

Trine University
Doctor of Physical Therapy Program
Course Descriptions

Fall 1

DPT 5111 CARE I: 0-2-1

Clinical Application and Reflection Experience (CARE) I is the first in a series of five courses that are integrated with didactic instruction in the first five semesters of the DPT curriculum. Students work in teams with a physical therapist clinical instructor to practice and refine skills, employ clinical problem-solving, participate in reflective group discussions and assume professional roles in various clinical patient care settings. Students are expected to demonstrate skills and apply knowledge obtained from concurrent coursework.

DPT 5124 Anatomy of Movement I: 2-4-4

Systems and regional approaches to gross human anatomy are combined with principles of kinesiology to enable an in-depth study of the anatomical components and principles of function. The material covered in this course includes anatomy and kinesiology of the upper extremities, head, and neck. Classroom and online lectures are complemented by laboratory experiences that include study of prosected human cadavers, and instructional palpation of live humans.

DPT 5134 Applied Physiology I: 3-2-4

This is the first of a two course series in which students study applied physiological concepts. This course focuses on the physiological and functional responses and adaptations of the human body to exercise, and the influences of structural and physiological changes with growth, aging, nutrition, drugs, and disease. The primary focus will be on the musculoskeletal and cardiopulmonary systems, and systems of energy production, delivery and balance. Learning occurs through lecture, discussion, and laboratory experiences.

DPT 5143 Clinical Practice I: 1-4-3

Students learn through lecture, discussion, and guided practice important skills for patient management in clinical practice. Examples of these skills include: Effective patient interviewing and documentation; assessment of impairments including vital signs, sensation, reflexes, and pain; safe and effective positioning and draping; managing wheelchairs and other equipment; safe assistance with gait and transfers; and the therapeutic application of superficial heat and cold. Students are also introduced to theoretical models that guide clinical decision making, including patient management, clinical reasoning, disablement, and evidence-based practice models.

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DPT 5152 Health Behavior Science: 2-4-4

Students will explore and analyze how human actions, cognitions, communications, and environment affect health, chronic disease, and quality of life across the lifespan. Students will explore evidence and strategies for health promotion through education, policy change, development and implementation of programs, and evaluation of impact and outcomes.

DPT 5162 Professional Development I: 2-0-2

This is the first of a series of three professional development courses whose focus is the professional socialization process. Students will learn about the profession of physical therapy, including its history, and future directions. Topics of emphasis include professional codes of ethics and conduct, laws relative to PT practice, therapeutic communication, cultural competency, stress management and conflict resolution.

Spring 1

DPT 5211 CARE II: 0-2-1

Clinical Application and Reflection Experience (CARE) II is the second in a series of five courses that are integrated with didactic instruction in the first five semesters of the DPT curriculum. Students work in teams with a physical therapist clinical instructor to practice and refine skills, employ clinical problem-solving, participate in reflective group discussions and assume professional roles in various clinical patient care settings. Students are expected to demonstrate skills and apply knowledge obtained from concurrent and previous coursework.

DPT 5224 Anatomy of Movement II: 2-4-4

Systems and regional approaches to gross human anatomy are combined with principles of kinesiology to enable an in-depth study of the anatomical components and principles of function. The material covered in this course includes anatomy of the internal thorax and abdomen as well as anatomy and kinesiology of the pelvis and lower extremities. A study of the anatomy of the heart and lungs is also included. Classroom and online lectures are complemented by laboratory experiences that include study of prosected human cadavers, and instructional palpation of live humans.

DPT 5234 Applied Physiology II: 3-2-4

This is the second of a two course series in which students study applied physiological concepts. This course focuses on the normal physiology of the cardiovascular, pulmonary, endocrine, GI, renal, and reproductive organ systems, as well the influences of physiological changes with growth, aging, nutrition, drugs, and disease. The course will also highlight the basic processes of disease, identification of tissues displaying signs of disease, and basic diagnostic tests and tools. Learning occurs through lecture, discussion, and problem solving laboratory experiences.

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DPT 5243 Clinical Practice II: 1-4-3

Students learn through lecture, guided practice, literature reviews, case-based discussion, and documentation assignments, important skills for patient management in clinical practice. Examples of these skills include: assessment of range of motion, muscle performance, and posture: the therapeutic use of passive, active-assisted, and manually resisted motion; and the design and implementation of therapeutic exercise programs. An emphasis is placed on the integration of examination findings, current scientific evidence, and sound clinical reasoning to guide the use of therapeutic exercise for prevention and rehabilitation of movement dysfunction and disability.

DPT 5352 Pharmacology: 2-0-2

An integrated study of pharmacology presenting the pharmacodynamics and pharmacotherapeutics of common classes of drugs which include anti-inflammatory, analgesic, muscle relaxant, psychotropic, anti-microbial, and diabetic medications. Factors emphasized include indications, contraindications, adverse reactions, and the implications for physical therapy care.

Summer 1

DPT 5254 Applied Neuroscience: 3-2-4

Students are introduced to the structure and function of the nervous system. An emphasis is placed on the sensory and motor systems involved in motor control and key concepts required for clinical practice. Through lecture and laboratory instruction, the gross and cellular organization of the nervous system are presented, along with its relationship to the somatic and visceral systems, and the reception, transmission, and integration of information at multiple levels. Clinical manifestations of dysfunction of major neural elements are discussed.

DPT 5311 CARE III: 0-2-1

Clinical Application and Reflection Experience (CARE) III is the third in a series of five courses that are integrated with didactic instruction in the first five semesters of the DPT curriculum. Students work with a physical therapist clinical instructor to practice and refine skills, employ clinical problem-solving, participate in reflective group discussions and assume professional roles in various clinical patient care settings. Students are expected to demonstrate skills and apply knowledge obtained from concurrent and previous coursework.

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DPT 5361 Outcome Assessment: 1-0-1

This course explores approaches to the appraisal of health, functional outcomes, and the effectiveness of physical therapy interventions. Students study specific metrics utilized for outcomes assessment, and analyze common health and rehabilitation outcomes measures in terms of reliability, validity, clinical utility, and cost effectiveness. A working knowledge of these topics is developed through lecture, discussion and case-based examples.

DPT 5343 Clinical Practice III: 1-4-3

Students learn through lecture, guided practice, literature reviews, case-based discussion and treatment plan development, important skills for patient management in clinical practice. Examples of these skills include the selection and use of deep thermal, electrodiagnostic, electrotherapeutic, and mechanical/manual techniques including massage and peripheral joint mobilization for various impairments and functional limitations. An emphasis is placed on the integration of examination findings, current scientific evidence, and sound clinical reasoning to guide the use of therapeutic interventions for prevention and rehabilitation of movement dysfunction and disability.

DPT 5372 Evidence Base Practice I: 2-0-2

Students will study the theoretical foundations of evidence-based practice and develop a framework to support sound clinical reasoning. They will learn how to search, retrieve and organize scientific evidence from sources of knowledge such as library and internet-based sources. Following an introduction to psychometrics and principles of measurement in healthcare, students will learn to critically evaluate current literature to inform clinical decisions.

DPT 5381 Integumentary System: 1-0-1

This course introduces the physical therapy management of patients with integumentary system pathology or impairments. Study of anatomy, physiology, and pathologies of the integumentary system provide a foundation for theoretical and practical applications of care. Students learn to examine and evaluate individuals with integumentary lesions of various etiologies and to use appropriate clinical decision-making and problem-solving strategies to determine and implement safe and effective plans of care.

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Fall 2

DPT 6111 CARE IV: 0-2-1

Clinical Application and Reflection Experience (CARE) IV is the fourth in a series of five courses that are integrated with didactic instruction in the first five semesters of the DPT curriculum. Students work in teams with a physical therapist clinical instructor to practice and refine skills, employ clinical problem-solving, participate in reflective group discussions and assume professional roles in various clinical patient care settings. Students are expected to demonstrate skills and apply knowledge obtained from concurrent and previous coursework.

DPT 6124 Musculoskeletal PT I: 2-4-4

This course is the first of a two-part series dedicated to study of the musculoskeletal system as it relates to the clinical practice of physical therapy. This course introduces students to musculoskeletal examination, evaluation, diagnosis, prognosis, intervention, standardized assessment, and outcome measurement for impairments, functional limitations, and disability in clients with pathologies of the cervical and thoracic spine and upper extremities.

DPT 6134 Neuromuscular PT I: 2-4-4

In this first of a two course series focusing on the neuromuscular system, students will be introduced to the management of adults with complex CNS and multisystem disorders and co-morbidities. Instruction occurs via lecture, discussion of case scenarios, and guided laboratory practice. The neuropathology of conditions frequently managed by physical therapists is studied with an emphasis on examination, evaluation, diagnosis, clinical decision-making, prognosis, intervention, standardized assessments and relevant outcome measures. The appropriate use of assistive technologies is also explored.

DPT 6142 Imaging and Laboratory Testing: 2-0-2

Students study the fundamentals of diagnostic testing procedures used in the evaluation of patients with various disorders and disease processes. Scientific principles underlying clinical laboratory testing and imaging technologies will be explained. Emphasis will be placed on the information obtained through specific testing and medical imaging procedures, its sensitivity and specificity, and its potential to influence the physical therapy examination, interventions, and plan of care.

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DPT 6152 Lifespan I: Growth and Development: 2-0-2

Students learn through lecture, discussion, and guided practice, the major components of development from birth through adolescence. Theories that support our understanding of developmental delays and disabilities, and guided clinical decisions are also explored. Additionally considered are pediatric public laws, child abuse, and therapeutic interactions with families.

DPT 6172 Evidence Based Practice II: 2-0-2

Students study principles of experimental, qualitative, and survey research methods and the application of these methods to the field of physical therapy. Emphasis is placed on the function of the research question, hypotheses, study design, sampling, study variables, measurement, reliability, validity, and statistics in the analysis and evaluation of research literature. In addition to descriptive statistics, students are introduced to, linear regression, comparison of means, and categorical data analysis (chi-square and logistic regression). Statistics for comparison of results across studies will also be discussed (e.g., effect size, odds ratio).

DPT 6191 Anatomy Seminar I: 0-3-1

The goal of this course is to enable an in-depth study of human anatomy. Students will perform an independent human cadaver dissection project under the supervision of the course instructor. Learning is enhanced as students share their results through formal presentations to their peers and clinical experts.

Spring 2

DPT 6211 CARE V: 0-2-1

Clinical Application and Reflection Experience (CARE) V is the last and final course in a series of five that are integrated with didactic instruction in the first five semesters of the DPT curriculum. Students work in teams with a physical therapist clinical instructor to practice and refine skills, employ clinical problem-solving, participate in reflective group discussions and assume professional roles in various clinical patient care settings. Students are expected to demonstrate skills and apply knowledge obtained from concurrent and previous coursework.

DPT 6224 Musculoskeletal PT II: 2-4-4

This course is the second of a two-part series dedicated to study of the musculoskeletal system as it relates to the clinical practice of physical therapy. This course introduces students to musculoskeletal examination, evaluation, diagnosis, prognosis, intervention, standardized

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assessment, and outcome measurement for impairments, functional limitations, and disability in clients with pathologies of the lumbar spine and lower quarter.

DPT 6233 Neuromuscular PT II: 2-4-4

In this second of a two course series focusing on the neuromuscular system, students will be introduced to the management of pediatric patients with neurological and neuromuscular conditions and co-morbidities. Instruction occurs via lecture, discussion of case scenarios, and guided laboratory practice. Relevant neuropathology is studied with an emphasis on examination, evaluation, diagnosis, clinical decision-making, prognosis, intervention, standardized assessments and relevant outcome measures. The appropriate use of assistive technologies is also explored.

DPT 6242 Cardiopulmonary PT: 2-0-2

The focus of this course is the physical therapy management of individuals with adults with movement-related cardiovascular and pulmonary conditions including those with significant co-morbidities. Instruction occurs via lecture, discussion of case scenarios, and guided laboratory practice. The pathology of conditions frequently managed by physical therapists is introduced with an emphasis on examination, evaluation, diagnosis, clinical decision-making, prognosis, intervention, standardized assessments and relevant outcome measures.

DPT 6252 Lifespan II: Geriatrics: 2-0-2

Students study the physiologic and pathologic changes in musculoskeletal, neurological, integumentary, cardiopulmonary and metabolic systems that occur from middle to old age and the consequent effects on physical performance, cognition, behavior, and social and emotional wellbeing. Emphasis will be placed on utilizing a clear understanding of the consequences of aging to plan effective, evidence-based physical therapy intervention for older adults.

DPT 6272 Evidence-Based Practice III: 2-0-2

In this course students apply the concepts of evidence-based practice to answer a question relevant to clinical practice. Students work in groups with faculty mentors to identify a question, review the literature, and collect and analyze evidence to determine best practices and/or policies. The course will meet its outcomes through one of three mechanisms: (1) student research with faculty mentor; (2) evidence based project; or (3) case study. 8-12 projects are anticipated to be supported by the combined DPT faculty to enable each cohort to complete this course through one of these three mechanisms. Each faculty member will annually mentor 1-4 groups through this capstone project. Weekly sessions will be led by the instructor(s) of record and the recitations will be mentored by a DPT faculty member assigned to each group. The weekly sessions will focus on application of concepts from prior evidence-based practice courses and critical evaluation of the literature.

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DPT 6282 Healthcare Delivery I: 2-0-2

This course provides an overview of the American health care system. It will review the system's origins and its various components and how these factors translate into current health care services. Forces influencing health care access, cost, and quality will be explored as well as the effects of the current environment on physical therapy practice, research and education.

DPT 6291 Anatomy Seminar II: 0-3-1

The goal of this course is to enable an in-depth study of human anatomy. Students will perform an independent human cadaver dissection project under the supervision of the course instructor. Learning is enhanced as student share their results through formal presentations to their peers and clinical experts.

Summer 2

DPT 6314 First Full-Time Clinical Education Experience: 0-0-4

This is the first of four full-time clinical education experiences during which students are engaged in clinical observation and supervised application of basic examination, evaluation, and intervention skills and procedures. An emphasis is placed on professional behaviors, safe patient handling techniques, analysis of examination findings, individualized treatment planning and progression, and appropriate communication.

DPT 6342 Orthotics and Prosthetics: 1-2-2

This course introduces students to the management of patients with amputations, prosthetics, and orthotics. Instruction occurs via lecture, discussion of case scenarios, and guided laboratory practice. Relevant pathology and kinesiology are reviewed with an emphasis on examination, evaluation, diagnosis, clinical decision-making, prognosis, intervention, standardized assessments and relevant outcome measures. The appropriate use of orthotic and prosthetic technologies is also explored.

DPT 6342 Primary Care Practice: 2-0-2

This course explores current issues in primary care practice and focuses specifically on aspects of primary care that are crucial to safe and effective practice. Students learn to perform higher level diagnostic screening procedures to identify selected medical diagnoses, and they practice clinical decision making to guide patient management and referral decisions. Students also learn to assess the health needs of individuals, groups and communities in order to develop programs for health, wellness, and injury prevention across the lifespan.

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DPT 6362 Professional Development II: 2-0-2

This course emphasizes a professional approach to clinically relevant topics such as cultural diversity; child, elder, and domestic abuse; workplace violence and harassment; end of life issues; and mental health concerns. Professional communications and the role of the professional as an educator and lifelong learner are also explored. Students present the results of their Evidence-based practice project in poster or platform format at the School of Health Sciences research forum.

DPT 6382 Healthcare Delivery II: 2-0-2

This course focuses on contemporary managerial and leadership issues important to the provision high quality, fiscally sound healthcare. Topics include organizational structures, management principles, leadership and decision-making, quality assurance and accountability, financial and reimbursement concerns, marketing and customer relations, and the regulatory and external environment.

Fall 3

DPT 7118 Terminal Full-time Clinical Education Experience I: 0-0-8

During this full-time clinical education experience, students are engaged in clinical observation and supervised application of basic and comprehensive examination, evaluation, and intervention skills and procedures. An emphasis is placed on integration of professional behaviors, evaluation, physical therapy diagnosis, individualized treatment planning and progression, clinical reasoning, and documentation.

DPT 7128 Terminal Full-time Clinical Education Experience II: 0-0-8

During this full-time clinical education experience, students participate, with supervision, in the provision of major components of physical therapy care including screening, examination, integrative evaluation, differential diagnosis, prognosis, and procedural interventions. Students also design, prepare and provide an educational intervention. An emphasis is placed on the development of entry-level PT competencies and behaviors as students are given opportunities to practice components of the professional physical therapist's role.

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DPT 7262 Professional Development III: 0-0-2 (online)

Students participate in asynchronous learning sessions while on their final clinical internship. The emphasis is on sharing and reflecting on aspects of their internship experience pertinent to their development as professionals. Topics emphasized include leadership, interdisciplinary collaboration, quality and safety standards, billing, rules, regulations, laws. Following the internship students will come together on campus to participate in seminars on topics such as for effective resume writing and interviewing, exam preparation, and professional career planning. Students will also disseminate their scholarly projects via poster or platform presentation to peers, faculty, and local clinicians.

Spring 3

DPT 7212 Terminal Full-time Clinical Education Experience III: 0-0-14

In this final full-time clinical education experience, students engage in continued supervised application of comprehensive patient management skills including advanced examination, evaluation, diagnosis, prognosis and interventions. Students also provide an educational intervention, and participate in practice management and proper utilization of support personnel. At the completion of this experience students are expected to have demonstrated entry-level physical therapist competency and behaviors.