# PHYSICAL THERAPY PROGRAM

## DOCTOR OF PHYSICAL THERAPY (DPT) COURSES

### Entry Level DPT

#### FIRST YEAR, Summer Semester

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>DPTR 5001</td>
<td>Clinical Anatomy 1</td>
<td>4.0 cr.</td>
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<td></td>
<td>N. Bookstein, PT, EdD.</td>
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<td></td>
<td>Prereq: matriculation in entry-level Physical Therapy Program.</td>
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<td></td>
<td>A regional approach to the musculoskeletal, vascular, lymphatic, and nervous system anatomy of the appendicular skeleton, body walls, thorax and head. Cross sectional and radiographical anatomy are included.</td>
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<tr>
<td>DPTR 5002</td>
<td>Foundations in Physical Therapy</td>
<td>2.0 cr.</td>
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<td>J. Rodriguez, PT, MHS.</td>
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<td></td>
<td>Introduction to foundational elements of physical therapy, including movement, patient/client centered care, professionalism, evidence-based practice, and disablment/enablement/quality of life. Work with community volunteers to apply concepts to real situations and complete a service learning project.</td>
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<tr>
<td>DPTR 5003</td>
<td>Histology</td>
<td>2.0 cr.</td>
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<td></td>
<td>R.O’Hara, PT, MS; C. Reigger-Krugh, PT, ScD.</td>
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<td></td>
<td>Study of cells and tissues of the human body with emphasis on normal function and inflammation/repair in disease and injury. Epithelial tissues, blood, dense connective tissue, cartilage, bone, muscle and nerve emphasized. Mechanical properties of musculoskeletal structures included.</td>
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#### FIRST YEAR, Fall Semester

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<tbody>
<tr>
<td>DPTR 5111</td>
<td>Exercise Science 1</td>
<td>2.0 cr.</td>
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<td>E. Melanson, PhD.</td>
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<tr>
<td></td>
<td>Discussion of the effect of exercise on physiologic systems, including measurement of exercise capacity in the clinic and laboratory and the effect of exercise on cardiovascular and pulmonary performance.</td>
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<tr>
<td>DPTR 5201</td>
<td>Clinical Skills: Examination/Evaluation 1</td>
<td>1.0 cr.</td>
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<td>D. Stelzner, PT, MBA.</td>
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<td></td>
<td>Introduction to the process of obtaining a history, performing a systems review and selecting and administering tests and measures to gather data about the patient. Beginning of the examination process with an overview of the patient’s functional ability.</td>
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<tr>
<td>DPTR 5601</td>
<td>Scientific Inquiry 1</td>
<td>1.0 cr.</td>
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<td>J. Hebert, PT, MS.</td>
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<td>Course designed to introduce students to concepts and approaches to evidence-based practice including effective searching and reviewing literature materials. Observational study designs (cohort, case-control, and cross-sectional) covered, including evaluative tests and measures for diagnostic tests.</td>
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<tr>
<td>DPTR 5101</td>
<td>Movement Science 1</td>
<td>4.0 cr.</td>
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<td></td>
<td>C. Reigger-Krugh, PT, ScD.</td>
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<td>Prereq: DPTR 5001.</td>
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<tr>
<td>DPTR 5141</td>
<td>Human Growth and Development</td>
<td>2.0 cr.</td>
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<td>A. Bodkin, PT, MS.</td>
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<td></td>
<td>Functional movement across the life span. Emphasis on periods of greatest changes in motor behavior. Exploration of factors influencing functional movement, including developmental changes in body systems, physical fitness and activity level. Analysis of movement throughout the life span.</td>
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<tr>
<td>DPTR 5151</td>
<td>Motor Control/Motor Learning 1</td>
<td>2.0 cr.</td>
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<td>J. Valvano, PT, PhD.</td>
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<td></td>
<td>Application of current principles of motor learning and motor control to activity-focused physical therapy interventions. Emphasis on variables related to task composition and schedule, the environment, and augmented information that enhance practice of motor skills.</td>
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<tr>
<td>DPTR 5161</td>
<td>Psychosocial Aspects of Care/Interprofessional Ethics 1</td>
<td>1.0 cr.</td>
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<td>D. Stelzner, PT, MBA.</td>
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<td>Principles of human interaction beginning with discussion of one’s self followed by clarification of the dynamics involved in professional-patient caring relationships. Interprofessional student discussions including an introduction to critical reasoning, and reflective deliberation required within ethical dimensions of health care.</td>
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DPTR 5202  Clinical Skills: Examination/Evaluation 2  2.0 cr.
D. Stelzner, PT, MBA.  Prereq: DPTR 5001, DPTR 5201.
Continuation of examination process including advanced movement tests. Progression to dynamic process of making clinical judgments based on data gathered from the examination. Introduction of the process of diagnosis by organizing into defined syndromes or categories of examination results.

DPTR 5203  Clinical Skills: Therapeutic Intervention 1  2.0 cr.
S. Jordan, PT, MA.
Introduction to therapeutic intervention skills, such as basic mobility with and without assistive devices, positioning, basic therapeutic exercise, soft tissue mobilization, thermal modalities, and relaxation training, for improving functional mobility and for managing a variety of clinical problems.

DPTR 5204  Clinical Skills: Therapeutic Intervention 2  2.0 cr.
S. Jordan, PT, MA.  Prereq: DPTR 5203.
Continuation of therapeutic intervention skills, such as specific exercise approaches (both land and water based), exercise progressions, electrotherapeutic modalities, mechanical traction, and body weight support systems, for improving functional mobility and for managing a variety of clinical problems.

DPTR 5206  Physiology  2.0 cr.
W. Betz, PhD.
Fundamentals of human physiology from basic cellular processes such as membrane support, to the organization and control of organ systems.

DPTR 5006  Physiology  2.0 cr.
W. Betz, PhD.
Fundamentals of human physiology from basic cellular processes such as membrane support, to the organization and control of organ systems.

DPTR 5011  Neuroscience  3.0 cr.
M. Schenkman, PT, PhD.  
Principles of neurophysiology and neuroanatomy introduced. Membrane receptors, membrane potentials, synaptic transmission, and neuromuscular junctions, blood supply three dimensional topography of the nervous system, functional correlates, and sensory and motor tracks of the spinal cord and brainstem included.

DPTR 5162  Psychosocial Aspects of Care 2  2.0 cr.
D. Stelzner, PT, MBA.  Prereq: DPTR 5161.
Principles of human interaction beginning with discussion of one’s self followed by clarification of the dynamics involved in professional-patient caring relationships. Interprofessional student discussions including an introduction to critical reasoning, and reflective deliberation required within ethical dimensions of health care.

DPTR 5204  Clinical Skills: Therapeutic Intervention 2  2.0 cr.
S. Jordan, PT, MA.  Prereq: DPTR 5203.
Continuation of therapeutic intervention skills, such as specific exercise approaches (both land and water based), exercise progressions, electrotherapeutic modalities, mechanical traction, and body weight support systems, for improving functional mobility and for managing a variety of clinical problems.

DPTR 5301  Cardiopulmonary and Integumentary Conditions  2.0 cr.
N. Bookstein, PT, EdD; L. Csiza, PT, NCS.  Prereq: DPTR 5111.
Pathology and physical therapy management of cardiovascular and respiratory system diseases, and integumentary conditions across the life span. Review of anatomy, physiology, EKG, exercise testing/training, endurance/cardiac laboratories, cardiac rehabilitation, pulmonary assessment/intervention, wellness and prevention, and burn and wound care.

DPTR 5401  Musculoskeletal Conditions 1  3.0 cr.
P. Mintken, PT, MS, DPT, OCS.
Orthopaedic pathokinesiology of the upper extremity across the life span. Pathogenesis, clinical presentation, medical and surgical management, and rehabilitation of upper extremity orthopaedic disorders. Radiologic and pharmacologic applications with implications for physical therapy intervention.

DPTR 5611  Patient Care Seminar 1  1.0 cr.
M. Schenkman, PT, PhD.
Critical thinking and clinical decision making skills. Application of clinical decision making frameworks and models for clinical practice. Patients with musculoskeletal and medical conditions across the life span emphasized.
A regional approach to the in-depth study of structural and functional anatomy of the musculoskeletal, vascular, lymphatic, and nervous systems of the axial skeleton, abdomen, and pelvis, with specific emphasis on the spine and peripheral joints. Cross sectional and radiographical anatomy is included.

**DPTR 6012  Neuroscience 2**  
M. Schenkman, PT, PhD.  Prereq: DPTR 5011.  
Neuroanatomy and neurophysiology continued with emphasis on topics such as cortical anatomy and clinical correlates of injury, neurophysiological processes associated with specific systems (e.g., vestibular, pain), cognition and memory, laterality, and plasticity of the nervous system.

**DPTR 6102  Movement Science 2**  
C. Riegger-Krugh, PT, ScD.  Prereq: DPTR 5001, DPTR 5101.  

**DPTR 6402  Musculoskeletal Conditions 2**  
P. Mintken, PT, MS, DPT, OCS.  Prereq: DPTR 5001.  
Orthopaedic pathokinesiology of the lower extremity across the life span. Pathogenesis, clinical presentation, medical and surgical management, and rehabilitation of lower extremity orthopedic disorders. Radiologic and pharmacologic applications with implications for physical therapy intervention.

**DPTR 6501  Neuromuscular Conditions 1**  
M. Schenkman, PT, PhD.  Prereq: DPTR 5011.  
Frameworks and models used to analyze interrelationships of neuropathology, impairments, and functional loss with neurological conditions across the life span (e.g. spinal cord injury, stroke, cerebral palsy). Neuropathology presented. Implications for examination, and evaluation (including prognosis, diagnosis, and goals) analyzed.

**DPTR 6911  Field Work 1**  
J. Rodriguez, PT, MHS.  Prereq: DPTR 6161.  
Approximately one half day per week in clinical settings during the summer and fall semesters to continue to develop and apply the knowledge, skills, and behaviors learned in the classroom to real situations working with patients and clients.

**SECOND YEAR, Fall Semester**

**DPTR 6121  Pharmacology**  
N. Bookstein, PT, EdD.  
Online course designed to help the learner utilize pharmacological information in planning patient care. Principles of pharmacodynamics and pharmacokinetics precede information regarding mechanisms of action, adverse effects, implications for exercise and other physical therapy interventions for different drug classes included.

**DPTR 6131  Radiology**  
P. Mintken, PT, MS, DPT, OCS.  
Study of the application and integration of diagnostic imaging to physical therapy clinical decision making. Provides the physical therapy student with the background to understand diagnostic imaging technology, indication, evaluative value and limitations. Musculoskeletal pathology emphasized.

**DPTR 6205  Clinical Skills: Prosthetics and Orthotics**  
PT Clinical Faculty.  
Principles of prosthetics and orthotics across the life span in physical therapy clinical practice.

**DPTR 6302  Medical Conditions**  
N. Bookstein, PT, EdD; L. Csiza, PT, MS, NCS.  Prereq: DPTR 5111, DPTR 5301.  
Pathology and physical therapy management of individuals with multi-system disease across the life span. Differential diagnosis, screening and referral to appropriate personnel. Physical therapy management principles of endocrine, gastrointestinal, renal diseases, and other disorders emphasized.

**DPTR 6403  Musculoskeletal Conditions 3**  
P. Mintken, PT, MS, DPT, OCS.  Prereq: DPTR 5401, DPTR 6402.  
Orthopaedic pathokinesiology of the spine across the life span. Pathogenesis, clinical presentation, medical and surgical management, and rehabilitation of spinal orthopedic disorders. Radiologic and pharmacologic applications with implications for physical therapy intervention.

**DPTR 6502  Neuromuscular Conditions 2**  
M. Schenkman, PT, PhD.  Prereq: DPTR 6501.
Principles of PT management for individuals with neurological conditions across the life span. Clinical decision making and clinical skills for examination, evaluation, and intervention with individuals with a variety of neurological disorders (e.g., spinal cord injury, stroke, multiple sclerosis) emphasized.

DPTR 6602 Scientific Inquiry 2  
J. Hebert, PT, MS.  Prereq: DPTR 6601.  
Experimental and Quasi-experimental study designs (Group and Single Subject) with delineation of the application and analysis of appropriate test statistics (parametric and non-parametric). Survey and qualitative research approaches presented. Application of evidence-based practice continued.

DPTR 6721 Educational Methods  
M.J. Rapport, PT, PhD.  
Application of learning theories and teaching strategies to clinical practice. Emphasis on patient/client and family education, including home programs, clinical teaching, and presentations in community and physical therapy settings.

DPTR 6912 Field Work 2  
J. Rodriguez, PT, MHS.  
One half to a full day per week exploration of issues surrounding access to health care, with an emphasis on underserved populations and persons, who have limited access. Service project included.

SECOND YEAR, Spring Semester

DPTR 6151 Motor Control/Motor Learning 2  
J. Valvano, PT, PhD.  Prereq: DPTR 5205.  
Follow-up to Motor Control/Motor Learning 1 with emphasis on application of motor learning principles to varied cases of physical therapy intervention. Introduction to current concepts in motor control, or the ability to regulate mechanisms essential to movement.

DPTR 6503 Neuromuscular Conditions 3  
L. Czisa, PT, MS, NCS.  Prereq: DPTR 6502.  
Principles of PT management for individuals with neurological conditions continued. Refinement of clinical decision making and skills for individuals with disorders such as Parkinson’s disease, vestibular dysfunction, and pediatric conditions. Return to community and quality of life emphasized.

DPTR 6603 Scientific Inquiry 3  
J. Hebert, PT, MS.  Prereq: DPTR 6602.  
Methods of scientific inquiry and evidence-based practice to analysis of patient care for patients with a variety of conditions and diagnoses applied. Evidence for use of measures and intervention approaches emphasized.

DPTR 6612 Patient Care Seminar 2  
M. Schenkman, PT, PhD.  Prereq: DPTR 6611.  
Development of critical thinking and clinical decision making skills across the life span continued. Differential diagnosis, management of individuals with multiple underlying conditions (e.g., musculoskeletal, neuromuscular), and patients with diagnoses that are not specifically addressed in PT management courses emphasized.

DPTR 6702 Professional Topics  
S. Jordan, PT, MA; J. Rodriguez, PT, MHS; M. Rapport, PT, PhD.  Prereq: DPTR 5701.  
Exploration of professional issues.

DPTR 6711 Health Care Delivery 1  
Tami Struessel, PT, MS.  
Health care systems will be reviewed and discussed with a focus on trends and issues that impact the practice of physical therapy in diverse health care settings. Communication between individuals and across systems will be explored along with team structure and function.

DPTR 6932 Clinical Education 2  
J. Rodriguez, PT, MHS.  
Eight week full-time supervised clinical experience. Experience emphasizes students beginning to make the transition from student or “aide” to taking on the responsibility of the professional physical therapist.

THIRD YEAR, Summer Semester

DPTR 7112 Applied Exercise Science  
3.0 cr.
PT Faculty. Prereq: DPTR 5111, DPTR 5301, DPTR 6302.
Complex patients with multi-system disease emphasized. Differential diagnosis, screening and referral to appropriate personnel. Physical therapy management principles of complex medical patients, including exercise prescription, biomechanical principles, and chronic disability issues.

**DPTR 7604 Scientific Inquiry 4** 2.0 cr.
J. Hebert, PT, MS. Prereq: DPTR 6603.
Knowledge and skills obtained in previous courses in this sequence applied. Evidence-based practice project completed. Measures and interventions for patients with specific clinical conditions and diagnoses proposed.

**DPTR 7703 Professional Topics 3: Leadership in Practice** 2.0 cr.
PT Faculty. Prereq: DPTR 6702.
More advanced concepts related to the doctoring profession, as well as service learning, and leadership. Role of leadership in promoting social change in health and education. Differences between leadership and management used for leadership development.

**DPTR 7712 Health Care Delivery 2** 2.0 cr.
M.J. Rapport, PT, PhD.
Organization and administration of physical therapy services will be addressed including supervision, recruitment, staffing, evaluation, financial management, leadership styles and conflict resolution.

**DPTR 7731 Complementary and Alternative Medicine** 1.0 cr.
S. Jordan, PT, MA.
Introduction to the major concepts and issues related to complementary and alternative medicine (CAM). Discussions related to incorporating evidence based CAM for effective patient centered care across the life span.

**DPTR 7741 Special Practice Settings** 3.0 cr.
A. Bodkin, PT, MS; N. Bookstein, PT, EdD.
Special issues related to clinical practice in geriatric and pediatric clinical physical therapy practice.

**DPTR 7751 Health Promotion** 2.0 cr.
E. Melanson, PhD; N. Bookstein, PT, EdD.
Critiquing and designing fitness, wellness, and nutrition programs that are appropriate for physical therapy for well populations across the life span and people with disabilities. Focus on the well elderly and populations with obesity, coronary heart disease, diabetes, and cancer.

**THIRD YEAR, Fall Semester**

**DPTR 7605 Scientific Inquiry 5** 2.0 cr.
J. Hebert, PT, MS. Prereq: DPTR 7604.
Advanced evaluation of the scientific literature encompassing a diverse selection of research types and designs applied to a variety of patient conditions.

**DPTR 7613 Patient Care Seminar 3** 1.0 cr.
M. Schenkman, PT, PhD. Prereq: DPTR 6612.
Critical thinking and clinical decision making skill development continued and applied to patients with complex diagnoses and disorders affecting multiple systems across the life span. Social and emotional disability, participation in leisure, work, and family activities emphasized.

**DPTR 7712 Health Care Delivery 2** 2.0 cr.
M.J. Rapport, PT, PhD.
Organization and administration of physical therapy services will be addressed including supervision, recruitment, staffing, evaluation, financial management, leadership styles and conflict resolution.

**DPTR 7933 Clinical Education 3** 6.0 cr.
J. Rodriguez, PT, MHS.
Twelve week full-time supervised clinical experience. Exploration of general or specialty areas of physical therapy practice. Skills developed throughout earlier experiences demonstrated as entry-level competency in physical therapy practice by the end of this experience.

**THIRD YEAR, Spring Semester**

**DPTR 7614 Patient Care Seminar 4** 1.0 cr.
M. Schenkman, PT, PhD. Prereq: DPTR 7613.
Development of critical thinking and clinical decision making skills continued. Oral and written presentation of case material, critique of colleagues, and integration of evidence into clinical practice emphasized.

**DPTR 7934 Clinical Education 4** 6.0 cr.
J. Rodriguez, PT, MHS.
Twelve week full-time supervised clinical experience. Full preparation of students to transition to the work force. Publishable case report prepared by the end of this experience, which is linked to DPTR 7613.

TRANSITION DPT

**DPTR 8111 Evidence-Based Practice**
J. Valvano, PT, PhD. Prereq: Research knowledge base/course work.
Introduction to principles of evidence-based practice. Application of evidence-based principles to prognosis, diagnosis, and intervention in physical therapy practice. Focus on finding and critically appraising evidence for physical therapy interventions.

**DPTR 8112 Professional Development**
C. DeRosa, PT, PhD, DPT; A. Grady PT, PhD.; D. Stelzner, PT, MBA; J. Valvano, PT, PhD.
Principles of the doctoring profession of physical therapy. Role of leadership and management in promoting social change in health and education. Completion of the APTA Clinical Education and Instructor Credentialing Course or equivalent required for the non-clinical track.

**DPTR 8211 Patient Care Seminar 1**
M. Schenkman, PT, PhD. Prereq: Research knowledge base/course work. Pre/Coreq: DPTR 8111.
Critical thinking and clinical decision making skills. Application of clinical decision making frameworks and models for clinical practice. Patients with musculoskeletal, neuromuscular, and medical conditions across the life span emphasized.

**DPTR 8212 Radiology**
P. Mintken, MS, PT, DPT, OCS; V. Akuthota, MD; D. James, MSPT, OCS, CSCS.
Study of the application and integration of diagnostic imaging to physical therapy clinical decision making. Provides the physical therapy student with the background to understand diagnostic imaging technology, indication, evaluative value and limitations. Musculoskeletal pathology emphasized.

**DPTR 8213 Health Promotion**
N. Bookstein, PT, EdD; E. Melanson, PhD; T. Horton, PhD; C. Figuers, PT, EdD.
Critiquing and designing fitness, wellness, and nutrition programs that are appropriate for physical therapy for well populations and people with disabilities. Focus on the well elderly and populations with obesity, coronary heart disease, diabetes, and cancer.

**DPTR 8312 Patient Care Seminar 2**
M. Schenkman, PT, PhD.
Seminar providing students with opportunities to refine critical thinking and clinical decision making skills and to integrate critical issues related to physical therapy care of complex patients. Written and oral presentation of case content emphasized.

**DPTR 8313 Pharmacology**
N. Bookstein, PT, EdD; R. Page, PharmD; T. French, PhD.
Online course designed to help the learner utilize pharmacological information in planning patient care. Principles of pharmacodynamics and pharmacokinetics, information regarding mechanisms of action, adverse effects, implications for exercise and other physical therapy interventions for different drug classes included.

**DPTR 8314 Differential Diagnosis in Practice**
S. Jordan, PT, MA.
Differential diagnosis in primary care physical therapy within a collaborative healthcare model. Synthesis of critical thinking and clinical decision making for efficient screening/examination to determine the need for referral to other health providers.

**DPTR 8935 Clinic**
J. Rodriguez, PT, MHS.
Ten-week full-time supervised clinical internship enabling students to continue in their professional development through critical self-assessment along with ongoing feedback from an experienced clinician. Clinical experience designed by students based on the student’s special areas of interest and learning needs.