Physical Therapy

K. Gibson, Chair
Department of Physical Therapy
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https://healthprofessions.missouri.edu/physical-therapy/

Physical Therapy involves the evaluation and treatment of physical disability and pain that may result from injury, disease or developmental disability. Prevention of disability and public education are also roles of the physical therapist. Physical therapists use tests and measurements to assess body system dysfunction and determine diagnosis and treatment. Daily living skills, including work, are also addressed.

The University of Missouri offers a Doctor of Physical Therapy degree. No master’s degree or terminal undergraduate degree in Physical Therapy are available.

Admissions

Doctor of Physical Therapy Program, Regular Admissions

Most students admitted to the Doctor of Physical Therapy program will have a baccalaureate degree. Students who are interested in pursuing application to the Doctor of Physical Therapy program are encouraged to work on an undergraduate degree that will allow them to fulfill application requirements.

Doctor of Physical Therapy Program, Early Admissions

Admission to the Doctor of Physical Therapy program may be available to a small group of students who have completed at least 90 credit hours, completed at least six full-time semesters of residential course work, all MU general education requirements and have shown excellent academic progress. Students who gain early admission to the Doctor of Physical Therapy program will be awarded the Bachelor of Health Science in pre-professional physical therapy upon completing one year of coursework in the physical therapy program.

Faculty

Emeritus Professor M. Brown*, M. A. Minor*
Teaching Professor K. Gibson*
Clinical Professor C. C. Abbott*
Associate Professor E. A. Dannecker**, T. M. Guess**, S. P. Sayers**
Associate Teaching Professor T. Briedwell*, K. Gibson*, M. S.
Hargrove*, J. Krug*, D.E. Martin*, E. Prost*
Associate Clinical Professor J. B. Mann*
Assistant Professor J. Craggs*
Assistant Teaching Professor C. A. Blow*, J. Bridges*, A. Campbell*, J. Hall*, K. Stephens*, B. Willis*
Instructor A. C. Connell*

* Graduate Faculty Member - membership is required to teach graduate-level courses, chair master's thesis committees, and serve on doctoral examination and dissertation committees.

** Doctoral Faculty Member - membership is required to chair doctoral examination or dissertation committees. Graduate faculty membership is a prerequisite for Doctoral faculty membership.

PH_THR 1000: Introduction to Physical Therapy

Acquaints students with the physical therapy profession including the required educational preparation, practice settings, sample interventions, current issues, trends and research. Graded on S/U basis only.

Credit Hour: 1

PH_THR 2500: Musculoskeletal Anatomy and Injury

Study of human musculoskeletal anatomy, movement, common injury and physical therapy management. Graded on an A-F basis only.

Credit Hours: 3

Recommended: biology

PH_THR 2510: Human Anatomy for Rehabilitation Professionals

System-based human anatomy. Musculoskeletal, Neuromuscular, Cardiovascular, Pulmonary, Integumentary. Lab includes three-dimensional identification of structures and instruction in common system-based physical exam procedures. Graded on A-F basis only.

Credit Hours: 4

PH_THR 3022: Principles of Physical Therapy

History of physical therapy: the profession; basic skills: first aid, infection control, vital signs; medical terminology. Graded on S/U basis only.

Credit Hour: 1

PH_THR 4120: Clinical Education IA

(cross-leveled with PH_THR 7120). An introduction to clinical education in Physical Therapy: includes development of foundational clinical skills and behaviors as well as experience in the PhysZou clinical setting. Graded on S/U basis only.

Credit Hour: 1

PH_THR 4150: Clinical Education IB

(cross-leveled with PH_THR 7150). Continuation of Clinical Education IA with further emphasis on current events in Physical Therapy as well as the professional attributes of communication, teamwork and problem solving. Required experience in PhysZou clinical setting. Graded on S/U basis only.

Credit Hour: 1

PH_THR 4240: Applied Neurophysiology for Allied Health Students

(Cross-leveled with PH_THR 7240, OC_THR 7240). Principles of basic neurophysiology, emphasizing correlation of structure and function of the nervous system.

Credit Hours: 3

PH_THR 4250: Human Kinesiology

(same as HTH_PR 4250). Study of principles of physical laws, biomechanics and anatomic structure relative to human movement. Applications through analysis of daily functional performance, exercise, and sport.
PH_THR 4270: Clinical Pathophysiology
(Cross-leveled with PH_THR 7270, OC_THR 7270). Interdisciplinary and case-based examination of the pathophysiology, prevention and general health management of disease/injury across the lifespan encountered in occupational and physical therapy practice. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: successful completion of prior professional coursework

PH_THR 4330: Physical Agents
Biophysics, theory and technique concerning the use of physical agents as adjuncts to exercise programs. Includes thermal, electrical, light, hydrotherapy and mechanical agents.

Credit Hours: 3

PH_THR 4420: Foundations of Therapeutic Exercise
Physiological basis of exercise throughout the lifespan with emphasis on the musculoskeletal, neuromuscular, cardiovascular/pulmonary and integumentary systems and the effects of injury and disease on these systems.

Credit Hours: 3

PH_THR 4520: Applied Therapeutic Exercise
Application of therapeutic exercise with an emphasis on evidenced-based exercise prescription, modes and techniques of exercise typically seen in rehabilitation.

Credit Hours: 3

PH_THR 4620: Introduction to Orthopedic Physical Therapy with Laboratory
Physical therapy diagnosis, management, and prevention of disorders of the musculoskeletal system; basics of orthopedic manual therapy. Includes laboratory.

Credit Hours: 3

PH_THR 4790: Pharmacology in Rehabilitation
Principles of pharmacology including pharmacokinetics, pharmacodynamics, and toxicology of common drugs encountered in rehabilitation. Emphasis on pharmacology related to the musculoskeletal, neuromuscular, cardiovascular/pulmonary and integumentary systems across the lifespan.

Credit Hours: 2
Prerequisites: Restricted to students accepted into a professional major

PH_THR 4980: Clinical Evaluation and Procedures with Laboratory
Principles and procedures of basic evaluation methods and documentation: muscle strength, range of motion, muscle balance, posture, neurologic tests. Includes laboratory.

Credit Hours: 3

PH_THR 4981: Clinical Kinesiology with Laboratory
Advanced Kinesiology addressing functional mobility; specifics of normal human gait; pathokinetcs of gait. Assistive devices; wheelchairs; orthoses and prostheses. Includes laboratory.

Credit Hours: 3

PH_THR 5110: Fundamentals of Physical Therapy
Introduction to professional school and expectations, history of physical therapy; the profession, basic skills, first aid, infection control, vital signs, surface anatomy. Instruction includes lecture and discussion, lab activities, written assignments and practical examinations. Graded on S/U basis only.

Credit Hour: 1
Prerequisites: Admission to professional phase of doctor of physical therapy program

PH_THR 5210: Applied Neurophysiology for Allied Health Students
(Cross-leveled with PH_THR 4240). Principles of basic neurophysiology, emphasizing correlation of structure and function of the nervous system.

Credit Hours: 3

PH_THR 5220: Biophysical Agents
Includes biophysics, theory and techniques concerning usage of biophysical agents as adjuncts to exercise programs. This entails the use of thermal, electrical, light, hydrotherapy, and mechanical agents.

Credit Hours: 3

PH_THR 5230: Clinical Evaluation and Procedures with Laboratory
Principles and procedures of basic evaluation methods and documentation: transfers, body mechanics, muscle strength, range of motion, muscle length, neurologic tests. Includes laboratory. Includes discussion with emphasis on critical thinking and clinical application through problem solving.

Credit Hours: 4
Prerequisites: Restricted to physical therapy students only
Recommended: Successful completion of prior professional coursework

PH_THR 5240: Foundations of Therapeutic Exercise
Physiologic basis of exercise throughout the lifespan with emphasis on the musculoskeletal, neuromuscular, cardiovascular/pulmonary and integumentary systems and the effects of injury and disease on these systems.

Credit Hours: 3

PH_THR 5250: Human Kinesiology
(same as HTH_PR 4250, OC_THR 4220 or OC_THR 7220). Study of principles of physical laws, biomechanics and anatomic structure relative to human movement. Applications through analysis of daily functional performance, exercise, and sport.

Credit Hours: 3
Prerequisites: Human Anatomy
PH_THR 5260: Introduction to Clinical Education and PhysZOU I
Introduction to the aspects of clinical education. Development of foundational clinical skills and behaviors, includes clinical experience in PhysZOU. This course is graded on a S/U basis only.

Credit Hour: 1
Prerequisites: Successful completion of prior professional coursework

PH_THR 5310: Applied Therapeutic Exercise
Application of therapeutic exercise with an emphasis on evidenced-based exercise prescription, modes and techniques of exercise typically seen in rehabilitation.

Credit Hours: 3

PH_THR 5320: Clinical Kinesiology with Laboratory
Advanced Kinesiology addressing functional mobility; specifics of normal human gait; pathokineti cs of gait. Assistive devices; wheelchairs; orthoses and prostheses. Includes laboratory.

Credit Hours: 3

PH_THR 5330: Clinical Pathophysiology
(Cross-leveled with PH_THR 4270) Interdisciplinary and case-based examination of the pathophysiology, prevention and general health management of disease/injury across the lifespan encountered in occupational and physical therapy practice.

Credit Hours: 3

PH_THR 5340: Introduction to Clinical Education and PhysZOU II
Continuation of Introduction to Clinical Education and PhysZOU I with further emphasis on current events in the Physical Therapy profession as well as the professional attributes of communication, teamwork and problem solving. Required experience in PhysZou clinical setting. This course is graded on a S/U basis only.

Credit Hour: 1
Prerequisites: Successful completion of prior professional coursework

PH_THR 5350: Introduction to Orthopedic Physical Therapy with Laboratory
The physical therapy management of musculoskeletal disorders. a systematic clinical decision making model is introduced that considers the stage of inflammation and repair, impairments, and the systematic anatomical structure. Lecture/Laboratory/ Written Examination/Practical Examination.

Credit Hours: 3

PH_THR 5360: Pharmacology in Rehabilitation
Principles of pharmacology including pharmacokinetics, pharmacodynamics, and toxicology of common drugs encountered in rehabilitation. Emphasis on pharmacology related to the musculoskeletal, neuromuscular, cardiovascular/ pulmonary and integumentary systems across the lifespan.

Credit Hours: 2
Prerequisites: Restricted to students accepted into professional major

PH_THR 5460: Pediatrics and Rehabilitation
Physical therapy evaluation and treatment of children with movement dysfunction. Emphasis on therapeutic exercise.

Credit Hours: 4

PH_THR 5550: PhysZOU III
Clinical experience through PhysZOU clinic, in three clinical areas (orthopedic, pediatric, and neurologic). Each student will work as a team with students and a clinical instructor to develop, perform and document physical therapy sessions. Graded on S/U basis only.

Credit Hours: 0.5
Prerequisites: Successful completion of prior professional coursework

PH_THR 6000: Topics in Physical Therapy
Organized study of selected topics in physical therapy, health and wellness, prevention of disease and disability, and the rehabilitation sciences. Specific content may vary from semester to semester.

Credit Hour: 1-99
Prerequisites: instructor's consent

PH_THR 6010: Problems in Physical Therapy
Independent study and development of a clinical or research paper, poster or workshop suitable for presentation in a symposium or conference. Specific plan individually developed with advisor. Journal reviews. Graded on S/U basis only

Credit Hour: 1-3

PH_THR 6410: Clinical Education I
Full time, supervised clinical experience addressing application of basic skills in patient evaluation and treatment, documentation and professional behaviors. Graded on S/U basis only.

Credit Hours: 5

PH_THR 6510: Differential Diagnosis in Physical Therapy
Evidence-based clinical decision making emphasizing health screenings and system review to determine physical therapy diagnosis/need for referral to other health care professionals.

Credit Hours: 3
Prerequisites: Restricted to students accepted into the professional major

PH_THR 6520: Evidence-Based Practice
This course focuses on improving students' knowledge and skills for asking clinical questions, accessing and appraising research evidence, and integrating research, patient preferences, clinical expertise, and context into clinical decision making.

Credit Hours: 3

PH_THR 6530: Orthopedic Physical Therapy
Physical therapy diagnosis, management, and prevention of disorders of the musculoskeletal systems; continuation of Introduction to Orthopedic Physical Therapy emphasizing physical therapy interventions. Lecture/ Laboratory/Practical and Written Examinations

Credit Hours: 3

PH_THR 6540: Pediatric Physical Therapy
Physical therapy evaluation and treatment of children with movement dysfunction. Emphasis on therapeutic exercise.

Credit Hours: 4

PH_THR 6550: PhysZOU III
Clinical experience through PhysZOU clinic, in three clinical areas (orthopedic, pediatric, and neurologic). Each student will work as a team with students and a clinical instructor to develop, perform and document physical therapy sessions. Graded on S/U basis only.

Credit Hours: 0.5
Prerequisites: Successful completion of prior professional coursework
PH_THR 6560: Rehabilitation of the Neurologically Impaired Adult
Physical Therapy evaluation and treatment of adults who have incurred neurological deficits; emphasis on the restorative care of individuals following spinal cord injury, stroke, and traumatic head injury.

Credit Hours: 4

PH_THR 6710: Case Management: Neurological Impairments Across the Lifespan
Traditional and contemporary theories of physical therapy in advanced rehabilitation of children and adults with neurologic disorders; education/employment, ethical/legal issues; patient/client advocacy. Problem based format; laboratory.

Credit Hours: 5
Prerequisites: Restricted to students accepted into DPT professional major and successful completion of prior professional coursework

PH_THR 6810: Case Management: Geriatrics and Orthopedics
Complex orthopedic problems in persons of all ages; supervision, reimbursement, ethical/legal situations; community programs for injury prevention; work capacity evaluation/work hardening; consultation. Problem-based format; laboratory.

Credit Hours: 5
Prerequisites: Restricted to students accepted into DPT professional major and successful completion of prior professional coursework

PH_THR 6820: Clinical Education III
A continuation of supervised clinical education with supervision from a licensed physical therapist that has at least one year of experience. This course is a continuation of 7945 with advancing expectations of student physical therapist performance. Graded on S/U basis only.

Credit Hours: 6
Prerequisites: Successful completion of PH_THR 7945

PH_THR 6830: Health Policy for Physical Therapy
This course is designed for physical therapy students and will provide an introduction to health policy along with an overview of the health care system in the United States, including its structures, financing mechanisms, and outcomes. Lecture/reflective writing/written exams. Graded on A-F basis only.

Credit Hours: 2
Prerequisites: Successful completion of prior coursework

PH_THR 6840: PhysZOU V
Clinical experience through PhysZOU clinic, in three clinical areas (orthopedic, pediatric, and neurologic). Each student will work as a team with students and a clinical instructor to develop, perform and document physical therapy sessions. Graded on S/U basis only

Credit Hours: 0.5

PH_THR 6850: Professional Issues
The physical therapist as health care professional, administrator, and educator; legal, ethical, and political issues. Service delivery management; delegation of care; rural vs. urban health care needs.

Credit Hours: 2
Prerequisites: Restricted to students who are admitted into the Physical Therapy-DPT program

PH_THR 6860: Rehabilitating the Neurologically Impaired Adult
Physical Therapy evaluation and treatment of adults who have incurred neurological deficits; emphasis on the restorative care of individuals following spinal cord injury, stroke, and traumatic head injury.

Credit Hours: 4

PH_THR 7170: PhysZOU IV
Clinical experience through PhysZOU clinic, in three clinical areas (orthopedic, pediatric, and neurologic). Each student will work as a team with students and a clinical instructor to develop, perform and document physical therapy sessions. Graded on S/U basis only.

Credit Hours: 0.5
Prerequisites: Successful completion of prior professional coursework

PH_THR 7190: PhysZOU VI And Professional Development Plan
Clinical experience through PhysZOU clinic, in three clinical areas (orthopedic, pediatric, and neurologic). Each student will work as a team with students and a clinical instructor to develop, perform and document physical therapy sessions. Graded on S/U basis only. Prerequisites: Successful completion of prior professional coursework

Credit Hours: 0.5

PH_THR 7250: Human Kinesiology
(same as HTH_PR 4250, OC_THR 4220 or OC_THR 7220). Study of principles of physical laws, biomechanics and anatomic structure relative to human movement. Applications through analysis of daily functional performance, exercise, and sport.

Credit Hours: 3
Prerequisites: Human Anatomy

PH_THR 7420: Foundations of Therapeutic Exercise
Physiologic basis of exercise throughout the lifespan with emphasis on the musculoskeletal, neuromuscular, cardiovascular/pulmonary and integumentary systems and the effects of injury and disease on these systems.

Credit Hours: 3

PH_THR 7480: Medical Testing in Rehabilitation
Diagnostic test used by disciplines within and outside of physical therapy. Studies include laboratory, nuclear medicine, radiologic, and motion analysis. Emphasis placed on interpretation of results as they apply to physical therapy examination and intervention.

Credit Hours: 3
Prerequisites: Restricted to students accepted into professional major

PH_THR 7550: Psychosocial Issues for Health Promotion
Psychological and social factors impact people's health and the American Physical Therapy Association has called for interprofessional approaches for the provision of fitness, health promotion, wellness, and risk reduction programs to enhance quality of life for persons across the life-span. This course focuses on psychosocial issues for health promotion in order to help future health care providers and scientists to improve the health and well-being of people. Graded on A-F basis only.

Credit Hours: 2
Prerequisites: Restricted to students who are admitted into the Physical Therapy-DPT program
PH_THR 7570: Bridging the Clinical-Research Gap
This class focuses on theories of clinical decision making and Evidence-
based Practice, their applications to the clinical setting and dissemination
of such information to colleagues in professional forums. Graded on A-F
basis only.
Credit Hours: 3

PH_THR 7850: Assessment and Neuropsychology of Pain
Pain is a common problem that impairs people's quality of life and costs
millions of dollars annually. Yet, an investigation of physical therapy
education programs in the U.S. supported inadequate coverage of pain.
This course focuses on the assessment and neuropsychology of pain in
order to help future health care providers and scientists to improve the
health and well-being of people with impaired quality of life due to pain.
Graded on A-F basis only.
Credit Hour: 1
Prerequisites: Restricted to students who are admitted into the Physical
Therapy-DPT program

PH_THR 7890: Case Management I
Evaluation and team approach to physical therapy management in adult
medical and surgical conditions: cardiopulmonary, rheumatic, oncologic,
tegumentary or wound care, including major burn injury. Psychosocial
and ethical issues incorporated. Problem based; laboratory.
Credit Hours: 5

PH_THR 7945: Clinical Education III
Continuation of supervised clinical education. (Capstone course). Graded
on S/U basis only.
Credit Hours: 7
Prerequisites: Successful completion of PH_THR 7940

PH_THR 7960: Special Readings in Physical Therapy
Independent readings selected in consultation with supervising faculty
member. Identified educational goals and activities; discussion,
annotated bibliography or report.
Credit Hour: 1-3
Prerequisites: instructor's consent

PH_THR 8080: Special Skills in Physical Therapy
This course will offer a menu of options to students to develop additional
knowledge about specific skills in the physical therapy profession.
Students may choose topics of interest in addition to the mandatory
sessions to meet a minimum of 800 minutes of contact. Graded on S/U
basis only. Prerequisites: successful completion of prior professional
coursework.
Credit Hour: 1

PH_THR 8087: Seminar in Physical Therapy
Integrate previously learned content in unique patient cases and
comprehensive review and evaluation of readiness for entry level physical
therapist practice, in both didactic and psycho-motor domains. Enrollment
is limited to students in professional physical therapy program.
Credit Hours: 4
Prerequisites: departmental consent

PH_THR 8945: Clinical Education IV
A continuation of supervised clinical education with supervision from a
licensed physical therapist that has at least one year of experience. This
course is a continuation of 7945 with advancing expectations of student
physical therapist performance. Graded on S/U basis only.
Credit Hours: 7
Prerequisites: Successful completion of PH_THR 7945

PH_THR 8950: Clinical Education V
Full time supervised clinical education with supervision from a licensed
physical therapist that has at least one year of experience. This course
is a continuation of 8945 with advancing expectations of student physical
therapist performance. Graded on S/U basis only.
Credit Hours: 6
Prerequisites: Successful completion of PH_THR 8945