

PT Physical Therapy

PT 603 PHARMACOLOGY I. (1)

Fundamental concepts of pharmacology and their impact on the physical therapy management of patients. This course focuses on the integration of basic science, research, and clinical intervention. Prereq: Admission to the Physical Therapy Professional program and successful completion of the spring and summer semesters in the first year.

PT 604 PHARMACOLOGY II. (1)

This course will build on the material covered in PT 603, Pharmacology I in Physical Therapy, focusing on how drug classes influence rehabilitation treatment strategies. Prereq: Successful completion of PT 603.

PT 605 WELLNESS AND SPORTS NUTRITION. (3)

Emphasis is directed toward nutrition as applied to prevention of disease through lifestyle management and the application of nutrition in exercise and sport. Targeted focus areas are: body composition and energy expenditure, the metabolic basis of weight management, nutrient needs throughout the lifecycle, the metabolic changes associated with obesity, behavioral management of obesity, nutrient metabolism and exercise, water and electrolyte balance during exercise, nutritional ergogenic aids, nutrition-strength and performance enhancement. Prereq: PGY 412G, and BCH 401G or equivalent or consent of instructor. (Same as CNU/NS 605.)

PT 610 ETHICS IN CLINICAL SCIENCES RESEARCH. (1)

Students will examine ethical issues in biomedical research using a case-study approach. Representative issues addressed may include data selection and retention, plagiarism, scientific review of grants and manuscripts, scientific misconduct, and informed consent. Prereq: Graduate student status. (Same as CD/CLS/CNU/RAS 610.)

***PT 628 GERONTOLOGY FOR PHYSICAL THERAPY STUDENTS. (2)**

PT 628 will utilize biological aspects of aging as the foundation, and integrate psycho-social-spiritual characteristics associated with aging, health and function through the use of lectures, discussions, case studies, service learning, panel discussions and clinical experience. Students will work closely with older adults in terms of PT management for those with functional limitations and in health care promotion and prevention. Prereq: Admission to the Physical Therapy Professional program and successful completion of the first year.

PT 645 RESEARCH AND MEASUREMENT IN PHYSICAL THERAPY. (3)

An analysis of various procedures and measuring instruments used in clinical practice and research in physical therapy. Emphasis is placed on the theory, application, and interpretation of the measurements in the evaluation of published materials. Basic statistical techniques and their appropriate use will be presented. Prereq: Admission to the Physical Therapy professional program and to the Graduate School.

PT 650 DYSFUNCTION OF PERIPHERAL JOINTS. (3)

This course is an advanced approach to assessment and therapeutic management of musculoskeletal problems involving peripheral joints. Lecture, two hours; laboratory, two hours per week. Prereq: Consent of instructor.

PT 651 DYSFUNCTION OF VERTEBRAL JOINTS. (3)

This course concentrates on advanced theories and techniques of assessment and therapeutic management of musculoskeletal problems of the back. Lecture, two hours; laboratory, two hours per week. Prereq: Consent of instructor.

PT 652 PATHOMECHANICS. (3)

An application and research oriented investigation into the science of abnormal human movement. The course involves the pathologic aspects of neural control, muscle contraction, assessment and motion analysis, joint mechanics, and noncontractile tissue as they relate to human movement and kinetics. Lecture, two hours; laboratory, two hours per week. Prereq: HPR 515 or consent of instructor.

***PT 654 MOTOR CONTROL THEORY AND INTERVENTION. (4)**

This course explores current knowledge regarding the neurophysiological mechanisms involved in motor control from birth to adulthood. The course also explore a variety of therapeutic interventions with motor control as a foundation. Prereq: Admission to the PT professional program or consent of the instructor.

PT 655 NEUROMOTOR DEVELOPMENT. (3)

This is an advanced course on normal neuromotor development and the deviations from normal with emphasis on the infant. Prereq: Consent of instructor.

PT 668 RESEARCH TOPICS IN PHYSICAL THERAPY: ANALYSIS. (1-3)

This course is intended to introduce the student to methods of analyzing data and problems of writing a scientific paper for publication. Students will analyze data they have collected as it relates to their research problems. Their written manuscripts will be due at the end of this course. May be repeated to a maximum of three credits. Prereq: Admission to the Physical Therapy professional program and successful completion of the first year or permission of the instructor.

PT 669 RESEARCH TOPICS IN PHYSICAL THERAPY: OUTCOMES. (1-3)

This course is intended to introduce students to the process of turning a finished research manuscript into an oral research presentation. Students will be responsible for audiovisuals, handouts, and any other methods used to make their presentations. In addition to faculty advisor input and grading, students will critique their own presentations and gain experience in critique of other professional research presentations. May be repeated to a maximum of three credits. Prereq: Admission to the Physical Therapy professional program and successful completion of the second year or permission of the instructor.

PT 676 ELECTROPHYSIOLOGICAL TESTING

AND THERAPEUTICS. (1-3)

The student is introduced to the principles of electricity, how it affects the muscle and nerve, its use in physical therapy for patient assessment and management, and its safety aspects. Lectures and laboratory exercises are included. Students in the professional program will enroll for at least one credit in the first year of the professional program and at least one credit in the second year of the professional program. May be repeated to a maximum of three credits. Prereq: Admission to the Physical Therapy Professional program and successful completion of the first two semesters of the program.

PT 686 INTEGRATIVE CARE FOR HEALTH SCIENCES. (1-3)

Integrative care involves using the best possible treatments from both complementary/alternative and allopathic medicine, based on the patient's individual needs and condition. The selection of health care providers should be based on good science and this course will introduce students to complementary and alternative health care providers and the practices and beliefs of these practices as well as the scientific evidence in support of these practices. The course integrates successes from both worlds and describe the safest, least invasive, most cost-effective approach while incorporating a holistic understanding of the individual. May be repeated to a maximum of 3 credits (1 credit didactic and up to two credits experiential/research). (Same as AT 500, HS 500, CLS 500, CNU 500, CD 500, PA 500.)

PT 695 INDEPENDENT STUDY
IN PHYSICAL THERAPY. (1-3)

Independent work devoted to specific problems or area of interest in physical therapy. Work to be supervised by a graduate faculty member proficient in the area under study. May be repeated to a maximum of six credits. Prereq: Consent of instructor.

PT 705 SKELETAL MUSCLE
PHYSIOLOGY AND ADAPTABILITY. (3)

This course is designed to present a broad series of topics central to the understanding of human skeletal muscle physiology and therapeutic interventions. Course emphases will include muscle physiology rather than anatomic factors enabling the clinical implications of the dynamic alterable nature of muscle to be central. Included in these implications are aging, disease and injury processes, and therapeutic interventions/strategies. Prereq: Admission to the graduate program in Physical Therapy, or the Rehabilitation Sciences Ph.D. program or consent of instructor.

PT 748 MASTER'S THESIS RESEARCH. (0)

Half-time to full-time work on thesis. May be repeated to a maximum of six semesters. Prereq: All course work toward the degree must be completed.

PT 768 RESIDENCE CREDIT
FOR THE MASTER'S DEGREE. (1-6)

May be repeated to a maximum of 12 hours.

PT 770 SEMINAR IN PHYSICAL THERAPY. (3)

Each semester a contemporary topic in the field of physical therapy will be studied intensively. Lecture, two to three hours per week; laboratory, zero to two hours per week. May be repeated to a maximum of nine credits.

PT 805 NORMAL FUNCTIONAL ANATOMY. (3)

A regional study of the normal functional aspects of the neuromusculoskeletal systems, including the basic principles of biomechanics and human locomotion. This course runs during the entire 12-week summer term. Prereq: Admission to the Physical Therapy professional program and successful completion of the spring semester (first year of the professional program).

#PT 814 FOUNDATIONAL SKILLS. (2)

A course that lays the foundation for specific physical therapy procedures, basic to the delivery of care and professional development. Prereq: Admission to the Physical Therapy education program and consent of the instructor.

***PT 815 BASIC CLINIC SKILLS. (3)**

Theory, techniques, rationale, physiological effects, and indications of basic physical therapeutic procedures of hydrotherapy, thermal therapy, cryotherapy, muscle testing and goniometry evaluations, gait analysis, muscle function are presented in lecture. Techniques are demonstrated and practiced in laboratory. Prereq: Admission to the Physical Therapy professional program and successful completion of the spring semester (first year of the professional program).

***PT 821 MANAGEMENT OF VASCULAR AND INTEGUMENTARY DISORDERS. (2)**

The theoretic and clinical framework for physical therapy assessment and management of patients with disorders of the vascular and integumentary system, (i.e., open wounds, burns, etc.) are discussed. The student will utilize a problem solving approach to select, implement tests and measurements as well as therapeutic interventions. Prereq: Admission to the Physical Therapy professional program and successful completion of the first year.

PT 825 PROSTHETICS. (2)

This course will prepare the student to perform physical therapy evaluation and provide patient management as part of a prosthetic team. Lecture, 18 hours; laboratory, 34 hours. Prereq: Admission to the Physical Therapy professional program and successful completion of the first year.

PT 826 ORTHOTICS. (2)

This course will prepare the student to perform the physical therapy evaluation and provide patient management as part of a prosthetic or orthotic team. Lecture, 18 hours; laboratory, 30 hours. Prereq: Admission to the Physical Therapy professional program and successful completion of the first year.

***PT 827 SPINAL CORD INJURY. (2)**

This course will apply material and techniques from prior classes to the acute and chronic treatment of the spinal cord injured individual. Use of evaluation skills, body mechanics, knowledge of anatomy and physiology and program planning will play major roles in the course. In addition, you

will be encouraged to view the patient as a whole. Experiences will include patient demonstrations, videotapes, and personal experiences that will help you appreciate the lifestyle change that is inevitable after a severe injury. Prereq: Admission to the Physical Therapy professional program and successful completion of the first year.

**#PT 830 DIAGNOSTIC IMAGING,
SCREENING AND INSTRUMENTATION. (2)**

This course presents diagnostic screening processes utilized in PT. Included are the applications of results from specialized imaging instrumentation. Prereq: Successful completion of the previous second year courses in physical therapy.

PT 831 CLINICAL NEUROPHYSIOLOGY. (2)

The study of the regional organization of the brain and spinal cord, the ways in which they connect and how these connectivities influence human behavior with emphasis on motor behavior. The effect of disease states on normal brain and spinal cord function will be discussed. Prereq: Admission to the Physical Therapy professional program and successful completion of the spring and summer semesters in the first year.

**PT 834 INTRODUCTION TO PHYSICAL
THERAPY AND BIOETHICS. (3)**

An orientation to the profession of physical therapy including history, professional organization, role in health care, elementary patient care skills, use of the medical library and professional documentation. Bioethics will be introduced in relationship to moral issues in health care. Prereq: Admission to the Physical Therapy professional program.

PT 835 PHYSICAL THERAPY CLERKSHIP I. (1)

The student receives campus based clinical and classroom preparation for clinical experience. The student then observes patient treatment by experienced staff members and is supervised in the performance of elementary procedures involved in patient care. Offered on a pass/fail basis only. Prereq: Admission to the Physical Therapy professional program and successful completion of the first two semesters of the professional program.

***PT 836 PHYSICAL THERAPY CLERKSHIP III. (3)**

Students progress from performance of basic skills under close supervision to performance of those skills with more independence and adding more opportunities for evaluation and treatment experiences. Offered on a pass/fail basis only. Prereq: Admission to the Physical Therapy professional program and successful completion of the first three semesters of the professional program.

PT 837 PHYSICAL THERAPY INTERNSHIP I. (4)

This course is the first clinical internship. Students remain under supervision of clinical instructors but have increasing independence in evaluation, examination, treatment and discharge planning in a variety of clinical settings at selected sites. Offered on a pass/fail basis only. Prereq: Admission to the Physical Therapy professional program and successful completion of the first six semesters of the professional program.

PT 838 PHYSICAL THERAPY INTERNSHIP II. (6)

This course is the second clinical internship. Structure is similar to PT 837 but students continue to increase their repertoire of clinical skills and meet higher passing standards while receiving two additional weeks of clinical experience. Students will continue to perform physical therapy evaluation, examination, treatment and discharge. Offered on a pass/fail basis only. Prereq: Admission to the Physical Therapy professional program and successful completion of the first two years of the professional program.

PT 839 PHYSICAL THERAPY INTERNSHIP III. (6)

This course is the third of three clinical internships. Structure is similar to PT 837 and PT 838 but students continue to increase their repertoire of clinical skills. Students are expected to perform as entry level physical therapist by the end of the internship. Students are placed in appropriate sites throughout the Commonwealth and the United States. International experiences are available for selected students. Offered on a pass/fail basis only. Prereq: Admission to the Physical Therapy professional program and successful completion of the first two years of the professional program.

PT 840 ADVANCED CAPSTONE INTERNSHIP IV. (8)

This course consists of a 12 week internship in which the students are assigned to clinical facilities throughout Kentucky and beyond. Prereq: Course work preceding this in the professional program.

**PT 846 MEDICAL AND PHYSICAL THERAPY
MANAGEMENT OF ORTHOPEDIC PROBLEMS. (3)**

An introduction to medical procedures, including history, physical exam, laboratory data, radiographic film and medical and physical therapy management of orthopedic problems, including fractures, soft tissue injuries, scoliosis, joint replacements, muscle transplants and tendon repairs, will be presented. Prereq: Admission to the Physical Therapy professional program and successful completion of the first year.

***PT 847 MANAGEMENT OF
NEUROLOGICAL SYSTEMS I. (3)**

Medical and physical therapy management of neurological problems, including the neurological examination, seizures, degenerative and neurological diseases, will be presented. Lecture/laboratory, patient contact, and case study formats will be used. Lecture, two hours; laboratory, two hours. Prereq: Admission to the Physical Therapy professional program and successful completion of the first year.

**#PT 850 ADVANCED MANUAL
INTERVENTIONS. (3)**

A combined lecture and lab series focusing on advanced manual interventions, their indications, contraindication, anticipated goals and expected outcomes. Topics will include spinal mobilization and manipulation, manual lymph drainage, soft tissue, neural tissue and connective tissue mobilization along with current topics introduced through advancement of knowledge in the profession. Prereq: Admission to the PT program and successful completion of the second year or the consent of the instructor.

***PT 854 PATHOLOGY AND**

CLINICAL APPLICATION. (4)

PT 854 is a medical pathology course where major diseases and conditions of the body's systems are presented in terms of definition, etiology, pathogenesis, clinical presentation, prognosis and intervention. Prereq: Admission to the Physical Therapy professional program.

PT 856 THERAPEUTIC EXERCISE I. (2)

This introductory course provides an overview of therapeutic exercise and its relation to patient management, and development of skill in basic therapeutic exercise approaches for improving muscle performance, relaxation and mobilization. Lecture and laboratory sessions are included. This course runs during the entire 12-week summer term. Prereq: Admission to the Physical Therapy professional program and successful completion of the spring semester in the first year.

#PT 860 DIAGNOSIS AND MANAGEMENT OF COMPLEX PATIENTS. (3)

Lecture and case-based small group discussion of patients who have complex management needs in the biomedical, physical, psychosocial, and/or spiritual realms. Prereq: Successful completion of all prior course work in the PT program.

*PT 877 CARDIOPULMONARY PHYSICAL THERAPY. (3)

A combined lecture, laboratory series about the theoretical and practical foundations necessary for entry-level physical therapists to conduct examinations and interventions for individuals with primary or secondary cardiac and/or pulmonary dysfunction. Case studies, demonstrations and laboratory experiences are used to help the student. Prereq: Students must have successfully completed the first year of program.

PT 887 INTRODUCTION TO PHYSICAL THERAPY MANAGEMENT. (1)

An introduction to basic management techniques including purpose, goals and objectives; contracts, task statement and analysis; position descriptions; medicare; quality assurance; placement services. This course runs during the entire 12-week summer term. Prereq: Admission to the Physical Therapy professional program and successful completion of the first year.

PT 888 ADVANCED PHYSICAL THERAPY MANAGEMENT. (3)

Emphasis is placed on operational aspects of physical therapy department including relationship to total facility operation, designing and equipping a department, contracts, salaries, fees, personnel policies, records, data processing, budget process, medical-legal implication, continuing education, and the consultative process. Prereq: PT 887 or consent of instructor.

#PT 902 INTEGRATION OF EVIDENCE BASED PRACTICE. (3)

This course is designed to provide the participant with knowledge and hands-on experience in the integration of an evidence-based approach into practice. Students will learn how to critically review the literature and will acquire skills to integrate evidence into practice. Prereq: Admission to transitional DPT track and completion of a CAPTE accredited professional – entry level physical

therapy program and successful achievement of licensure. Applicants will be required to have completed a minimum of 9 months of clinical activity as a professional physical therapist.

**#PT 904 HEALTH PROMOTION
AND DISEASE PREVENTION.**

(2)

This 2 credit course is designed to increase the depth and breadth of the practitioner's knowledge regarding health promotion, wellness and disease prevention, particularly as it is appropriate within the scope of PT practice. Utilizing valid theoretical constructs for behavioral change, the course will focus on clinical application and program design for effective promotion of health, wellness, and disease prevention for the individual and for the community. Prereq: Admission to transitional DPT track and completion of a CAPTE accredited professional – entry level physical therapy program and successful achievement of licensure. Applicants will be required to have completed a minimum of 9 months of clinical activity as a professional physical therapist and PT 902.

**#PT 906 ADVANCED PHYSICAL
THERAPY DIAGNOSIS AND SCREENING.**

(2)

This course is designed to provide the PT practitioner with increased expertise in analysis and interpretation of multidisciplinary tests, measures, and screens in order to enhance PT diagnostic and screening skills. Instrumentation related to imaging techniques such as radiology, magnetic resonance, PET scans, and ultrasound will be addressed. In addition, specific foci will include nerve conduction velocity examination, as well as the use of the computer enhanced equipment (e.g. Biodex, Cybex, BTE, Neurocom) for assessing strength, endurance, balance and function. Prereq: Admission to transitional DPT track and completion of a CAPTE accredited professional – entry level physical therapy program and successful achievement of licensure. Applicants will be required to have completed a minimum of 9 months of clinical activity as a professional physical therapist and PT 902.

**#PT 908 CLINICAL DECISION MAKING FOR
PATIENTS WITH COMPLEX PROBLEMS I.**

(3)

This course is designed to enhance the diagnosis and management skills of PT practitioners in providing care to individuals with complex problems related to chronic illness and/or neuromuscular pathology. This includes deepening practitioners' knowledge base regarding pathology and clinical application, as well as enhancing their understanding regarding biopsychosocial-spiritual aspects of coping and adaptation as experienced by patients with multiple diagnoses and problems. Foundational material related to pharmacology, reimbursement, care environments, and cardiopulmonary pathology and management will be presented. Prereq: Admission to transitional DPT track and completion of a CAPTE accredited professional – entry level physical therapy program and successful achievement of licensure. Applicants will be required to have completed a minimum of 9 months of clinical activity as a professional physical therapist and PT 902.

**#PT 910 CLINICAL DECISION MAKING FOR
PATIENTS WITH COMPLEX PROBLEMS II.**

(2)

This course is designed to enhance the diagnosis and management skills of PT practitioners in providing care to individuals with complex problems related to acute illness and/or musculoskeletal pathology. This includes deepening practitioners' knowledge base regarding pathology and clinical

application, as well as enhancing their understanding regarding biopsychosocial-spiritual aspects of coping and adaptation as experienced by patients with multiple diagnoses and problems. Material foundational to this course is presented in PT 908. The two courses are linked, taught in modular format sequentially. Prereq: Admission to transitional DPT track and completion of a CAPTE accredited professional – entry level physical therapy program and successful achievement of licensure. Applicants will be required to have completed a minimum of 9 months of clinical activity as a professional physical therapist and PT 902 and 908.

#PT 912 ADVANCED ELECTIVES.

(2)

This course is designed to allow the student to select an area of special interest for focus and investigation. The course work is designed to allow acquisition of knowledge and skill at an advanced level. Students will choose one specialty area out of a selection of elective topics for their in-depth study. Topics for advanced electives may vary each year based on student interest and faculty expertise. Prereq: Admission to transitional DPT track and completion of a CAPTE accredited professional – entry level physical therapy program and successful achievement of licensure. Applicants will be required to have completed a minimum of 9 months of clinical activity as a professional physical therapist and PT 902.