Department of Physical Therapy

Vision

The Physical Therapy Department at Marquette University will be among the best educational programs in preparing graduates who excel in academics, leadership, clinical practice, and service to others.

Mission

To graduate entry-level physical therapist professionals who are knowledgeable of current practices and trends, skillful in applying their knowledge, motivated to address the needs of the underserved community, self-directed lifelong learners who will become leaders in their profession and community.

Furthermore, in an effort to meet the current health care needs in under-served areas, the department is committed to supporting programs of outreach that will enhance the enrollment and training of disadvantaged students and service to disadvantaged populations.

Philosophy

The teaching-learning process is recognized as a dynamic interaction of shared responsibility among the academic faculty, clinical faculty, and students. The Department of Physical Therapy supports the educational view that students learn in a multitude of ways, necessitating a variety of learning experiences. These experiences are important for the development of a life-long autonomous learner who is self-motivated and self-directed. The departmental faculty are a resource and role model in the development of these traits by providing quality instruction, contributing to the general body of knowledge through an active research agenda, maintaining personal clinical competence including the operation of on-campus Physical Therapy clinic, showing professionalism, respecting the dignity of others and being advocates for patient and professional causes. It is the goal of the faculty to help students to become educated members of society, active members of their profession and role models for peers and future physical therapists.

Expected Global Student Outcomes

Graduates of the Physical Therapy program will be able to:

1. Demonstrate the skills necessary to practice autonomously within a direct access environment in essential practice areas as defined by the Guide for Physical Therapist Practice.
2. Screen individuals through testing and differential diagnosis, to determine a physical therapy diagnosis which is within the scope of physical therapy, and/or to determine the need for referral to other health professionals.
3. Apply evidence based decision making in planning patient care.

Students admitted to the Physical Therapy program are enrolled in a curriculum that culminates in a doctor of physical therapy degree. This is a six-year curriculum for a student admitted at the freshmen level. The student first will earn a baccalaureate degree of his or her choice and then be awarded the Doctor of Physical Therapy (D.P.T.) degree at the end of the professional course work. Students admitted with a bachelor’s degree will earn the Doctor of Physical Therapy degree after completing the three-year professional program.

Undergraduate Admission Requirements

Students may be admitted to the program as freshmen with a guaranteed admission to the professional phase beginning fall of 2018 if the student successfully meets all requirements for advancement. Guaranteed admission cannot be extended if requirements are not successfully completed in the pre-professional phase.

High school applicants to the Department of Physical Therapy are expected to fulfill the general admissions requirements listed in the university section of this bulletin. In addition, the following specific items should be noted for admission to the Department of Physical Therapy:

1. One year of high school chemistry and biology is required. Applicants should include trigonometry among the three required units in mathematics because trigonometry is a prerequisite for General Physics 1 and 2 at Marquette.
2. Freshman class enrollment is limited. College entrance exam results, transcripts and the application must be received at Marquette by Dec. 1 of the preceding academic year for which the student is applying.
3. The sequence of courses in the professional phase begins in August of each academic year.
4. Advanced Placement (AP) and/or International Baccalaureate (IB) credits may be applied toward D.P.T. pre-requisite courses with the exception of CHEM 1002 and PHYS 1002. These two pre-requisite courses must be completed at an accredited 4-year institution. Note: AP and IB credits awarded by MU are credit-bearing only and are not included in grade point average (GPA) calculations.

Marquette students who were not admitted as freshmen may apply to transfer into the program. Further details of entrance requirements are available from Marquette’s Office of Undergraduate Admissions.
Physical Therapy Observation Hours Policy

Currently enrolled Marquette students, who have a health care major with a clinical component in their undergraduate course work, may complete up to 40 hours of the required minimum 80 hours of PT observation as part of their clinical component in their undergraduate major. Clinical hours completed in the undergraduate major must be documented by their undergraduate academic adviser. The remainder of the 80 hours must be completed under the supervision of a physical therapist and documented on one or more of the Marquette clinical hour’s assessment and verification forms prior to June 1 preceding fall enrollment in the professional phase.

Transfer Applicants

Pre-physical therapy students (PREP) applying for transfer admission into Year Four, are subject to spaces available. To apply for this internal window of admission, students need to complete at least 12 of the physical therapy prerequisite credits at Marquette University and meet or exceed all requirements for the undergraduate phase. External transfer students with degrees and pre-reqs from other institutions may also make application to the professional phase of the program and may be enrolled as space allows. As the program is primarily direct freshmen admittance, transfer enrollment is extremely competitive. All external transfer applicants apply via the national Physical Therapist Centralized Application Service. (www.PTCAS.org)

D.P.T. prerequisites courses must be completed at an accredited four-year institution and cannot be completed through online courses. D.P.T. prerequisites required before admission to the professional phase:

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<tr>
<td>Introduction to Physical Therapy*</td>
<td>1</td>
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<td>Statistics</td>
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Advanced Placement (AP) and/or International Baccalaureate (IB) credits may be applied toward D.P.T. pre-requisite courses with the exception of CHEM 1002 General Chemistry 2 and PHYS 1002 General Physics 2. These two pre-requisite courses must be completed at an accredited 4-year institution. **Note:** AP and IB credits awarded by MU are credit-bearing only and are not included in grade point average (GPA) calculations.

* Waived for accepted transfer students but will need to document proficiency in medical terminology in lieu of Intro to PT Class. Completion of a programmed text and written departmental test in medical terminology would meet this requirement and is offered to the students accepted into the professional phase of the program.

** External transfer students will need 12 credits of social sciences and/or humanities in addition to the DPT prerequisites. Three credits of cognitive and motor learning are strongly recommended, but not required.

Essential Functions

Students are made aware as freshmen and prior to entering the professional phase that all students must be able to carry out the basic duties of a generalist physical therapist with or without reasonable accommodation(s). A generalist P.T. is one who is capable of treating patients across the lifespan. Specifics of the essential functions are included in the Physical Therapy Student Handbook.

Absences

Students who are ill or anticipate absence for a family emergency must contact the physical therapy office immediately. All students must consult with the instructor of the course(s) missed for makeup if necessary. Absences of two or more weeks during the fourth, fifth or sixth years of the program may be considered as grounds for repeating the entire term.

Anticipated absences from full-time clinic must be approved in advance by one of the directors of clinical education at Marquette University and the center coordinator of clinical education at the clinical site. Unapproved absences are not acceptable and may lead to dismissal from the clinical site. Emergency absences, illness, etc., are circumstances usually considered to be acceptable absences if they are substantiated by the coordinators.

Academic Regulations - Undergraduate Phase

Students admitted to the D.P.T. Program as freshmen must meet all requirements for advancement. These include:

1. A 2.400 or greater cumulative grade point average in the specified D.P.T. prerequisite course work consisting of BIOL 1001, CHEM 1001, CHEM 1002, PHYS 1001, PHYS 1002, PTHH 1001 and a statistics course (23 credits). Advanced Placement (AP) and/or International Baccalaureate (IB) credits may be applied towards DPT pre-requisite courses with the exception of Chem 1002 and Phys 1002. AP and/or IB credits awarded by MU are credit-bearing only and are not included in grade point average (GPA) calculations.

2. A grade of C of better in all D.P.T. prerequisite courses.
3. All D.P.T. prerequisites must be completed at an accredited four-year institution, course work will not be accepted from a two-year school, community college, junior college or technical college. Online courses will not be accepted for D.P.T. prerequisites.

4. Proof of completion of 80 volunteer and/or work related hours supervised by a physical therapist by June 1 after completion of the D.P.T. 3 academic year.

5. A demonstrated plan for completion of a bachelor’s degree at the end of the spring term of the DPT5 year in the professional phase (years 4, 5 and 6) of the program. Except for ATTR and EXPH students, students who do not complete their undergraduate degree in the traditional 4 years must submit a written plan to the PT department chairperson to complete their undergraduate degree within the required time frame.

Students failing to satisfy all requirements or students who are required to withdraw for academic reasons are not guaranteed admission to the professional phase of the program. Following acceptance into the professional phase of the program, students follow the curriculum as outlined for the three-year professional phase unless prior approval is received from the department chairperson.

CR/NC Grade Option

University guidelines allow junior and senior students to elect one course per term (to a maximum of four courses) for which only a CR or NC grade is assigned, given certain requirements are met. Refer to the CR/NC option entry in the university section of this bulletin for the specific requirements. However, this CR/NC option is not available for any course that is part of the 23 prerequisite core credits nor any course normally required in the professional phase of the program.

Course Sequence

Professional phase courses taken early while a student is in the pre-professional phase must be completed with a grade of C and a minimum 2.400 GPA for all professional phase courses completed in a given semester. (If only one professional phase course is taken in a given semester, a BC grade will be required to exceed the requirement of a 2.4 GPA per semester.) Taking courses early and out of sequence is discouraged. No online prerequisite courses are accepted. Students who fail to meet these requirements may be placed on academic probation and required to retake professional phase courses.

Academic Regulations - Professional Phase

A student must complete the academic requirements of the D.P.T. program within four years of admission to the professional phase of the program in the fall semester of the D.P.T. 4 year, unless there are non-academic extenuating circumstances. Failure to complete the PT program requirements within the 4-year time limit may result in dismissal from the program. During the professional phase of the program a student will be considered in good academic standing if he/she complies with the academic standards printed in the Physical Therapy Student Handbook. Failure to meet the academic requirements will result in probation or dismissal from the program.

Overview

There are certain categories of student performance problems that can lead to some form of censure. These problems may be identified at any point during the academic year, though a systematic review of all students' course grades is also conducted at the end of each academic term. The review of other, non-course grade problems is typically conducted on an individual basis as issues arise. A finding of significant problems in any of these areas can result in probation, suspension, or dismissal, depending on the nature and severity of the problems identified. All of these statuses are maintained permanently on the student's academic record; only dismissal, however, appears permanently on Marquette University's official transcript. If a student is reinstated following a dismissal, that notation will also permanently appear on the student's official transcript. The statuses that will appear permanently on a student's official transcript include those listed (in bold type) below:

Required to Withdraw for Academic Reasons (RWAR) – dismissal for deficient academic performance as described below.

Reinstated on Probation - following successful appeal of academic dismissal.

Required to Withdraw for Professional Integrity Reasons (RWPI) – dismissal for violation of Professional Integrity standards as described below.

Required to Withdraw for Academic Misconduct (RWAM) – dismissal for violation of the academic honesty policy as outlined in the Academic Regulation section of this bulletin.

Academic Censure (Dismissal/Probation/Academic Alert)

1. Academic Dismissal – Required to Withdraw for Academic Reasons (RWAR):

Health Science Professional students (HESP) admitted to the Doctor of Physical Therapy program for fall 2015 or thereafter must maintain a cumulative GPA of at least 2.400 by the end of the second semester in the program, and each semester thereafter. In addition, students will be RWARd for any course attempted with a final grade below a C (CD, D, or F) or an unsatisfactory grade (U) in a clinical experience. The Office of the Registrar (OTR) and the Office of Student Financial Aid (OSFA) will monitor the program academic requirements at the end of each term (fall, spring and summer). A student who does not meet these academic requirements will be academically dismissed by the college (coded as RWAR by OTR) and his/her record coded as failure to maintain Satisfactory Academic Progress (SAP) by OSFA.

Health Science Professional students (HESP) admitted to the Doctor of Physical Therapy program before fall 2015 must maintain a cumulative GPA of at least 2.200 by the end of the second semester in the program, and each semester thereafter. In addition, students will be RWARd for any course...
attempted with a final grade below a CD (D or F) or an unsatisfactory grade (U) in a clinical experience. The Office of the Registrar (OTR) and the Office of Student Financial Aid (OSFA) will monitor the program academic requirements at the end of each term (fall, spring and summer). A student who does not meet these academic requirements will be academically dismissed by the college (coded as RWAR by OTR) and his/her record coded as failure to maintain Satisfactory Academic Progress (SAP) by OSFA.

The college office will communicate the RWAR and the OSFA will communicate SAP via Marquette email. As per university email policy, it is the student’s responsibility to monitor his/her email at all times. A RWAR/SAP student will be dropped from any classes in which he/she is subsequently registered.

An undergraduate student in the Physical Therapy program must meet the requirements listed above to continue in the Doctor of Physical Therapy program. A student that is not allowed to continue in the Physical Therapy program, but remains in good standing at the university as an undergraduate student, will be allowed to continue with their undergraduate degree course of study.

Satisfactory Academic Progress: there are other SAP conditions for which the student is responsible and will be applied to all students in the program, both professional and undergraduate. Refer to the complete SAP policy (http://www.marquette.edu/mucentral/financialaid/resources_elig_standards.shtml) on the OSFA website.

RWAR/SAP Appeal Process

A RWAR/SAP student must appeal both RWAR/SAP by sending one form, which addresses both RWAR and SAP issues. This is done via the Academic Censure form located on the Marquette Central academic forms website (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml). The form includes all of the required information the student must submit in order to have his/her appeal reviewed.

- The form is submitted to the College of Health Science main office for initial review for completeness of forms. Completed appeal forms are then forwarded to the chair of the Department of Physical Therapy. The department chair, in consultation with the Academic Standards Committee, has the final decision on all RWAR/SAP appeals. The Academic Standards Committee may require a hearing with the student. See appeal hearing procedures in the PT Student Handbook.
- If the appeal is approved, the student will be ‘Reinstated on Probation’ and the Academic Standards Committee will establish an academic probation plan for the student to regain his/her satisfactory academic and degree progress standing, and the student’s eligibility for financial aid will be restored.
- The plan must be measurable and ensure that the student is able to meet Marquette’s SAP standards by a specific point in time. Plans should include courses to be taken, expected grades and a timeframe to complete the outlined objectives.
- The plan will be monitored by the department (Academic Standards Committee).
- Should the student not fulfill all of his/her academic obligations as outline in the academic probation plan, the student’s performance will be evaluated by the committee and a determination will be made as to whether the College Academic Alert (see below) process will be instituted; however, the student will again be coded with SAP for that term.

2. Physical Therapy Probation and College Academic Alert (CAA)

Physical Therapy Program Probation Possibilities

a. Automatic probation based on GPA – A student in the Physical Therapy program is allowed one instance of automatic probation for a single semester grade point average (GPA) between 2.200 and 2.399 if all required courses are completed with a grade of C or better. To return to good academic standing, the average GPA of the semester resulting in automatic probation and the next graded semester must be equal to or greater than 2.400.

b. Probation established by the Academic Standards Committee - A probation hearing will be required for a student with a single semester GPA below 2.200, or any grade below a C. Refer to the probation hearing procedures in the PT Student Handbook.

Failure to meet the requirements of probation may lead to College Academic Alert (see below).

Physical Therapy Program College Academic Alert (CAA)

Academic performance is monitored carefully by the Academic Standards Committee of the Department of Physical Therapy program, and students either not maintaining steady progress or not demonstrating adequate achievement will be barred from future registration in the program by College Academic Alert (CAA) action.

Conditions of probation may be prescribed in writing at the time of the student’s admission or readmission. Conditions may also be prescribed in writing in the case of a student whose course performance or failure to follow academic advice warrants such action at any time during the program. All students where conditions of probation have been established will be subject to committee review and possible CAA action should they fail to fulfill the specific terms. It is possible that a student be barred from registration for academic reasons even though the student’s cumulative GPA exceeds 2.400. Students concerned about their academic progress should consult the department office.

A student placed on College Academic Alert cannot register for subsequent courses in the Physical Therapy program and will be removed from any such classes for future terms in which he/she is registered. Students will be notified by letter or email of the committee’s decision and of the appeal process.
Undergraduate students that are not allowed to continue in the Physical Therapy program, but remain in good standing at the university, will be allowed to continue in their undergraduate degree course of study.

3. Academic Dismissal – Professional Integrity

Students may be dismissed from the Physical Therapy program for failure to maintain professional integrity standards, which may include, but are not limited to:

A. Failure to comply with the American Physical Therapy Association (APTA) Code of Ethics or the APTA Guide of Professional Conduct. (www.apta.org)

B. Failure to comply with learning objectives set forth in a professional behavior learning contract between the student and the program.

C. Failure to complete their undergraduate degree by the end of the spring semester of year 5.

D. Clinical misconduct, including, but not limited to:
   a. Conduct that constitutes harassment, threats or abuse of, or discrimination against peers, faculty, patients or others.
   b. Provision of physical therapy services, including laboratory experiences in courses, while under the influence of an illegal substance and/or alcohol.
   d. Failure to comply with the policies and procedures of the clinical facility during a clinical experience.
   e. Failure to comply with the Physical Therapy Act for the state in which an internship experience is located.

Violations of the professional integrity requirements will result in a hearing with the Academic Standards Committee. Findings of misconduct to self, faculty, the University clinical placements and/or patient may result in failure in the assignment, failure in the course or dismissal from the program.

For instances of dismissal from the program, a notation of “Required to Withdraw for Professional Integrity Reasons” will be placed on the student’s permanent academic record and transcript.

4. Academic Dismissal - Academic Misconduct:

Dismissal for academic misconduct (RWAM) is determined per the Academic Honesty policy found in the Academic Regulation section of this bulletin. Once this determination has been made, the student will be dismissed from the university. This action results in ineligibility to register at Marquette. Reinstatement criteria for the student who is dismissed, if applicable, will be outlined in the dismissal notice. If the student is allowed to return to the university, a permanent notation of ‘Reinstated to the University’ will appear on the student’s academic record and Marquette’s official transcript.

Accreditation

The Commission on Accreditation in Physical Therapy Education (CAPTE) has granted accreditation to the current Doctor of Physical Therapy program. Initial accreditation of the D.P.T. program was granted in April of 2002. Current Accreditation Status: Accreditation. Five-year history: Accreditation.

Students are free to contact CAPTE with questions or concerns by mail or phone at: CAPTE American Physical Therapy Association; 111 N. Fairfax St.; Alexandria, VA 22314; (703) 684-2782.

Certification in Basic Life Support

Certification in basic life support that includes child, infant and both one- and two-person adult CPR along with AED (automatic external defibrillator) training is required of all students prior to beginning the fourth year of the D.P.T. program. Continued certification is required to be maintained by the student throughout the D.P.T. curriculum. Failure to maintain current certification may jeopardize enrollment in subsequent PTH courses and/or clinical assignments. Students should contact their local Heart Association or Red Cross offices.

Emergency Care and Safety

All clinical sites will provide the students with safety information including emergency procedures. There may be potential health risks at a clinical site. Students are required to complete yearly OSHA training. Students are not employees of the facility and are not covered by workman’s compensation. Students provide proof of health insurance, but should also be aware that they are responsible for the cost of any emergency care, unless the injury or illness was due to negligence on the part of the facility. In non-emergency situations, students should expect to be responsible for their own medical care while off campus.

All D.P.T. students are required to attend and provide documentation of completion of yearly OSHA training sessions, which assure that they have received training on OSHA guidelines for blood borne pathogens and universal precautions.
Patient Right to Refuse
Clinical Contracts state that patients have the risk-free-right to refuse to participate in clinical education and patients/clients provide informed consent to being involved in the clinical education experience.

Examinations
A student who misses a final examination risks the loss of credit and the possibility of not being able to enroll in subsequent PHTH courses. All such cases will be judged by the department chairperson.

Liability Insurance
Even though the university has liability insurance on students while they are in clinical practice situations, some facilities require the student to have an additional liability policy. This type of insurance can be obtained through the insurance company used by the American Physical Therapy Association by student members of the association.

Policy for Students Requesting Accommodations
It is the responsibility of a student to request reasonable accommodations in the classroom or laboratory. Students are encouraged to discuss their needs with their instructors. It is expected that students will be proactive in addressing learning needs rather than reactive. Disability Services is a valuable resource to both students and faculty.

Tuition/Financial Aid for Professional Phase
Students who enter physical therapy as freshmen are considered in the pre-professional phase for Years 1-3, and the D.P.T. professional phase for Years 4-6. Full-time students will be charged normal undergraduate rates of tuition for Years 1-3. Students are charged the higher professional phase tuition rate in years 4-6. There is no additional tuition payment for summer work. Even though undergraduate students in Year 4 are considered in the professional phase of the program, they may still apply for normal financial aid available to Marquette undergraduate students. When physical therapy students complete their undergraduate degree, they can no longer be considered for undergraduate sources of financial aid.

Withdrawal from the Physical Therapy Program
Withdrawal from the program is achieved through a written request submitted to the chairperson of the Department of Physical Therapy. Any student considering withdrawing from the physical therapy program is encouraged to meet with the chairperson of the Department of Physical Therapy or his/her adviser prior to making a final decision.

Physical Therapy
Typical Professional Program — Physical Therapy Degree: D.P.T. †

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<th>DPT 4</th>
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### Courses

**PHTH 1001. Introduction to Physical Therapy and Medical Terminology. 1 cr. hr.**
Lecture course with two components, medical terminology and introduction to the study of physical therapy and physical therapist practice. The study of medical terminology is pertinent to the health care professions, organized by body systems with a focus on prefixes, suffixes, word roots and their combining form. The medical terminology component primarily follows a self-guided study model. The introduction to Physical Therapy component provides career exposure to physical therapy and includes current topics of interest in the field with several guest speakers/lecturers. Prereq: Direct-Admit PT students; or EXPH major; or ATTR major; or cons. of instr.

**PHTH 4512. Culture and Disability. 3 cr. hrs.**
The culture of disability, as a product of intrinsic factors of the person (spiritual beliefs and cultural practices) and those extrinsic factors in society (prejudice, stigma and discrimination) and the environment (architectural barriers) will be examined. The human dignity and civil rights of persons with disability, especially for the ever-expanding population of persons aged 65 and older, will be emphasized. Students will reflect on their own values, beliefs, and guiding life principles (Vocational Discernment) which shape their interactions and behaviors as professional health-care providers. The role of positive emotions, having choices, hope, and spiritual resolve as a foundation for the developing field of rehabilitation medicine called "Cardio-Psycho-Neuro-Immunology" will be a focus in this course. Prereq: Cons. of instr.

**PHTH 7503. Patient Management 1. 3 cr. hrs.**
Lecture/laboratory course simulating patient interactions and discussing learning units that enforce application of course work to clinical practice. Prereq: PHTH major.

**PHTH 7504. Patient Management 2. 2 cr. hrs.**
Lecture/laboratory course simulating patient interactions and discussing learning units that enforce application of course work to clinical practice. Patient Management course sequence cannot proceed if students have not successfully completed all required DPT4 coursework (preceding or concurrent). Prereq: PHTH major.

**PHTH 7505. Patient Management 3. 2 cr. hrs.**
Lecture/laboratory course simulating patient interactions and discussing learning units that enforce application of course work to clinical practice. Prereq: PHTH major; and concurrent enrollment in PHTH 7986.
PHTH 7512. Culture and Disability. 3 cr. hrs.
The culture of disability, as a product of intrinsic factors of the person (spiritual beliefs and cultural practices) and those extrinsic factors in society (prejudice, stigma and discrimination) and the environment (architectural barriers) will be examined. The human dignity and civil rights of persons with disability, especially for the ever-expanding population of persons aged 65 and older, will be emphasized. Students will reflect on their own values, beliefs, and guiding life principles (Vocational Discernment) which shape their interactions and behaviors as professional health-care providers. The role of positive emotions, having choices, hope, and spiritual resolve as a foundation for the developing field of rehabilitation medicine called "Cardio-Psycho-Neuro-Immunology" will be a focus in this course. Prereq: PHTH major; or cons.of instr.

PHTH 7513. Health Care Policy/Management. 3 cr. hrs.
Contemporary Issues and Management Principles in physical therapy practice. Discussions of recent historical and current external environmental factors affecting the delivery of health care services are interwoven with discussions of business, management, and supervisor/leadership principles applicable to the health care service industry. Particular attention is focused on the delivery of physical therapy services under changing environmental conditions. 7000 level course contains enhanced content. Open to practicing Physical Therapists. Prereq: PHTH major; or cons. of instr.

PHTH 7515. Pathophysiology. 2 cr. hrs.
Lecture/clinical observations course presents the pathophysiology of cardiovascular, respiratory, renal, endocrine and immune system disorders. Prereq: Physiology; and current enrollment in BISC 3150.

PHTH 7516. Geriatric Rehabilitation. 2 cr. hrs.
Lecture/lab course discusses the implications of aging, disease, physical therapy assessment and interventions and rehabilitation approaches. The laboratory portion includes psychological, sociological and economic aspects of aging plus selected pathological conditions that affect communication, compliance and functional performance. Provides opportunities to refine clinical and problem solving skills in supervised laboratory sessions and supervised clinical experiences in senior center environments. Prereq: PHTH major.

PHTH 7518. Physiology of Activity. 3 cr. hrs.
This lecture/laboratory course will concentrate on the assessment of activity tolerance in, and basic principles of, exercise prescriptions for normal healthy individuals through the life span who are either trained or untrained. A functional approach will be emphasized and factors that enhance or impede performance will be examined. Various training strategies will be introduced. Prereq: PHTH major and PHTH 7515; or enrolled in Health Sciences - Professional and PHTH 7515; and current certification in CPR for the health care provider.

PHTH 7522. Introduction to Evidence Based Decision Making in Clinical Practice. 2 cr. hrs.
Teaches physical therapy students how to provide the best possible care for patients according to an evidence based practice model, which integrates clinical experience, external evidence, and patient expectations. Students will learn how to formulate answerable clinical questions, use online databases to access research evidence, critically evaluate clinical and scientific literature related to patient care, integrate and apply the best evidence for practice, and use these skills to become life long learners. Instruction methods include lectures, in class discussions, hands on activities, and student presentations. Prereq: Major in Physical Therapy.

PHTH 7523. Applied Evidence Based Decision Making. 1 cr. hr.
Evidence-based practice applied to clinical content areas, including orthopedics. Web based assignments. Students will complete individual projects and present their work. Prereq: PHTH major and PHTH 7522; and concurrent enrollment in PHTH 7532.

PHTH 7525. Kinesiology 1: The Upper Extremity. 3 cr. hrs.
Anatomy of the muscular and joint systems in normal and abnormal conditions in the upper extremities. Course includes surface anatomy, the biomechanics of normal and abnormal muscle and joint action. Lecture, demonstration and laboratory practice. Prereq: PHTH major.

PHTH 7526. Kinesiology 2: The Spine and Lower Extremity. 3 cr. hrs.
Continuation of PHTH 7525 with emphasis on head, trunk and lower extremities, including an introduction to normal gait, posture, and surface anatomy. Lecture, demonstration and laboratory practice. Prereq: PHTH 7525.

Lecture and clinical laboratory course. The students will learn the general concepts and specific techniques of Physical Therapy evaluation including tests and measures including range of motion, flexibility and strength using diverse instrumentation. Prereq: PHTH major and BISC 7130 or BISC 2135 and BISC2136.

PHTH 7530. Pain Mechanisms and Treatment. 2 cr. hrs.
Lecture and clinical laboratory course (based on research evidence and/or best practice) that presents the principles and methods that lead to clinical outcomes related to pain conditions including the theoretical models for understanding the basis for pain. Content will include pain mechanisms, assessment and physical therapy management. Prereq: PHTH Major.

PHTH 7532. Orthopedics 1. 4 cr. hrs.
Lecture, demonstration and laboratory experiences. The elements of patient/client management (examination; evaluation; diagnosis; prognosis; and intervention) are applied to musculoskeletal conditions. Prereq: PHTH major and PHTH 7525; and concurrent enrollment in PHTH 7526.

PHTH 7533. Orthopedics 2. 4 cr. hrs.
Continuation of PHTH 7532 with an emphasis on the evaluation and treatment of specific musculoskeletal injuries/dysfunctions. Includes surgical, non-surgical, traumatic, chronic and sports-related conditions. 7000 level course contains enhanced content. Prereq: PHTH 7532 and PHTH 7526.

PHTH 7539. Diagnostic Imaging Testing. 3 cr. hrs.
Study of diagnostic imaging techniques as they relate to physical therapy practice areas. Includes study of common medical tests.
PHTH 7549. Differential Diagnosis of Disease. 2 cr. hrs.
Lecture course focusing on a broad range of medical diseases and their various clinical presentations. The focus is on the use of clinical decision making skills when analyzing a patient's medical history intake and the review of systems. The course addresses screening, to include referral for conditions or diseases that are not within a physical therapist's scope of practice. Prereq: PHTH major.

PHTH 7555. Life Span Development. 2 cr. hrs.
Lecture/discussion/lab. Normal growth and motor development from prenatal development to motor adaptation and functional changes in adult years. Special focus on motor behaviors across the life span and implications for the physical therapist, as well as potential influence of motor development in the presence of injury, disease, and disability. Opportunity for interaction with infants, toddlers, children, teens and adults. Prereq: PHTH major and BISC 7130.

PHTH 7558. Neuroanatomy. 4 cr. hrs.
Structure and function of the central nervous system (CNS). Lecture, clinical correlations, clinical problem solving to predict signs and symptoms in patients with PNS and CNS lesions. Prereq: PHTH major or PHAS major.

Lecture and clinical laboratory course (based on research evidence and/or best practice) that presents the physical and physiological basis and the principles and methods that lead to: 1. clinical outcomes following the therapeutic application of thermotherapy, cryotherapy, actinotherapy and mechanotherapy in the treatment of disorders involving the musculoskeletal, neuromuscular, cardiovascular and integumentary systems and 2. for electrotherapeutic interventions for clinical treatment of individuals with musculoskeletal dysfunction, motor control deficits, acute and chronic pain, and other selected conditions. Electrophysiological testing will include electromyography and nerve conduction velocity evaluation. Prereq: PHTH major.

PHTH 7570. Advanced Biomechanics and Kinesiology. 4 cr. hrs.
Advanced analysis of human movement including gait, orthotics and prosthetics. Rehabilitation focuses on physical therapy interventions for patient/clients with chronic diseases and other conditions necessitating long-term therapeutic intervention. Prereq: PHTH major.

PHTH 7577. Wound/Integumentary Physical Therapy. 2 cr. hrs.
Lecture and clinical laboratory course (based on research evidence and/or best practice) that presents the physical and physiological basis and the principles and methods that lead to clinical outcomes related to the integumentary system. Content will include pathophysiology, diagnosis and management of chronic wounds, management of thermal injuries and edema. The course will also include infection control and aseptic technique. Prereq: PHTH major.

PHTH 7576. Neurological Rehabilitation 1. 2 cr. hrs.
Lecture and discussion-based course covering the pathology, etiology, and epidemiology of common neurological diseases. Clinical presentation, differential diagnosis, evaluation, and medical/surgical interventions for the diseases are the focus of the first of a 2 part course series. Prereq: PHTH major and successful completion or concurrent enrollment in PHTH 7558.

PHTH 7668. Neurological Rehabilitation 2. 4 cr. hrs.
Continuation of Neurological Rehabilitation 1. Lectures and labs focus on physical therapy interventions for specific impairments, disease-specific conditions, and overall function. Evidence-based practice guidelines are utilized when available, objective tests and measures are emphasized, and case studies are utilized to integrate and apply information. Prereq: PHTH major, successful completion of PHTH 7667 and PHTH 7558.

PHTH 7674. Critically Appraising and Contributing to the Evidence for Clinical Practice. 3 cr. hrs.
Course is a culmination of the skills and knowledge obtained in PHTH 7522 and 7523 and prepares students for leadership roles in physical therapy. Students hone their skills at reading and critically evaluating the clinical and scientific literature. In so doing, student become familiar with the evidence for practice in several emerging areas of physical therapy. Students also learn to lead and participate in journal clubs, provide effective peer review, contribute to the evidence for practice, and communicate novel ideas to the physical therapy community. Instruction methods include lectures, journal clubs, and writing workshops. As a capstone project students will author papers comparable to those seen in the journal of the American Physical Therapy Association and present their work to the physical therapy community. Prereq: PHTH major; PHTH 7522 and PHTH 7523.

PHTH 7675. Pediatric Disorders and Intervention Strategies. 4 cr. hrs.
Lecture/lab/discussion on developmental disabilities and other selected pediatric disorders. Concepts of physical therapy evaluation, assessment, goal setting and treatment of the pediatric patient; common treatment theories and techniques and their application to children. Current cultural, ethical, and legal issues related to health care and children. Prereq: Must be a 6th year PHTH major.

PHTH 7682. Cardiovascular and Pulmonary Physical Therapy. 3 cr. hrs.
Lecture/laboratory course will focus on recuperative/restorative management of clients having primary or secondary involvement of the cardiovascular and/or pulmonary systems. A total gas delivery approach will be emphasized through case presentations. Clinical skills to be taught will be consistent with nationally published Clinical Practice Guidelines that are evidence-based. 7000 level course contains enhanced content. Prereq: PHTH major; certification in Basic Life Support (CPR).

PHTH 7684. Clinical Issues and Decision Making. 2 cr. hrs.
Lecture course with occasional lab/clinics during class time. The emphasis of this course is to examine and discuss current issues and trends in physical therapy practice, and to mentor DPT-5 students. Topics include patient and professional advocacy, autonomous practice, ethics, jurisprudence, reimbursement, applying the Guide to Physical Therapist Practice to a complex multi-system patient case, resume writing, interview skills, and assessment for learning. Additionally, a representative from the Department of Regulation and Licensing will address the licensing process. Prereq: PHTH 7523.
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**PHTH 7932. Advanced Topics in Physical Therapy. 0-4 cr. hrs.**
Advanced clinical electives in specific areas of physical therapy practice. Prereq: PHTH major; or cons. of instr. 0 credit will be SNC/UNC grade assessment; 1-4 credits will be graded.

**PHTH 7986. Internship in Physical Therapy. 4-10 cr. hrs.**
Full time experiences supervised by clinical faculty that immerse students in various practice settings throughout the country Prereq: PHTH major; must be taken in PHTH course sequence.

**PHTH 7995. Independent Study in Physical Therapy. 1-3 cr. hrs.**
Independent study and research in special areas of interest in physical therapy under faculty supervision. No mid-term assessment assigned. Prereq: PHTH major, cons. of instr., and cons. of dept. chair.