT 5500

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$10

**PT 5800 Clinical Education I Cr. 3**

Full-time supervised clinical experience for physical therapy students. Six-week experience. First in a two-course clinical education sequence. Offered Spring/Summer.

**Prerequisite:** PT 7120 with a minimum grade of C or PT 7220 with a minimum grade of C

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$20

**PT 5820 Clinical Education II Cr. 3**

Full-time supervised clinical experience for physical therapy students. Six-week experience. Second in a two-course clinical education sequence. Offered Spring/Summer.

**Prerequisite:** PT 5800 with a minimum grade of C

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$30

**PT 6100 Therapeutic Exercise II Cr. 3**

Advanced application of principles and techniques of therapeutic exercise; evaluation and modification of therapeutic exercise plan of care, based on physical and functional responses and characteristics of patients or clients. Offered Fall.

**Prerequisite:** PT 5100

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$60

**PT 6200 Diversity, Ethics and Legal Issues in Health Care Cr. 3**

Impact of diversity and legal practice standards, including federal, state, and institutional regulations related to patient care and fiscal management of health care practice. Issues in cultural awareness, cultural sensitivity, cultural competence, ethics, and ethical decision making in personal, professional, and societal contexts. Self-analysis of personal attitudes, values, and beliefs. Offered Winter.

**Prerequisite:** PT 5120

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**PT 6300 Research I: Critical Thinking Cr. 2-3**

Introduction to evidence-based practice and clinical reasoning and decision making. Identification, location, critique and analysis of evidence. Evidence-based case report appropriate for publication required, if elected for three credits. Offered Fall, Winter.

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**PT 6310 Physiology of Exercise II Cr. 3**

Metabolic, neuromuscular, cardiovascular, and respiratory adjustments to acute and chronic exercise in health and disease, including body composition and weight control, nutritional considerations, and the effects of different environments on exercise performance. Offered Fall.

**Prerequisite:** KIN 3570 with a minimum grade of C-

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**Equivalent:** KIN 6310, PSL 6010

**PT 6400 Teaching and Learning in Health Care Cr. 2-3**

Exploration of theoretical and practical issues pertinent to physical therapy profession: educational methods, adult learning theories, instructional design methodologies, evaluation, instructional management. Additional project required if elected for three credits. Offered Winter.

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**PT 6500 Pharmacology Cr. 2**

Effects of drug distribution, absorption and excretion as pertaining to physical therapy. Major drug categories, OTC, and nutritional supplements, pertinent to acute and chronic responses to physical therapy; indications, mechanisms, effects. Offered Fall.

**Prerequisite:** PT 5430 and PT 7400

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**PT 6700 Motor Learning and Motor Control Cr. 2-3**

Current theories and concepts in processes of motor skill acquisition and performance, from a behavioral objective. Additional evidence-based case reports required if elected for three credits. Offered Winter.

**Prerequisite:** PT 5400 with a minimum grade of C-

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**PT 6750 Seminar: Complementary and Alternative Health Care Cr. 2**

Physical, psychological, and nutritional approaches relevant to practice of physical therapy. Seminar course. Offered Winter.

**Prerequisite:** PT 5430 and PT 5650

**Restriction(s):** Enrollment limited to students in the Pharmacy and Health Sciences.

**PT 7000 Therapeutic Modalities Cr. 3**

Lecture and laboratory experiences focusing on principles and procedures for using physical agents and spinal traction. Tissue inflammation and repair, pain, superficial and deep heat, cryotherapy, electrotherapy, and spinal traction included. Integumentary evaluation and wound management. Offered Fall.

**Prerequisite:** PT 5430 and PT 5660

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$20

**PT 7100 Management of Patients with Orthopedic Conditions I Cr. 3**

Lecture and laboratory experience focusing on knowledge, principles, clinical reasoning and decision making skills, examination and evaluation procedures, and interventions required for managing patients with impairments, functional limitations, and disabilities due to musculoskeletal pathologies of the extremity joints across the life span, and the continued development of patient care skills. Offered Fall.

**Prerequisite:** PT 5320 with a minimum grade of C- and PT 5500 with a minimum grade of C- and PT 5100 (may be taken concurrently) with a minimum grade of C-

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$15

**PT 7120 Management of Patients with Orthopedic Conditions II Cr. 3**

Lecture and laboratory experience focusing on knowledge, principles, clinical reasoning and decision making skills, examination and evaluation procedures, and interventions required for managing patients with impairments, functional limitations, and disabilities due to musculoskeletal pathologies of the spinal column and extremity joints across the life span, and the continued development of patient care skills. Offered Winter.

**Prerequisite:** PT 7100

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$15

**PT 7200 Management of Patients with Neurological Disorders I Cr. 3**

Basic principles and techniques of assessing problems associated with neurological disorders including postural tone, sensation, superficial and developmental reflexes, quality of movement, perceptual-motor skills and functional mobility. Offered Yearly.

**Prerequisite:** PT 5400 and PT 6700

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$15

**PT 7220 Management of Patients with Neurological Disorders II Cr. 3**

Theory, principles and application of the neurophysiological approach to evaluation and treatment. Proprioceptive neuromuscular facilitation, neuro development treatment, sensory integration, and sensory-motor approaches. Offered Winter.

**Prerequisite:** PT 7200

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$15

**PT 7300 Orthotics and Prosthetics Cr. 3**

Principles and techniques of prosthetic and orthotic function, component selection and application, use and training. Upper and lower extremity devices, and spinal devices, wheelchairs, ambulatory aids, assistive devices and environmental control systems. Advanced gait and movement biomechanics and evaluation. Offered Fall.

**Prerequisite:** PT 5100

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$20

**PT 7320 Rehabilitation Procedures Cr. 3**

Theoretical issues and treatment of patients with spinal cord injury, traumatic brain injury, problems of aging, and chronic neuromuscular conditions. Offered Winter.

**Prerequisite:** PT 7200 (may be taken concurrently) and PT 7300 (may be taken concurrently)

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**PT 7400 Cardiopulmonary Rehabilitation Cr. 4**

Physiology and pathophysiology of disorders of the cardiac and pulmonary systems. Evaluation and treatment of cardiopulmonary disorders. Offered Winter.

**Prerequisite:** PT 5100 and PT 5430 and PT 6310

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$20

**PT 7600 Physical Therapy for Medical and Surgical Conditions Cr. 3**

Management of patients with complex problems including medical and surgical conditions seen in acute care hospital settings. Offered Winter.

**Prerequisite:** PT 5650 and PT 5430

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$25

**PT 7700 Research II: Design & Methodology Cr. 2**

Introduction to basic principles of research theory, design, and methodology for physical therapy. Biostatistics and analysis of scientific literature relevant to physical therapy. Offered Fall.

**Prerequisite:** PT 6300

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**PT 7720 Research III: Data Analysis and Interpretation Cr. 2**

Basic principles of research design as it relates to the theory and practice of physical therapy. Students will analyze relevant scientific literature, design, develop and implement a research project, and learn basic computer skills in utilizing a statistical analysis program. Offered Winter.

**Prerequisite:** PT 7700

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$20

**PT 7740 Research IV: Research Practicum Cr. 1**

Basic principles of research design as it relates to the theory and practice of physical therapy. Students will develop and implement a research project and present the results in several formats. Offered Fall.

**Prerequisites:** ([PT 6300]) AND ([PT 7700]) AND ([PT 7720])

**Restriction(s):** Enrollment is limited to Graduate level students.

**PT 7990 Directed Study Cr. 1-4**

Independent study: critical analysis or review of new or unique topics in health care; or physical therapy role, approach, methodology, techniques or scientific rationale for professional practice. Oral and written presentation required. Elective. Offered Yearly.

**Prerequisite:** PT 5100

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**PT 8000 Therapeutic Management of Pediatric Populations Cr. 3**

Principles and application of the elements of physical therapy practice in the management of pediatric populations. Offered Fall.

**Prerequisite:** PT 5120 and PT 7220

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$15

**PT 8110 Geriatrics Cr. 2**

Theories and basic principles of physical, sensorimotor, perceptual, cognitive, social, emotional, and language changes during the aging process. Emphasis is placed on the how the aging process impacts functional independence and contributions from all body systems. Implications for physical therapy evaluation and treatment for the aging population are examined. Offered Fall.

**Restriction(s):** Enrollment limited to students in the Doctor of Physical Therapy program; enrollment limited to students in the Pharmacy and Health Sciences.

**PT 8170 Professional Development and Reflective Practice Cr. 3**

Exploration of novice vs. expert practice in physical therapy; role of reflection in developing professional skills and behaviors. Current professional and legal issues in provision of physical therapy services. Web-based course. Offered Every Term.

**Restriction(s):** Enrollment limited to students in the Doctor of Physical Therapy program; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**PT 8200 Management in Physical Therapy Practice Cr. 2**

Overview of health care systems; financing and administration of physical therapy services within various health care systems. Offered Fall.

**Restriction(s):** Enrollment limited to students in the Doctor of Physical Therapy program; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**PT 8300 Differential Diagnosis for Health Sciences Cr. 3**

Principles and procedures designed to facilitate the integration of previously-introduced examination and evaluation skills, in order to perform differential diagnosis for primary care practice. Offered Every Term.

**Restriction(s):** Enrollment limited to students in the Doctor of Physical Therapy program; enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**PT 8400 Diagnostic Procedures for Health Sciences Cr. 2-3**

Medical diagnostic procedures and application of results as related to provision of physical therapy health services, including diagnostic imaging and laboratory tests. Additional project required if elected for three credits. Offered Every Term.

**Prerequisite:** PT 5650 with a minimum grade of C and PT 5430 with a minimum grade of C

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**PT 8500 Clinical Decision Making Cr. 3**

Integration of didactic and clinical knowledge in development of diagnostic prognostic skills in physical therapy; focus on refining competencies in peer referral across health care disciplines; development of strategies for clinical decision making. Offered Yearly.

**Prerequisite:** PT 8300 with a minimum grade of C

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$80

**PT 8600 Health Promotion and Wellness Cr. 2**

Dimensions of health promotion and wellness, including implementation strategies for different populations. Analysis of physical, emotional and cost benefits. Identification of needs and development of practice plan for groups and individuals. Offered Yearly.

**Prerequisite:** PT 5100 and PT 7400

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**PT 8800 Clinical Internship I Cr. 4**

Final full-time supervised clinical experiences for physical therapy students. First of two-course series. Offered Yearly.

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$20

**PT 8820 Clinical Internship II Cr. 8**

Full-time supervised clinical internship. Continuation of P T 8800. Offered Fall.

**Prerequisite:** PT 8800 (may be taken concurrently) with a minimum grade of C

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.

**Course Material Fees:** \$30

**PT 8850 Clinical Practicum Cr. 3**

Monitored clinical practice in a focused area of physical therapy practice. Focus may include: administration and management, cardiopulmonary, neurology, orthopedics, integumentary care, pediatrics, and teaching. Offered Every Term.

**Restriction(s):** Enrollment is limited to Graduate level students; enrollment limited to students in the Pharmacy and Health Sciences.