

# Physical Therapy

<http://www.med.und.edu/physical-therapy/>

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## Degree Granted: Doctor of Physical Therapy (D.P.T.)

The Department of Physical Therapy offers the clinically-oriented, entry-level Doctor of Physical Therapy (DPT) degree. Students interested in the physical therapy program at UND should stay in contact with the PT department to keep informed of the pre-professional and professional curriculum. The website address is: <http://www.med.und.edu/physical-therapy/>.

Physical therapists provide services to patients who have impairments, activity limitations, and participation restrictions related to environmental or personal factors. Physical therapists assist patients in restoring health; alleviating pain; examining, evaluating, and diagnosing changes in physical function and health status resulting from injury, disease, or other causes. Physical therapists are also involved with intervention, prevention, and the promotion of health, wellness, and fitness. They are employed by hospitals, outpatient clinics, rehabilitation centers, skilled nursing facilities, home care, school systems, industrial settings, athletic facilities, and in private practice.

The Physical Therapy program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE).

Details pertaining to admission requirements, degree requirements and courses offered can be found in the Degree section.

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

### Mission Statement and Program Goals

The mission of the Department of Physical Therapy is to prepare physical therapists with the clinical, professional and critical inquiry skills to provide quality physical therapy services. The professional services provided by a physical therapist demand a strong background in the liberal arts and clinical sciences as well as high moral and ethical standards. In addition to clinical practice expectations, responsibilities in teaching, service and critical inquiry are an integral part of the educational experience.

**Goal 1:** The student will demonstrate the skills necessary for the entry level practice of physical therapy.

**Goal 2:** The student will demonstrate advocacy skills for health and wellness at the individual and societal level.

**Goal 3:** The student will provide service to the community and/or to the profession.

**Goal 4:** The student will develop critical inquiry skills related to clinical and basic science research.

**Goal 5:** The student will develop the skills required for life-long learning.

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

### Admission Requirements

#### Pre-Physical Therapy

Prior to admission, a minimum of 90 semester hours of credit from an approved college or university is required. Students should be broadly educated in the sciences and humanities. The Department of Physical Therapy recognizes that, since physical therapy deals with people, an understanding of literature, art, history, ethics, and philosophy is an adjunct to a physical therapist. Science and humanities are both viewed as necessary for the practice of physical therapy.

The following list of courses and credits indicates the core prerequisites all applicants must complete prior to admission to the physical therapy program. It is strongly recommended that students be computer literate prior to entering the professional program. Students may take additional electives from any field of study; however, the depth of the pre-physical therapy education should demonstrate that students have progressed from simple to complex studies in at least one content area. This requirement might typically be demonstrated by a discipline major, but in any case should demonstrate a basic comprehensiveness and integrity of study within a particular content area. This does not suggest that a separate undergraduate degree must be awarded; however, the breadth and depth in a discipline should be demonstrated. Course credits equivalent to a minor, i.e., approximately 20 credits at UND, in a particular discipline could accomplish this requirement. The prospective student should include eight (8) credits from upper level courses, i.e., 300 and/or 400 numbers.

- Two semesters of General Biology (8 cr.)
- Two semesters of General Chemistry (8 cr.)
- Two semesters of General Physics (8 cr.)
- One semester of Human Anatomy (3 cr.)
- One semester of Human Physiology (3 to 4 cr.)
- One semester of Introductory Psychology (3 cr.)
- One semester of Developmental Psychology (3 to 4 cr.)
- One semester of Abnormal Psychology (3 cr.)
- One semester of a Public Speaking course (3 cr.)
- One semester of an undergraduate statistics course (3 cr.)
- Essential Studies requirements

All of the prerequisite coursework must be completed before entering the professional program; however, the prospective student may be enrolled in pre-professional coursework at the time of application. All students must apply for the professional program through the PTCAS system. WICHE-eligible students should also apply through the WICHE certification process. Please refer to the UND-PT website at: [www.med.und.edu/physical-therapy/](http://www.med.und.edu/physical-therapy/) for application details.

### Admission Requirements

Acceptance is on a competitive basis, with the major determinant being the basic science grade point average. The basic science GPA is defined as: biology (eight semester credits), chemistry (eight semester credits), physics (eight semester credits), anatomy (three semester credits), physiology (four semester credits), and psychology (seven semester credits). In addition to the science GPA, GRE score, and cumulative GPA, an interview and letters of reference will be considered in the admission process. Prospective students are expected to complete at least 60 hours of physical therapy observation prior to application.

The applicant must meet the School of Graduate Studies's current minimum general admission requirements as published in the graduate catalog.

1. Completion of the application for admission to the professional program and UND School of Graduate Studies application form.
2. Submission of score from the Graduate Record Examination General Test.
3. Satisfy the School of Graduate Studies' English Language Proficiency requirements as published in the graduate catalog.
4. Applicants who have received their bachelors or masters degree in the United States or English-speaking Canada are not required to submit the TOEFL or IELTS.

### Degree Requirements

1. Students must be formally accepted into the professional education component of the DPT and endorsed by the Chair of Physical Therapy. NOTE: Acceptance by the UND Office of Admissions or the School of Graduate Studies does not constitute acceptance into the professional program in Physical Therapy.
2. The professional education component of the DPT will require three academic years and two summer sessions following completion of the pre-physical therapy entrance requirements.
3. No student will be allowed to remain in the program or complete the full-time clinical experiences unless he/she attains a letter grade of at least "C" in the major courses.

- To advance to candidacy, the student must successfully complete the first year comprehensive examination, and maintain a cumulative School of Graduate Studies GPA of # 3.00 AND/OR a summer session GPA of # 3.00. Students who fail to advance to candidacy during the first year will be dismissed from the professional program.
- After advancement to candidacy, the student is expected to maintain a cumulative GPA of # 3.00. The School of Graduate Studies will monitor the cumulative GPA, which must be # 3.00. If the cumulative GPA is not # 3.00, the School of Graduate Studies policies for probation and dismissal will govern the student's status.
- Students in the professional program should be aware there are special requirements for clinical uniforms, professional liability insurance, medical insurance, immunizations, CPR certification, and completion of a criminal background check. These requirements must be met prior to any clinical contact with patients. The student will also be responsible for travel, housing, and food costs, in addition to the payment of tuition and fees, during the full-time clinical experience semesters. The majority of these experiences will be completed at geographical locations other than the City of Grand Forks.
- Prospective students should be aware that a felony conviction may affect a graduate's ability to obtain a professional license to practice physical therapy.
- The faculty reserves the right to place on professional probation or to cancel the registration of any student in Physical Therapy whose performance in the classroom or the clinic is unsatisfactory.

## Pre-Physical Therapy

ENGL 110	College Composition I	3
ENGL 130	Composition II: Writing for Public Audiences	3
COMM 110	Fundamentals of Public Speaking	3
Fine Arts and Humanities*		9
BIOL 150 & 150L	General Biology I and General Biology I Laboratory	4
BIOL 151 & 151L	General Biology II and General Biology II Laboratory	4
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory	4
CHEM 122 & 122L	General Chemistry II and General Chemistry II Laboratory	4
Social Science		3
PSYC 111	Introduction to Psychology	3
PHYS 161 & PHYS 162	Introductory College Physics I and Introductory College Physics II	8
ANAT 204	Anatomy for Paramedical Personnel	3
PPT 301	Human Physiology	4
PSYC 250	Developmental Psychology	4
PSYC 270	Abnormal Psychology	3
Statistics		3
Cognate/Minor (required)		
Electives (required, minimum of 20 with emphasis in a single discipline)		

\* Courses should contribute to completion of Essential Studies requirements.

## Bachelor of General Studies Degree with Health Studies Option

This degree will be available to Physical Therapy students who:

- do not already have a baccalaureate degree,
- have completed at least 30 of the 90 pre-Physical Therapy credits at UND before beginning Professional Year One,
- have successfully completed fall, spring and summer semesters of Professional Year One.

The BGS degree would normally then be awarded at the end of the summer semester of Professional Year One if the student has completed all general UND graduation requirements:

- 125 total credits,
- 60 credits from 4-year schools, including at least 30 from UND,
- 36 upper-level credits,
- all essential studies requirements.

## Professional Program - Physical Therapy

### Professional Year 1

Fall		Credits
PT 402	Professional Communication and Behavior	2
PT 420	Musculoskeletal System Examination	2
PT 422	Anatomy for Physical Therapy	5
PT 423	Neuroscience for Physical Therapy	4
PT 435	Introduction to Patient/Client Care and Interventions	4
PT 510	Integrated Clinical Experience (Each semester during year one, a small group of students will perform a learning event outside of the PT department.)	0-1
Credits		17-18

### Spring

PT 409	Clinical Pathology I	3
PT 412	Biomechanics and Kinesiology	4
PT 413	Exercise in Health and Disease	3
PT 415	Motor Control	3
PT 417	Clinical Exam and Evaluation I	4
PT 426	Manual Therapy I	2
PT 510	Integrated Clinical Experience (Each semester during year one, a small group of students will perform a learning event outside of the PT department.)	0-1
Credits		19-20

### Summer

PT 410	Clinical Pathology II	3
PT 510	Integrated Clinical Experience (Each semester during year one, a small group of students will perform a learning event outside of the PT department.)	0-1
PT 512	Therapeutic Agents	3
PT 514	Case Management I	2
PT 519	Electrotherapy and Electrodiagnosis	2
Credits		10-11

### Professional Year 2

#### Fall

PT 521	Critical Inquiry I	1
PT 528	Clinical Education I	9
PT 529	Clinical Education II	9
Credits		19

#### Spring

PT 522	Administration in Physical Therapy	3
PT 523	Lifespan I	3
PT 524	Psychological Aspects of Disability	2
PT 525	Clinical Examination and Evaluation II	3
PT 527	Critical Inquiry II	2
PT 540	Cardiopulmonary Physical Therapy	2
PT 584	Evidence in Practice	2
PT 550	Interprofessional Health Care	0-1
Electives		0-2
Credits		17-20

#### Summer

PT 535	Lifespan II	2
PT 544	Pharmacology for Physical Therapists	1
PT 545	Medical Imaging for Physical Therapists	2
PT 591	Research in Physical Therapy	2

PT 592	Case Management II	2
Electives		1-2
	Credits	10-11
<b>Professional Year 3</b>		
<b>Fall</b>		
PT 511	Applied Movement Science and Rehabilitation Procedures	4
PT 526	Manual Therapy II	2
PT 539	Prevention and Wellness	2
PT 541	Clinical Examination and Evaluation III	3
PT 561	Seminar:Physical Therapy	1
PT 550	Interprofessional Health Care	0-1
Electives		1-3
	Credits	13-16
<b>Spring</b>		
PT 552	Clinical Education III	9
PT 553	Clinical Education IV	9
PT 995	Scholarly Project	1
	Credits	19
	Total Credits	Minimum of 125 credits required

**PT 101. Orientation Physical Therapy. 1 Credit.**

Overview of the educational requirements, practice issues, and opportunities in the profession of physical therapy. Course content includes multimedia presentations, lectures, and observation in clinical settings.

**PT 402. Professional Communication and Behavior. 2 Credits.**

Lecture and practice in interprofessional and interpersonal communication including professional behavior, ethics, patient education, and written documentation. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 409. Clinical Pathology I. 3 Credits.**

Selected pathological conditions affecting the musculoskeletal system. Associated orthopedic diagnoses, surgical interventions, the influences of co-morbidities and pharmaceutical interventions, and safety concerns are discussed with an application to physical therapy patient/client management during orthopedic rehabilitation. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

**PT 410. Clinical Pathology II. 3 Credits.**

Selected pathological conditions of body systems, associated surgical interventions, the influence of co-morbidities, pharmaceutical interventions, and safety concerns are discussed with application to physical therapy patient/client management. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. SS.

**PT 412. Biomechanics and Kinesiology. 4 Credits.**

Biomechanics and kinesiology of musculature acting on the extremities and trunk. Clinical applications and evaluation of joint integrity and mobility, gait, range of motion and muscle performance. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

**PT 413. Exercise in Health and Disease. 3 Credits.**

Basic foundation for theoretical and practical application of exercise science principles for physical therapists. Exercise science principles are applied to healthy individuals and individuals with disease, impairments, and/or functional limitations. Examination and intervention procedures incorporate aerobic capacity/endurance, anthropometric characteristics, and muscle performance activities. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

**PT 415. Motor Control. 3 Credits.**

Lecture and laboratory work in therapeutic exercise to establish and maintain muscular control and coordination, including muscle re-education, facilitation, and relaxation. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 417. Clinical Examination and Evaluation I. 4 Credits.**

Emphasizes patient/client management elements of examination and evaluation. Emphasis is given to the musculoskeletal and neurological systems. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 420. Musculoskeletal System Examination. 2 Credits.**

Principles of musculoskeletal examination and evaluation including identification and palpation of surface anatomy, range of motion (ROM), measurement of joint ROM, and evaluation of muscle performance. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. F.

**PT 422. Anatomy for Physical Therapy. 5 Credits.**

Detailed lectures and demonstrations on musculoskeletal anatomy and neuroanatomy. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 423. Neuroscience for Physical Therapy. 4 Credits.**

Structure and function of the human nervous system including pathophysiology and clinical applications relevant to physical therapy practice. Prerequisite: Registered in Professional Physical Therapy Curriculum. F.

**PT 426. Manual Therapy I. 2 Credits.**

Introduction to joint mobilization/manipulation techniques. Emphasis is on mobilization/manipulation as it relates to peripheral joints and soft tissues of the human body. Basic examination, evaluation, and intervention techniques for the spine are also presented. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

**PT 435. Introduction to Patient/Client Care and Interventions. 4 Credits.**

Basic physical therapy patient care skills addressing multiple areas of physical therapy practice. A sample of topics address injury to the integument, select interventions for all patients, positioning of patients, vital signs, aseptic technique, and basic wheelchair techniques. Laboratory. Prerequisite: Registered in professional physical therapy curriculum. F.

**PT 490. Special Topics:Physical Therapy. 1-4 Credits.**

Introduction and investigation of advanced clinical procedures and topics. Topics discussed will be dictated by student and faculty interests. Prerequisite: Registered in Professional Physical Therapy Curriculum. Repeatable to 4 credits.

**PT 491. Independent Study. 1-4 Credits.**

Research and independent study in a specialized area of Physical Therapy. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 510. Integrated Clinical Experience. 1 Credit.**

Short-term clinical experience to provide hands-on experience for students to apply knowledge learned during the first year of the professional program. Experiences will be set up in acute care, sub-acute care, long-term care, out-patient orthopedic, or a rural site. Prerequisite: Registered in Professional Physical Therapy Curriculum. Repeatable to 3 credits. F,S,SS.

**PT 511. Applied Movement Science and Rehabilitation Procedures. 4 Credits.**

Integration of clinical evaluation, functional goals, and treatment planning for individuals with neurological and multiple musculoskeletal dysfunction. The primary focus is on rehabilitation skills including assessment, exercise, handling techniques, functional activities, equipment prescription, patient education, and ADLs, as well as community mobility and governmental services. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 512. Therapeutic Agents. 3 Credits.**

Theory and application of various hydrotherapy, phototherapy, and thermotherapy modalities in Physical Therapy, including heat, light, sound, and water. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 514. Case Management I. 2 Credits.**

Integrates multiple aspects of case management, including examination, evaluation, diagnosis, prognosis, plan(s) of care, and intervention strategies. Evidence based clinical decision making and verbal and written communications relative to case management will be emphasized. Prerequisite: Registered in Professional Physical Therapy Curriculum. SS.

**PT 519. Electrotherapy and Electrodiagnosis. 2 Credits.**

Theory and application of therapeutic electrical currents, biofeedback, electromyography, and nerve conduction velocity in physical therapy. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 521. Critical Inquiry I. 1 Credit.**

Introduction to the collection of clinical data leading to a case study report. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 522. Administration in Physical Therapy. 3 Credits.**

Lectures/discussion and seminar formats used to explore concepts of administration procedures as applied to Physical Therapy and the health care delivery system. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 523. Lifespan I. 3 Credits.**

Content related to human development; age-appropriate patient/client management; family-centered care; health promotion and safety; and legislative, policy, and systems are applied to pediatric patient/client management. Evidence-based practice for specific, common pediatric conditions is emphasized in the application of core content concepts. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

**PT 524. Psychological Aspects of Disability. 2 Credits.**

Readings and discussion course. Study of psychological coping mechanisms, reactions, and motivational factors pertinent to people with disabilities. Review of adjustment problems unique to specific disabilities and/or disease processes, including terminal illness. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 525. Clinical Examination and Evaluation II. 3 Credits.**

Emphasis is given to physical therapy examination, evaluation, and diagnoses as related to an advanced dynamic biomechanical evaluation. Also included will be the integration of NMS and support systems; clinical reasoning resulting in referral and/or modified physical therapy interventions; and the communication of findings and recommendations. Lecture Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. F,S.

**PT 526. Manual Therapy II. 2 Credits.**

Theory and application of manual therapy skills for examination and intervention techniques, including thrust and nonthrust mobilizations/manipulations of the spine, pelvis, and associated areas. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum. F.

**PT 527. Critical Inquiry II. 2 Credits.**

Application, analysis, and evaluation of clinical decision-making components, strategies, and skills. Preparation and presentation of a clinical case study. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

**PT 528. Clinical Education I. 9 Credits.**

The first in a sequence of four full-time clinical experiences in selected physical therapy provider centers throughout the United States. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 529. Clinical Education II. 9 Credits.**

The second in a sequence of four full-time clinical experiences in selected physical therapy provider centers throughout the United States. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 535. Lifespan II. 2 Credits.**

Examine the factors and forces that affect life quality in later years. The physiological, psychological, and sociological aspects of aging will be considered, including those influences in the cultural context that enhance and impede continued growth of the person. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 537. Strategies Early Intervention. 2 Credits.**

This course is designed to review current practices in early intervention. Course materials will focus on characteristics of disabling conditions that influence growth and development of motor skills, cognition, and educational development. Emphasis will be on collaborative service provision with an interdisciplinary approach. Topics also covered include: current issues, assessment of the child/family unit, and legislative guidelines for service provision. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 538. Advanced Topics in Pediatric Physical Therapy. 3 Credits.**

This course is designed to present current and advanced topics relating to pediatric physical therapy clients and their families. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 539. Prevention and Wellness. 2 Credits.**

The theory and practice of prevention of injury, maintenance and improvement of wellness, and promotion of health and healthy behaviors across the lifespan. Concepts are applied to the general, athletic, and industrial populations, with a view to interprofessional involvement in wellness optimization. Prerequisite: Registered in Professional Physical Therapy Curriculum. F.

**PT 540. Cardiopulmonary Physical Therapy. 2 Credits.**

This course is designed to expand the theoretical understanding and clinical application of cardiopulmonary physical therapy examination, evaluation, diagnosis, prognosis, intervention and outcomes. Laboratory. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 541. Clinical Examination and Evaluation III. 3 Credits.**

Emphasizes patient/client management elements of examination and evaluation. Emphasis is given to systems screening, physical therapy diagnoses, and clinical reasoning resulting in referral and/or modified physical therapy interventions. Emphasis is also given to the communication of findings. Laboratory. F.

**PT 544. Pharmacology for Physical Therapists. 1 Credit.**

Pharmacological principles and implications for the clinical treatment of patients referred to physical therapy. Fundamentals of drug classification, actions of drugs, physiological mechanisms, and drug therapeutic and adverse effects. Prerequisite: Registered in Professional Physical Therapy Curriculum. SS.

**PT 545. Medical Imaging for Physical Therapists. 2 Credits.**

An introduction to medical imaging and an overview of its role in the health care delivery system. Topics include principles of medical imaging, imaging equipment, diagnostic imaging, and application of imaging principles to inform physical therapy care. Prerequisite: Registered in Professional Physical Therapy Curriculum. SS.

**PT 549. Advanced Applied Anatomy/Clinical Kinesiology. 2 Credits.**

Study of applied anatomy and its importance to research and clinical application, particularly as related to Physical Therapy. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 550. Interprofessional Health Care. 1 Credit.**

A process-learning course intended to provide experience in building a team of health professionals from different professions. The focus is on learning to work effectively with an interprofessional health care team. Emphasis is placed on effective teamwork, the unique contributions of different professions, patient or family centered approach in health care delivery, effective communication, and awareness of potential medical errors. Prerequisite: Registered in Professional Physical Therapy Curriculum. F,S.

**PT 552. Clinical Education III. 9 Credits.**

The third in a sequence of four full-time clinical experiences in selected physical therapy provider centers throughout the United States. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 553. Clinical Education IV. 9 Credits.**

The fourth in a sequence of four full-time clinical experiences in selected physical therapy provider centers throughout the United States. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 561. Seminar:Physical Therapy. 1-4 Credits.**

This course serves to focus student attention toward graduate study in Physical Therapy. Explore and discuss areas of interest for students and faculty. May repeat to 4 credits maximum. Prerequisite: Registered in Professional Physical Therapy Curriculum. Repeatable to 4 credits.

**PT 562. Readings:Physical Therapy. 1-4 Credits.**

Review of current literature pertinent to Physical Therapy; critical examination of design, content, and validity of conclusions. Prerequisite: Registered in Professional Physical Therapy Curriculum. Repeatable to 4 credits.

**PT 572. Teaching Experience in Physical Therapy. 1-4 Credits.**

Supervised experience in University teaching in Physical Therapy. Projects in curriculum development, formulation of teaching/learning objectives, teaching materials, evaluation tools, and experience in competency-based learning environment. Prerequisite: Registered in Professional Physical Therapy Curriculum. Repeatable to 4 credits.

**PT 583. Critical Inquiry III. 1 Credit.**

Introduction to research instruments including surveys, electrical and mechanical instrumentation critical to research methods. Includes discussion of validation, calibration, and reliability of instruments used in physical therapy research. Students develop a proposal for their scholarly projects and complete IRB use of human subject forms. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 584. Evidence in Practice. 2 Credits.**

Application of qualitative and quantitative research designs. Interpretation of statistical tests used in evidence-based medicine. Critical review of current articles related to diagnosis, prognosis, therapy, harm, cost, systematic reviews, meta-analysis, and clinical practice guidelines. Application of evidence to physical therapy practice. Prerequisite: Registered in Professional Physical Therapy Curriculum. S.

**PT 590. Directed Studies: Clinical Concepts in Physical Therapy. 1-12 Credits.**

Individualized study of a particular area of interest for the student approved by his/her major advisor and supervised by preceptors with specialty and/or recognized expertise in the area of interest. Study may include library research, clinical research, discussion/seminars, projects, and directed clinical experience. Prerequisite: Registered in Professional Physical Therapy Curriculum. Repeatable to 12 credits.

**PT 591. Research in Physical Therapy. 2 Credits.**

Students develop the ability to effectively and accurately interpret and communicate results/clinical outcomes as a component of the written Scholarly Project. Frequent group and/or individual meetings with the advisor incorporate peer review discussion to facilitate student development of professional written and oral communication skills. Prerequisite: Registered in Professional Physical Therapy Curriculum. SS.

**PT 592. Case Management II. 2 Credits.**

Case management, with emphasis on the teaching and learning process and techniques targeted to promote and optimize physical therapy services, including advocacy. Strategies appropriate for conflict resolution are introduced. Professional development as a practitioner of physical therapy is emphasized through introduction and preliminary development of a portfolio. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 995. Scholarly Project. 1 Credit.**

Students provide a final written and oral report to the faculty on the results of their collaborative Scholarly Project. Prerequisite: Registered in Professional Physical Therapy Curriculum.

**PT 996. Continuing Enrollment. 1-12 Credits.**

Repeatable. S/U grading.

**PT 997. Research III: Independent Study. 2 Credits.**