

## **Course List**

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## **Course Descriptions**

### **Summer I**

#### *DPTE 710 Principles & Values in Physical Therapy*

(3 hours) Prerequisites: Enrolled in the Charleston Southern University DPT Program. This course teaches students foundational information and skills essential to the practice of physical therapy. Three major themes are covered: 1) Program, institutional, and healthcare policies and procedures including professionalism, emergency procedures, and HIPAA regulations; 2) Concepts inherent to the profession including its history, APTA core values, and Code of Ethics; and 3) The relationship of how cultural competency and psychosocial patient characteristics impact the practice of physical therapy. Strategies for effective learning, interpersonal communication, and team building are covered throughout the term.

#### *DPTE 711 Gross Anatomy*

(5 hours) Prerequisites: Enrolled in the Charleston Southern University DPT Program. This course provides an overview of human anatomy predominantly through guided human cadaver dissection. Additional learning experiences will be conducted via lecture to expand on functional anatomical concepts. Content learned in this course will contribute to a physical therapy student's mastery of identification and relationship of anatomical structures. Anatomical topics will predominantly focus on muscles, joints, bones, cardiovascular structures, and peripheral nervous systems with exploration into other body systems and regions as appropriate.

#### *DPTE 712 Screening & Examination*

(3 hours) Prerequisites: Enrolled in the Charleston Southern University DPT Program. This course is designed to develop the fundamental knowledge, psychomotor skills and behaviors needed in patient care for physical therapy practice as it relates to understanding the framework for patient care management across systems and performing a screen and basic examination skills. Student engagement and proficiency requires assessment of person, task, and environment in order to safely execute the patient care screen and basic examination skills.

#### *DPTE 713 Physiology*

(3 hours) Prerequisites: Enrolled in the Charleston Southern University DPT Program. This course reinforces the fundamental physiologic principles underlying the structure and function of the cells, tissues organs which make up the major organ systems of the human body, and the interconnectivity within and between these organ systems. This course will present these principles at the cellular, organ, tissue, and systems level in the context of both health and pathologies/disease with a particular emphasis on the latter. Clinical correlations relevant to the practice of physical therapy will be emphasized.

### **Fall I**

#### *DPTE 720 Applied Kinesiology*

(3 hours) Prerequisites: Successful completion of previous Summer term, Year I, CSU PT classes. This course is an overview of kinesiology and biomechanics from a clinical perspective. The principles and theories of human motion, typically kinematics and kinetics, are presented to develop analytical skills necessary to assess normal and abnormal movement. Additionally, unique characteristics of biological tissues will be analyzed to understand their influence on movement. Introductory laboratory activities are used to develop these skills and provide clinical applications of the didactic course content.

### *DPTE 721 ICE I with Service Learning*

(2 hours) Prerequisites: Successful completion of previous Summer term, Year I, CSU PT classes. This course will prepare students to begin their clinical coursework and facilitate understanding of the physical therapy profession and its integration into the current health care system. Students will learn about various settings and patient populations a physical therapist might treat, documentation and communication standards for the physical therapy professional, and how the principles of service integrate into physical therapy practice and leadership through the lens of the APTA Core Values and ethical standards. Finally, students will complete the first in a series of Integrated Clinical Experiences with a live patient to put previously learned examination skills and concepts into practice.

### *DPTE 722 Foundations of Research*

(3 hours) Prerequisites: Successful completion of previous Summer term, Year I, CSU PT classes. This foundations course is intended to provide the learner the opportunity to develop skills and knowledge related to scientific methods, research design, and basic statistics that are pervasive in physical therapy literature. The course is also intended to prepare physical therapy students with the skills to obtain, analyze, synthesize, and integrate trustworthy evidence into clinical practice as educated consumers. Emphasis will be placed on instruction in these research and appraisal skills in the context of contemporary physical therapy literature. The interrelationship of best available research findings with evidence-based practice strategies will be emphasized.

### *DPTE 723 Neuroanatomy*

(3 hours) Prerequisites: Successful completion of previous Summer term, Year I, CSU PT classes. This course is designed to prepare the physical therapy student to apply basic neuroanatomy and neurophysiology principles to patient populations. Emphasis placed on the structural and functional organization of the central and peripheral nervous system. From this understanding, connections between neural structures that form the sensory, motor and homeostatic systems are discussed to generate human movement. Clinical correlations relevant to the practice of physical therapy are applied.

### *DPTE 724 Mobility & Function*

(3 hours) Prerequisites: Successful completion of previous Summer term, Year I, CSU PT classes. This course is designed to apply the fundamental knowledge and develop the psychomotor skills and behaviors needed in patient care for physical therapy practice as it relates to patient care management across systems and performing a screen, basic examination skills, positioning, and mobility tasks under different functional contexts across a variety of diagnoses. Student engagement and proficiency requires assessment of person, task, and environment in order to safely execute the patient care screen, basic examination skills and patient care interventions for positioning and mobility.

### *DPTE 725 Concepts of Diagnostic Imaging*

(1 hour) Prerequisites: Successful completion of previous Summer term, Year I, CSU PT classes. The topics of instruction include the foundational principles, procedures, and interpretation of diagnostic imaging commonly encountered in physical therapy practice. Focus is placed on the imaging methods of plain film radiography, myelograms, CT scans, magnetic resonance imaging and nuclear medicine as they relate to the musculoskeletal, neuromuscular, and cardiovascular, gastrointestinal, and reproductive systems.

### *DPTE 726 Pharmacology*

(2 hours) Prerequisites: Successful completion of previous Summer term, Year I, CSU PT classes. This course introduces the principles of pharmacology, pharmacokinetics, pharmacodynamics, and classifications of drugs used in the treatment of disease. Implications of pharmacological interventions will be addressed, including recognition of adverse drug effects in patients.

### Spring I

#### *DPTE 730 Motor Control & Motor Learning*

(2 hours) Prerequisites: Successful completion of previous Fall term, Year I, CSU PT classes. Theories of motor control, motor learning, motor planning, and neuroplasticity are introduced and linked to fundamental core concepts of how neuroanatomical systems communicate via the central and peripheral nervous system to produce and control human movement. The course provides experiences in clinical applications of these concepts.

#### *DPTE 731 Health Promotion & Wellness*

(2 hours) Prerequisites: Successful completion of previous Fall term, Year I, CSU PT classes. The course addresses performing a health risk assessment, fitness and exercise examination, and body composition analysis as well as interpreting the results for the well individual and special populations with and without impairments. This course involves how the physical therapist should incorporate health informatics and disease prevention to promote health, wellness, and fitness in young and elderly individuals. Basic nutrition needs for health and wellness are addressed.

#### *DPTE 732 Musculoskeletal I: Examination*

(4 hours) Prerequisites: Successful completion of previous Fall term, Year I, CSU PT classes. This course serves to introduce and expand musculoskeletal topics for first year DPT students. These topics will predominantly focus on screening, examination, evaluation, and clinical decision making in patients with musculoskeletal impairments. Additional topics include musculoskeletal impairments associated with common orthopedic pathologies, functional outcome measures, and patient centered goals. This course utilizes foundational concepts from gross anatomy, applied kinesiology, and screening and examination courses. Student mastery of previous coursework is expected.

#### *DPTE 733 Neuromuscular I*

(4 hours) Prerequisites: Successful completion of previous Fall term, Year I, CSU PT classes. Didactic: Application and integration of knowledge acquired in neuroscience and motor control, learning, and planning as well as of neuroplasticity. This content is synthesized to determine how pathophysiology contributes to subsequent impairment resulting in movement dysfunction in acquired brain injury diagnoses predominantly seen throughout the lifespan that are not chronic or degenerative in nature.

Application (Laboratory Component): Evaluation, treatment, and management of adults with neurologic impairment using a systems approach to include motor development theory, task analysis and evidence-based practice as foundations for developing proficiency in executing evaluation, treatment and management of impairments. Therapeutic interventions applicable to the treatment of neurologic diagnoses are introduced.

### *DPTE 734 Hospital Care*

(2 hours) Prerequisites: Successful completion of previous Fall term, Year I, CSU PT classes. This course addresses the role of the physical therapist within the hospital practice environment, including the role that the hospital plays in the community of health care, common administrative structures, and common care payment systems for insured and uninsured persons. The practice of physical therapy utilizing previously instructed content will now integrate clinical knowledge, tests and measures, interpretation of physiologic status, lab values and available imaging will be incorporated into practice decision-making. Purposes and concerns with lines/leads involved in this setting are introduced. Interprofessional practice and discharge planning for the best patient outcomes are explored.

### *DPTE 735 Seminar I*

(1 hour) Prerequisites: Successful completion of previous Fall term, Year I, CSU PT classes. This course is designed to assess student comprehension of all materials covered during the first year of the DPT curriculum. This first course, in a two-part series, provides an opportunity for students to integrate previous course content and contemporary evidence to effectively examine patients across the lifespan commonly seen in physical therapy practice. The course includes a comprehensive written and an Objective Structured Clinical Examination (OSCE), each including concepts spanning the entire first year of the curriculum.

## Summer II

### *DPTE 810 Special Populations Across the Lifespan*

(5 hours) Prerequisites: Successful completion of previous Spring term, Year I, CSU PT classes. This course entails assessment of the pediatric and geriatric population in normal/abnormal development of the aging process, as well as the creation of a plan of care to address impairments and functional limitations associated with conditions frequently encountered by physical therapists. Content includes data interpretation from age-specific outcome measures and the planning of age-appropriate and patient/family-centered interventions that is inclusive of the social determinants of health across the continuum of care.

### *DPTE 811 Exercise Prescription*

(4 hours) Prerequisites: Successful completion of previous Spring term, Year I, CSU PT classes. This course is designed to introduce and expand a wide array of therapeutic interventions including targeted exercises, rehabilitation procedures, gait retraining, post-surgical protocols, and joint mobilizations. This course is a continuation of the musculoskeletal curriculum building on the foundations of Musculoskeletal I: Examination and incorporating concepts from Neuromuscular I. Topics covered in this class will predominantly be focused on providing safe and effective interventions in patients with musculoskeletal and neurological impairments across all health care settings. Students will be expected to synthesize previous mastered examination concepts to design, implement and teach a variety of rehabilitation protocols to improve limitations and activities in patients.

### *DPTE 812 Biophysical Agents*

(2 hours) Prerequisites: Successful completion of previous Spring term, Year I, CSU PT classes. This course provides instruction on the physiological effects, mechanical operation, and appropriate application of superficial and deep thermal agents; hydrotherapy; compression; traction; electrical stimulation; biofeedback; and other emerging technologies.

### *DPTE 813 Disabilities Management*

(2 hours) Prerequisites: Successful completion of previous Spring term, Year I, CSU PT classes. The course covers recommendation, prescription and management of functional support systems that enhances client independence with functional mobility. Using a systems approach, impairments are identified and prioritized, client goals and social determinants of health are considered, and evidence-based practice is utilized to assure that the optimal functional support system meets the needs of the client. Interprofessional collaboration will be introduced. Content covers rehabilitative functional supports for clients with neurological, genetic and/or orthopedic disorders and concepts related to accessibility and ergonomic modifications.

### Fall II

#### *DPTE 820 ICE II*

(1 hour) Prerequisites: Successful completion of previous Summer term, Year II, CSU PT classes. This course is a continuation of integrated clinical experiences and is intended to prepare students full-time clinical experiences. Students will integrate knowledge, skills, and behaviors into an Integrated Clinical Experiences with a live patient as well as assume the role of teacher/mentor for a first year DPT student.

#### *DPTE 821 Evidence-Based Practice I*

(3 hours) Prerequisites: Successful completion of previous Summer term, Year II, CSU PT classes. Participation in Evidence-Based Practice I focus on experiences are intended to assist the student develop a greater understanding of the process used to formulate evidence supporting physical therapy practice. Students will search and critique the literature concerning a research problem, identify and practice methodology suitable to conduct an experiment or gather information to address the research problem, and consider translation of the results to clinical practice under supervision of the faculty primary investigator.

#### *DPTE 822 Musculoskeletal II: Evaluation & Intervention*

(5 hours) Prerequisites: Successful completion of previous Summer term, Year II, CSU PT classes. This course is a culmination of the musculoskeletal curriculum building on the foundations of Musculoskeletal I: Examination and Exercise Prescription. This course is designed to emphasize clinical reasoning skills to enhance physical therapy practice based on current best practice knowledge. Students will be expected differentially diagnose a variety of musculoskeletal pathologies and create a full plan of care for targeted rehabilitation in the physical therapy setting and create plans of care that transition beyond the clinical setting. Students will be expected to expand musculoskeletal interventions to include manipulation, high-velocity low-amplitude thrust, and dry needling techniques to best address impairments across a spectrum of patients with a variety of musculoskeletal and non-musculoskeletal based comorbidities.

#### *DPTE 823 Neuromuscular II*

(5 hours) Prerequisites: Successful completion of previous Summer term, Year II, CSU PT classes. Didactic: Application and integration of knowledge acquired in neuroscience and motor control, learning and planning as well as of neuroplasticity. This content is synthesized to determine how pathophysiology contributes to subsequent impairment resulting in movement dysfunction associated with neurologic diagnoses and impairments not covered in DPTE 815, primarily consisting of vestibular disorders, spinal cord injury and degenerative and chronic diseases of upper and lower motor neuron origin. Application (Laboratory Component):

Evaluation, treatment and management of adults with neurologic impairment using a systems approach to include motor development theory, task analysis and evidence-based practice as foundations for developing proficiency in executing evaluation, treatment and management of impairments that are degenerative and chronic in nature. Various treatment interventions previously learned are modified, built upon and applied to this diagnostic group of acquired brain and spinal cord injury based on impairment.

#### *DPTE 680 Administration for PTs*

(3 hours) Prerequisites: Successful completion of previous Summer term, Year II, CSU PT classes. This course is designed to study of the impact of health care industry trends and issues upon the development and operations of physical therapy services. Instructors will share guidelines to apply planning, organizing, and marketing and financing principles to the establish physical therapy clinical practice arrangements. The course also includes methods to assess staff performance and standards relevant to the medico-legal, ethical, and quality control aspects of physical therapy services. Finally, this course will teach students about various physical therapy topics including healthcare structure, insurance, and health informatics.

#### Spring II

#### *DPTE 830 Clinical Experience I*

(2 hours) Prerequisites: Successful completion of previous Fall term, Year II, CSU PT classes. A 2-week full-time clinical education experience to develop physical therapy management skills in an ambulatory setting.

#### *DPTE 831 Cardiopulmonary*

(3 hours) Prerequisites: Successful completion of previous Fall term, Year II, CSU PT classes. This course is designed to prepare entry level physical therapists to 1) recognize patients who are at risk for cardiopulmonary disease secondary to the presence of well recognized cardiac disease risk factors and 2) acquire as clear an understanding of the cardiopulmonary involvement in patients who do have recognized cardiopulmonary disease in order to safely and effectively manage this patient population. These goals will be achieved by teaching the students 1) about the recognized comorbidities and risk factors for cardiopulmonary disease, 2) about medical tests including blood tests (serum enzymes and cardiac biomarkers), surgical interventions, imaging studies (echocardiograms, CT scans, positron emission tomography scans (PET) and MRI scans, Holter monitors/ECG and stress testing which provide information about the impact of cardiopulmonary disease on the function of this organ system and 3) “real time” assessments including chart review), physical examination, cardiopulmonary functional assessment (heart rate, blood pressure, oxygen saturation, etc.), and activity assessment. Goals 1 & 2 are designed to provide any physical therapist with the ability to define the cardiopulmonary status of any patient using available information and physical assessment of the patient. The combination of goals 1,2 and 3 is designed to maximize the understanding a physical therapist has of the cardiopulmonary status of a patient with known cardiopulmonary disease, thus allowing the crafting of an optimal and focused treatment plan that is both safe and effective. Laboratory sessions will focus on learning specific physical assessment and intervention techniques essential for optimizing the management of patients with cardiopulmonary diseases.

### *DPTE 832 Evidence-Based Practice II*

(3 hours) Prerequisites: Successful completion of previous Fall term, Year II, CSU PT classes. Participation in experiences intended to assist the student draw conclusions from systematically acquired data intended to answer a research question relevant to contemporary physical therapy practice. Students will develop data analysis and interpretation skills, ascertain the clinical relevance of their findings, identify barriers to translation of the results to clinical practice, and disseminate their work in a public forum under supervision of the faculty primary investigator.

### *DPTE 833 Complex Medical Diagnoses*

(5 hours) Prerequisites: Successful completion of previous Fall term, Year II, CSU PT classes. This course addresses the often complex and complicated pathology and pathophysiology of diagnostic groups commonly treated by physical therapists to include complex medical patients with the chronic disease profile of hypertension, hypercholesterolemia and/or diabetes mellitus related to the classification of diagnoses in the metabolic syndrome group, oncology, pelvic floor, vestibular/concussion, chronic pain, organ transplantation, co-morbidities associated with vascular diseases and blood disorders, renal dysfunction and dialysis, and adults with mental disabilities. Content contains use of specialty evaluation tools, screens and outcome measures to assess impairment and guide clinical decision-making for treatment intervention and referrals across the lifespan and the continuum of care.

### *DPTE 834 Integumentary*

(2 hours) Prerequisites: Successful completion of previous Fall term, Year II, CSU PT classes. This course provides the learner with the principles of prevention, evaluation, and treatment of integumentary practice as may be encountered by the physical therapist, utilizing a comprehensive patient/client management approach through integration of the five elements of care (examination, evaluation, diagnosis, prognosis, and intervention). The common diseases and conditions of the integumentary system are discussed. Treatment interventions include debridement, dressing types and mechanical assist. The processes of documentation and clinical decision making are practiced. Foundational concepts for the examination and treatment of lymphedema are also addressed.

### *DPTE 835 Seminar II*

(2 hours) Prerequisites: Successful completion of previous Fall term, Year II, CSU PT classes. This course is designed to assess student comprehension of all materials covered throughout the entire didactic DPT curriculum. This second course, in a two-part series, provides an opportunity for students to integrate previous course content and contemporary evidence to effectively examine, evaluate, and treat patients across the lifespan commonly seen in physical therapy practice. Students are also provided a guided review of previously covered classroom material based on current information about content and format of the National Physical Therapist Examination (NPTE). The summative assessment of this course is a comprehensive written and an Objective Structured Clinical Examination (OSCE), each including concepts spanning the entire didactic curriculum.

### Summer III

#### *DPTE 910 Clinical Experience II*

(10 hours) Prerequisites: Successful completion of previous Spring term, Year II, CSU PT classes. A 10-week full-time clinical education experience to develop physical therapy management skills of patients in one of three possible settings: inpatient, outpatient or specialized clinical setting of the student's choosing.

#### *DPTE 911 Clinical Experience III*

(10 hours) Prerequisites: Successful completion of DPTE 910. A 10-week full-time clinical education experience to develop physical therapy management skills of patients in one of three possible settings: inpatient, outpatient or specialized clinical setting of the student's choosing.

### Fall III

#### *DPTE 920 Clinical Experience IV*

(10 hours) Prerequisites: Successful completion of DPTE 911. A 10-week full-time clinical education experience to develop physical therapy management skills of patients in one of three possible settings: inpatient, outpatient or specialized clinical setting of the student's choosing.

#### *DPTE 921 Diakonia: Commission for Service*

(1 hour) Prerequisites: Successful completion of previous Summer, Year III, CSU DPT classes. This 1-week summative course is a culmination of all didactic learning and clinical education experiences throughout the DPT curriculum. Diakonia is the Greek word for Deacon, translated ministry or service. Students reflect on how they have and will continue to exemplify Christian principles through evidence-based clinical care while serving their community and profession. The threshold for success, in this course, is the completion of a standardized practice examination to prepare students for the NPTE. In addition, students share a "game changing" patient to whom they provided care during one of their clinical experiences. Finally, students provide the program and university feedback for quality improvement for future DPT students.