PHYSICAL THERAPY (PTS)

PTS 508. Human Gait and Locomotion. 1 Credit Hour.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 516. Clinical Research I. 3 Credit Hours.
Principles, concepts, and basic skills required to conduct clinical research in physical therapy. Topics include research design, sampling, bias, reliability and validity, questionnaire design, statistical computing, conceptual review of literature, and the preparation of a research proposal.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 518. Introduction to Pilates - Gateway. 1 Credit Hour.
Components: LEC.
Grading: SUS.
Typically Offered: Spring.

PTS 526. Therapeutic Exercise. 3 Credit Hours.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 528. Musculoskeletal Examination and Treatment I. 3 Credit Hours.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 530. Foundations in Physical Therapy. 3 Credit Hours.
This course is designed to enable students to develop an understanding of the interdependence of systems in the physical therapy profession. The initial classes will assess personal fitness and demonstrate the professional socialization system of the physical therapist as a fitness role model for patients. The interrelationships among the body mind system, the professional socialization system, and the communication systems will be discussed using an adult learning model. The utilization of Professional Behaviors will provide the experiential foundation for the development of affective skills in the profession. The course provides an overview of historical development, philosophical foundations and contemporary practice of physical therapy in the United States. The historical role of the physical therapist will be contrasted to the role of the autonomous professional capable of examination to establish diagnoses and prognoses and evaluations that synthesize the examination data. This evaluation provides the basis for interventions related to patient disorders affecting the musculoskeletal, integumentary, neurological and cardiopulmonary systems. The team approach to patient management will be presented as related to problem solving and coordination of patient care. The other roles of the physical therapist as consultant, educator, researcher, and administrator will also be discussed. The impact of a culturally diverse society on the practice of physical therapy will be covered. Medical terminology, with special emphasis on pathology and terminology commonly seen by a physical therapist will be mastered through self instruction and evaluation by the instructor.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 531. Gross Anatomy I. 3 Credit Hours.
This course will use dissection of human cadavers in order to study the macroscopic structure and organization of organs and organ systems.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 532. Gross Anatomy II. 3 Credit Hours.
This course will use dissection of human cadavers in order to study the macroscopic structure and organization of organs and organ systems.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 540. Foundations of Neuroscience. 3 Credit Hours.
The human central nervous system with emphasis on structure-function relationships, and clinical applications. The brain, spinal cord, cranial nerves, tracts, and nuclei of major systems. Central nervous systems lesions and their clinical significance are discussed. Lecture and human dissection are included.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 542. Electrotherapy. 3 Credit Hours.
This course presents the physiological rationale, indications, contraindications and the application of electrical modalities, including electrical stimulation, thermal modalities, sound modalities, compressive devices, mechanical machinery, and light therapy.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 543. Medical Pathology Seminar I. 1 Credit Hour.
Lectures and seminar discussion on medical and surgical management of pathological conditions, with particular emphasis on musculoskeletal disorders.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 544. Medical Pathology Seminar II. 1 Credit Hour.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 570. Physical Therapy Clinical Skills. 3 Credit Hours.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 572. Clinical Kinesiology and Biomechanics. 3 Credit Hours.
A study of musculoskeletal structure and function, physiological and biomechanical factor, and principles underlying the kinematics and kinetic of normal and abnormal human motion.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.
PTS 574. Clinical Examination. 3 Credit Hours.
This course will present the basic examination skills for patients with various diseases and dysfunctions of the neuromusculoskeletal system. The skills emphasized are patient interviewing, palpation, reflex/sensory testing, cranial nerve testing, coordination testing, manual muscle testing, goniometric measurement with assessment of end feels, upper and lower quarter screening, postural assessment, and documentation of findings. The prerequisite for this course is Gross Anatomy: coordinates with Clinical Kinesiology/Biomechanics. Human Gait and Locomotion, Clinical Research, and Clinical Skills: and leads to Musculoskeletal Rehabilitation I/II, Management of the Spine I/II, Clinical Decision Making I, Therapeutic Exercise, Neurological Evaluation, Geriatric Physical Therapy, and Cardiopulmonary Physical Therapy.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 576. Medical Screening in Physical Therapy. 1 Credit Hour.
This course presents content related to screening for medical conditions in order to make clinical decisions about appropriateness for physical therapy and need for medical referral for patients presenting for physical therapy management.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 601. Advanced Clinical Practice: Counterstrain I. 1 Credit Hour.
This seminar course will provide an in depth discussion of the history, physiologic rationale, and fundamentals of the Strain Counterstrain method of manual therapy. Newer concepts of facial science will also be explored. Counterstrain I will stress palpation skills as the foundation for any manual therapist and will teach advanced palpatory anatomy techniques. 30-50 Counterstrain techniques spanning the whole body and consisting of the musculoskeletal, neurovascular, and visceral systems will be taught through lecture, demonstration, and lab.
Components: LEC.
Grading: SUS.
Typically Offered: Fall.

PTS 603. Introduction to Principles of Orthotic Fabrication and Prescription. 1 Credit Hour.
This seminar course is designed to introduce the art of custom orthotic making. We will explore the various categories within custom orthotics; static, dynamic, serial static, and static progressive. A comparison of the features of pre-fabricated orthoses vs. custom made will be made. The application of clinical reasoning to decision making will equip the Therapist with the necessary information to assist them when considering the orthotic options to achieve the best possible outcome for their patients.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 604. Rehabilitation Technology for Physical Therapists. 1 Credit Hour.
This course will introduce current advancements in diagnostic and therapeutic equipment used by physical therapists in clinical practice. The emphasis will be on latest rehabilitation technology such as virtual reality, neural stimulation and rehabilitation robotics. Students will observe the equipment being used on patients, get a basic understanding of its operation and have an opportunity for hands-on learning.
Components: LEC.
Grading: CNC.
Typically Offered: Fall.

PTS 605. Physical Therapy Private Practice Management. 1 Credit Hour.
Course focuses on establishing a private physical therapy practice, including initial development through marketing and management. Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 606. Issues in Women's Health: Obstetrics, Osteoporosis and Breast Health. 1 Credit Hour.
Introduction to physical therapy practice for evaluation and treatment of pelvic floor dysfunction. Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 607. Issues in Women's Health: Gynecology. 1 Credit Hour.
Introduction to physical therapy practice for evaluation and treatment of problems related to pregnancy, osteoporosis, and other disorders specific to women. Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 608. Nutrition for Physical Therapists. 1 Credit Hour.
A presentation of nutrition content that will benefit the professional skills of physical therapists. Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: SUS.
Typically Offered: Spring.
PTS 609. Advances in Amputee Rehabilitation and Prosthetic Technology. 1 Credit Hour.
This course is designed to provide interested students with educational materials about amputations surgery, prosthetic technology and rehabilitation that will augment the information presented in other courses. A select faculty of experts have been invited to present on topics of interest that provide greater depth of knowledge for those physical therapy students who are interested in the field of prosthetics and amputee care. Students will be encouraged to actively participate during each presentation with thought provoking dialog regarding how technology, evidence-based rehabilitation and disciplines involved in prosthetic rehabilitation can work together as a team to generate a better than satisfactory outcome for people with limb loss.
Components: LEC.
Grading: SUS.
Typically Offered: Fall.

PTS 610. Introduction to Pilates - Gateway. 1 Credit Hour.
This course provides in-depth instruction in the use of Pilates Mat to supplement physical therapy practice. This course covers the history of Pilates and Polestar education, biomechanics, and the many uses of Pilates in physical practices, as well as instruction in 18 Pilates mat exercises. Students learn to perform and teach the exercises and 4 unique class sequences.
Components: LEC.
Grading: SUS.
Typically Offered: Offered by Announcement Only.

PTS 611. Advanced Clinical Practice: Topics in Pediatrics. 1 Credit Hour.
The course will focus on advanced topics in pediatric physical therapy. Through lecture, seminar discussion and lab experiences, topics will include: typical and atypical development over the first year and examination and evidence-based intervention strategies used in early intervention strategies.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: SUS.
Typically Offered: Fall.

PTS 612. Sports Physical Therapy. 1 Credit Hour.
An overview of the general aspects of sports physical therapy practice will be provided. Topics will include the various settings, evaluations, interventions, and techniques involved in Sports physical therapy practice.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 613. Advanced Clinical Practice: Evaluation and Treatment of the Foot and Ankle. 1 Credit Hour.
This course will review the anatomy, normal and abnormal kinesiology/biomechanics, pathology and imaging of the foot and ankle and discuss physical therapy evaluation and intervention based on evidence based practice. It will include an introduction to evaluation and negative casting for orthotics.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: SUS.
Typically Offered: Fall.

PTS 614. Certified Strength and Conditioning Specialist Preparation (NSCA). 1 Credit Hour.
Evaluation and exercise planning of athletes to help them achieve their maximum physical performance without incurring injury. Case studies, a problem-solving approach, and integration of previously learned material are emphasized. Classroom instruction, exercise performance, video analysis, and case studies are utilized.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 615. Advance Clinical Practice: Taping for the Orthopedic Population. 1 Credit Hour.
This seminar course is designed to introduce the participant to the concepts of taping for various musculoskeletal pathologies commonly seen in the athletic population. Athletic taping and kinesiotaping principles and uses in rehabilitation will be introduced. A lab component will allow participants to practice the various taping techniques demonstrated.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 616. Clinical Research I. 3 Credit Hours.
This course provides a foundation for evidence based practice as a physical therapist. It presents the principles, concepts and basic skills required to identify, evaluate, create and apply research evidence to the practice of physical therapy. Topics covered include levels of research evidence, health/disability models, searching for research literature including electronic data bases hypothesis testing, critical review of research literature, measurement, statistical analysis, research design, sampling, bias, and statistical computing.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 617. Abdominal Anatomy. 1 Credit Hour.
Course analyzes abdominal anatomy emphasizing structure and function. Cadaver dissection is included.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 619. Pelvic Anatomy. 1 Credit Hour.
Course analyzes the anatomy of the human pelvic area. Cadaver dissection is included.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 620. Spanish for Physical Therapists. 1 Credit Hour.
This course is designed to familiarize the physical therapy student with different aspects of the Spanish speaking culture. This course is also designed to assist the student in developing the basic communication skills in Spanish needed in the clinical setting when working with Spanish speaking patients.
Components: LEC.
Grading: SUS.
Typically Offered: Summer.
PTS 623. Myofascial Release. 1 Credit Hour.
Introduction to Myofascial Release technique in rehabilitation.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 624. Myofascial Release II. 1 Credit Hour.
A follow up to the introductory course MFR I. This course focuses on a review of bioenergy followed by practice of release techniques for trunk, extremities and head and neck. Cranial techniques and rebundaring are also taught.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 625. Introduction to Dry Needling Theory and Technique. 1 Credit Hour.
Course introduces the participant to the concepts of dry needling, its neuro-functional principles, and its use in a physical therapy setting. Emphasis on comparing and contrasting dry needling to acupuncture, as well as the safety, indications and contraindications of dry needling. A lab component will allow participants to practice various introductory dry needling techniques.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 627. Gateway Pilates II. 1 Credit Hour.
This two-day Pilates course will teach how to provide four new basic Pilates Mat classes. A total of 18 Gateway 2 preparatory exercises and original Pilates Mat exercises will be taught. The instructor will provide ample experiences for real time practice of each of the 4 Pilates Mat sequences, and will provide feedback to each participant pertaining to additional training and practice to become proficient teachers of the Gateway Introductory Mat work.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 629. Evaluation and Treatment of Spinal Dysfunctions I. 3 Credit Hours.
This course provides an in-depth exploration of the evaluation and treatment of various dysfunctions of the spine. The lumbar and sacroiliac regions will be explored. Thorough evaluation procedures will be emphasized as they relate to specific diagnosis. Treatment for the respective diagnoses will include therapeutic exercise, soft tissue stretching, and postural re-education.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 630. Foundations of Physical Therapy. 3 Credit Hours.
Historical development, philosophical foundations and contemporary practice of a physical therapist as an educator, consultant, researcher, administrator, and model of healthy behaviors. Health as indicated by global fitness measures will be demonstrated and experienced. Medical terminology mastered.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 631. Gross Anatomy for Physical Therapy I. 3 Credit Hours.
Gross anatomy with emphasis on the musculoskeletal systems and a survey of other systems that are relevant to physical therapy practice. Cadaver dissection.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 632. Gross Anatomy for Physical Therapy II. 3 Credit Hours.
Gross Anatomy with emphasis on the musculoskeletal systems and a survey of other systems that are relevant to physical therapy practice. Cadaver dissection.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 633. Communication in Physical Therapy Practice. 2 Credit Hours.
Course provides an analysis of communication skills in physical therapy clinical practice. Emphasis is placed on instruction of patients and their families, supportive staff, and health care team members. In-depth examination of patient-therapist interactions is included. Prerequisite: Open to Physical Therapy majors only.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 640. Neuroscience I. 3 Credit Hours.
This course will explore the human nervous system with an emphasis on the relationship between structure and function. The gross structures of the central and peripheral nervous systems will be discussed, and basic neurophysiological and neuropsychological constructs regarding the function of the nervous system will be explored. Particular emphasis is placed on the systems involved in human motor control and function, its assessment, and the basis for diagnosis and treatment selection by physical therapists.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 641. Neuroscience II. 3 Credit Hours.
Basic neurophysiological and neuropsychological constructs regarding the function of the nervous system are explored. Analyses of normal systems are contrasted with abnormal systems. Particular emphasis is placed on the systems involved in human motor control and function, its assessment, and the basis for diagnosis and treatment selection by physical therapists.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 642. Electrotherapy. 3 Credit Hours.
This course presents the physiological rationale, indications, contraindications and the application of electrical modalities, including electrical stimulation, thermal modalities, sound modalities, compressive devices, mechanical machinery, and light therapy.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.
PTS 643. Medical Pathology Seminar I. 1 Credit Hour.
Lectures and seminar discussion on medical and surgical management of pathological conditions, with particular emphasis on musculoskeletal disorders.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 644. Medical Pathology Seminar II. 1 Credit Hour.
Lectures and seminar discussion on pathological conditions with particular emphasis on neuromuscular and musculoskeletal disorders.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 645. Medical Pathology Seminar III. 1 Credit Hour.
This course provides lectures and seminar discussion on medical and surgical management of pathological conditions, with particular emphasis on regenerative medicine, neuromuscular disorders and women's health.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 646. Medical Pathology Seminar IV. 1 Credit Hour.
Lectures and seminar discussion of pathological conditions with particular emphasis on cardiorespiratory and pediatric disorders.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 650. Pharmacology. 2 Credit Hours.
Basic principles of pharmacology and pharmacotherapeutics. Contemporary drug therapies and their effects on patients undergoing rehabilitation are discussed.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 651. Therapeutic Physiology. 2 Credit Hours.
This course will require the student to analyze and apply physiologic principles to promote optimal patient evaluation and management. A variety of tests and measures will be reviewed and will be integrated with specific physiologic principles in order for the student to better understand the role of therapeutic interventions for patients referred to physical therapy. The focus of the course will revolve around several related themes including (1) interpreting the cardiorespiratory response to exercise, (2) understanding energy production and regulation, (3) integrating the cardiovascular, pulmonary, and muscular systems to better understand and interpret cardiorespiratory function as well as energy production, regulation, and homeostasis, and (4) examining the effects of de-conditioning and re-conditioning using different forms of exercise for individuals who are healthy or diagnosed with a medical disorder.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 671. Medical Screening in Physical Therapy. 1 Credit Hour.
This course presents the basic examination skills for patients with various diseases and dysfunctions of the neuromusculoskeletal system. The skills emphasized are patient interviewing, palpation, reflex/sensory testing, cranial nerve testing, coordination testing, manual muscle testing, goniometric measurement with assessment of end feels, upper and lower quarter screening, postural assessment, and documentation of findings.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 672. Clinical Kinesiology and Biomechanics. 3 Credit Hours.
A study of musculoskeletal structure and function, physiological and biomechanical factors, and principles underlying the kinematics and kinetics of normal and abnormal human motion.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 674. Clinical Examination. 3 Credit Hours.
This course will present the basic examination skills for patients with various diseases and dysfunctions of the neuromusculoskeletal system. The skills emphasized are patient interviewing, palpation, reflex/sensory testing, cranial nerve testing, coordination testing, manual muscle testing, goniometric measurement with assessment of end feels, upper and lower quarter screening, postural assessment, and documentation of findings.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 675. Clinical Decision Making I. 2 Credit Hours.
This course presents components of physical therapist practice with an emphasis on evidence-based decision making related to interviewing patients, selecting appropriate tests and measures, arriving at a physical therapy diagnosis and developing a plan of care within the physical therapist’s scope of practice. Documentation formats as they relate to clinical decision making are presented. The Physical Therapist Guide to Practice patient/client management model, International Classification of Function, and practice patterns are presented. The process of physical therapy diagnosis is presented. Students will be given an opportunity to practice with case studies.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 676. Medical Screening in Physical Therapy. 1 Credit Hour.
This course presents content related to screening for medical conditions in order to make clinical decisions about appropriateness for physical therapy and need for medical referral for patients presenting for physical therapy management.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.
PTS 695. Selected Topics in Physical Therapy. 1-3 Credit Hours.
Topics in contemporary physical therapy clinical practice with focus on specialty areas such as neonatal pulmonary care, balance/vestibular dysfunction, geriatrics, pediatrics, obstetrics, and gynecology. Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall, Spring, & Summer.

PTS 706. Neurological Evaluation. 2 Credit Hours.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 708. Human Gait and Locomotion. 1 Credit Hour.
This course is an in-depth study of the fundamental mechanisms of normal human gait and locomotion. Students will be instructed on the terminology, normal joint range of motion and muscle function of the lower limbs during gait. Mechanisms of observational and instrumented analyses of gait will be discussed. Identification of common gait deviations, using observational gait analysis skills, will be briefly discussed.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 710. Clinical Internship I. 2 Credit Hours.
First in a series of supervised clinical education experiences emphasizing the mastery of clinical skills and professional behaviors across patient care settings as they relate to the patient/client management model. This is an 8-week clinical internship.
Components: CLN.
Grading: SUS.
Typically Offered: Fall.

PTS 711. Clinical Internship II. 2 Credit Hours.
Second in a series of supervised clinical education experiences emphasizing the mastery of clinical skills and professional behaviors across patient care settings as they relate to the patient/client management model. This is an 8-week clinical internship.
Components: CLN.
Grading: SUS.
Typically Offered: Fall.

PTS 714. Neurorehabilitation. 3 Credit Hours.
Evidence-based practices in the treatment of individuals with neurological involvement are explored. Emphasis is placed upon the integration and application of theoretical constructs, prognostic indicators, examination and evaluation findings, and therapeutic intervention strategies utilized by physical therapists in neurological rehabilitation across disease course and practice settings.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 715. Rehabilitation of the Complex Patient. 3 Credit Hours.
The course will instruct students on the management of individuals with complex pathology that has additional complex social and environmental factors. Emphasis will be placed on the principles of assessment, treatment, discharge planning, and referral in the Acute Care environment. Topics covered include: early mobilization in the ICU, management of patients with multiple lines, drains, and tubes, multiple trauma, cancer, hospice and palliative care, bariatrics, solid organ transplantation, patient safety, collaboration with healthcare team members, and use of acute care appropriate outcome measures. The course includes hands on transfer labs, patient evaluation and simulation experiences, and a practical examination on assessment and mobilization of a simulated complex patient.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 717. Clinical Research II. 3 Credit Hours.
This course is a continuation of Clinical Research I that provides the student with continued guidance in the completion of the faculty led research project begun as part of Clinical Research I. A series of lectures also provide exposure to additional topics relevant to clinical research in Physical Therapy. Potential lecture topics include data analysis, design, error, philosophy of science, and research reporting.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 718. Physical Therapy Administration. 3 Credit Hours.
Course discusses physical therapy services, departmental policies and procedures, and personnel management. Issues relevant to clinical practice and the physical therapy profession are emphasized.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 720. Biomechanical Basis of Human Movement. 3 Credit Hours.
A study of the basic biomechanical principles underlying the kinetics and kinematics of normal and abnormal human motion as well as the measurement of human movement.
Requisite: Physical Therapy PHD Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 721. Measurement of Impairment and Function in Human Movement. 3 Credit Hours.
A study of measurement tools utilized in the analysis of normal and abnormal human motion.
Requisite: Physical Therapy PHD Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 722. Pathobiology of Human Function I. 3 Credit Hours.
Pathophysiology of musculo-skeletal processes that impair human function including skeletal muscle; skin, tendons, ligaments, cartilage; bone; and cardiorespiratory.
Requisite: Physical Therapy PHD Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.
PTS 724. Cardio-Respiratory Physical Therapy. 3 Credit Hours.
The skills necessary for the evaluation and treatment of patients with various cardio-respiratory diseases and dysfunctions. Inpatient and outpatient cardiac and respiratory rehabilitation is included. Research on prevention of cardio-respiratory diseases and dysfunctions as it relates to evaluative, and therapeutic methods is also discussed. Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 726. Therapeutic Exercise. 3 Credit Hours.
This course will be a comprehensive approach for the evaluation and management of patients with various orthopaedic pathologies and their related dysfunction(s). An emphasis will be placed on evidence-based practice, critical thinking, treatment algorithms, as they all interrelate to therapeutic exercises. The general focus of this course is to possess entry-level skills in the cognitive, affective, and psychomotor domains as they relate to the treatment of a wide-variety of orthopaedic conditions. Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 727. Prosthetics and Orthotics. 3 Credit Hours.
This course offers a comprehensive approach to the evaluation, treatment and management of people who require the intervention of prosthetic or orthotic appliances. Identification and application of appropriate therapeutic management alternatives are integrated with self-help appliances to assist with the goal of returning the client to the community and/or the highest level of social interaction. Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 728. Musculoskeletal Examination and Manual Treatment I. 3 Credit Hours.
In-depth examination of differential diagnosis of various extremity dysfunctions with principles of examining soft tissue, bony and postsurgical problems relevant to the shoulder, elbow, wrist/hand, hip, knee, ankle, and foot. Manual therapy/joint mobilizations for each joint will also be introduced. Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 729. EVALUATION and TREATMENT OF SPINAL DYSFUNCTIONS II. 3 Credit Hours.
This course provides an in-depth exploration of the evaluation and treatment of various dysfunctions of the spine. The cervical, thoracic, suboccipital regions and TMJ will be explored. Students will review the lumbar and sacro-iliac dysfunctions. Students are expected to critically review and investigate the literature relevant to the cervical, thoracic, and head-neck regions. Treatment for respective diagnoses will include therapeutic exercise, soft tissue stretching and manual therapy techniques. Clinical competence in manual evaluation and treatment procedures are to be developed.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 730. Pediatric Physical Therapy. 2 Credit Hours.
This course is designed to provide students with an entry level knowledge, attitudes and skills essential for working with children with movement dysfunction. Examination and evidence-based practices utilized by physical therapists in the treatment of children with musculoskeletal, neuromuscular, cardiopulmonary, integumentary and/or cognitive/affective issues will be emphasized. Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 731. Geriatric Physical Therapy. 2 Credit Hours.
A case-based clinical approach to factors and issues related to examination, evaluation, diagnosis, prognosis, and intervention of aging adults by physical therapists. Topics covered include age-related versus activity related changes to body systems; use of standardized functional assessments appropriate for aging adults; successful aging; musculoskeletal, neuromuscular, cardiopulmonary, cognitive and psychiatric disorders in the elderly; fall risk assessment and fall prevention; home and environmental adaptations/modifications; health care delivery sites/systems; nutrition; polypharmacy; Medicare rules and regulation related to rehabilitation; frailty/sarcopenia; and strength training and exercise prescription in the aging adult. Focused discussion centers on clinical decision making across multiple geriatric settings. Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 743. Measuring Health Outcomes. 3 Credit Hours.
An in depth analysis of the use and construction of health outcome measures. Topics covered include creating and selecting items, scaling responses, scale construction, response bias, reliability, validity, responsiveness and methods of administration.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

PTS 744. Integrated Sports and Leisure. 3 Credit Hours.
Course promotes the integration of students with the physically challenged by working together to learn common recreational activities. Sailing and camping activities are used as an educational tool for students to learn the capabilities, physical resources, and assistance required by physically challenged individuals. Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.
PTS 745. Integumentary Disorders and Treatment. 2 Credit Hours.
The course will instruct students on the management of individuals with open wounds, burns, and other dermatologic pathology from a patient-focused perspective. Emphasis is placed on clinical decision making as it relates to the principles of assessment, treatment, referral, and prevention. Topics covered include: wound assessment and documentation, debridement, electrical stimulation and ultrasound for wounds, dressing selection, skin breakdown and pressure ulcer prevention, support surface selection, burns, skin grafts and muscle flaps, evaluation of arterial and venous circulation, nutrition, and the identification of melanoma, basal cell and squamous carcinoma, psoriasis, impetigo, shingles and other dermatological pathology. The course includes labs for wound evaluation, measurement, debridement, dressing selection and application, pressure mapping and support surface selection.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 748. Musculoskeletal Examination and Treatment II. 3 Credit Hours.
Advanced examination, evaluation, functional assessment and treatment of patients in selected specialty areas of musculoskeletal physical therapy, with emphasis on functional outcomes and evidence-based treatment throughout the lifespan.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 755. Neuromuscular Basis of Movement. 3 Credit Hours.
Concepts of neuromuscular production and regulation of movement with emphasis on neurophysiologic substrates and mechanisms underlying motor behavior.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 760. Theories of Movement Science. 3 Credit Hours.
An in-depth review of classical theories and recent research in the movement sciences, to include the study and analysis of system theory and neurobiological substrates.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 761. Motor Learning. 3 Credit Hours.
The factors relating to, and affecting, the acquisition and performance of motor skills. Qualification of skill acquisition and performance are explored.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 762. Advanced Topics in Neurodevelopment. 3 Credit Hours.
Classical research and systems models of neurodevelopment is reviewed, analyzed, and related to current research on various areas of human development throughout the lifespan.
Requisite: Physical Therapy PHD Majors Only.
Components: THI.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

PTS 764. Seminars in Neuroscience. 3 Credit Hours.
This course explores the role and organization of the key units of the central and peripheral nervous systems at the molecular and cellular levels. The integrated functional physiology of systems neuroscience and behavioral neuroscience will be studied with special emphasis on neural contributions to involuntary and voluntary motor functions, perception, cognition, and learning. PREREQUISITE: For Physical Therapy PhD students only.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

PTS 765. Health Promotion and Disease Prevention. 2 Credit Hours.
The role of physical therapists in health promotion and disease prevention.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Summer.

PTS 766. Rehabilitation of the Amputee. 3 Credit Hours.
This course examines the scientific evidence related to the evaluation, treatment and management of clients who require intervention for diabetic foot and/or dysvascular limb potentially leading to amputation, amputation surgery, prosthetic appliances, functional assessment and amputee rehabilitation. Upper limb prosthetic management will also be examined.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

PTS 767. Prosthetic Technology and Amputee Rehabilitation. 3 Credit Hours.
This course examines the scientific evidence related to the evaluation, treatment and management of patients with amputee-related conditions. Emphasis is on state-of-the-art technology and the future of prosthetic designs.
Requisite: Physical Therapy PHD Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

PTS 768. Rehabilitation Engineering and Assistive Technology. 3 Credit Hours.
This course is designed for graduate students interested in developing an understanding of complementary roles of clinicians and engineers in assisting individuals with disabilities in all areas of life.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

PTS 769. Seminars in Orthotics and Prosthetic Rehabilitation. 3 Credit Hours.
Examination of current scientific evidence and clinical issues related to upper and lower limb amputees, and prosthetic and orthotic componentry and related technology. Students will discuss case studies and design appropriate devices to address the needs of the individuals in the cases.
Requisite: Physical Therapy PHD Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.
PTS 770. Education Principles in Physical Therapy. 1 Credit Hour.
Principles of education, as they apply to the educational setting, and
in patient care. Students are instructed in basic educational principles
and methods to prepare materials and instruct and evaluate learning for
patients, families, caretakers, students, colleagues, and others, in the
classroom, clinic and community.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 771. Complementary Therapies in Rehabilitation. 2 Credit Hours.
Historical development and evidence-based approach to complementary
therapies in rehabilitation.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 774. Role of Academic Faculty in Physical Therapy. 3 Credit Hours.
Introduction to the faculty roles in an institution of higher education,
including faculty development and evaluation systems, educational
leadership, and student advising, initiation of a research career and
educational administration of physical therapy programs at the entry-
level and post-graduate level.
Requisite: Physical Therapy PHD Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 775. Clinical Decision Making II. 3 Credit Hours.
This course will require the student to utilize: the patient management
model, the ICF model, the role of disablement and enablement in the
provision of physical therapy, all clinical and basic science course work,
professional and third party documentation requirements, knowledge
of healthcare delivery systems and legal/regulatory requirements, as
well as the research literature to plan and document evidence-based
care of patients in a variety of settings spanning the continuum of care.
Cases will represent a sample of ages, diagnoses, and patient acuity and
complexity.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 777. Instructional Methods in Physical Therapy Education. 3 Credit Hours.
Overview of research in the professional education field, with specific
applications to physical therapy academic and clinical education.
Emphasis is placed on curriculum development, competency-based
instructional design, testing, and instructional evaluation methods.
Requisite: Physical Therapy PHD Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 778. Teaching Practicum. 1-3 Credit Hours.
Supervised instructional design, teaching and evaluation of entry level
physical therapy students. Students participate as course instructors in
entry-level master's degree physical therapy curriculum.
Requisite: Physical Therapy PHD Majors Only.
Components: PRA.
Grading: GRD.
Typically Offered: Fall, Spring, & Summer.

PTS 784. Human Neuroanatomy. 3 Credit Hours.
Detailed exploration of the human nervous system with an emphasis on
structure-function relationship and clinical applications. This course is
designed for Physical Therapy graduate students with an interest in a
professional career in teaching the anatomical sciences to students of
the health professions including medical students.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Offered by Announcement Only.

PTS 785. Medical Diagnostic Tests. 2 Credit Hours.
This course is designed to provide the Physical Therapy student with the
basic skills in understanding and interpreting the imaging techniques of
Plain film x-ray, Magnetic Resonance Imaging, Computed Tomography,
Bone Scans, Real Time Ultrasound, Electrodiagnostic Tests, selected
Laboratory Tests and Fluoroscopy. Special emphasis will be placed on
the understanding of where the interpretation of these images falls in
physical therapy Differential Diagnosis and evidence based practice.
Requisite: Physical Therapy Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 790. Models of Physical Therapy Practice. 3 Credit Hours.
Study of the integration of didactic knowledge, clinical skills, clinical
problem solving and the intuitive process into the formation of a clinical
diagnosis which will direct treatment in physical therapy. Diagnosis
as a process in physical therapy is compared to diagnosis in nursing,
psychiatry and medicine, and is distinguished from similar processes
such as assessment, examination and screening. Various models of
physical therapy practice currently being taught and published will be
explored, including the ICF model, the Patient/Client management
model, and the Movement System. Recommendations for a Model of PT
Diagnosis and Decision making will be made by students.
Requisite: Physical Therapy PHD Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Spring.

PTS 795. Clinical Research Methods I. 3 Credit Hours.
An overview of measurement and sampling research design relevant to
clinical research in physical therapy.
Requisite: Physical Therapy PHD Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall.

PTS 796. Applied Statistics in Physical Therapy. 3 Credit Hours.
Basic statistics taught from an applied perspective which includes
statistical computing using SAS or SPSS and interpretation and
presentation of data analysis.
Requisite: Physical Therapy PHD Majors Only.
Components: LEC.
Grading: GRD.
Typically Offered: Fall, Spring, & Summer.

PTS 798. Research Practicum. 3 Credit Hours.
Practicum designed to familiarize the student with an area of research,
to implement a pilot study in an area of interest, and to develop working
relationship with a sponsoring faculty member.
Requisite: Physical Therapy PHD Majors Only.
Components: RSC.
Grading: GRD.
Typically Offered: Fall, Spring, & Summer.
PTS 799. Independent Study in Physical Therapy. 1-3 Credit Hours.
Each course is designed to meet the needs of graduate students for in-depth study in a particular area of special interest.
Requisite: Physical Therapy Majors Only.
Components: THI.
Grading: GRD.
Typically Offered: Fall, Spring, & Summer.

PTS 802. Special Internship. 1-3 Credit Hours.
Supervised clinical education emphasizing clinical skills.
Requisite: Physical Therapy Majors Only.
Components: CLN.
Grading: SUS.
Typically Offered: Offered by Announcement Only.

PTS 803. Clinical Internship III. 2 Credit Hours.
Third in a series of supervised clinical education experiences emphasizing the mastery of clinical skills and professional behaviors across patient care settings. This is an 8-week clinical internship.
Components: CLN.
Grading: SUS.
Typically Offered: Spring.

PTS 804. Clinical Internship IV. 2 Credit Hours.
Fourth in a series of supervised clinical education experiences emphasizing the mastery of clinical skills and professional behaviors across patient care settings. This is an 8-week clinical internship.
Components: CLN.
Grading: SUS.
Typically Offered: Spring.

PTS 830. Pre-candidacy Dissertation. 1-6 Credit Hours.
To be used for pre-candidacy PhD dissertation research.
Requisite: Physical Therapy PHD Majors Only.
Components: THI.
Grading: SUS.
Typically Offered: Fall, Spring, & Summer.

PTS 840. Post-candidacy Dissertation. 1-12 Credit Hours.
The student will enroll for credits as determined by his/her advisor, but not for less than a total of 12. No more than six hours may be taken in a regular semester, nor more than three in a summer session. When a student has passed his/her qualifying exams and is engaged in an assistantship, he/she may still take the maximum allowable credit stated above.
Requisite: Physical Therapy PHD Majors Only.
Components: THI.
Grading: SUS.
Typically Offered: Fall, Spring, & Summer.

PTS 843. Measuring Health Outcomes. 3 Credit Hours.
An in depth analysis of the use and construction of instruments designed to measure health outcomes. Topics covered include creating and selecting items, scaling responses, scale construction, response bias, reliability, validity, measuring change, and methods of administration.
Components: LEC.
Grading: GRD.
Typically Offered: Fall, Spring, & Summer.

PTS 850. Research in Residence. 1 Credit Hour.
To establish residence for the PhD, or DPT, after the student has been enrolled for the permissible cumulative total in appropriate doctoral research or clinical practice. Credit not granted, may be regarded as full-time residence as determined by the Dean of the Graduate School.
Components: THI.
Grading: SUS.
Typically Offered: Fall, Spring, & Summer.