University of Evansville Doctor of Physical Therapy Program

Year 1 Summer

PT 441/541 Clinical & Professional Issues I: Introduction
First, in a series of clinical and professional issues courses. Introduces professional practice expectations of physical therapy. Provides orientation and strategies for success in the professional program and an introduction to American Physical Therapy Association. Students explore the practice of physical therapy utilizing the Guide to Physical Therapist Practice and the core values of the profession. Introduction to professional ethics and communication required in professional relationships.

PT 405/505 Human Physiology
A detailed study of human function, beginning at a cellular level. Emphasis is placed on the neuromuscular, cardiovascular, pulmonary, renal, and endocrine systems. The effects of exercise and pathology are integrated into each system.

PT 432/532 Kinesiology
Introduces elements and principles essential to the study of human movement, including principles of introductory biomechanics and biomechanical behavior of biological tissues. Discusses concepts of kinetics, kinematics, length-tension relationships, and the functional significance of the structure of biological tissues. Emphasizes the clinical application of mechanical concepts.

PT 433/533 Human Growth and Development
Presents typical human development from conception to death, including functional changes in posture and movement. Presents growth, maturation, adaptation, motor control, and motor learning processes. Discusses concepts of the critical period, health risk, physiologic reserve, and senescence. The relationship between physical, cognitive, and social theories of human development and age-related system changes is given. Views motor behavior across the life span within a social and psychological context.

Year 1 Fall

PT 431/531 Gross Anatomy
For students in the physical therapy program. Emphasis on gross anatomy of the human skeleton, muscular, vascular, and nervous systems. Knowledge of gross anatomy provides students with a sound foundation upon which other courses in the physical therapy curriculum can directly or indirectly be related. Content presented in a regional approach includes anatomical concepts such as proper terminology, surface anatomy, and joint function. Gross anatomy is best learned in the laboratory through dissection of the human body. The course includes a laboratory experience.

PT 410/510 Foundations of PT
This course introduces the foundational proficiencies necessary for practice in the profession of physical therapy. Topics include body mechanics, elements of documentation (initial encounter, daily note, re-examination, discharge summary), effects of inactivity, foundations of therapeutic exercise, infection control, mobility training, patient/client equipment, patient/client stress, positioning and turning, posture preparation for patient/client care, proprioceptive neuromuscular facilitation trunk and extremity patterns, range of motion exercise, stretching
exercise, transfer training, vital signs, wheelchairs, and wound management. Principles from the Guide to Physical Therapist Practice are incorporated into the course, and written documentation, as suggested by the guide, is utilized for specific lab activities. Students participate in initial field experiences in acute care, inpatient rehabilitation, and pediatric facility.

PT 412/512 Physical Interventions
This lecture/lab course provides the student with an introduction to the therapeutic modality skills necessary for practice in the profession of physical therapy—electrical stimulation, hydrotherapy, massage, thermal modalities, traction, and ultrasound. Principles from the Guide to Physical Therapist Practice are incorporated into these skills, and written documentation, as suggested by the guide, is utilized for specific lab activities.

PT 414/514 Foundations in Therapeutic Exercise
This course introduces the student to commonly performed therapeutic exercise interventions. An emphasis will be placed on understanding therapeutic exercise from a motor control perspective and how pain affects motor control and exercise. Through lecture and laboratory experiences, common exercise progressions related to high volume conditions encountered in outpatient physical therapy practice will be covered. Students will learn therapeutic exercise techniques, which will be utilized in future patient management courses emphasizing the current best evidence.

PT 434/534 Medical Pathology I
Explores consequences of disruption in normal physiological and developmental processes. Common diseases and disorders involving all major body systems are addressed and selected systemic diseases. Topics include infectious disorders, immune system, traumatic, degenerative, and congenital origin diseases. Focuses on pathogenesis, clinical presentation, laboratory findings, prognosis, medical intervention including pharmacological agents, and implications related to physical therapy practice.

PT 451/551 Scientific Inquiry I
This is the first in a series of courses designed to prepare the physical therapist for practice in an evidence-based environment. Topics to be addressed in the series include research design and analysis, research ethics, and critical appraisal of published research in diagnosis, prognosis, intervention, and harm.

Year 1 Spring

PT 417/517 Tests and Measures
Introduces basic procedures for objective musculoskeletal system assessment by measuring joint range of motion (ROM) and muscle strength. Laboratory sessions allow practice in the techniques of goniometry and manual muscle testing (MMT). Inclinometers and hand-held dynamometers are introduced. Opportunity to learn about isokinetic testing at local outpatient clinics.

PT 421/521 Patient Management I: Musculoskeletal
Initiates patient management sequence. Expands upon the anatomical, kinesiological, and therapeutic exercise principles presented in previous courses—emphasis on examination and assessment of the musculoskeletal system. Common conditions and impairments are introduced and reinforced through case examples. Appropriate interventions are addressed conceptually and performed in the laboratory. Addresses concepts and techniques related to proprioceptive neuromuscular facilitation. Medical documentation is integrated into laboratory
activities and assignments. Experiential opportunities included.

**PT 452/552 Scientific Inquiry II**
This is the second in a series of courses designed to prepare the physical therapist for practice in an evidence-based environment. Topics to be addressed in the series include research design and analysis, research ethics, and critical appraisal of published research in diagnosis, prognosis, intervention, and harm.

**PT 423/523 Wellness-experiential**
Addresses issues related to wellness, health promotion, health maintenance, and fitness and how these concepts can be incorporated into physical therapy practice. Areas of learning include primary health theory; needs; epidemiological factors; principles of exercise and physical fitness; effects of the environment, fitness, and nutrition on wellness; principles of motivation and behavior modification in health promotion; assessment techniques; development of a personal wellness profile; and identification of a specialized wellness program.

**PT 536 Medical Pathology II**
This course explores the consequences of disruption in normal physiological and developmental processes. Common diseases, disorders, and syndromes involving all major body systems are addressed, and selected systemic diseases. Topics include conditions of an infectious nature, immune system deficiency, and degenerative origin. The course focuses on the pathogenesis, clinical presentation, laboratory findings, prognosis, medical intervention, including pharmacologic agents, and implications related to physical therapy practice.

**Year 2 Summer**

**PT 661 Clinical I**
Active participation in this full-time clinical course emphasizes the development of professional behavior, written and verbal communication skills, and evaluation, examination, and interventions previously addressed in didactic coursework. Emphasizes physical therapy management of musculoskeletal conditions. (320 clinic hours)

**Year 2 Fall**

**PT 623 Patient Management III: Multiple Systems**
This course studies physical therapy management of patients with amputations, integumentary, oncologic disorders, and acute and chronic disorders seen in older adults. The student is expected to discuss the medical, surgical, and pharmacological management of these conditions, emphasizing problem-solving with the material presented in module format. Laboratory activities include balance assessment, wound assessment, management, lymphedema interventions including bandaging, geriatric screening, functional assessments, and exercise for the elderly. Concepts associated with limb amputations and prosthetic devices are addressed in laboratory settings. Students participate in an observational experience in a prosthetic clinic and at a health care facility specializing in wound care.

**PT 622 Patient Management II: Cardiovascular and Pulmonary**
Applies principles of rehabilitation science to patients with cardiovascular or pulmonary systems disorders. Topics include pathophysiology, patient assessment, medical and surgical management of disease, and safety. The course emphasizes designing, implementing, and administering a team-based approach to cardiovascular and pulmonary rehabilitation and
disease prevention.

PT 630 Rehabilitation Pharmacology
Presents essential aspects of the mechanism of action of drugs commonly employed in the practice of rehabilitation. Fundamental principles of drug action are followed by an in-depth discussion of specific drugs used. Topics include pharmacokinetics, pharmacodynamics, pharmacoeconomics, drug interactions, polypharmacy, and adverse drug reactions.

PT 631 Neurobiology
Lecture-lab. Normal development of the brain and spinal cord and the gross anatomy of these structures were examined. Subsequently, pathways and associated structures that mediate general sensory, special sensory, autonomic, and somatic motor functions are described, and the consequences of lesions of these pathways are discussed.

PT 651 Scientific Inquiry III
This course is the third in a series of courses designed to prepare the graduate to practice evidence-based and be an astute consumer and judge of scientific research. Topics include inferential statistics, probability and probability distributions, and various bivariate parametric and non-parametric statistical tests.

PT 727 Community Health
Expands the students' knowledge and experiences in health promotion, wellness, and autonomous care. Assists the student in analyzing and identifying community health needs. Areas of learning include physical therapists' role in community wellness programs and continued participation in the legislative and political processes as advocates for their communities health and wellness needs. Additionally, students examine health-related issues for individuals of varying races and ethnicities, national origins, and sexual orientations. Students develop and implement community-based health promotion, prevention, or wellness program for a specific segment of the population based on a needs assessment.

PT 670-01 Special Topics – Orthopedic
This course provides students who are interested in furthering their skills in the orthopedic physical therapy setting with advanced diagnostic and treatment interventions. An emphasis will be placed on identifying significant impairments hindering functional movement patterns and utilizing appropriate manual therapy and motor control exercise interventions to improve movement quality. Through lecture and laboratory experiences, the students will be able to diagnose movement pattern limitations and create appropriate treatment progressions related to their physical therapy evaluation.

Year 2 Spring

PT 626 Patient Management V: Neuromuscular
Studies on physical therapy management of patients with neurologic dysfunction, including stroke, traumatic brain injury, spinal cord injury, and multiple progressive conditions. Pathology, etiology, and natural history of these disorders are presented in tandem with their medical, surgical, and pharmacological management. Students are expected to be able to examine and evaluate patients with neurological dysfunction by selecting appropriate tests and measures, developing efficacious plans of care, implementing therapeutic interventions, and documenting results using the Guide format. Students are also expected to justify all decisions made as part of this patient management process. Experiential opportunities, clinical simulations, role-
playing, small group learning activities, and video demonstrations are used with problem-solving exercises to reinforce mastery of the material.

**PT 644 Behavioral Psychology**
Draws together theoretical constructs of psychology, neuropsychological, and behavioral medicine to help explain the etiology of expected behavioral and emotional responses to compromised motor function and neurologic impairment typically experienced by patients in physical therapy rehabilitation and provide guidance in managing these patients.

**PT 643 Leadership & Administration**
Examines leadership and administration theories and practices specific to physical therapy and rehabilitation. Practical implementation of this information is emphasized with the students actively involved in strategic planning, marketing, supervising, budgeting, adequate documentation, and balancing human and fiscal resources within health care environments. Additional leadership concepts of motivation, communication, group dynamics, managing change, and organizational development are explored.

**PT 632 Medical Imaging**
Covers basic principles of diagnostic imaging pertinent to clinical practice. Familiarizes the student with magnetic resonance imaging, computed tomography, ultrasonography, and plain film studies of the spine and extremities. Students view and interpret normal and abnormal images for these modalities. The student examines research related to diagnostic imaging about sensitivity, specificity, and correlation with clinical findings.

**PT 641 Clinical and Professional Issues II: Ethics**
Continuation of clinical and professional issues course sequence encourages value clarification and ethical decision-making and its relationship to health care. Various situations, dilemmas, and individuals are utilized to represent the topics discussed. Topics intended to develop and heighten awareness of dilemmas faced by health care providers and their patients.

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**Year 3 Summer**

**PT 761 Clinical II**
The full-time clinical experience emphasizes examining, evaluating, and managing patients with neurologic, neuromuscular, cardiopulmonary, or integumentary disorders. Further development of professional interaction skills and written and verbal communication are addressed. (320 clinic hours)

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**Year 3 Fall**

**PT 726 Patient Management VI: Integrated Musculoskeletal**
Builds on previously acquired examination and intervention skills related to musculoskeletal patient management—emphasis on examination and subsequent evaluation leading to the physical therapy diagnosis for the adult and athletic population. Covers, in detail, evidence-based interventions emphasizing manual therapy and therapeutic exercise in lecture and laboratory sessions. Includes examination and intervention models utilized in contemporary clinical practice, such as functional movement training and McKenzie. Specific techniques include muscle energy, neural mobilization, trigger points, joint mobilization/manipulation, and segmental stabilization for the spine. Therapeutic exercise and sport-specific progressions are addressed in relation to commonly encountered physical impairments. Master clinicians and
physicians share expertise through classroom and laboratory presentations related to each topic covered. Students utilize these concepts and techniques to develop comprehensive patient management programs. Students may participate in an athletic event coverage observational experience.

PT 724 Patient Management IV: Pediatrics
This course reviews studies on developmental disabilities that impact infants and children's posture and movement across the life span. Presents examination and evaluation of infants and children with specific congenital and acquired disorders. Physical therapy management includes handling and positioning, developmental activities, adaptive equipment, and orthoses presented in lecture and lab format. Actual patient and video demonstrations are used when possible for reinforcement, experiential learning, case studies, and treatment planning activities.

PT 728 Advanced Screening and Differential Diagnosis
Enables students to function as independent health care providers to identify signs and symptoms that fall outside the scope of physical therapy practice and refer clients appropriately to additional medical care. Addresses strategies to determine the source of various signs and symptoms. Tools used in the course include questionnaires based on presenting symptoms. Questionnaires to be used as a guide in history-taking and inter-practitioner communication.

PT 742 Clinical and Professional Issues III: Transition to Practice
This course is the culmination of clinical and professional issues courses. The course is focused on the processes involved in the transition from student to new professional. Content includes career planning topics such as interviewing, résumé building, professional licensure, and opportunities and responsibilities of the new professional. The importance of becoming a high-performance, well-balanced professional will be emphasized.

PT 670-02 Special Topics – Pediatrics
This course provides students who are interested in furthering their skills in the pediatric physical therapy setting with advanced diagnostic and treatment interventions. Through lecture and laboratory experiences, the students will be able to diagnose and create appropriate treatment progressions related to their physical therapy evaluation and treatment.

PT 670-03 Special Topics – Neurological
This course provides students who are interested in furthering their skills in the neurological physical therapy setting with advanced diagnostic and treatment interventions. Through lecture and laboratory experiences, the students will be able to diagnose and create appropriate treatment progressions related to their physical therapy evaluation and treatment.

Year 3 Spring

PT 751 Scientific Inquiry IV
This is the fourth in a series of courses designed to prepare the physical therapist for practice in an evidence-based environment. Topics to be addressed in the series include research design and analysis, research ethics, and critical appraisal of published research in diagnosis, prognosis, intervention, and harm.

PT 762 Clinical III
Full-time clinical experience assists the student in achieving clinical competence as an entry-level physical therapist. The student examines and evaluates patients and designs,
implements, and analyses a physical therapy plan of care. Includes documentation of test results and patient progress. It can occur in an outpatient, acute care, or rehabilitation setting. Students can manage musculoskeletal, neuromuscular, neurologic, geriatric pathologies, developmental disabilities, and cardiopulmonary dysfunction. (280 clinic hours)

PT 763 Clinical IV
The full-time clinical experience completes the achievement of clinical competence as an entry-level physical therapist. The student examines and evaluates patients and designs, implements, and analyzes a physical therapy care plan as an entry-level practitioner. Professional communication and socialization further developed. Clinical experience can occur in an outpatient, acute care, rehabilitation, or specialized setting. (280 clinic hours)