Division of Physical Therapy

Degree Offered

• Doctor of Physical Therapy (D.P.T.)

Nature of 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, 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 promotes optimal health and function through the application of scientific principles to prevent, identify, assess, correct, or alleviate acute or prolonged movement dysfunction. The goal of physical therapy is to help individuals fully participate in all societal roles according to their capabilities.

Demand for physical therapy services is expected to continue over the next ten years. 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 professional organization represents therapists on healthcare issues and is working hard 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, rehabilitation nurses, psychologists, social workers, dentists, podiatrists, and 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 - Ph.D. (West Virginia University)
  Neuroscience and Pediatric PT

PROFESSORS

• John J. Petronis - M.S. (West Virginia University)
  Orthopedic Physical Therapy
• Bill Stauber - Ph.D. (Rutgers University)
  Electrotherapy, Muscle Physiology
• Anne Swisher - Ph.D. (West Virginia University)
  Cardiopulmonary PT, Oncology

ASSOCIATE PROFESSORS

• Duane Scott Davis - Ph.D. (West Virginia University)
  Orthopedic Physical Therapy
• Mia Erickson - Ed.D. (West Virginia University)
  Education, Professional Roles, Hand Therapy
• Dina Jones - Ph.D. (University of Pittsburgh)
  Public Health, Arthritic disease
• Corrie Mancinelli - Ph.D. (West Virginia University)
  Anatomy and Orthopedic Physical Therapy
• Ralph Utzman - M.P.H. (West Virginia University)
  Health Policy, Professional Roles

ASSISTANT PROFESSORS
• Kimeran Evans - D.P.T. (Virginia Commonwealth University)
  Clinical Education; General Physical Therapy Practice
• Valeriya Gritsenko - PhD. (University of Alberta, Edmonton, AB, Canada)
  Neurosciences, Motor Control
• Teresa Rice - P.R. N.C.S. (West Virginia University)
  Neurorehabilitation
• Krystal Thomas-Whetsel - D.P.T. (West Virginia University)
  Women’s Health Physical Therapy
• Carol Waggy - Ph.D. (West Virginia University)
  Anatomy and Hand Physical Therapy

The Admissions Process
Courses recommended for high school students in preparation for the preparatory and professional physical therapy program include, but are not limited to, biological sciences (e.g. anatomy, advanced biology, physiology, etc.), chemistry, algebra/trigonometry and/or pre-calculus, physics, and social sciences. Computer literacy is highly recommended.

Because individualized instruction in laboratories and clinics is an essential component of the professional physical therapy program, enrollment must be limited. The physical therapy program selects forty students per year for entrance into the professional phase of the program. All students who wish to enter the program must apply for admission, must have a bachelor’s degree, and have completed or be enrolled in the prerequisite coursework detailed below. These courses are available at most colleges.

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

• Applicant must have a minimum cumulative GPA of 3.0. Applicant must have a minimum prerequisite science GPA of 3.0 which includes two general biology courses, two chemistry courses, two physics courses, statistics, anatomy, and human physiology.
• Applicants must have a minimum of sixty hours of clinical volunteer or work experience obtained from two different physical therapy settings. 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.
• Applicants must submit three letters of recommendation. Two letters must be from physical therapists with whom the student has worked or volunteered. These letters must be from licensed physical therapists; the Admissions Committee will not consider letters from non-physical therapists or relatives. The third letter must be from a professor in their undergraduate major.

The form for the letters of recommendation is available with the electronic application.

• Applicant must take the Graduate Record Examination (GRE). No minimum score is required. Please note the Institution Code for reporting is 7639, which is different from the code used for other programs at WVU. Using this code will result in your official scores being sent to PTCAS, who will verify your scores and send them to WVUPT.
• Applicant must have a minimum grade of C in each prerequisite course.
• Applicant must have completed or be enrolled in the required courses listed below:

<table>
<thead>
<tr>
<th>Pre-requisite Courses</th>
<th>WVU Course Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology with lab (8 hours)</td>
<td>BIOL101/103, 102/104</td>
</tr>
<tr>
<td>Chemistry with lab (8 hours)</td>
<td>CHEM 115, 116</td>
</tr>
<tr>
<td>Physics with lab (8 hours)</td>
<td>PHYS 101, 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 inferntial statistics</td>
<td>STAT 211 or ECON 225</td>
</tr>
<tr>
<td>Human anatomy (3 hours)*</td>
<td>ATTR 219 (recommended) or NBAN 205</td>
</tr>
<tr>
<td>Human physiology (3 hours)**</td>
<td>PSIO 241 or PSIO 441</td>
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</table>
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 three-credit-hour course in human anatomy, ideally with a laboratory. A two-semester, eight-credit sequence of combined human anatomy and physiology may be accepted; however, comparative and animal anatomy does not count towards this pre-requisite.

Human physiology course with laboratory is preferred. A two-semester, eight-credit sequence of combined human anatomy and physiology may be accepted; however, animal or biology will not count towards this pre-requisite.

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

WVU maintains an online Course Equivalency System (CES) (http://admissions.wvu.edu/admissions/university-requirements/transfer_equivalency) that lists course equivalencies at many institutions in the state/region.

Applicants who complete any of their prerequisites outside of WVU should check the CES to see if each prerequisite course transfers directly to WVU as the required WVU course. If your undergraduate institution is not listed in the CES, or if you have taken prerequisite courses that transfer in as open credit or not equivalent, you must submit a photocopy of the catalog description of the courses in question. Upon receiving your application, the Admissions Committee may request that you submit a copy of the course syllabus for further review.

Baccalaureate Preparation

Applicants must have earned a baccalaureate degree or plan on completing a baccalaureate degree by May of the year of entering the program. Students may apply with a number of different baccalaureate degrees; however, they must complete the prerequisites for the physical therapy program as described no later than the spring semester of the year of application.

Students who want careers in healthcare may find that physical therapy fulfills their goals. A recommended baccalaureate preparation is in the field of exercise physiology. At WVU, exercise physiology majors will be able to obtain all of the prerequisites listed above during their course of study. Another common baccalaureate major may be biology. As discussed above, these are merely suggestions and students can apply from any institution of higher education with any degree background as long as they meet the aforementioned prerequisites.

Additional Information and Updates

For updates, be sure to periodically check the WVU Division of Physical Therapy website at http://www.hsc.wvu.edu/som/pt. You may also contact the Program Manager for the Physical Therapy Program, Brenda Wolfe, at bwolfe@hsc.wvu.edu.

Applications

The physical therapy program participates in the national electronic physical therapy standard application system, known as PTCAS (Physical Therapist Centralized Application Service). The website for PTCAS is http://www.ptcas.org. Typically, PTCAS opens for applications in mid-July. Well qualified applicants who consider WVU their first choice professional DPT program can apply for early decision through PTCAS in late summer. They would be notified of acceptance in September and if they accept a place in the class the decision is binding and the student cannot consider offers from other programs. The deadline for all other applications is December 1st of the year before entry. Applicants should receive initial communication regarding their application within thirty-five days of the deadline. Please check the program website frequently for any updates on deadlines or the admissions process. These are often adjusted on an annual basis.

Physical Therapy (PT)

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

PHYSICAL THERAPY CURRICULUM

Note: This is subject to change without notice.

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<tr>
<th>Course Code</th>
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<tr>
<td>PT 705</td>
<td>Intro to Evidence Based PT</td>
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<tr>
<td>PT 706</td>
<td>Advanced Clinical Anatomy</td>
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<tr>
<td>PT 711</td>
<td>Professional Roles 1</td>
<td>3</td>
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<tr>
<td>PT 713</td>
<td>Lifespan Functional Movement</td>
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<td>PT 714</td>
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<td>PT 716</td>
<td>Kinesiologic Foundations</td>
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<td>PT 718</td>
<td>Evaluation Procedures</td>
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<td>PT 723</td>
<td>Developmental Life Tasks</td>
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<tr>
<td>PT 724</td>
<td>Exercise Foundations</td>
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### SUGGESTED PLAN OF STUDY

#### First Year

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

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*Total Hours: 119-138*
PT 746

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**Third Year**

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<td>PT 771</td>
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**Total credit hours: 121**

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

**COURSES**

**PT 498A-Z. Honors. 1-3 Hours.**
PR: Students in Honors Program and consent by the honors director. Independent reading, study, or research.

**PT 503. Pediatric Physical Therapy. 2 Hours.**
Survey of developmental conditions commonly seen in pediatric physical therapy. Includes laboratory practice of evaluation, treatment planning and clinical problem solving.

**PT 591A-Z. Advanced Topics. 1-6 Hours.**
PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

**PT 593A-Z. Special Topics. 1-6 Hours.**
A study of contemporary topics selected from recent developments in the field.

**PT 595. Independent Study. 1-6 Hours.**
Faculty supervised study of topics not available through regular course offerings.

**PT 690. Teaching Practicum. 1-3 Hours.**
PR: Consent. Supervised practice in college teaching of physical therapy. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It also provides a mechanism for students not on assistantships to gain teaching experience. (Grading will be S/U.).

**PT 691A-Z. Advanced Topics. 1-6 Hours.**
PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

**PT 693A-Z. Special Topics. 1-6 Hours.**
A study of contemporary topics selected from recent developments in the field.

**PT 697. Research. 1-15 Hours.**
PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading may be S/U.).

**PT 705. Intro to Evidence Based PT. 2 Hours.**

**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 711. Professional Roles 1. 3 Hours.**
PR: PT 705. Introduction to fundamentals of professional behavior for the physical therapist. Includes units on professionalism, culture, health care ethics, and clinical documentation.

**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. Clinical Sciences 1. 4 Hours.
An Introduction to basic sciences fundamentals to physical therapy diagnosis and treatment. Areas of study include embryology, histology, pathology, and immunology.

PT 715. Evidence Based PT 1. 2 Hours.
PR: PT 705. The purpose of this course is to give the student the information needed to begin to apply research findings to individual patients. Research design and methods, ethics, appraisal and evidence-based practice will be emphasized.

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. Evaluation Procedures. 3 Hours.
Theory and practice in evaluation procedures used by therapists. Includes manual muscle test, isokinetic muscle testing, and assessment of components of movement, posture, balance and hand function.

PT 720. Clinical Education 1. 1 Hour.
Students observe various members of the health care team in practice. Students practice verbal and written communication skills. Course open to PT majors.

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. Exercise Foundations. 3 Hours.
Principles of aerobic and resistance training for rehabilitation populations. Includes laboratory experience in exercise testing and development of exercise programs for therapeutic purposes.

PT 725. Evidence-Based Physcl Thrpy 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 728. Physical Therapy Procedures 1. 4 Hours.
Introduction, theoretical basis, and laboratory practice of procedures basic to physical therapy practice.

PT 730. Clinical Education Symposium 1. 1 Hour.
PR: PT 720. Coreq: PT 733. Students attend and evaluate case presentations applicable to physical therapy practice, and practice documentation skills. Case topics will coincide with didactic material presented in PT 733.

PT 732. Physical Therapeutic Agents 1. 2 Hours.
Theory and practical application of modalities used in physical therapy practice. Therapeutic agents of this course include but are not limited to, hydrotherapy, therapeutic heat and cold, and ultrasound.

PT 733. Cardiopulmonary PT. 3 Hours.
Medical lectures on cardiovascular and pulmonary conditions, including surgical and pharmacologic treatments. Course includes topics on stress testing, usage of monitoring equipment and evaluation and planning of rehabilitation protocols.

PT 734. Clinical Sciences 2. 2 Hours.
PR: PT 714. Introduction to radiology for the physical therapy student. Study includes plain file radiology of the musculoskeletal and cardiopulmonary systems, an overview of advanced imaging techniques, and exposure to tests and intervention treatments performed by radiologists.

PT 738. Physical Therapy Procedures. 3 Hours.
Theory and clinical application of therapeutic exercise techniques. (1 hr. lec, 4 hr. lab.).

PT 740. Clinical Education 2. 1 Hour.
PR: PT 720. Students practice basic clinical skills under direct supervision of licensed physical therapists and prepare for full-time clinical internship experiences.

PT 741. Professional Roles 2. 4 Hours.
PR: PT 711. Provides information on educational theories and methods for use when working with patients, peers, students, and community members. Students use educational principles to design prevention, screening, and wellness programs for various community agencies.

PT 742. Physical Therapy Agents 2. 2 Hours.
PR: Physical therapy majors only; must have successfully completed the required previous coursework in the professional sequence. Continuation of therapeutic physical agents 1. Includes, but is not limited to, practical application and theory in electrotherapeutic modalities used in physical therapy practice. (1 hr. lec, 2 hr. lab.).

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. Clinical Sciences 3. 2 Hours.
PR: PT 714 and PT 734. 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 PT 3. 2 Hours.
PR: PT 705 and PT 715 and PT 725. Continuation of preparation for critical thinking and clinical decision-making. Emphasis is on generating a clinical research proposal and small group learning aimed at utilizing evidence to support clinical judgment in simulated patient cases.

PT 746. Orthopedic Physical Therapy 1. 5 Hours.
PR: PT 706 and PT 716 and PT 718. The first of two courses in physical examination of the musculoskeletal system, including mechanisms of injury, differential diagnosis and medical, surgical, and physical therapy interventions for musculoskeletal problems. (2 hr. lec., 3 hr. lab.).

PT 754. Clinical Sciences 4. 3 Hours.
Introduction to selected topics in clinical medicine, which are basic to physical therapy practice. Topics include genetics, metabolic and endocrine disorders, oncology, rheumatology, wound care and somatic disorders.

PT 755. Evidence Based PT 4. 2 Hours.
PR: PT 705 and PT 715 and PT 725 and PT 745. Continuation of preparation for critical thinking and decision-making in the clinic. Emphasis is on autonomous practice. Students will work in small groups in a case-based learning format, utilizing evidence to make clinical decisions.

PT 756. Orthopedic Physical Therapy 2. 3 Hours.
PR: PT 746. The second of two courses in physical examination of the musculoskeletal system, including mechanism of injury, differential diagnosis and medical/surgical, and physical therapy interventions for musculoskeletal problems. (1 hr. lec, 2 hr. lab).

PT 757. Neurologic Physical Therapy. 3 Hours.
PR: PT 727. Issues related to physical therapy management of patients with neurologic disorders are presented. Through lecture and lab, students learn assessment and intervention for several common problems based on theories of motor control, learning and function.

PT 760. Clinical Education 3. 8 Hours.
Students practice full-time for sixteen weeks under the direction of licensed physical therapists and participate in rural health projects.

PT 761. Professional Roles 3. 3 Hours.
PR: PT 741. Principles of business and management as they apply to contemporary physical therapy practice. Fiscal management risk management, marketing, and program improvement are addressed.

PT 762. Health Care Issues in PT. 2 Hours.
PR: PT 741. The role of physical therapists as advocates for people with disabilities is discussed. Investigation of community and home barriers is included. Students discuss the roles of and demands on physical therapists in various practice settings.

PT 763. Pediatric Physical Therapy. 3 Hours.
Students learn assessment and interventions for a variety of conditions that uniquely affect children. Students will explore current topics that influence pediatric practice. Practical experience sessions include observations in pediatric settings.

PT 765. Evidence-Based PT 5. 1 Hour.
PR: PT 755. Continuation and culmination of the evidence-based physical therapy track. Emphasis is on review and integration of physical therapy principles in preparation for successful completion of the National Board Examination. (Grading will be Pass/Fail).

PT 767. Neurologic Physical Therapy 2. 2 Hours.
PR: PT 727 and PT 757. Physical therapy management of patients with disorders of neurologic origin is presented. Through lecture and lab, students learn assessment and intervention planning for complex problems based on theories of motor control, learning and function.

PT 768. Prosthetics and Orthotics 1. 3 Hours.
Presents biomechanical principles applies to prosthetic and orthotic prescription and fabrication. Student learns how to plan and implement rehabilitation programs for patients that must use orthotic or prosthetic devices. (2 hr. lec, 1 hr. lab.).

PT 770. Clinical Education Symposium 3. 2 Hours.
PR: PT 730 and PT 740. Students prepare oral and written case reports based on their patient care experiences.

PT 771. Survey of Niche PT Practice. 2 Hours.
This course is designed to expose students to unique areas in physical therapy that are considered elective and advanced practice. Experiential learning and critical analysis are emphasized more than specific skill acquisition.

PT 780. Clinical Education 4. 8 Hours.
P.R: PT 720 and PT 750 and PT 760. Students practice full-time for sixteen weeks under the direction and supervision of licensed physical therapists.

PT 781. Advanced Cardiopulmonary PT. 1 Hour.
This course emphasizes content necessary for physical therapists to act as autonomous practitioners. Previous coursework and concepts of differential diagnosis are applied to simulated patient cases representative of cardiovascular and pulmonary physical therapy.

PT 782. Advanced Integumentary PT. 1 Hour.
This course emphasizes content necessary for physical therapists to act as autonomous practitioners. Previous coursework and concepts of differential diagnosis are applied to simulated patient cases representative of integumentary physical therapy.
PT 783. Advanced Orthopedic PT. 2 Hours.
This course emphasizes knowledge and skills necessary for physical therapists to act as autonomous practitioners. Previous coursework and concepts of differential diagnosis are applied to simulated patient cases representative of orthopedic physical therapy.

PT 784. Advanced Neurologic PT. 1 Hour.
This course emphasizes content necessary for physical therapists to act as autonomous practitioners. Previous coursework and contemporary literature are applied to analysis of patient cases.

PT 791A-Z. Advanced Topics. 1-6 Hours.
PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

PT 792A-Z. Directed Study. 1-6 Hours.
Directed study, reading, and/or research.

PT 793A-Z. Special Topics. 1-6 Hours.
A study of contemporary topics selected from recent developments in the field.

PT 795. Independent Study. 1-9 Hours.
Faculty supervised study of topics not available through regular course offerings.

PT 797. Research. 1-15 Hours.
PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or dissertation. (Grading may be S/U.).