

central nervous system reorganization after brain injury. Implication for neurorecovery and rehabilitation.

BKN 672 Advanced Independent Study in Biokinesiology (1-4, max 8, FaSpSm) Examination of selected mechanisms underlying normal movement and pathological movement. Ph.D. students only.

BKN 790 Research (1-12, FaSpSm) Research leading to the doctorate. Maximum units which may be applied to the degree to be determined by the department. Graded CR/NC.

BKN 794abcdz Doctoral Dissertation (2-2-2-2-0, FaSpSm) Credit on acceptance of dissertation. Graded IP/CR/NC.

Physical Therapy (PT)

PT 507 Professional Practice: Therapist Perspective (2, Fa) Identification of personal values, attitudes and beliefs and their relationship to personal development into a health care provider. Emphasis on communication skills, ethics, and professional guidelines, laws and regulations.

PT 509 Cellular and Systems Physiology (3, Fa) Selected subjects in cellular and systems physiology. Emphasis on molecular and cellular aspects of neuromuscular function; also renal and endocrine physiology.

PT 514L Musculoskeletal Anatomy (4, Fa) Musculoskeletal anatomy, innervation, blood supply, and function: intensive study of the head, neck, trunk, and limbs. Lecture, dissection laboratory.

PT 516 Principles of Disease (2, Fa) Principles and mechanisms of genetics, immunology, infection, wound healing, and oncology. Lecture.

PT 521L Basics of Patient Management (4, Fa) Development of basic decision-making skills, professional behaviors and impairment assessment in patients with musculoskeletal neurologic and/or cardiopulmonary dysfunction. Lecture, laboratory.

PT 529 Life Span Motor Control (3, Fa) Introduction to sensorimotor systems, overview of current perspectives in motor control from fetus through late adulthood, and clinical tests of motor proficiency. Lecture, limited laboratory.

PT 530ab Therapeutic Exercise (a: 2, Sp; b: 2, Sm) a: Theoretical and practical principles for evaluation of exercise need and prescription of exercise programs. Emphasis on approaches for patients with musculoskeletal deficits. (Duplicates credit in former PT 530.) b: Examination of needs analysis and prescription of exercise programs for special patient populations and assessment of current community trends in exercise and wellness.

PT 534L Neuroanatomy (3, Sm) Organized approach to structures in the brain, spinal cord and peripheral nervous systems that subserve motor, sensory, and integrative functions, memory, cognitive and special senses. Lecture, laboratory.

PT 536 Pathology of Cardiopulmonary Disease and General Medical Conditions (3, Fa) Pathology and pathophysiological mechanisms in disease of the cardiac, pulmonary and circulatory systems; examination of diabetes, burns, and other disabling medical disorders. Lecture. *Prerequisite:* PT 509, PT 514L, PT 516, PT 521L, PT 529.

PT 539 Clinical Pharmacology (1, Fa) Effects of commonly used drugs in patients with physical disability, side effects that alter physical performance or responses to exercise.

PT 546 Neuropathology (3, Sp) Pathology in the central and peripheral nervous systems that alter motor and sensory performance. Emphasis on loss of motion, excessive and involuntary movement disorders. Lecture. *Prerequisite:* PT 516, PT 534L.

PT 547 Professional Practice: System Perspective (2, Sm) Analysis of the integration of physical therapy practice into the national health care system; administration, budgeting and reimbursement for physical therapy services.

PT 549L Clinical Exercise Physiology (4, Fa) Adaptation of the human body to exercise and the use of exercise to modify human function. Lecture and laboratory.

PT 551L Therapeutic Application of Physical Agents (2, Sp) Physiologic responses to the application of thermal, mechanical, electromagnetic and hydrodynamic therapeutic procedures. Evaluation procedures and intervention planning. Lecture, laboratory. *Prerequisite:* PT 521L.

PT 554L Analytical Anatomy (3, Sp) Detailed kinesiological analysis of axial, spine, head, neck, face and bulbar muscles. Lecture, laboratory and clinical demonstration. *Prerequisite:* PT 514L.

PT 557 Professional Practice: Patient Perspective (2, Sp) Examination of issues related to professional-patient relationships, culture, lifestyles, ethnicity, gender and age. Emphasis on communication within a patient care model.

PT 561abcde Evidence for Physical Therapist Practice (2-2-2-2-2) a: Introduction to a patient-centered Evidence Based Practice model with emphasis on professional communication skills, ethics, professional guidelines, laws and regulations, b: introduction to acquiring, appraising and integrating research evidence, c: advanced critical analysis and application of research of evidence, d: advanced integration of patient values as influenced by culture, ethnicity, lifestyles, gender, and age into patient-centered clinical decision making, e: analysis of the integration of physical therapist practice into the national health care system; administration, budgeting and reimbursement for physical therapist services.

PT 566 Disorders of the Musculoskeletal System (3, Sp) Regional description of pathology and pathophysiological mechanisms of disorders of bone, connective tissue, and joints. Lecture, demonstration.

PT 569 Fundamentals of Neuroscience (4, Sp) Detailed analysis of neurophysiologic mechanisms underlying normal and abnormal motor and sensory function. Lecture. *Prerequisite:* PT 509, PT 516, PT 529, PT 534L.

PT 571L Clinical Management of Cardiopulmonary Dysfunction (4, Fa) Physical therapy evaluation and intervention in the care of patients with circulatory, cardiac, or pulmonary dysfunction. Lecture, case presentations, laboratory. *Prerequisite:* PT 521L.

PT 573 Physical Examination and Differential Diagnosis in Patients with Medical Disorders (2, Fa) Physical assessment and differential diagnosis in common medical conditions. Emphasis on factors that influence physical therapy or require referral back to the physician.

PT 574 Clinical Biomechanics (3, Fa) Introduction to the principles of biomechanics (statics, dynamics) as they apply to physical therapy practice. Emphasis on tissue mechanics, joint function and gait. Lecture. *Prerequisite:* PT 554L.

PT 581L Clinical Management of the Patient with Neurological Dysfunction (5, Fa) Physical therapy theory and methods for intervention in neurological dysfunction. Lecture, laboratory. Neuroanatomy lab available. *Prerequisite:* PT 509, PT 516, PT 521L, PT 529.

PT 534L.

PT 582 Mechanics of Human Gait (2, Sp) Introduction to both normal and pathological gait. Emphasis on the basic components of abnormal ambulation including temporal-spatial factors, joint motion, kinetics, kinematics, and muscle activity. Lecture.

PT 583L Clinical Electrophysiology (3, Sp) Use of electrical currents to evaluate and treat musculoskeletal, neurological and wound disorders. Theory and practice. Lecture, laboratory. *Prerequisite:* PT 514L, PT 554L.

PT 585 Physical Examination and Differential Diagnosis in Patients with Neurological Disorders (2, Fa) Physical examination and differential diagnosis in neurologic disorders. Emphasis on factors that influence physical therapy or require referral back to the physician.

PT 591 Physical Examination and Differential Diagnosis in Patients with Orthopedic Disorders (2, Sp) Physical examination and differential diagnosis in orthopedic disorders. Emphasis on factors that influence physical therapy or require referral back to the physician.

PT 592 Capstone Project (1-6, max 6, FaSpSm) Synthesis of knowledge gained in the pursuit of D.P.T. degree through a case study, a learning module for students or patients, a business plan for a unique form of health care delivery, or some other innovative concept. The primary faculty advisor will determine the unit value of the project.

PT 595abcd Residency in Advanced Clinical Physical Therapy (1-4 each, FaSpSm) Residency open to students pursuing a Graduate Certificate in Orthopedic Physical Therapy or Neurologic Physical Therapy or the post-professional D.P.T. program. Graded CR/NC. P.T. Licensure required.

PT 600abcdez Clinical Clerkship (1-3-1-1-3-0, FaSpSm) *a:* Practical experience in two- or six-week physical therapy manual skills, decision making and professional behaviors. *b:* Practical experience in six-week physical therapy manual skills, decision making, and professional behaviors. *c:* Practical experience in two-week physical therapy psychomotor skills, decision making and professional behaviors. *d:* Practical experience in two-week physical therapy psychomotor skills, decision making and professional behaviors. *e:* Practical experience in six-week physical therapy psychomotor skills, decision making and professional behaviors. Graded CR/NC.

PT 605 Orthopedic Radiology (2, Fa) Study of normal and pathologic skeletal radiographic examinations.

PT 606 Clinical Imaging (2, SpSm) Elements of reading roentgenographs, CAT and MRI scans for the physical therapist. Lecture, demonstration, practical experience. Open only to Biokinesiology and Physical Therapy graduate students.

PT 607 Clinical Scanning (2, Sp) Survey of diagnostic imaging for orthopedic and neurologic disorders seen in physical therapy practice.

PT 608 Pharmacotherapeutics (2, Fa) Indications, contraindications, physiologic mechanisms, and side-effects of pharmacologic agents. Analysis of interactions between drugs and physical therapy interventions.

PT 612L Physical Therapy Management of Spinal Disorders (2, FaSpSm) Advanced evaluation and treatment skills for the management of individuals with spinal disorders. Lecture, laboratory. *Prerequisite:* PT 600d.

PT 613L Physical Therapy Management of the Foot and Lower Quarter (2, Fa) Advanced evaluation and treatment skills for management of individuals with lower extremity disorders. Lecture, laboratory. *Prerequisite:* PT 600d.

PT 614L Evaluation and Management of Hand Dysfunction (2, Sp) Pathology, evaluation, differential diagnosis and treatment of hand and wrist dysfunction. Lecture, laboratory. *Prerequisite:* PT 600d.

PT 618L Seminar in Advanced Neurological Rehabilitation (2, Sp) Advanced evaluation treatment, and problem solving skills for the individual with neurological dysfunction. Lecture, laboratory. *Prerequisite:* PT 600d.

PT 619L Clinical Electrophysiology (2, Fa) Advanced evaluation and treatment of individuals with peripheral nerve disorders using electrotherapy. Lecture, laboratory. *Prerequisite:* PT 600d.

PT 621L Clinical Management of the Patient with Musculoskeletal Dysfunction (5, Sp) Physical therapy theory and methods of evaluation and treatment of orthopedic dysfunction. Lecture, demonstration, laboratory. Dissection lab available. *Prerequisite:* PT 514L, PT 521L.

PT 622 Advanced Management of Spinal Disorders (3, FaSpSm) Theoretical and practical foundations in orthopedic rehabilitation of spinal disorders with emphasis on differential diagnosis from systemic manifestation. Lecture, laboratory, and case presentations. Open to licensed physical therapists only.

PT 623 Advanced Management of Extremity Disorders (3, FaSpSm) Theoretical and practical foundations in orthopedic rehabilitation of occupational, recreational and athletic disorders of the extremities, emphasis on differential diagnosis from systemic manifestations. Lecture, laboratory, and case presentations. Open to licensed physical therapists only.

PT 624abL Neurological Differential Diagnosis and Therapeutic Interventions (3-3, FaSp) Theoretical and practical foundations of clinical practice for specialization in neurologic physical therapy. *a:* Principles of neurologic differential diagnosis, mechanisms of neurorecovery and rehabilitation of focal neurologic disorders covered. *b:* Emphasis on advanced skills in neurologic differential diagnosis and rehabilitation for complex neurologic disorders.

PT 630 Integrated Management of the Upper and Lower Extremities (3, FaSp) Advanced evaluation and management of upper and lower extremity disorders and related movement dysfunction. *Prerequisite:* PT 600e.

PT 631 Integrated Patient Management of the Axial Skeletal System and Related Movement Disorders (3, FaSp) Advanced assessment and management of axial skeletal dysfunctions and related movement disorders. *Prerequisite:* PT 600e.

PT 632 Integrated Patient Management Seminar (5, FaSp) Integration of physical therapy management of complicated patients with concurrent musculoskeletal, cardiopulmonary and/or neurologic disorders. *Prerequisite:* PT 571L, PT 581L, PT 621L.

PT 642abc Evidence Based Practice (2-2-2, a: Sm, b: Fa, c: Sp) *a:* Practical considerations of evidence-based practice including patient interviews and search methods. *b:* Development of critical analysis skills of evidence to enhance critical thinking. *c:* Focus on evidence-based decision making using patient perspectives to effect optimal function outcomes.

PT 650 Differential Diagnosis in Physical Therapy (2, FaSpSm) Consideration of principle of differential diagnosis with emphasis on mastering this skill. Open only to Biokinesiology and Physical Therapy graduate students. *Recommended preparation:* completion of years 1 and 2.

PT 654 Physical Therapy Intervention in Pediatrics (2, Sm) Physical therapy management of commonly encountered pediatric diagnoses. Seminar, clinical laboratory. Open to students enrolled in physical therapy degree programs only.

PT 660 Advanced Clerkship with Academic Integration (5, FaSp) A 16-week clerkship consisting of a minimum of 24 hours per week in a part-time setting. Emphasis on the care of orthopedic, neurologic, pediatric or complicated medical conditions. Graded CR/NC. *Prerequisite:* PT 600e.

PT 665 Advanced Clinical Clerkship (8, FaSp) A 16-week clerkship consisting of a minimum of 36 hours per week in a full-time setting. Emphasis on care of orthopedic, neurologic, pediatric or complicated medical conditions. Graded CR/NC. *Prerequisite:* PT 600e.

USC

1540 Alcazar Street, CHP 155
Los Angeles, CA 90089-9006

Phone: (323) 442-2900
Fax: (323) 442-1515

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