

Physical Therapy

Physical therapy is the science of human movement applied to rehabilitation, injury, fitness, injury prevention and overall health. Practicing in a variety of settings, physical therapists diagnose and treat movement dysfunction in patients with skill, competence and compassion. The Program in Physical Therapy is committed to providing students with excellent scientific and clinical education in an environment that strives to continually lead the industry in practice, research, innovation and advocacy of movement health.

The Program in Physical Therapy at the School of Medicine offers two formal curricula that collectively foster opportunities for lifelong learning and comprehensive career development: the Doctor of Physical Therapy (<http://bulletin.wustl.edu/medicine/degrees-offerings/dpt/>) and the PhD in Movement Science (<http://bulletin.wustl.edu/medicine/degrees-offerings/movement-science-phd/>).

The Human Movement System Approach

The Program in Physical Therapy has pioneered a unique, movement-based approach to physical therapy. The human movement system is at the core of our approach to physical therapy education, research and patient care. This system consists of physiological organ systems that interact to produce and support the movement of the body and its parts. Movement science is the study of the movement system, and we believe physical therapists are the world's movement system experts.

Our program (<https://outlook.wustl.edu/movement-redefined/>) has pioneered the development of movement-focused physical therapy education, research and treatment. The human movement system continues to be our foundation for treating patients, conducting research, and training the next generation of leaders in physical therapy. Our vision is aligned with the vision of the American Physical Therapy Association (APTA) (<http://www.apta.org/>), which is to "transform society by optimizing movement to improve the human experience."

Additional Information

Further information, including complete admissions instructions and program descriptions, may be obtained through direct correspondence with the Program in Physical Therapy:

Program in Physical Therapy
Washington University School of Medicine
4444 Forest Park Avenue, CB 8502
St. Louis, MO 63108-2212
Fax: 314-286-1410

Phone: 314-286-1400
Email: ptadmissions@email.wustl.edu
Website: <https://pt.wustl.edu>

Degrees & Offerings

- Doctor of Physical Therapy (<http://bulletin.wustl.edu/medicine/degrees-offerings/dpt/>)
- PhD in Movement Science (<http://bulletin.wustl.edu/medicine/degrees-offerings/movement-science-phd/>)

Research

The mission of the Research Division is to understand how the movement system (<https://pt.wustl.edu/about-us/>) is affected by disease, injury, lifestyle, development and aging and to understand how movement can be used to promote health by enhancing physical function, activity and participation across the lifespan.

Our interdisciplinary scientific endeavors include mechanistic and translational investigations at all levels of organization, from the cell to society. Our research (<https://pt.wustl.edu/research/our-research-areas/>) is supported by millions of dollars in federal, private foundation and university funding. We pursue knowledge in a collaborative work environment within the Movement Science Research Center (<https://pt.wustl.edu/research/movement-science-research-center/>).

Our doctoral and postdoctoral Research Training Programs (<https://pt.wustl.edu/research/research-training-programs/>) prepare students for careers at the forefront of physical therapy and movement science research.

Research Areas

Research Area	Faculty Investigators
Foot & Ankle Injury & Recovery	Mary K. Hastings, PT, DPT, MSCI, ATC
Hardware & Software Design for Rehabilitation Research	Joseph W. Klaesner, PhD
Integrative Muscle Physiology	Gretchen A. Meyer, PhD
Metabolism & Organ Function in Metabolic Disease	W. Todd Cade, PT, PhD
Movement & Musculoskeletal Problems in Diabetes	Michael J. Mueller, PT, PhD, FAPTA
Movement & Neurodegenerative Disease	Gammon M. Earhart, PT, PhD
Movement & Neurodegenerative Disease	Ryan P. Duncan, PT, DPT
Nutrition & Exercise	Diana C. Parra Perez, MPH, PhD
Physical Activity & Fitness	B. Ruth Clark, PT, PhD
Physical Activity & Fitness	Susan B. Racette, PhD

Prevention, Rehabilitation & Maintenance in Musculoskeletal Conditions	Linda Van Dillen, PT, PhD, FAPTA
Rehabilitation Research for Orthopaedic Conditions	Marcie Harris-Hayes, PT, DPT, MSCI
Stroke Recovery & Rehabilitation Accelerometry	Catherine Lang, PT, PhD
Stroke Recovery & Rehabilitation Accelerometry	Marghuretta D. Bland, PT, DPT, NCS
Whole Body & Joint-Level Orthopaedic Biomechanics	Michael D. Harris, PhD

Movement Science Research Center

The Movement Science Research Center is approximately 13,000 square feet of newly renovated space that provides a collaborative environment for faculty, PhD students and postdoctoral fellows to conduct rehabilitation research.

The facility includes numerous private rooms for clinical interventions and state-of-the-art equipment.

Equipment List	
Accelerometer activity monitors	Gene and protein quantification
Balance platform	Histology
Biological sample processing equipment	Motion capture
Cell culture suite	Muscle physiology testing equipment
Dynamometers	Oscilloscopes
Electromyography	Rotating treadmill
Eye tracking	Simulated spaces for functional activities
Force platforms	Split-belt treadmill
Function generators	Treadmills
GAITRite instrumented walkway	Wheel mill system

Research Training Programs

We offer physical therapy research training programs designed to prepare students at the doctoral and postdoctoral levels for careers in groundbreaking physical therapy research.

PhD in Movement Science

Under the Movement Science Program, students work on the research topics that interest them while completing course work that prepares them for their research careers. The Movement Science Program encourages collaboration with other departments within the School of Medicine.

Visit the Program in Physical Therapy website for more information about the Movement Science Program (<https://pt.wustl.edu/education/phd-in-movement-science/>).

Postdoctoral Fellowship in Movement Science

Our Postdoctoral Fellowship in Movement Science offers an opportunity to develop and complete research projects related to movement science and rehabilitation. Fellows are encouraged to collaborate with other faculty and programs in the School of Medicine.

Visit the Program in Physical Therapy website for more information about the Postdoctoral Fellowship (<https://pt.wustl.edu/education/postdoctoral-fellowship-in-movement-science/>).

Comprehensive Opportunities in Rehabilitation Research Training Program

The Comprehensive Opportunities in Rehabilitation Research Training (CORRT) Program is a multicenter career development program for physical and occupational therapists.

Visit the CORRT website for more information about the CORRT Program (<https://www.corrt.pitt.edu/>).

Institute of Clinical and Translational Sciences

The Institute of Clinical and Translational Sciences (ICTS) offers programs designed to support investigators at each phase of their clinical and translational research studies.

Visit the ICTS website for more information about the ICTS (<https://icts.wustl.edu/>).

Clinical Research Training Center

The Clinical Research Training Center (CRTC) fosters clinical research training and career development for predoctoral students, house staff, postdoctoral fellows and faculty.

Visit the CRTC website for more information about the CRTC (<https://crtc.wustl.edu/>).

Faculty

Executive Director, Program in Physical Therapy

Gammon Earhart, PT, PhD (<https://pt.wustl.edu/faculty-staff/faculty/gammon-m-earhart-pt-phd/>)

Division Director of Education

Jennifer Stith, PT, PhD, LCSW (<https://pt.wustl.edu/faculty-staff/faculty/jennifer-s-stith-pt-phd-lcsw/>)

Division Director of Research

Linda Van Dillen, PT, PhD, FAPTA (<https://pt.wustl.edu/faculty-staff/faculty/linda-van-dillen-pt-phd/>)

Division Director of Clinical Practice

Beth Crowner, PT, DPT, NCS, MPPA (<https://pt.wustl.edu/faculty-staff/faculty/beth-crowner-pt-dpt-ncs-mppa/>)

Visit our website for more information about our faculty (<https://pt.wustl.edu/faculty-staff/faculty/>) and their appointments.

A

Steven B Ambler, PHD, DPT, M PH

Associate Professor of Physical Thereapy (primary appointment)
Associate Director of Professional Curriculum in Physical Therapy
Associate Professor of Orthopaedic Surgery
BS University of Illinois 2002
PHD University of South Florida 2016
DPT Washington Univ in St. Louis 2005
M PH University of South Florida 2014

B

Amy J Bastian, PHD

Adjunct Assistant Professor of Physical Therapy (primary appointment)
BS University of Oklahoma 1990
PHD Washington Univ in St. Louis 1995

Marghuretta Dakota Bland, MS, DPT

Associate Professor of Physical Therapy (primary appointment)
associate Professor of Neurology
Associate Professor of Occupational Therapy
BS Canisius College 2004
MS Washington Univ in St. Louis 2008
DPT Washington Univ in St. Louis 2008

Marybeth Brown, MA, PHD

Adjunct Associate Professor of Physical Therapy (primary appointment)
BS Russell Sage College 1967
MA University of Southern Calif 1974
PHD University of Southern Calif 1984

Megan Maupin Burgess, DPT

Assistant Professor of Physical Therapy (primary appointment)
Assistant Professor of Orthopaedic Surgery
DPT Washington Univ in St. Louis 2010
BS University of Virginia 2006

Tamara Lavon Burlis, MHS, DPT

Professor of Physical Therapy (primary appointment)
Assistant Director of Professional Curriculum in Physical Therapy
Associate Director for Clinical Education in Physical Therapy
Professor of Medicine

MHS Washington Univ in St. Louis 1993
DPT Washington Univ in St. Louis 2003
BS Washington Univ in St. Louis 1988
BA Wartburg College 1988

C

Cheryl Ann Caldwell, DPT, MHS

Associate Professor of Physical Therapy (primary appointment)
Associate Professor of Orthopaedic Surgery
DPT Washington Univ in St. Louis 2002
MHS Washington Univ in St. Louis 1988
BS University of Colorado Boulder 1976

Billie Ruth Clark, PHD

Professor of Physical Therapy (primary appointment)
Professor of Neurology
PHD Saint Louis University 1988
BS Saint Louis University 1974

Suzanne Marie Cornbleet, DPT, MA

Associate Professor of Physical Therapy (primary appointment)
Associate Professor of Orthopaedic Surgery
DPT Washington Univ in St. Louis 2003
MA Washington Univ in St. Louis 1987
BS University of Colorado Boulder 1975

Beth Elaine Crowner, MS, M PP, DPT, BS PT

Professor of Physical Therapy (primary appointment)
Professor of Neurology
MS Washington Univ in St. Louis 1989
M PP University of MO St Louis 1997
DPT Washington Univ in St. Louis 2007
BS PT Washington Univ in St. Louis 1989

Sylvia Lin Czuppon, DPT, MS

Associate Professor of Physical Therapy (primary appointment)
Associate Professor of Orthopaedic Surgery
DPT Washington Univ in St. Louis 2011
BA Washington Univ in St. Louis 2000
MS Washington Univ in St. Louis 2002

D

Ryan Michael DeGeeter, DPT

Assistant Professor of Physical Therapy (primary appointment)
Assistant Professor of Orthopaedic Surgery
BS Ball State University 2007
DPT Washington Univ in St. Louis 2010

Ryan Patrick Duncan, DPT, MS

Associate Professor of Physical Therapy (primary appointment)
Associate Professor of Neurology
BS Maryville University 2007
DPT Washington Univ in St. Louis 2012
MS Maryville University 2008

E

Gammon Marie Earhart, MS, PHD

Professor of Physical Therapy (primary appointment)
Associate Dean for Physical Therapy
Professor of Neurology
Professor of Neuroscience
MS Beaver College 1996
PHD Washington Univ in St. Louis 2000
BS Beaver College 1994

H

Michael Dennison Harris, PHD

Assistant Professor of Physical Therapy (primary appointment)
Assistant Professor of Mechanical Engineering and Materials Science
Assistant Professor of Orthopaedic Surgery
PHD University of Utah 2013
BS University of Utah 2007

Mary Kent Hastings, MS, DPT

Professor of Physical Therapy (primary appointment)
Professor of Orthopaedic Surgery
BS University of Illinois 1990
MS Washington Univ in St. Louis 1993
DPT Washington Univ in St. Louis 2002

Marcie Harris Hayes, MS, DPT

Professor of Physical Therapy (primary appointment)
Professor of Orthopaedic Surgery
BS Southwest Missouri St University 1994
MS Northwestern University 1996
DPT Washington Univ in St. Louis 2003

Carey Lane Holleran, M PHYSTH, DHS

Assistant Professor of Physical Therapy (primary appointment)
Assistant Professor of Neurology
M PHYSTH Duquesne University 2004
BS Duquesne University 2003
DHS University of Indianapolis 2014

Gregory William Holtzman, DPT, MS

Professor of Physical Therapy (primary appointment)
Division Director of Clinical Practice in Physical Therapy
Professor of Orthopaedic Surgery
BA Emory University 1995
DPT Washington Univ in St. Louis 2007
MS Washington Univ in St. Louis 2001

I

Renee A. Ivens, MHS, DPT

Associate Professor of Physical Therapy (primary appointment)
Associate Professor of Orthopaedic Surgery
BS Maryville University 1984
MHS Washington Univ in St. Louis 1996
DPT Washington Univ in St. Louis 2006

K

Lynnette C Khoo-Summers, DPT, MS

Associate Professor of Physical Therapy (primary appointment)
Associate Professor of Orthopaedic Surgery
DPT Washington Univ in St. Louis 2008
MS Washington Univ in St. Louis 1998
BA Colorado St University 1990

Joseph W. Klaesner, MS, PHD, BS1

Professor of Physical Therapy (primary appointment)
Professor of Radiology
MS Vanderbilt University 1993
PHD Vanderbilt University 1995
BS Marquette University 1987
BS1 Marquette University 1987

L

Catherine Eckels Lang, MS, PHD

Professor of Physical Therapy (primary appointment)
Associate Director of Movement Science PhD Program in Physical Therapy
Professor of Neurology
Professor of Occupational Therapy
MS University of Vermont 1997
BS University of Vermont 1993
PHD Washington Univ in St. Louis 2001

Vanessa Mae Lanier, DPT

Assistant Professor of Physical Therapy (primary appointment)
Assistant Professor of Orthopaedic Surgery
BS Washington Univ in St. Louis 2007
DPT Washington Univ in St. Louis 2012

M

Mary Kate McDonnell, MHS, DPT

Associate Professor of Physical Therapy (primary appointment)
Associate Director of Residencies and Fellowships in Physical Therapy
Associate Professor of Orthopaedic Surgery
BS Saint Louis University 1981
MHS Washington Univ in St. Louis 1985
DPT Washington Univ in St. Louis 2003

Patricia Navarro McGee, DPT

Assistant Professor of Physical Therapy (primary appointment)
Assistant Professor of Orthopaedic Surgery
DPT Washington Univ in St. Louis 2004
BA Washington Univ in St. Louis 2001
BA Washington Univ in St. Louis 2001

Jacob Graves McPherson, MS, PHD

Assistant Professor of Physical Therapy (primary appointment)
Assistant Professor of Anesthesiology
MS Northwestern University 2008
PHD Northwestern University 2011
BS University of North Carolina a 2005

Laura Crego Miller McPherson, DPT, PHD

Assistant Professor of Physical Therapy (primary appointment)

Assistant Professor of Neurology
DPT Northwestern University Med 2012
PHD Northwestern University 2014
BS Vanderbilt University 2006

Gretchen Ann Meyer, MS, PHD

Assistant Professor of Physical Therapy (primary appointment)
Assistant Professor of Neurology
Assistant Professor of Orthopaedic Surgery
BS Washington Univ in St. Louis 2004
MS Washington Univ in St. Louis 2004
PHD University of CA San Diego 2011

Jennifer Alaine Miller-Katsafanas, DPT, DPT, BBA

Assistant Professor of Physical Therapy (primary appointment)
Assistant Professor of Obstetrics and Gynecology
DPT Washington Univ in St. Louis 2012
DPT Washington Univ in St. Louis 2012
BA University of MO St Louis 1996
BBA University of MO St Louis 1996
BA University of MO St Louis 1996

Michael Jeffrey Mueller, MHS, PHD

Professor of Physical Therapy (primary appointment)
Professor of Radiology
MHS Washington Univ in St. Louis 1984
BS Washington Univ in St. Louis 1979
PHD Washington Univ in St. Louis 1992

N

Barbara Jean Norton, PHD, MHS

Professor of Physical Therapy (primary appointment)
Associate Director for Education Technology in Physical Therapy
Professor of Neurology
PHD Washington Univ in St. Louis 1996
MHS Washington Univ in St. Louis 1985
BS Washington Univ in St. Louis 1966

R

Susan B. Racette, PHD

Professor of Physical Therapy (primary appointment)
Professor of Medicine
PHD University of Chicago 1994
BS Bucknell University 1988

S

David R Sinacore, MHS, PHD

Adjunct Professor of Physical Therapy (primary appointment)
BS State University of New York 1979
MHS Washington Univ in St. Louis 1983
PHD West Virginia University 1992

Cheryl Renae Smith, DPT, MS

Assistant Professor of Physical Therapy (primary appointment)
Assistant Professor of Orthopaedic Surgery
DPT Washington Univ in St. Louis 2010

MS University of Oklahoma 2004

Nancy Bloom Smith, MS, DPT

Professor of Physical Therapy (primary appointment)
Professor of Orthopaedic Surgery
MS Washington Univ in St. Louis 1979
BS Washington Univ in St. Louis 1984
BA University of Virginia 1976
DPT Washington Univ in St. Louis 2002

Theresa M Spitznagle, DPT, MHS

Professor of Physical Therapy (primary appointment)
Professor of Obstetrics and Gynecology
BS Marquette University 1986
DPT Washington Univ in St. Louis 2006
MHS Washington Univ in St. Louis 1994

Jennifer S Stith, MS, MSW, PHD

Professor of Physical Therapy (primary appointment)
Division Director for Education in Physical Therapy
Professor of Neurology
MS University of Southern Calif 1979
MSW Washington Univ in St. Louis 2006
PHD Washington Univ in St. Louis 1994
BS University of California 1976

T

Stacy Lynne Tylka, DPT, MS

Associate Professor of Physical Therapy (primary appointment)
Associate Professor of Obstetrics and Gynecology
Associate Professor of Orthopaedic Surgery
DPT Washington Univ in St. Louis 2009
MS Saint Louis University 2002
BS Saint Louis University 2000

V

Linda R Van Dillen, MS, PHD

Professor of Physical Therapy (primary appointment)
Division Director of Research in Physical Therapy
Professor of Orthopaedic Surgery
MS Washington Univ in St. Louis 1985
PHD Washington Univ in St. Louis 1994
BS University of Missouri 1979

Z

Dequan Zou, ME, MS, D SC

Professor of Physical Therapy (primary appointment)
Professor of Radiology
ME Harbin Engineering University 1984
MS Washington Univ in St. Louis 1991
BS Harbin Engineering University 1982
D SC Washington Univ in St. Louis 1993

Courses

Visit online course listings to view semester offerings for M02 PhysTher (<https://courses.wustl.edu/CourseInfo.aspx?sch=M&dept=M02>).

M02 PhysTher 5001 Independent Study

Independent research work under supervision of a faculty member in the Program in Physical Therapy. Prerequisite: junior or senior standing and permission of faculty. Petition forms are available from Dr. Clark.

Credit variable, maximum 6 units.

M02 PhysTher 601 Diagnosis and Evidence Analysis in PT Practice I

Includes processes required for effective clinical decision-making such as the use of disablement models, decision trees, diagnostic classification systems, patient interviewing and outcome measures. An introduction to basic research methods and systematic review of the literature. Patient cases will be used to practice clinical decision-making skills.

Credit 2 units.

M02 PhysTher 602 Professional Issues and Skills I

An introduction to the profession of physical therapy, the APTA, professional behavior and clinical activities such as documentation and quality improvement. Includes ethics, legal issues and policies that guide professional behavior. Students will learn and practice using principles of patient teaching, negotiation and team building. Students will spend 80 hours at clinical sites.

Credit 3 units.

M02 PhysTher 603 Essential Clinical Skills I

Beginning skills for patient management include using systems screening and reliable assessment of impairments including visual appraisal, vital signs, sensation, reflexes, pain, range of motion, muscle strength and infection control. Skill and safety in positioning, draping and managing equipment during patient care activities such as walking and transfers will be developed.

Credit 4 units.

M02 PhysTher 604 Cells, Systems and Disease I

The first of a two-semester course, this course focuses on advanced human physiology and pathological mechanisms of disease. Course content emphasizes cellular and organ system physiology, pathological mechanisms of disease, and medical management of pathological conditions. Physicians will discuss medical diagnosis, clinical signs and symptoms, and management of selected diseases. Students will be introduced to pharmacology and to the relevance of clinical laboratory values. Patient case studies will be used to integrate information.

Credit 4 units.

M02 PhysTher 605 Neuroscience

Focuses on the study of structures, organization and function of the nervous and muscular systems. Emphasis is on the sensory and motor systems involved in motor control and on basic knowledge required for clinical practice.

Credit 3 units.

M02 PhysTher 606 Kinesiology I

An introduction to the analysis of normal human movement activities through the application of mechanical concepts including displacement, velocity, acceleration, force and torque. Emphasizes kinematic and kinetic concepts relevant to human movement and study of the structures involved in movement.

Credit 3 units.

M02 PhysTher 610 Cells, Systems and Disease II

A continuation of the first semester. Open only to individuals enrolled in the Physical Therapy program.

Credit 4 units.

M02 PhysTher 611 Human Anatomy

Emphasis is on: 1) Musculoskeletal, neural and vascular systems of the extremities, head, neck and trunk; and 2) anatomical features relevant to current physical therapy practice. Lectures are complemented by student-performed dissection of human cadavers, instructor-prepared prosections and computer-assisted instruction. Open only to individuals enrolled in the Physical Therapy program.

Credit 5 units.

M02 PhysTher 612 Diagnosis and Evidence Analysis in PT Practice II

Continuation of research methods from the first semester, including use of statistics and outcome measurements. Students will complete a reliability project and write a paper based on the literature. Cases will permit further practice using decision trees and assigning diagnoses of basic movement-related conditions. *Open only to individuals enrolled in the Physical Therapy program.*

Credit 2 units.

M02 PhysTher 613 Kinesiology II

Emphasizes principles of maturation and motor learning relative to the application of biomechanical principles to the analysis of human movement. Standardized methods of characterizing movement by observation and with the use of technology will be addressed. Topics include developmental, anatomical, electromyographical and physiological elements of kinesiology with regard to individual joints and common functional activities such as gait and transitional movements.

Credit 5 units.

M02 PhysTher 614 Diagnosis and Management of Musculoskeletal Conditions in PT I

Students will learn postural assessment and application of Movement Systems Balance. Analysis of functional activities, the essential components and compensatory strategies, will prepare the student to begin to plan interventions for individuals with musculoskeletal problems. Skill in providing interventions of manual exercise, fitness training and functional mobility training will be developed. Cases will provide use of diagnostic systems relevant to musculoskeletal conditions.

Credit 3 units.

M02 PhysTher 615 Professional Issues and Skills Development II

Students will be assigned to part-time clinical experiences for 45 hours to allow practice of acquired skills in patient care, documentation and communication.

Credit 0.5 units.

M02 PhysTher 621 Exercise Physiology

A study of the responses of various physiological systems to exercise. Includes application and integration of these systems to various diseases and to human performance. Content will be coordinated with Diagnosis and Management of Cardiopulmonary Conditions in Physical Therapy. Open only to individuals enrolled in the Physical Therapy program. Credit 3 units.

M02 PhysTher 622 Diagnosis and Management of Cardiopulmonary Conditions in PT

Students will learn to assess, diagnose and treat movement-related cardiopulmonary conditions. Treatment techniques will include exercise and conditioning, breathing techniques, postural drainage and percussion. Interpretation of laboratory tests and pharmacology will prepare students to work with patients safely. Case studies will prepare students for general practice. *Open only to individuals enrolled in the Physical Therapy program.* Credit 3 units.

M02 PhysTher 623 Orthopaedic Medicine

Physician lectures will provide students with information on surgical and non-surgical procedures and postoperative management of patients with orthopaedic conditions. Physicians will discuss medical diagnosis, clinical signs and symptoms, and management of selected conditions to prepare the student to use this information in Diagnosis and Management of Musculoskeletal Conditions in PT II - III. Open only to individuals enrolled in the Physical Therapy program. Credit 2 units.

M02 PhysTher 624 Diagnosis and Management of Musculoskeletal Conditions in PT II

Students will acquire the skills needed to manage and prevent movement-related musculoskeletal problems of the spine and lower quarter. Acute and post-acute care will be addressed. Integration of information from previous and concurrent courses will be stressed with emphasis on screening, examination, analysis of findings, diagnosis, design and implementation of intervention programs for patients with increasingly complex problems. Functional activities across the life span also will be addressed. Open only to individuals enrolled in the Physical Therapy program. Credit 3 units.

M02 PhysTher 625 Neurology Medicine

Physician lectures will provide students with information on the medical management of patients with neurological conditions. Physicians will discuss medical diagnosis, clinical signs and symptoms, and management of selected conditions to prepare the student to use this information in Diagnosis and Management of Neuromuscular Conditions in PT. *Open only to individuals enrolled in the Physical Therapy program.* Credit 2 units.

M02 PhysTher 626 Moderators of Health, Wellness and Rehabilitation

Designed to explore individual attitudes toward health, illness, disability and death. Emphasizes the effect of these attitudes on individual goals, motivation, expectations, interpersonal relationships and exercise adherence. Investigates individual health attitudes, personal values, family interaction, stress management and concepts of wellness. Age-related issues will be addressed. *Open only to individuals enrolled in the Physical Therapy program.* Credit 3 units.

M02 PhysTher 627 Essential Clinical Skills II

Skill in providing interventions including massage and mobilization and the application of thermal, mechanical, hydro and electrotherapeutic modalities will be developed. Students will learn the basic indications for and prescription of adaptive equipment and wheelchairs. Open only to individuals enrolled in the Physical Therapy program. Credit 3 units.

M02 PhysTher 628 Case Integration Lab I

Paper, video and live patient cases provided by faculty and students will be completed to provide practice in managing patients with varying movement-related diagnoses of the cardiopulmonary and musculoskeletal systems. Open only to individuals enrolled in the Physical Therapy program. Credit 1 unit.

M02 PhysTher 629 Diagnosis and Management of Neuromuscular Conditions in PT I

Students will acquire the skills to examine patients with neuromuscular disorders. Emphasis will be on screening, selecting tests and measures, examination, determining impairments and functional loss, and making a movement system diagnosis. Students will practice examining both adult and pediatric patients. Content related to motor control and motor learning will be integrated into the course. Course content will be integrated with the concurrent Neurology Medicine course. *Open only to individuals enrolled in the Physical Therapy program.* Credit 2 units.

M02 PhysTher 635 Professional Issues and Skill Development III

Focuses on clinical application of compliance and motivation principles. Peer teaching, communication, consultation skills, leadership skills, lobbying legislation, documentation and negotiation in the clinic will be practiced. Students will practice decision making, supervision and delegation. Students will prepare resumes and begin career planning. Credit 3 units.

M02 PhysTher 636 Diagnosis and Management of General Medical Conditions in PT

Students will acquire the skills needed to manage movement-related problems in patients with diabetes, burns, arthritis, wounds, amputation and prosthetics, obesity, oncological problems, incontinence, pain, genetic conditions, osteoporosis, malnutrition, transplants and neonatology. Integration of information from previous and concurrent courses will be

stressed with emphasis on screening, examination, analysis of findings, diagnosis, design and implementation of intervention programs for patients with increasingly complex problems. Functional activities across the life span will be addressed. Credit 3 units.

M02 PhysTher 638 Diagnosis and Management of Musculoskeletal Conditions in PT III

Students will acquire the skills needed to manage and prevent movement-related musculoskeletal problems of the spine, neck, elbow, wrist and hand, ankle and foot. Integration of information from previous and concurrent courses will be stressed with emphasis on screening, examination, analysis of findings, diagnosis, design and implementation of intervention programs for acute and post-acute patients with increasingly complex problems. Functional activities across the life span will be addressed. Credit 3 units.

M02 PhysTher 642 Case Integration Lab II

Students will use paper, computer, video and live patients to integrate information learned across the curriculum. Students will orally present cases they managed during Clinical Experience II. Credit 1 unit.

M02 PhysTher 643 Diagnosis and Management of Neuromuscular Conditions in PT II

Students will build on their skills for examining patients with neuromuscular disorders and diagnosing movement system dysfunction. Additional skills acquired will be designing and implementing intervention plans to address impairments and functional loss in patients of all ages. To aid in selecting appropriate interventions, students will consider patient prognosis. Students will learn to prescribe wheelchairs and orthotics, fabricate splints, apply kinesiotape, and use a variety of medical equipment. Motor control and motor learning principles will be integrated into the course. Open only to individuals enrolled in the Physical Therapy program. Credit 4 units.

M02 PhysTher 650 Diagnosis and Evidence Analysis in PT Practice III

Students will prepare written case reports based on patients seen during their clinical experiences. Students will defend use of diagnostic classifications and integrate the literature to support their case. Students will practice selecting appropriate outcome measures, designing clinical research questions, and use data to make decisions about individual and group treatment. Credit 3 units.

M02 PhysTher 651 Organizational and Management Issues

Dynamics of organizations and departments will be discussed using case examples. Focuses on the knowledge and skills needed by physical therapists early in their careers. Principles of administration and management that enable the physical therapist to supervise supportive personnel, to understand fiscal issues including reimbursement, and to recommend staffing schedules and patterns will be addressed. Students will learn marketing and public relations strategies. Credit 3 units.

M02 PhysTher 652 Alternative Settings and Practice Environments

Physical therapy practice in work and community settings will be addressed with an emphasis on ergonomics and group treatment. Special PT tests and the interpretation of other tests will be integrated into cases. Students will be introduced to care for the patient with vestibular problems, care in the ER, and an update in genetics/genomics. Alternative medicine and alternative PT practice will be studied. Students will explore recreational options for disabled populations. Credit 3 units.

M02 PhysTher 653 Health Fitness and Prevention

Emphasis will be on critiquing and designing fitness and wellness programs for well and special populations. Programs will focus on those for employee fitness, diabetes, arthritis, obesity and the elderly. Students will participate in and evaluate group treatments and recreational exercise. Use of exercise equipment will be addressed. Credit 3 units.

M02 PhysTher 654 Case Integration Lab III

A variety of teaching methods, including rounds format, assessment centers and student presentations will enable students to integrate information from across the curriculum to complete complex case studies. Emphasis will be on pharmacology, other tests, moderators, establishing time frames and setting priorities for care. Age-related issues will be addressed. Credit 3 units.

M02 PhysTher 655 Professional Issues and Skill Development IV

Focus will be on the professional skills students need to function in entry-level practice in a variety of settings. Students will study licensure, and will participate in lobbying and a mock House of Delegates. Skills in serving as an expert witness, a leader, a peer instructor and in clinical instruction will be developed. Students will be expected to participate in a service project and activities of the American Physical Therapy Association. Cultural and race issues will be actively explored. Credit 4 units.

M02 PhysTher 691 Clinical Experience I

An eight-week, full-time clinical experience supervised by clinical faculty. Allows the student to practice evaluation and treatment skills acquired in the classroom and laboratory. Also emphasizes development of professional behaviors. Credit 4 units.

M02 PhysTher 692 Clinical Experience II

An eight-week, full-time clinical experience supervised by clinical faculty. Allows the student to practice evaluation and treatment skills acquired in the classroom and laboratory. Also emphasizes development of professional behaviors. Credit 4 units.

M02 PhysTher 693 Clinical Experience III

A 10-week, full-time clinical experience supervised by clinical faculty. Allows the student to practice evaluation and treatment skills acquired in the classroom and laboratory. Also emphasizes the development of professional behaviors.

Credit 5 units.

M02 PhysTher 694 Clinical Experience IV

A 12-week, full-time clinical experience supervised by clinical faculty. Allows the student to practice evaluation and treatment skills acquired in the classroom and laboratory. Also emphasizes the development of professional behaviors.

Credit 6 units.
