Physical Therapy, D.P.T.

Degree Offered

- Doctor of Physical Therapy (D.P.T.)

Nature of the Program

The WVU Division of Physical Therapy was established in 1970 under the auspices of the School of Medicine to help meet the need for physical therapists in West Virginia. The program became an entry-level doctoral degree program in Fall 2005. The program is accredited by the Commission on Accreditation in Physical Therapy Education [CAPTE], a specialized body recognized by the Council on Postsecondary Accreditation. The most recent accreditation was awarded in November of 2011 for ten years. Forty full-time students are admitted in a typical annual admissions cycle. Preference is given to West Virginia residents and non-residents who have attended a West Virginia college or university or who have ties to West Virginia. All other non-residents who meet program requirements will also be considered for admission.

Students admitted into the program complete three years of combined classroom, laboratory, and clinical education, and part-time and full-time supervised clinical practice in various clinics in West Virginia and other states. A doctor of physical therapy (D.P.T.) degree is awarded upon completion of the program which entitles the graduate to apply for examination for state licensure. A license to practice physical therapy is required by all states.

The Profession of Physical Therapy

Physical therapy is a hands-on health care profession that defines and promotes the movement system as the foundation for optimizing movement to improve the health of society. The physical therapist is uniquely qualified to evaluate and manage an individual’s movement system across the lifespan to promote optimal development; diagnose impairments, activity limitations, and participation restrictions; and provide interventions targeted at preventing or ameliorating activity limitations and participation restrictions. The movement system is the core of physical therapist practice, education and research.

Demand for physical therapy services is expected to continue over the next ten years. The Bureau of Labor Statistics projects growth of 18 percent from 2019 to 2029, which is much faster than average for all occupations. The demand for physical therapists in all practice settings is affected by such factors as an aging population and increased emphasis on a healthy, active lifestyle. The American Physical Therapy Association (APTA) is the professional organization which represents therapists on healthcare issues and advocates for the profession with government and payor agencies to assure that physical therapy will continue to be a favorable career choice.

Physical therapists are respected members of the healthcare team. They work with other healthcare providers such as physicians, occupational therapists, music and arts therapists, rehabilitation nurses, psychologists, social workers, dentists, podiatrists, speech pathologists and audiologists. Physical therapists work in hospitals, private physical therapy offices, community health centers, corporate or industrial health centers, sports facilities, research institutions, rehabilitation centers, nursing homes, home health agencies, schools, pediatric centers, and colleges and universities.

Some physical therapists work as employees in these settings, while others are self-employed as owners or partners in private practices. Settings, employment arrangements, career responsibilities, and career opportunities depend on the interests and skills of each practitioner.

FACULTY

CHAIR

- MaryBeth Mandich - PT, (Virginia Commonwealth University) Ph.D. (West Virginia University)
  Neuroscience, Pediatric Physical Therapy

PROFESSORS

- Dina Jones - PT, PhD (University of Pittsburgh)
  Arthritis, community based physical activity
- John J. Petronis - PT, M.S. (West Virginia University)
  Orthopedic Physical Therapy [Emeritus Faculty]
- Bill Stauber - PT, Ph.D. (Rutgers University)
  Electrotherapy, Muscle Physiology
- Corrie Mancinelli - PT, GCS, PhD (West Virginia University)
  Orthopedics and geriatrics
- Anne Swisher - PT, MS (University of North Carolina) CCS, Ph.D. (West Virginia University)
  Cardiopulmonary, Oncology
- Ralph Utzman - PT, MPH, (West Virginia University) PhD (Virginia Commonwealth University)
  Director of Clinical Education
ASSOCIATE PROFESSORS

• Kimeran Evans - DPT, (Virginia Commonwealth U); PhD (West Virginia University)
  Clinical Education, General Physical Therapy

• Valeriya Gritsenko - PhD (University of Alberta, Edmonton)
  Neuroscience, motor control

• Teresa Rice - PT, NCS, MPH,EdD (West Virginia University)
  Neurologic physical therapy

• Carol Waggy - PT, CHS, PhD (West Virginia University)
  Hand therapy, General Orthopedics

ASSISTANT PROFESSORS

• Muhammad Alrwaily - PT, COMT, PhD (University of Pittsburgh)
  Orthopedics, Research

• Megan Burkart - DPT (West Virginia University), Board Certified Oncology Clinical Specialist
  Oncology PT

• Yu-Jen Chang - PT, PhD (University of Southern California)
  Musculoskeletal, Research, Prosthetics and orthotics

• Renee McGinnis - OCS, DPT (West Virginia University)
  Professional roles, orthopedics

• Kristin Phillips - DPT, WCS (University of Pittsburgh)
  Women's Health

• Michael Timko - PT, (WestVirginia University) MS (University of Pittsburgh)
  Orthopedic and Manual Therapy

Admissions

For the most up-to-date information, including temporary adjustments to requirements due to effects of COVID-19, please refer to our admissions website at:

https://medicine.hsc.wvu.edu/pt/admissions/

APPLICATION REQUIREMENTS

The following requirements must be met to apply to the WVU Physical Therapy Program:

1. Completion of a baccalaureate degree:

Applicants must complete a baccalaureate degree at an accredited US college or university prior to May of the year of matriculation. Students may apply with any degree background, as long as all prerequisite courses are completed.

2. Completion of prerequisite courses

Prerequisite courses (listed in the table below) must be completed at a regionally accredited 2- or 4-year US college or university. Applicants may be enrolled in prerequisite courses at the time of application. However, all prerequisite courses and the undergraduate major must be successfully completed by the end of the Spring semester (typically mid-May) of the year of entering the program.

The applicant must earn a minimum grade of C in each prerequisite course.

It is recommended that prerequisite courses in human anatomy and human physiology be completed within two years prior to admission.

<table>
<thead>
<tr>
<th>Pre-requisite Courses</th>
<th>WVU Course Number</th>
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<tr>
<td>Biology with lab (8 hours)</td>
<td>(BIOL 101 and BIOL 103, BIOL 102 and BIOL 104) OR (BIOL 115 and BIOL 117)</td>
</tr>
<tr>
<td>Chemistry with lab (8 hours)</td>
<td>CHEM 115, CHEM 115L, CHEM 116, CHEM 116L</td>
</tr>
<tr>
<td>Physics with lab (8 hours)</td>
<td>PHYS 101, PHYS 102</td>
</tr>
<tr>
<td>General psychology (3 hours)</td>
<td>PSYC 101</td>
</tr>
<tr>
<td>Developmental psychology (3 hours)*, should include development across the human lifespan</td>
<td>PSYC 241</td>
</tr>
<tr>
<td>Introductory statistics (3 hours), must include descriptive and inferential statistics</td>
<td>STAT 211 or ECON 225</td>
</tr>
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</table>
Human anatomy (3 hours)**

**ATTR 219 or NBAN 205 or PALM 205 or EXPH 350 or EXPH 440

Human physiology (3 hours)***

***PSIO 241 or PSIO 441 or BIOL 235

* A course Developmental Psychology is strongly recommended, although other psychology courses (abnormal, social) are accepted. Students should seek Developmental Psychology courses that cover the entire human lifespan, from birth through older adulthood, when possible. Courses in Sports Psychology may not be used for this prerequisite.

** The anatomy courses included in the DPT curriculum are extremely rigorous. Students should seek out the highest level anatomy course(s) available. The minimum prerequisite is a 3 credit hour course in Human Anatomy; ideally with a laboratory. We will accept a 2-semester, 8 credit sequence of combined Human Anatomy & Physiology. Courses in comparative, mammalian, or animal anatomy will not be accepted.

*** For the physiology prerequisite, we will accept a 2-semester, 8 credit sequence of combined Human Anatomy & PhysiologySeparate Human Physiology course with lab is preferred. Animal, Mammalian, or Comparative Physiology courses are not acceptable.

3. Overall Cumulative GPA:

An overall cumulative GPA of 3.0 is required.

4. Prerequisite GPA:

A GPA in the prerequisite courses of 3.0 is required.

5. Graduate Record Examination (GRE) scores:

Submit official GRE scores using institution code #7639 for the [West Virginia U Sch Med Phys Therapy].

6. Volunteer/Work experience in physical therapy:

A minimum of 60 hours of volunteer or work experience is required. This experience must be under the direction of licensed physical therapist, and experience from two different practice settings is recommended. Practice settings include acute care/hospital, outpatient, adult rehabilitation hospital/center, nursing home, school system/pediatrics, and home health. Though these hours may be obtained during high school and college, some volunteer hours obtained during the junior or senior college years is strongly recommended. Volunteer/work experience must be completed within the US.

Hours devoted to internships in undergraduate majors in other fields (such as exercise physiology or athletic training) may NOT be used as part of the 60 hours of volunteer experience.

7. Three Letters of recommendation

We require two references from US-licensed physical therapists with whom the student has worked in a clinical setting, either on a volunteer or work basis.

The third reference must be from a professor/instructor who taught the student in at least one course, or an academic advisor who is familiar with the applicant’s academic background and performance.

We do NOT accept letters from physical therapist assistants or other healthcare providers.

We do NOT accept letters from relatives of the applicant, even if the relative is a physical therapist or professor.

APPLICATION PROCESS

Applications to the DPT program at West Virginia University are submitted through the Physical Therapy Centralized Application Service (PTCAS). The PTCAS application cycle will open July 15, 2021.

The application deadline is November 1. For an application to be considered, it must be marked as “Complete” by PTCAS and all supporting materials (GRE scores, letters of recommendation, etc.) must be received by PTCAS on or before the November 1 deadline.

INTERVIEWS

The admissions committee will offer personal interviews to well-qualified candidates. Interviews are conducted in late fall and early January at the WVU Health Sciences Center.

OFFERS OF ADMISSION

Applicants accepted to the program will receive an offer of admission through their preferred email (as identified in PTCAS) with a link to an online Declaration of Acceptance form. Those wishing to accept a seat in the class will complete an online Declaration of Acceptance form. Applicants accepting the offer of admission will be sent an invoice from the WVU Graduate Admissions Office for a non-refundable deposit ($400 for WV residents, $800 for non-residents), which will be due within two weeks of receipt of the invoice. The deposit will be applied towards the first semester tuition. Failure to pay the deposit within the required time period will result in forfeiture of the seat.
UPDATES AND ADDITIONAL INFORMATION

For updates, please periodically check the WVU Division of Physical Therapy website at https://medicine.hsc.wvu.edu/pt/admissions/.

Major Code: 8374

Physical Therapy (PT)

Course information for the doctor of physical therapy degree can be found on the following website: http://medicine.hsc.wvu.edu/pt (http://medicine.hsc.wvu.edu/pt/).

PHYSICAL THERAPY CURRICULUM

Note: This is subject to change without notice.

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<td>PT 708</td>
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<td>PT 713</td>
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<td>PT 785</td>
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### SUGGESTED PLAN OF STUDY

#### First Year

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<th>Spring</th>
<th>Hours</th>
<th>Summer</th>
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#### Second Year

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#### Third Year

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</table>

Total credit hours: 122

* The professional curriculum begins in summer before first year. Students should plan for these courses to begin on or around June 1st.

### Major Learning Outcomes

#### PHYSICAL THERAPY

This program is designed to prepare future physical therapy professionals for practice with special emphasis on meeting the needs of the citizens of West Virginia. This is done by the delivery of instruction focused on providing students with knowledge, skills, and behaviors consistent with professional excellence as described below:

Graduates will:

- Deliver high quality physical therapy services to individuals and communities across a continuum of care, including rural settings
- Demonstrate the ability to make sound clinical decisions characterized by critical thinking, information literacy, and based on scientific evidence
- Demonstrate the ability to collaborate as a unique member of inter-professional teams
• Provide care distinguished by inclusion, cultural sensitivity, advocacy, trust, respect and appreciation for both individual differences and population health disparities
• Demonstrate a commitment to the health of the community through participation in primary, secondary and tertiary prevention programs
• Demonstrate attributes of life-long learning through ongoing professional development, engagement in professional organizations and advocacy for the profession

COURSES

PT 701. Professional Development 1. 3 Hours.
Introduction to the roles and professional behaviors of physical therapists. Includes units on professionalism, health care ethics, and clinical documentation.

PT 706. Advanced Clinical Anatomy. 5 Hours.
This course presents advanced study of clinical applications of gross anatomy to physical therapy practice through lecture and lab. Laboratory includes dissection, computer-based instruction and clinical palpation.

PT 708. Movement Diagnosis 1. 2 Hours.
An introduction to the concept of human movement as the basis of physical therapy expertise. Includes overview of how anatomic structures and physiologic functions interact to move the body or its component parts. Laboratory activities include exposure to methods to assess the systems that contribute to human movement.

PT 713. Lifespan Functional Movement. 2 Hours.
An overview of motor learning including acquisition of developmental patterns, motor control, and motor skill acquisition. This course also provides an overview of the effects of normative processes of aging on neuromotor patterns in occupational performance.

PT 714. Foundational Science 1. 4 Hours.
An introduction to basic sciences fundamental to physical therapist diagnosis and treatment. Areas of study include genetics, embryology, histology, pathology, and immunology.

PT 715. Evidence Based Physical Therapy 1. 3 Hours.
Introduces students to information needed to practice evidence-based physical therapy, design research studies, and apply research findings to patients. The course emphasizes the role of scientific evidence in physical therapy practice; research ethics, design, methods, and writing; and the critical appraisal of diagnostic, prognostic/outcomes, and intervention studies.

PT 716. Kinesiologic Foundations. 4 Hours.
PR: Admission to professional program in PT. Functional anatomical correlations and human movement. Statics, biomechanics, dynamics and functional movement analysis. (2 Hr. lec; 4 hr. lab.).

PT 718. Movement Diagnosis 2. 3 Hours.
This foundational course sets the stage for more advanced examination procedures of the movement system. The course covers many of the essential components of a physical therapy examination including: history taking, vital signs, gross evaluation, basic neurological examination, functional evaluation, goniometry, manual muscle testing, balance assessment, postural assessment, and medical screening.

PT 720. Clinical Education 1. 2 Hours.
Experiential learning through an integration of classroom and patient/client opportunities. This first course in a series of two integrated clinical education courses will focus on documentation, communication, development of basic examination and treatment techniques, the roles of the physical therapist, and introduction to the members of the interprofessional team.

PT 723. Developmental Life Tasks. 3 Hours.
Life-span human development across cognitive, psychosocial and neuromotor domains with particular emphasis on applications to physical or occupational therapy interventions. Cultural influences in health and illness.

PT 724. Cardiopulmonary Physical Therapy 1. 3 Hours.
Principles of aerobic and resistance training for both healthy and rehabilitation populations. Includes exercise testing and development of exercise programs for persons with either primary or secondary cardiopulmonary issues.

PT 725. Evidence-Based Physical Therapy 2. 3 Hours.
PR: PT 705 and PT 715. Continuation of critical thinking and scientific inquiry. Emphasis is on understanding quantitative and qualitative research designs and data analysis.

PT 727. Neurobiologic Foundations. 4 Hours.
PR: Enrolled in professional sequence. Basic and clinical applications of neurophysiological basis of physical and occupational therapy practice.

PT 729. Physical Therapy Interventions 1. 3 Hours.
Introduction and application of the clinical interventions foundational to physical therapy practice. Includes body mechanics, positioning and draping, transfer and gait training, seated mobility, and wound management.

PT 731. Professional Development 2. 1 Hour.
The role of the physical therapist in wellness and health promotion for patients/clients and communities. Includes content related to nutrition, physical activity, sleep, stress management and avoiding addictive substances to prepare future physical therapists to provide health behavior change advice within their scope of practice.
PT 734. Cardiopulmonary Physical Therapy 2. 3 Hours.
Correlation of anatomy, physiology and pathology for the physical therapy management of cardiovascular and pulmonary conditions. Laboratory includes cardiopulmonary assessments and interventions for persons with cardiovascular and/or pulmonary conditions in a variety of settings.

PT 736. Orthopedic PT 1. 4 Hours.
Clinical-decision making principles that govern diagnosis of soft tissue lesions and joint impairments associated with movement dysfunction. Includes application of therapeutic exercise techniques and skills used in physical therapist intervention.

PT 738. Movement Diagnosis 3. 1 Hour.
An introduction to imaging studies with an emphasis on plain film imaging of the musculoskeletal system. This course, the first in a 2-part series, focuses on normal anatomy and common pathologies as viewed on radiographs of major areas of the upper extremity. Clinical correlations of information gleaned from imaging studies affecting physical therapy diagnosis and interventions is emphasized.

PT 739. PT Interventions 2. 3 Hours.
Introduces the use of thermal, mechanical and electromagnetic biophysical agents as physical therapists. The course includes a strong emphasis of the effects on human anatomy and physiology as well as clinical decision-making principles involved in usage to ensure safe and effective application.

PT 740. Clinical Education 2. 1 Hour.
Experiential learning through an integration of classroom and patient/client opportunities. This second course in a series of two integrated clinical education courses will focus on advancement of documentation, communication, examination/screening, and interventional techniques as well as the role of the physical therapist as part of the interprofessional team.

PT 741. Professional Development 3. 3 Hours.
The roles of the physical therapist as an educator and a provider of primary, secondary and tertiary prevention services in the community. Includes information on educational theories and methods, evidence-based development of community health programs, providing culturally competent care, and post-professional development.

PT 743. Geriatric Physical Therapy 1. 2 Hours.
Students are provided information about medical and psychosocial factors associated with aging. Study of the role of physical therapy in geriatrics, including laboratory practice of common evaluation and treatment procedures. (1 hr. lec, 2 hr. lab.).

PT 744. Foundational Science 2. 2 Hours.
Introduction to pharmacology for the physical therapy student. Includes study of pharmacotherapeutics, and an overview of selected medications. The emphasis is on clinical application and the therapist's role as a health care team member.

PT 745. Evidence Based Physical Therapy 3. 1 Hour.
Small group, case-based learning to help students synthesize and apply didactic information related to evaluation, differential diagnosis, and management of patients commonly presenting for physical therapy services.

PT 746. Orthopedic Physical Therapy 2. 4 Hours.
Physical examination and interventional techniques for the cervical and thoracic spine and upper extremity. Includes mechanisms of injury, diagnostic signs and symptoms, and therapeutic management of musculoskeletal injury and disease.

PT 747. Neurorehabilitation 1. 3 Hours.
The first course in a two course series to prepare physical therapy students to work in neurologic rehabilitation. The course is based on an International Classification of Function (ICF) paradigm. Theories of motor control, motor learning and motor rehabilitation which support the ICF are presented in the context of adult neurorehabilitation.

PT 749. Survey of PT Practice. 1 Hour.
Content related to practice areas of women's health/pelvic floor PT, occupational PT and chronic pain/psychological health and PT.

PT 754. Foundational Science 3. 3 Hours.
Introduction to selected topics in clinical medicine that are foundational to physical therapy practice. Utilizes the movement system model to describe screening, examination, evaluation and intervention as it relates to medical conditions seen in physical therapy practice such as metabolic and endocrine disorders, somatic disorders, oncology, and rheumatology.

PT 756. Orthopedic Physical Therapy 3. 4 Hours.
Physical examination and interventional techniques for the lumbosacral spine, pelvis, and lower extremity. Includes mechanisms of injury, diagnostic signs and symptoms, and therapeutic management of musculoskeletal injury and disease.

PT 757. Neurorehabilitation 2. 3 Hours.
The second in the course sequence preparing the physical therapy student to work with patients in neurologic rehabilitation. Builds on the International Classification of Function model of analysis and outcomes. Clinical populations include brain injury, spinal cord injury, and cerebral palsy.

PT 758. Movement Diagnosis 4. 1 Hour.
The second in a 2-part series, focuses on normal anatomy and common pathologies as viewed on radiographs of areas of the spine and the lower extremity. Clinical correlations of information gleaned from imaging studies affecting physical therapy diagnosis and intervention is emphasized.

PT 759. Prosthetics and Orthotics. 3 Hours.
Presents the principles of biomechanics as they apply to prosthetic and orthotic prescription and fabrication. Students learn how to plan and implement rehabilitation programs for patients who use orthotic or prosthetic devices.
PT 760. Clinical Education 3. 5 Hours.
The first of three full-time clinical education experiences. Students practice for 10 weeks under the direction of licensed physical therapists.

PT 761. Professional Development 4. 2 Hours.
Introduction to health policy related to physical therapist practice, including payment policies in various clinical settings and licensure laws. Includes a unit on advocacy for people with disabilities.

PT 770. Clinical Education 4. 5 Hours.
The second of three full-time clinical education experiences. Students practice for 10 weeks under the direction of licensed physical therapists.

PT 771. Professional Development 5. 3 Hours.
Principles of business and management as they apply to contemporary physical therapy practice. Fiscal management, risk management, marketing, and program improvement are addressed.

PT 772. Pediatric Physical Therapy. 3 Hours.
An overview of pediatric physical therapy practice, including legislation, common practice settings, as well as unique aspects of assessment and documentation. Pediatric conditions commonly treated by physical therapists are introduced.

PT 773. Evidence-Based Practice 4. 1 Hour.
Emphasis is on review and integration of physical therapy principles in preparation for successful completion of the national board examination. The course includes a curriculum based comprehensive examination.

PT 776. Medical Issues of Prematurity. 1 Hour.
Introduction to medical issues of prematurity for the physical therapy neonatal fellow. Includes common medical sequelae of prematurity as well as medical management of these conditions as they affect neonatal physical therapy practice.

PT 777. Premature Infant Growth and Development. 1 Hour.
Introduction to growth and development of the premature infant for the physical therapy neonatal fellow. Includes normal and abnormal development of the GI system, nutritional needs, feeding methods and developmental impact.

PT 778. Neurobehavioral Management of Premature Infants. 1 Hour.
This course prepares the learner for specialty physical therapy practice in the Neonatal Intensive Care Unit (NICU), utilizing principles of family centered care and synactive theory. Topics include neurobehavioral development, developmental assessment, intervention planning and outcomes assessment.

PT 779. Evidence Based PT in NICU Practice. 1 Hour.
The learner is prepared to critically read the literature relevant to neonatal physical therapy practice, as well as to develop skills in Scientific Inquiry in order to be able to design, carry out and disseminate a clinical study and participate in ongoing NICU research by other professionals.

PT 780. Advanced Topics. 1-6 Hours.
PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

PT 781. Directed Study. 1-6 Hours.
Directed study, reading, and/or research.

PT 782. Special Topics. 1-6 Hours.
A study of contemporary topics selected from recent developments in the field.

PT 783. Independent Study. 1-9 Hours.
Faculty supervised study of topics not available through regular course offerings.

PT 784. Research. 1-9 Hours.
PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or dissertation. (Grading may be S/U).

PT 800. Professional Roles in Neonatal Physical Therapy. 1 Hour.
The learner is prepared to participate in the roles of a leader in neonatal physical therapy, including education, administration, and evidence based practice.