

**SAINT FRANCIS UNIVERSITY DEPARTMENT OF
PHYSICAL THERAPY
DOCTOR OF PHYSICAL THERAPY CURRICULUM COURSE
HIGHLIGHTS**

SUMMER 1

PT 402 Movement Science 1 (2 credits)

- analysis of normal and pathological human movement using the physical laws of motion and principles of arthrology
- emphasis on isolated and gross movement patterns of lower extremities
- application to functional anatomy and kinesiological principles with respect to human locomotion, including gait assessment
- investigate mechanical principles of human movement and ergonomic principles

PT 404 Surface Anatomy/Palpation (1)

- palpation of anatomical landmarks, muscles, bones, and other human anatomical structures
- lab experiences emphasizing clinical application of surface anatomy and palpation techniques
- links to human anatomy course

PT 406 Human Anatomy 1 (3)

- study of gross human anatomy (includes cadaver lab/dissection)
- emphasis on musculoskeletal, neurological, and vascular systems
- focus on extremities

FALL 1

PT 403 Movement Science 2 (2)

- analysis of normal and pathological human movement using the physical laws of motion and principles of arthrology
- emphasis on isolated and gross movement patterns of upper extremities and spine
- introduction to basic principles of orthotics and effect on human movement
- introduction to technologies commonly used for motion analysis

PT 405 Exercise Prescription (2)

- analysis of scientific principles of therapeutic exercise
- focus on exercise prescription addressing muscle performance, strength, endurance, power, flexibility, mobility, and balance impairments
- rationale for exercise prescription using isometric, concentric, and eccentric contractions
- exercise prescription for resistance exercise using exercise equipment including free weights, Theraband, and weight machines
- open and closed kinetic chain exercises,
- muscle and cardiovascular adaptations to exercise training programs including aerobic and anaerobic activities
- introduction to special exercise techniques (aquatics, functional movements, plyometrics)
- discussion of tissue adaptation to activity and immobilization

PT 407 Human Anatomy 2 (2)

- study of gross human anatomy (includes cadaver lab/dissection)
- emphasis on musculoskeletal, neurological, and vascular systems
- focus on deep back, neck, cardiovascular, and respiratory systems

PT 510 Pathology & Differential Diagnosis-Cardiopulmonary (2)

- cardiopulmonary pathologies
- response of the cardiopulmonary system to disease, exercise, and medical and surgical management of common cardiopulmonary pathologies
- differential diagnosis and analysis of impact of pathology on movement dysfunction
- asthma, cystic fibrosis, bronchitis, COPD, emphysema, pneumonia, adult respiratory syndrome, pulmonary embolus
- PVD, PAD, HTN, CAD, MI, cardiac pathologies, angina, CHF, arrhythmias
- Other diagnoses as referenced following the entry level competencies for PT students in cardiovascular and pulmonary physical therapy

PT 520 Physical Therapy Procedures (3)

- instruction in patient and therapist body mechanics
- positioning/draping
- mobility training, including transfer and ambulation techniques
- basics of wheelchair and ambulatory assistive device prescription
- theory and principles of joint goniometry and manual muscle testing for extremities and spine

PT 521 Patient Management 1-Cardiopulmonary (4)

- Patient management model cited by the entry level competencies for physical therapists in cardiovascular and pulmonary physical therapy
- examination, evaluation, diagnosis and interventions for patients with cardiopulmonary and vascular dysfunction
- theory and implementation of cardiopulmonary tests and interventions
- auscultation, airway clearance, breathing
- EKG, therapeutic exercise for acute and chronic cardiorespiratory conditions
- principles of target endurance, aerobic and conditioning exercises
- primary, secondary, and tertiary prevention for patients with cardiorespiratory dysfunction
- emphasis on evidenced based practice and the importance of patient-practitioner interaction

PT 530 Professional Issues-Documentation (2)

- introduction to the Guide to PT Practice as a basis for clinical practice
- introduction to the medical record
- clinical documentation, using case examples designed to integrate evidenced based practice, clinical decision making, and critical thinking

PT 560 Clinical Education Seminar 1(.5)

- orientation to clinical education program, including requirements, site selection, roles and responsibilities
- infection control, standard precautions, chemical and patient safety
- medical terminology

PT 570 Professional Development 1 (.5)

- APTA Core Values
- professional behaviors

SPRING 1**PT 501 Neuroscience 1 (2)**

- foundational study of structural features and connectivity of human CNS and PNS
- exploration of relationships between anatomical structures in CNS and PNS and physiological functions of neurons
- concepts, terms, and methods of understanding physiology of human nervous system
- neuroimaging
- pain pathways

PT 511 Pathology & Differential Diagnosis-Musculoskeletal (3)

- differential diagnosis and response of the musculoskeletal system to disease, exercise, and medical and surgical management
- foundations of imaging techniques, including conventional radiographs, MR images, CT images, and bone scans, with emphasis on using imaging to differentiate musculoskeletal diagnoses
- radiographic evaluation of select musculoskeletal disorders, including fractures, dislocations, joint and bone disorders
- survey of common muscular disorders, including connective tissue disease, inflammatory and non-inflammatory joint diseases, bone and metabolic disorders, congenital and pediatric disorders, neoplasms,
- emphasis on non-musculoskeletal system disorders affecting the musculoskeletal system, including lab value interpretation
- differential diagnosis of common musculoskeletal injuries that may be related to systemic conditions
- pain, arthritic disorders, sports injuries across the lifespan (tendonitis, sprains, bursitis, capsular lesions, arthritic disorders, fractures)
- pathophysiology and differential diagnosis of bone disorders (osteoporosis, Paget's fractures)

PT 522 Therapeutic Agents (3)

- biophysical, physiological, and clinical principles and procedures associated with the application of physical agents
- clinical decision making related to application of thermal, electrical, acoustic, light, mechanical energy, and massage in prevention and treatment of pathological conditions (heat and cold, compression, hydrotherapy, mechanical traction, ultrasound, electromagnetic agents/lasers, electrical stimulation/TENS/Iontophoresis)
- emphasis on evidenced based practice
- development of skill in application of physical agents, massage, blood flow restriction, instrument assisted soft tissue mobilization
- introduction to theories and principles of sensory testing

PT 523 Patient Management 2-Musculoskeletal 1(4)

- clinical decision-making model integrating Guide to PT Practice
- examination, evaluation, diagnosis and interventions for patients with musculoskeletal dysfunction
- posture assessment and interventions
- focus on extremity examinations and interventions, including history taking, upper and lower quarter screens, flexibility and ligamentous testing, and other selected orthopedic tests
- patient education and injury prevention
- therapeutic exercise, manual therapy techniques, extremity mobilization
- emphasis on evidenced-based practice and the importance of patient-practitioner interaction

PT 540 Pharmacology (2)

- introduction to pharmacokinetics and pharmacodynamics
- basic drug classes and the physiological basis of their action
- emphasis on research drugs and drugs commonly used to treat disorders seen in patients receiving physical therapy, and their impact on evaluation and interventions

PT 555 Research 1-Critical Inquiry (2)

- introduction to the procedures and clinical application of scholarly inquiry
- highlights relationships between evidence, patient values and clinical practice
- introduces procedures of experimental and non-experimental design, conceptually based statistical interpretation and operational definitions of reliability and validity
- introduces and identifies concept of evidence based practice
- emphasizes accessing research literature databases
- introduces and describes critiquing research literature
- examination of clinical activities and incorporation of best available research for examination, evaluation, and interventions

PT 561 Clinical Education Seminar 2 (.5)

- orientation to clinical education evaluation tools
- analysis of professional behaviors
- clinical policies and procedures, supervision requirements, and legal considerations (HIPAA)

PT 571 Professional Development 2 (.5)

- service and social professionalism
- professional social media use

SUMMER 2**PT 660 Clinical Education Experience 1 (8 weeks) (4)**

- initial clinical education experience, emphasizing competencies in basic PT procedures introduced in the curriculum
- emphasis on general musculoskeletal or cardiopulmonary patients

PT 651 Research 2 – Clinical Application of Research (1)

- review relationships of evidence, patient values and clinical expertise and how this guides clinical decision making
- during clinical education identify areas that research is available to inform the decision making process
- apply procedure for the clinical appraisal of a research article and incorporate the finding into direct patient care including examination, evaluation, intervention and prevention

FALL 2**PT 601 Neuroscience 2 (2)**

- structure and function of specific regions in greater depth, including brainstem, cerebellum, cerebrum, diencephalon, basal ganglia, reticular formation, visual and vestibular systems, and limbic system
- comprehensive application of neuroscience to movement
- neuroplasticity and implications for PT practice
- integration of neuroscience into patient evaluation and therapeutic intervention

PT 610 Pathology & Differential Diagnosis-Neurology (2)

- neurological pathologies
- differential diagnosis for common pediatric and adult neurological disorders
- survey of early neurodevelopmental considerations such as cerebral palsy, spina bifida, neurodevelopmental delay
- pathology of progressive and non-progressive neurological disorders including CVA, CNS tumors, epilepsy, hematoma, CNS infection, headache, and dementia
- genetics as related to neuro pathologies
- neurological emergencies, trauma

PT 620 Patient Management 3-Neurology 1(4)

- clinical decision-making model integrating Guide to PT Practice and International Classification of Functioning, Disability and Health model to patient care
- foundation of examination, evaluation, diagnosis and interventions for patients with neuromuscular dysfunction
- introduction to sensory testing, cranial nerve testing, reflex testing, balance and coordination testing
- neurofacilitation techniques, task-oriented approaches and high intensity approaches
- introduction to motor control and motor learning
- introduction to management of patients with impaired motor function/sensory integrity associated with acquired and non-progressive conditions of the CNS and PNS throughout continuum of care
- primary, secondary, and tertiary prevention for patients with neurological involvement

- evaluation and treatment of balance and gait dysfunction
- management of patient following CVA
- use of evidence based practice and professionalism when working with neurologically involved patient

PT 621 Patient Management-Pediatrics (2)

- normal growth and development
- examination, evaluation, interventions for range of medical conditions for continuum of birth to adolescence
- family centered care

PT 630 Professional Issues-Ethics (2)

- ethics, core values, and professionalism in physical therapy practice
- review of ethical theories, as they apply to health care and PT practice
- emphasis on clinical situations in rehabilitation ethics (patient consent, patient autonomy, truth-telling, confidentiality, reimbursement and managed care issues, institutional and societal concerns)
- case discussion of professional and ethical expectations for situations including communicable diseases, sexual misconduct, child and elder abuse, impaired professionals, cultural competence
- APTA's Code of Ethics and Judicial Process

PT 641 Psychosocial Aspects of Patient Care (3)

- psychological and social response to illness and injury
- focus on patient/practitioner interaction in rehabilitation
- emphasis on issues facing the patient, family, and care providers including the health care team
- discussion of body image and self-concept; mind-body-spirit connection; effective and assertive patient communication; behavioral components of a disability; therapeutic helping; sexuality and disability; loss, grief, death and dying
- introduction to cultural competence and cultural humility

PT 655 Research 3-Clinical Research Design (2)

- study of research principles and clinical application of scholarly inquiry as they apply to evidence based PT practice
- introduction to sample selection, fundamentals of measurement, reliability and validity designs, measurement tools, and data analysis
- ongoing critical analysis of published literature
- formulation of clinical research questions
- develop proposal for research question, comprehensive review of literature, and methods to appropriately test question

PT 670 Professional Development 3 (.5)

- personal development plan
- professional networking
- exploration of the expanded role of the physical therapy professional, including that of clinical specialist and physical therapists in niche practices

SPRING 2

PT 611 Pathology & Differential Diagnosis-Multiple Systems (2)

- specific pathologies of the neurological, neuromuscular, endocrine, lymphatic, renal, urologic, and integumentary systems
- emphasis on differential diagnosis of selected diagnoses/conditions/trauma
- response to disease, exercise, and medical and surgical management
- work related injuries, repetitive trauma, microtrauma
- spine pathologies (scoliosis, degenerative conditions, disk disorders, infections, post-op complications)
- diabetes, metabolic, endocrine system, renal, kidney, liver disorders, urogenital systems
- geriatric conditions, including sensory changes, Alzheimer's disease, dementia, and delirium
- amputations
- neoplasms/oncology, lymphoproliferative disorders (leukemia, Hodgkin's, multiple myeloma)
- sports medicine
- differential diagnosis of common musculoskeletal injuries specifically related to the spine and axial musculoskeletal system and its relation to systemic dysfunction
- emphasis on lab values that impact on patient management

PT 622 Patient Management 5-Musculoskeletal 2 (4)

- clinical decision-making model integrating Guide to PT Practice
- examination, evaluation, diagnosis and interventions for patients with selected orthopaedic dysfunction
- treatment-based classification system for acute low back pain and cervical spine
- introduction to McKenzie mechanical diagnosis and therapy
- complex orthopaedic techniques (spine, SI joint), manual therapy including Grade 5 spinal mobilization
- TMJ evaluation and treatment
- introduction to industrial medicine evaluation and interventions
- primary, secondary, and tertiary prevention

- emphasis on evidenced-based practice and the importance of patient-practitioner interaction

PT 623 Patient Management 6–Neurology 2 (4)

- continuation of management of neurologically involved patient integrating Guide to PT Practice and the International Classification of Functioning, Disability and Health
- examination, evaluation, diagnosis and interventions for patients with spinal cord injury, TBI, MS, Parkinson's disorder, Amyotrophic Lateral Sclerosis, Post-Polio Syndrome, Guillain-Barre, and vestibular disorders throughout the continuum of care
- evaluation and treatment of spasticity, rigidity, hypotonia, ataxia, and other movement disorders
- primary, secondary, and tertiary prevention
- emphasis on evidenced based practice and the importance of patient-practitioner interaction

PT 624 Motor Control & Advanced Exercise (2)

- theoretical basis and historical overview of motor learning, application to motor skill acquisition
- framework for interventions including relation of task, individual and environment with motor skill acquisition; practice schedules, role of feedback
- application across patient populations and continuum of care

PT 631 Professional Issues-Legal (2)

- legal aspects of physical therapy practice
- introduction to the legislative process, including the role and responsibilities of key federal and state government agencies
- Physical Therapy Practice Acts across states
- malpractice
- trial procedure, expert witness, depositions
- ADA, FMLA, Worker's Compensation overview
- basic principles of business law, contracts, fraud and abuse
- advocacy for legislation affecting patient access to healthcare and PT practice

PT 640 Advanced Concepts in PT Practice 1 (2)

- topics in physical therapy specialty areas
- topics in defined or innovative areas of practice
- topics in health promotion, wellness

PT 642 Teaching and Learning (2)

- introduction to learning theories
- using multimodal approaches to learning to optimize learning for all
- concepts of learning across the lifespan, including cultural and psychological influences on learning
- patient education strategies, emphasizing development of individualized instructional aids that account for patient needs (age, intelligence level, education level, cognition, memory, culture, disability)
- clinical teaching
- community education project development and implementation

PT 671 Professional Development 4 (0)

- leadership
- generational differences

Summer 3

PT 720 Patient Management 7-Geriatrics (2)

- current research, theories of aging, and physiologic changes associated with aging (musculoskeletal, neurological, integument, cardiovascular, genitourinary systems)
- analysis and implementation of health, safety, and movement management for patients through the adult lifespan including end-of-life care
- multidimensional evaluation and assessment with system based approach
- implementation of treatment plans, coordination of interdisciplinary communication, and patient education with paper cases and hands-on experience
- contracture management and exercise prescription for aging adult
- falling in aging adult, prevention and management strategies, cost of falls (physical, emotional, monetary)

PT 721 Patient Management 8-Other Systems (4)

- clinical decision-making model integrating Guide to PT Practice
- examination, evaluation, diagnosis and interventions for patients with specific needs including metabolic and endocrine disorders, women's health, amputation and prosthetic management, wounds, burns, and oncology
- home and environmental assessment
- primary, secondary, and tertiary prevention

PT 722 Patient Management 9-Complex Patients (2)

- advanced clinical decision-making model integrating Guide to PT Practice
- examination, evaluation, diagnosis and interventions for patients with multi-system dysfunction or medically complex problems
- in-depth study of the integration of musculoskeletal, neurological, and cardiopulmonary and integumentary

- parameters in selected case management across settings and throughout an episode of care
- emphasis on impact of lab values, pharmacological interventions, living environment, home/work/play requirements, social support network, and reimbursement, on patient management
- emphasis on evidence-based practice and the importance of patient-practitioner interaction

PT 730 Administration (3)

- information management in PT
- human resource management to include recruitment and retention, supervisory relationships, hiring and firing
- developing mission statements, policies and procedures, developing job descriptions and measuring job performance
- marketing, contracting, networking
- quality assurance and risk management
- productivity
- fiscal management/reimbursement in physical therapy
- regulatory agencies

PT 740 Advanced Concepts in PT Practice 2 (2)

- topics in physical therapy specialty areas
- topics in defined or innovative areas of practice
- topics in health promotion, wellness

PT 741 Health and Wellness (2)

- analyze trends in morbidity and mortality
- development and implementation of strategies directed at health promotion, wellness, health maintenance and disease prevention to individuals, groups and communities
- emphasis on wellness, quality of life and its relation to physical therapy
- focus on lifestyle factors associated with health and disease
- effects of exercise on various populations, including effects on the immune system, cardiovascular and pulmonary systems, and patients with diabetes, obesity, immunological conditions
- business and marketing skills for health promotion, fitness, and wellness program administration
- discussion of the role of other exercise specialists and the relationship to physical therapy
- discuss complementary and alternative medicine, nutrition, and social determinants of health

PT 770 Professional Development 5 (.5)

- career preparation and planning

FALL 3

PT 731 Professional Issues-Health Policy & Administration (2)

- discussion of hospitals, long term care, ambulatory care, community health, public health
- analysis of the impact of current health care delivery systems (managed care), and insurance issues on physical therapy practice
- emphasis on health policy
- discussion and analysis of current topics in the health care delivery system, and the impact on physical therapy practice

PT 760 & 761 Clinical Education Experience 2 & 3 (8 Weeks Each) (8)

- full-time clinical education experiences, emphasizing competency in PT intervention and clinical decision making, integration of psychosocial aspects of patient care, application of ethical and legal theories of practice, and integration into the health care system

SPRING 3

PT 762 Clinical Education Experience 4 (15 Weeks) (8)

- final clinical education experience, emphasizing competencies in PT procedures instructed in the curriculum involving patients with increased complexity and decreasing student supervision needs to entry-level practice

PT 771 Professional Development 6 (0)

- long term career development

*****NOTE: This list represents highlights of major content area for each course in the curriculum. It is not intended to be a complete list of content included in each course.**