

# Physical Therapy (PHTH)

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## **PHTH 1001 Introduction to Physical Therapy and Medical Terminology (1 credits)**

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.

*Prerequisite:* Direct-Admit PT students; or EXPH major; or ATTR major; or cons. of instr.

*Level of Study:* Undergraduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%201001>)

## **PHTH 4512 Culture and Disability (3 credits)**

Culture as a product of intrinsic factors of the person (spiritual beliefs and cultural practices) and those extrinsic factors in society (prejudice, racism, stigma, and discrimination) and environment are examined. Students examine their own positions in social systems and determine concrete actions that promote equity and inclusivity within the healthcare setting. Topics include the social determinants of health, the sources and implications of inequity creating healthcare disparities, and ways to create more inclusive and collaborative social and professional processes acting as people with and for others. These skills are applied specifically to the practice of physical therapy.

*Prerequisite:* PHTH major or cons. of instr.

*Level of Study:* Undergraduate

*Marquette Core Curriculum:* Engage Social Systems & Values 2

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%204512>)

## **PHTH 7120 Pharmacology in Physical Therapy (2 credits)**

Pharmacological study to help physical therapy students understand the indications, mechanism of action, and common side effects of medications. Includes a study of a patient's/client's prescription and nonprescription medications and the relationship between medications and physical therapy interventions to improve patient/client outcomes. Further investigates therapeutic and adverse effects as well as drug interactions. Based on an understanding of neurotransmitters and disease pathology, medications used for the most common physical therapy diagnoses are reviewed.

*Prerequisite:* PHTH major.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207120>)

## **PHTH 7503 Patient/Client Management 1 (3 credits)**

Lecture/laboratory course simulating patient/client interactions and discussing learning units that enforce application of course work to clinical practice. Lab fee.

*Prerequisite:* PHTH major.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207503>)

## **PHTH 7504 Patient/Client Management 2 (2 credits)**

Lecture/laboratory course simulating patient/client 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 course work (preceding or concurrent).

*Prerequisite:* PHTH major.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207504>)

## **PHTH 7505 Patient/Client Management 3 (2 credits)**

Lecture/laboratory course simulating patient/client interactions and discussing learning units that enforce application of course work to clinical practice, including a writing intensive/documentation requirement that is applicable to future clinical education experiences.

*Prerequisite:* PHTH major; and concurrent enrollment in PHTH 7974.

*Level of Study:* Health Sciences Professional

*Marquette Core Curriculum:* Writing Intensive

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207505>)

## **PHTH 7513 Health Care Policy/Management (3 credits)**

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.

*Prerequisite:* PHTH major; or cons. of instr.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207513>)

**PHTH 7515 Clinical Pathology and Pathophysiology (4 credits)**

Lecture/clinical observations course presents the pathology and pathophysiology of the cardiovascular, pulmonary, renal, endocrine and immune system disorders. Limited introduction to oncology and the pathophysiological disorders of the nervous system. Included are the physical therapy implications of normal aging and disease with an emphasis on the pathological changes and the physiological aspects of each. Pharmacological and other medical interventions are discussed and integrated with material concurrently presented in other courses.

*Prerequisite:* PHTH major and BIOL 4701 or BISC 4145.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207515>)

**PHTH 7516 Geriatric Rehabilitation (2 credits)**

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.

*Prerequisite:* PHTH major, PHTH 7503, physiology and current enrollment in PHTH 7515.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207516>)

**PHTH 7518 Physiology of Activity (3 credits)**

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.

*Prerequisite:* PHTH major and PHTH 7515; or enrolled in Health Sciences - Professional and PHTH 7515; and current certification in CPR for the health care provider.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207518>)

**PHTH 7522 Introduction to Evidence Based Decision Making in Clinical Practice (2 credits)**

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.

*Prerequisite:* Major in Physical Therapy.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207522>)

**PHTH 7525 Kinesiology 1: The Upper Extremity (3 credits)**

Anatomy of the muscular and joint systems in normal and abnormal conditions in the upper extremities. Includes surface anatomy, the biomechanics of normal and abnormal muscle and joint action. Lecture, demonstration and laboratory practice.

*Prerequisite:* PHTH major and BISC 7130 or equiv.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207525>)

**PHTH 7526 Kinesiology 2: The Spine and Lower Extremity (3 credits)**

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.

*Prerequisite:* PHTH 7525.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207526>)

**PHTH 7528 Physical Therapy Evaluation, Tests and Measures (2 credits)**

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.

*Prerequisite:* PHTH major and BISC 7130 or BISC 2135 and BISC2136.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207528>)

**PHTH 7530 Pain Mechanisms and Treatment (3 credits)**

Lecture and discussion 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 includes pain mechanisms, assessment and physical therapy management.

*Prerequisite:* PHTH major and PHTH 7558.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207530>)

**PHTH 7532 Orthopedics 1 (4 credits)**

Lecture, demonstration and laboratory experiences. The elements of patient/client management (examination, evaluation, diagnosis, prognosis and intervention) are applied to musculoskeletal conditions of the upper quadrant.

*Prerequisite:* PHTH major; PHTH 7515, PHTH 7522, PHTH 7525, PHTH 7528, PHTH 7539 and PHTH 7560.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207532>)

**PHTH 7533 Orthopedics 2 (4 credits)**

Continuation of PHTH 7532 with an emphasis on the evaluation and treatment of specific musculoskeletal injuries/dysfunctions of the lower quadrant. Includes surgical, non-surgical, traumatic, chronic and sports-related conditions.

*Prerequisite:* PHTH 7532 and PHTH 7526.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207533>)

**PHTH 7539 Diagnostic Imaging Testing (2 credits)**

Study of diagnostic imaging techniques as they relate to physical therapy practice areas. Includes study of common medical tests.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207539>)

**PHTH 7549 Differential Diagnosis: Screening for Medical Referral (2 credits)**

Lecture/lab 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. Addresses screening, to include referral for conditions or diseases that are not within a physical therapist's scope of practice.

*Prerequisite:* PHTH major and PHTH 7515 with a grade of C or better.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207549>)

**PHTH 7555 Introduction to Pediatrics: Development and Assessment (2 credits)**

Focuses on the physical development that occurs from birth to maturity, specifically motor development. Discusses other developmental areas as well. Introduces the internal and external environmental influences on development, as well as traditional and contemporary theories of motor development. Lab experiences focus on analysis of posture/movement, gross motor testing, the child health screening and child wellness education. Evidence-based practice guidelines are utilized when available, and objective tests and measures are taught and emphasized. Fulfills one of the essential core competencies of entry-level pediatric physical therapy education as outlined in Pediatric Physical Therapy by the Academy of Pediatric Physical Therapy. Lab fee.

*Prerequisite:* PHTH major; BISC 7130 or BISC 3135/3136 series; PHTH 7525 and PHTH 7526.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207555>)

**PHTH 7558 Neuroanatomy (4 credits)**

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.

*Prerequisite:* PHTH major.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207558>)

**PHTH 7560 Physical Technologies/Electrotherapy/Electrophysiological Testing (4 credits)**

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. electrotherapeutic interventions for clinical treatment of individuals with musculoskeletal dysfunction, motor control deficits, acute and chronic pain, and other selected conditions. Electrophysiological testing includes electromyography and nerve conduction velocity evaluation. Lab fee.

*Prerequisite:* PHTH major.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207560>)

**PHTH 7570 Advanced Biomechanics and Kinesiology (4 credits)**

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.

*Prerequisite:* PHTH major; PHTH 7525 and 7526 with C or better.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207570>)

**PHTH 7577 Wound/Integumentary Physical Therapy (2 credits)**

Presents the physical and physiological basis and the principles and methods that lead to clinical outcomes related to the integumentary system. Discusses pathophysiology, diagnosis and management of chronic wounds, management of thermal injuries and edema. Studies infection control and aseptic technique. Lab fee.

*Prerequisite:* PHTH major.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207577>)

**PHTH 7667 Neurological Rehabilitation 1 (2 credits)**

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.

*Prerequisite:* PHTH major and PHTH 7558.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207667>)

**PHTH 7668 Neurological Rehabilitation 2 (4 credits)**

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.

*Prerequisite:* PHTH major and PHTH 7667.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207668>)

**PHTH 7672 Clinically Applied Evidence Based Decision Making (2 credits)**

Continues the process of educating the student how to incorporate evidence into their daily physical therapy practice. Focuses on the idea of incorporating evidence that is thorough and easy to access within daily practice.

*Prerequisite:* PHTH 7522.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207672>)

**PHTH 7675 Pediatric Disorders and Intervention Strategies (4 credits)**

Developmental disabilities and other selected pediatric disorders are covered. 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.

*Prerequisite:* PHTH 7555.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207675>)

**PHTH 7682 Cardiovascular and Pulmonary Physical Therapy (3 credits)**

Lecture/laboratory course that focuses on recuperative/restorative management of clients having primary or secondary involvement of the cardiovascular and/or pulmonary systems. A total gas delivery approach is emphasized through case presentations. Clinical skills to be taught consistent with nationally published Clinical Practice Guidelines that are evidence-based.

*Prerequisite:* PHTH major; certification in Basic Life Support (CPR); PHTH 7515 and 7518 with C or better.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207682>)

**PHTH 7684 Clinical Issues and Decision Making (2-3 credits)**

Lecture course with occasional joint labs with the DPT-5 students 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 addresses the licensing process.

*Prerequisite:* PHTH major.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207684>)

**PHTH 7713 Principles of Business, Management and Leadership for the Rehab Professional (3 credits)**

Foundational concepts and skills necessary for a health care practitioner to gain competency in leadership, leadership of a team, management of groups and organization business processes.

*Prerequisite:* PHTH major and cons. of instr. Consent required.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207713>)

**PHTH 7932 Advanced Topics in Physical Therapy (0-4 credits)**

Advanced clinical electives in specific areas of physical therapy practice. 0 credit will be S/U grade assessment; 1-4 credits will be graded.

*Prerequisite:* PHTH major; or cons. of instr.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207932>)

**PHTH 7953 Business, Management and Leadership for the Rehab Professional Journal Club (0 credits)**

Review of scholarly articles on current topics related to business, management and leadership within the physical therapy and rehabilitation fields.

*Prerequisite:* PHTH major in DPT4; and accepted to the business, management and leadership specialization.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207953>)

**PHTH 7974 Clinical Education Experience 1 (1-15 credits)**

Full-time clinical education experiences supervised by clinical faculty that immerse students in various practice settings throughout the country.

*Prerequisite:* PHTH major; must be taken in PHTH course sequence.

*Level of Study:* Health Sciences Professional

*Marquette Core Curriculum:* Writing Intensive

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207974>)

**PHTH 7975 Clinical Education Experience 2 (1-15 credits)**

Full-time clinical education experiences supervised by clinical faculty that immerse students in various practice settings throughout the country.

*Prerequisite:* PHTH major; must be taken in PHTH course sequence.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207975>)

**PHTH 7976 Clinical Education Experience 3 (1-15 credits)**

Full-time clinical education experiences supervised by clinical faculty that immerse students in various practice settings throughout the country.

*Prerequisite:* PHTH major; must be taken in PHTH course sequence.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207976>)

**PHTH 7977 Clinical Education Experience 4 (1-15 credits)**

Full-time clinical education experiences supervised by clinical faculty that immerse students in various practice settings throughout the country.

*Prerequisite:* PHTH major; must be taken in PHTH course sequence.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207977>)

**PHTH 7978 Clinical Education Experience Elective (1-15 credits)**

Full-time clinical education experiences supervised by clinical faculty that immerse students in various practice settings throughout the country.

*Prerequisite:* PHTH major. Consent required.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207978>)

**PHTH 7985 Business, Management and Leadership for the Rehab Professional Practicum (3 credits)**

Under the supervision of a mentor in a clinical leadership role, students learn the fundamentals of business/administrative/leadership duties within a clinical setting. Students assess communication and leadership styles of their mentors and themselves. Students gain an understanding of how clinical mentors lead their teams to optimize patient care.

*Prerequisite:* PHTH 7713.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207985>)

**PHTH 7995 Independent Study in Physical Therapy (1-3 credits)**

Faculty-supervised, independent study/research of a specific area or topic in Physical Therapy. No mid-term assessment assigned.

*Prerequisite:* PHTH major, cons. of instr., and cons. of dept. ch. Consent required.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207995>)

**PHTH 7997 Business, Management and Leadership for the Rehab Professional Capstone (3 credits)**

Under the supervision of the clinical leader mentor and the course director, students identify a business, management or leadership topic that will improve or enhance clinic team function. For this topic, students conduct an analysis of the topic within the clinical setting and in the context of other clinical settings, interpret the impact on clinic function/patient care and develop a recommendation for improvement. Students present their findings to the clinic leader, course director and relevant clinic team members.

*Prerequisite:* PHTH 7985.

*Level of Study:* Health Sciences Professional

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=PHTH%207997>)