Physical Therapy
Residential Entry-Level
D.P.T. Program

Curriculum Guide
# DOCTOR OF PHYSICAL THERAPY ENTRY-LEVEL PROGRAM CURRICULUM (Residential)

Information contained in this curriculum guide is subject to change.

## SEQUENCE OF COURSES

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## COURSE DESCRIPTIONS - (Residential)

**PT 514 Functional Kinesiology 1**
This course is a study of mechanical and biophysical principles of movement in humans. Techniques of analysis with qualitative and quantitative measures of movement are included. Application to evaluation and treatment in physical therapy is emphasized. Laboratory required.

**OT/PT 526 Basic Patient Care Skills**
This course includes the rationale and skills necessary for rehabilitation personnel to deliver basic patient care. The course includes blood-borne pathogens, universal safety precautions, vital signs, positioning, draping, transfers, lifting, sterile procedure and isolation techniques, wheelchair handling, ambulation with assistive devices, adaptive equipment, and basic patient care equipment. Laboratory required.

**PT 517 Therapeutic Exercise**
Principles of exercise for normal and abnormal musculoskeletal conditions are presented. Range-of-motion, stretching, resistive, flexibility, and relaxation exercises with and without equipment will be included. Exercise program progression and application to physical therapy intervention will be discussed. Laboratory required.

**PT 518 Principles and Theories of Education**
This course presents the foundation principles of teaching and learning styles and the application in physical therapy. Students will discover their personal learning style(s) and how to adapt teaching styles to facilitate learning. Practice in community teaching will be expected of all students.

**OT/PT 522 Pathology**
A study of basic pathological processes in disease and trauma, including inflammation, immunity, allergy, neoplasms, hereditary diseases, hematologic conditions, and nutritional deficiencies.

**PT 524 Functional Kinesiology 2**
This course is a continued study of the mechanical and biophysical principles of movement in humans. Techniques of muscle testing, joint measurement, and postural assessment will be presented. Laboratory required.

**PT 525 Tests and Measurements**
This course is a study of basic evaluation and assessment techniques used in physical therapy. The evaluation techniques, documentation, and standardization norms will be included. Laboratory required.
PT 526 Physical Agents
This course presents the theory and techniques of physical agents used for therapeutic interventions. Included are thermal agents, light, water, sound, mechanical compression, and traction. Laboratory required.

PT 527 Professional Practice Grand Rounds
This course consists of weekly seminars over the first two years and is a study of the organization, structure, purpose, ethics, legal aspects, role delineation and functions of health professions with special focus on the role of a doctor of physical therapy.

PT 528 Musculoskeletal Conditions I
An introduction into the clinical decision-making, clinical sciences, and basic skills necessary to evaluate and treat musculoskeletal impairments.

PT 531 Applied Human Physiology
This course presents the concepts of physiology applied to the human body during exercise and in response to disease and trauma. Principles of metabolism, energy expenditure, fluid balance, and neural control will be studied in addition to other concepts.

PT 532 Medical Management of Diseases
This course is a study of screening, differential diagnosis and the clinical management of common medical conditions.

PT 533 Clinical Management of Musculoskeletal Conditions
This course presents the evaluation, treatment, and disease processes of musculoskeletal diseases and conditions.

PT 534 Manual Therapeutics for the Extremities
Theory and techniques of manual therapeutics as applied to the upper and lower extremities. Laboratory required.

PT 535 Case Conference I
This course is a clinical case analysis of frequently seen conditions in rehabilitation. Case study presentations by experienced clinicians will be the primary method of instruction.

PT 536 Clinical Gait Analysis
This course is a study of the components of normal gait, methods of observation, gait analysis, and strategies of problem solving for various gait deviations. Laboratory required.

PT 537 Clinical Education
This is the initial four-week, full-time clinical experience. Students will work under the direct supervision of licensed professionals to provide patient care and integration of classroom knowledge with clinical practice. Assignment to facilities will be completed by the program.

PT 538 Clinical Management of Cardiopulmonary Conditions
This course covers evaluation, treatment, and disease processes of cardiopulmonary diseases and conditions. Laboratory required.

PT 539 Clinical Electrotherapy
This course is a study of the instrumentation and therapeutic applications of electrical modalities available to physical therapists. Laboratory required.

PT 540 Neuroanatomy
A study of the structure of the central, peripheral, and autonomic nervous systems.

PT 541 Neuroscience
This course provides a study of the function of the central, peripheral, and autonomic nervous systems.

PT 542 Human Development
This course provides an in-depth study of the cognitive and physical development of the human. Emphasis is on the neurodevelopmental pattern in movement, including reflexes seen in development, posture, and sensory protection.

PT 543 Clinical Management of Integrative Conditions
This course covers the care of diseases of the skin, including burns, wounds, and decubitus ulcers.

PT 544 Clinical Management of Spinal Conditions
This course covers the theory and application of evaluation and treatment techniques to spinal conditions. Included in this course will be spinal manual therapeutics, and spinal stabilization exercise. Laboratory required.

PT 545 Electrodiagnostic Procedures
This course covers a study of electrodiagnostic procedures, including nerve conduction velocities, electromyography, and biofeedback.

PT 546 Rehabilitation I
This course includes the study of rehabilitation philosophy and techniques for patients with amputations and other conditions treated using rehabilitation techniques.

PT 547 Clinical Management of Neurological Conditions
Evaluation, treatment, and disease processes of neurological diseases and conditions, including spinal cord injuries, congenital and developmental disabilities, stroke, traumatic brain injury, peripheral nerve injuries, and degenerative neuromuscular diseases.

PT 548 Therapeutic Interventions for Movement Disorders
This course covers a study of the theory and techniques of neurotherapeutic techniques, including but not limited to, Brunnstrom, neurodevelopmental theory, proprioreceptive neuromuscular facilitation, motor control, and sensorimotor integration.

PT 549 Rehabilitation II
This course is a continuation of PT 546 Rehabilitation I. Advanced theory and skills in therapeutic exercise, including mat exercises, vestibular retraining, adaptive technology, orthotics, and sensory retraining are discussed in this course.

PT 550 Organization and Management of Practice Settings
This course covers the principles of organization, management, and reimbursement of health profession practices.

PT 551 Pediatrics
Developmental disabilities and congenital problems found in birth through 10-year-olds will be studied. Early intervention, public school systems, and special education techniques are introduced.

PT 552 Geriatrics
A study of the social, biological, socio-economic, and therapeutic interventions commonly seen in populations over the age of 55 years is presented.

PT 553 Pain Management
The clinical management of acute and chronic pain through pharmaceutical, surgical, and conservative methods is presented.

PT 554 Psychological and Social Aspects of Illness and Disability
The study of communication, psychological, and emotional factors necessary to understand the health professional’s role and responsibility in patient care is presented.
PT 635 Prevention and Wellness
This course covers the study of risk factors and techniques used to facilitate prevention activities for health and wellness in physical therapy.

PT 636 Clinical Observation
Clinical observation and patient experience in neurological treatment settings.

PT 641 Advanced Musculoskeletal Techniques
A study of advanced techniques used by physical therapists to treat musculoskeletal conditions. Included will be topics such as sports physical therapy, strain-counterstrain, myofascial release, craniosacral techniques, and TMT.

PT 643 Gender Health Care Issues
This course is a study of the unique problems and issues of gender-related health issues. Students study conditions such as pre- and post-natal exercise care, treatment of pelvic floor dysfunction, incontinence, osteoporosis, reproductive cancers, and reproductive problems in men and women.

PT 645 Professional Leadership
This course covers a study of the attributes, behaviors, and values necessary for leadership in health professions. Included will be studies of the physical therapist's role in health care delivery systems, outcome measurement, and medical/legal situations.

PT 646 Case Conference 2
This course presents clinical case analysis of frequently observed diseases. Case study presentations will include literature reviews and evidence-based practice decision making examples.

OT/PT 740 Pediatric Orthopedics (3 qtr hr)
This distance learning course offers a comprehensive discussion of musculoskeletal development, common pediatric orthopedic disorders, and the lifespan issues of persons with cerebral palsy and spina bifida. Contemporary and comprehensive musculoskeletal assessment, therapeutic intervention, lower extremity bracing and splinting interdisciplinary and family-centered practice, and orthopedic surgical management of the pediatric patient are presented by experts in the field and illustrated through case study presentations. Elective.

PT 752 Clinical Internship I
The first full-time clinical internship. The student will be expected to integrate physical therapy theory and techniques into the evaluation and treatment of patients.

PT 753 Clinical Internship II
The second full-time clinical internship. The student will be expected to integrate physical therapy theory and techniques into the evaluation and treatment of patients.

PT 754 Clinical Internship III
The third full-time clinical internship. The student will be expected to integrate physical therapy theory and techniques into the evaluation and treatment of patients.

PT 755 Clinical Internship IV
The fourth full-time clinical internship. The student will be expected to integrate physical therapy theory and techniques into the evaluation and treatment of patients.

PT 756 Clinical Internship V
A maximum of eight hours of clinical experience in a specialty physical therapy or rehabilitation-related setting, such as work hardening, hand rehabilitation, aquatic therapy, advanced spinal treatment, research, administrative, or professional practice setting. Elective.

PT 757 Terminal Project
The student will participate in research and manuscript preparation under faculty direction. The student will be expected to submit the completed master's thesis or project at the completion of the course.

PT 791 Introduction to Sports Physical Therapy
A survey of Sports Physical Therapy concepts and practices will be covered. This residential and online course requires readings, assignments, and interactive chat room activities. In addition, the student will be required to participate in a weekend course on emergency management procedures and to complete a minimum of twelve (12) contact hours in a clinical observation setting for sports medicine. Elective.

PT 793 Strength and Conditioning of the Competitive Athlete
This course studies the theory and techniques commonly used in working with the high performing athlete in training and rehabilitation. This course requires on-line and residential participation. Elective.

PT 794 Advanced Study of the Foot and Ankle
Advanced issues and treatment strategies of the foot and ankle will be discussed. On-line and residential participation is required. Included in this course will be topics of overuse injuries, foot and ankle biomechanics, evaluation techniques, interventions and orthotics. Elective.

PT 795 Functional Rehabilitation in Musculoskeletal Conditions
This course requires both web-based and residential participation. The course will address exercise prescription concepts for both the normal patient population as well as the athletic and musculoskeletal patient. Instruction in exercise progression will be included in the tutorials as well as in the residential program. The material is based on physiological studies, evidence-based research, and presented in a functional manner in order to correlate specific criteria in the patient presentation to proper exercise progression. Elective.

PT 806 Pharmacology
This course is a study of basic pharmacological concepts as applied to rehabilitation professions. The major classes of drugs used in medical conditions will be covered. The course includes on-line lectures, readings, independent study, and assignments.

HEALTH PROFESSIONS COURSE DESCRIPTIONS
(Multi-Disciplinary Elective Courses)

HP 746 Advanced Anatomy and Physiology of the Vestibular System (2 qtr hr)
In-depth study of the anatomy and physiology of the vestibular system, including its role in control of orientation and postural stability. Elective.

HP 747 Normal and Abnormal Postural Control (2 qtr hr)
Advanced course in mechanisms underlying balance control in healthy adults and review of research findings of balance problems in persons with neurological disorders and in the aging adult. Elective.

HP 748 Pathophysiology and Diagnosis of Balance and Dizziness Disorders (3 qtr hr)
This course will cover the spectrum of etiologies underlying dizziness/balance disorders and will include neurodiagnostic tests and physical therapy assessment of balance/dizziness disorders. Determination of physical therapy diagnosis based on evaluation findings will be addressed. Elective.
HP 749 Medical Management of Dizziness and Balance Disorders (2 qtr hr)
Pharmacological management of the dizzy patient and overview of surgical procedures for various vestibular disorders will be discussed. Physical therapy management of the surgical patient will also be included. Elective.

HP 750 Advanced Techniques for the Patient with Disequilibrium and Dizziness (2 qtr hr)
Vestibular rehabilitation treatments, such as canthal repositioning, habituation exercises and postural control exercises will be discussed and practiced. Elective.

HP 786 Special Studies (Credit Varies)
Students may propose special studies or equivalent credit from participating in continuing education courses. Students may develop potential projects with the assistance of a faculty member or propose credit directly to the Chair of the major department. All Special Studies courses must be approved by the major department Chair.

HP 835 Principles of Medical Reimbursement (2 qtr hr)
This course provides the student with an overall understanding of Medicare Reimbursement. Web-based elective.

HP 771 Human Resources Management (3 qtr hr)
A study of methods and regulations affecting human resource management. Supervision, legal requirements, recruitment and hiring topics will be covered. Web-based elective.

HP 792 Nutrition, Supplements, and Ergogenic Aids (2 qtr hr)
This online course will cover issues of pharmacology, nutrition, supplements, and ergogenic aids in Physical Therapy settings. Elective.

HEALTH SCIENCE COURSE DESCRIPTIONS - (Core Courses)

HS 510 Human Anatomy I
A study of the general principles of histology and human anatomy with emphasis on the development of the musculoskeletal system of the head and neck and upper extremity. Prospected human cadaver laboratory is required.

HS 512 Introduction to Health Information Science
This course assists students in developing skills necessary to effectively identify health information using information technology. Students will gain knowledge of the use of Internet resources for health information access and will be introduced to the concept of the electronic health record including its ethical and legal implications.

HS 520 Human Anatomy II
A study of the anatomy and function of the human lower extremity, trunk, and structures of thorax, abdomen, and pelvis. Prospected cadaver laboratory is required.

HS 522 Research Methods and Design
Development and application of graduate level knowledge and skills related to research methods in health sciences. Completion of this course will assist the student in the development and completion of a research proposal including the identification of a problem, conducting a literature review, developing a hypothesis, designing a study and submitting an Institutional Review Board application.

HS 532 Methods of Data Analysis
Development and application of graduate level knowledge and skills regarding methodologies and statistics appropriate in descriptive and experimental research. Statistical software programs will be utilized to enhance student understanding and application of course material.

HS 612 Research-Directed Study
Research under faculty supervision. Requires filing of course objectives with program chair.

HS 622 Research-Directed Study
Research under faculty supervision. Requires filing of course objectives with program chair.

HS 632 Research-Directed Study
Research under faculty supervision. Requires filing of course objectives with program chair.

HS 642 Research-Directed Study
Research under faculty supervision. Requires filing of course objectives with program chair.
The Physical Therapy Residential Doctor of Physical Therapy Program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (APTA). Physical therapists must graduate from an accredited program to be eligible for licensure in the United States.

The name, address, and telephone number of the accrediting agency is:
Commission on Accreditation in Physical Therapy Education
American Physical Therapy Association
1111 N. Fairfax St.
Alexandria, VA  22314
703.706.3245

For further information pertaining to admissions policies and procedures, please visit us at www.atsu.edu.
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