Physical Therapy

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, 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, 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, Pediatric Physical Therapy

PROFESSORS

• Dina Jones - PT, PhD (University of Pittsburgh)
  arthritis, community based physical activity
• John J. Petronis - M.S. (West Virginia University)
  Orthopedic Physical Therapy [Emeritus Faculty]
• Bill Stauber - Ph.D. (Rutgers University)
  Electrotherapy, Muscle Physiology
• Corrie Mancinelli - PT, GCS, PhD (West Virginia University)
  orthopedics and geriatrics
• Anne Swisher - PT, CCS, Ph.D. (West Virginia University)
  Director of Faculty Development & Scholarship
• Ralph Utzman - PT, MPH, PhD (Virginia Commonwealth University)
  Director of Clinical Education

ASSOCIATE PROFESSORS

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

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 GPA of 3.0 which includes two general biology courses, two chemistry courses, two physics courses, two psychology courses, statistics, human 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>
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</thead>
<tbody>
<tr>
<td>Biology with lab (8 hours)</td>
<td>BIOL 101 and BIOL 103, BIOL 102 and BIOL 104</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>
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</table>
Human anatomy (3 hours)*  
ATTR 219 (recommended) or NBAN 205

Human physiology (3 hours)**  
PSIO 241 or PSIO 441

* 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://medicine.hsc.wvu.edu/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.

NOTE: The DPT Admissions Committee plans to invite qualified applicants for interviews during the 2018-2019 cycle. Applicants should consult the program website for more information.

**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.

**PHYSICAL THERAPY CURRICULUM**

Note: This is subject to change without notice.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PT 701</td>
<td>Professional Development 1</td>
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<tr>
<td>PT 706</td>
<td>Advanced Clinical Anatomy</td>
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<tr>
<td>PT 708</td>
<td>Movement Diagnosis 1</td>
<td>2</td>
</tr>
<tr>
<td>PT 713</td>
<td>Lifespan Functional Movement</td>
<td>2</td>
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<tr>
<td>PT 714</td>
<td>Foundational Science 1</td>
<td>4</td>
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<tr>
<td>PT 715</td>
<td>Evidence Based Physical Therapy 1</td>
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</tr>
<tr>
<td>PT 716</td>
<td>Kinesiologic Foundations</td>
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### SUGGESTED PLAN OF STUDY

**First Year**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours Spring</th>
<th>Hours Summer</th>
<th>Hours</th>
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<tr>
<td>PT 701 (Pre-fall)</td>
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<td>3 PT 724</td>
<td>3 PT 734</td>
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<tr>
<td>PT 706 (Pre-Fall)</td>
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<td>5 PT 720</td>
<td>2 PT 731</td>
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<tr>
<td>PT 708</td>
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<td>2 PT 723</td>
<td>3 PT 738</td>
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<td>PT 713</td>
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**Total Hours** 122
**Second Year**

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<th>Fall</th>
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<tr>
<td>PT 797</td>
<td>2 Independent Study (Optional) PT 795</td>
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**Third Year**

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<td>PT 775</td>
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<tr>
<td>PT 771</td>
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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 educate individuals with the knowledge, skills, and behaviors consistent with professional excellence. Working as part of a community of professionals, the program strives to advance practice characterized by independence, professional judgment, and involvement.

Graduates will:

- Demonstrate basic and applied knowledge necessary to practice PT as a member of the health care team in diverse settings
- Demonstrate the ability to make sound clinical decisions characterized by critical thinking, information literacy, and based on scientific evidence
- Find employment with special emphasis on recruitment and retention of graduates in WV
- Adhere to core professional values
- Demonstrate the ability to practice independently as collaborative members of inter-professional teams
- Adhere to legal and ethical standards
- Demonstrate a life-long commitment to the profession by engagement in professional organizations, scholarship, education and advocacy
- Deliver high quality physical therapy services to individuals and communities across a continuum of care, including rural settings.
- Provide culturally sensitive care distinguished by advocacy, trust, respect, and an appreciation for individual differences
- Demonstrate a commitment to the health of the community through participation in primary and secondary prevention programs
- Actively engage in local and professional advocacy in a changing health care environment

**COURSES**

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

**PT 593. 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 691. Advanced Topics. 1-6 Hours.
PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

PT 693. 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 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 705. Intro to Evidence Based Physical Therapy. 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 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. 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 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 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 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 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. Cardiopulmonary Physical Therapy. 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 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. (1hr. 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 755. Evidence Based Physical Therapy 4. 2 Hours.
PR: PT 705 and PT 715 and PT 725 and PT 745. Continuation of preparation for clinical -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 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.
Principles of business and management 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 762. Health Care Issues in Physical Therapy. 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 Physical Therapy 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 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 773. Pediatric Physical Therapy. 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 775. 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 780. Clinical Education 5. 8 Hours.
Students practice full-time for sixteen weeks under the direction and supervision of licensed physical therapists.

PT 781. Professional Development 6. 1 Hour.
Students who are preparing for graduation present a culminating professional development plan based on clinical experience and professional interest. The course also includes student experiences within the professional organization and ongoing plan for professional activity.
**PT 782. Advanced Integumentary Physical Therapy.** 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 Physical Therapy.** 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 Physical Therapy.** 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 785. Advanced Clinical Decision Making.** 2 Hours.
Students who are preparing for graduation present a culminating case study based on their clinical experience and applying principles of evidence based practice. The presentation could be on an individual case, a community needs assessment, or a quality improvement project.

**PT 786. 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 787. 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 788. 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 789. Evidence Based PT in NICU Practice.** 1 Hour.
The learner to 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 791. Advanced Topics.** 1-6 Hours.
PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

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

**PT 793. 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.)

**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.