



# **Graduate Certificate Orthopedic Physical Therapy Physical Therapy Program School of Health Sciences Oakland University**

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## **Special points of interest:**

**Program Highlights**  
Evidence based practice and evidence based manual and exercise techniques, translatoric spinal manipulation, functional massage, and advanced orthopedic therapeutic exercise concepts.

## **Faculty**

Nationally and internationally respected clinicians, authors and researchers in the field of Orthopedic Manual Physical Therapy.

## **ACCREDITATION**

North American Central Association of Colleges and Schools

## **DESCRIPTION**

The Graduate Certificate in Orthopedics is a one-year, part-time certificate with a broad orthopedic focus. Coursework in this program may be applied toward the post entry-level Doctor of Science (DScPT) or the Master of Science (MS).

The certificate program is offered as a part-time course of study accommodating the needs of working professionals. Students enrolled in the program will participate in 17 credits of coursework including orthopedic theory, techniques and clinical training. Courses are offered primarily on a weekend and evening basis.

## **ADMISSION REQUIREMENTS**

To be eligible for admission to this program, individuals must hold an entry-level degree in physical therapy and be licensed (or eligible for licensure) in physical therapy. Two years of clinical experience is highly recommended. All other admissions requirements for graduate applicants as determined by Graduate Admissions must also be met.

## **ADMISSION TERMS AND DEADLINES**

Students are admitted in the fall semester only. Applications will be accepted until August 1 for the following fall semester.

## **APPLICATION REQUIREMENTS**

The application materials and steps to be completed are:

1. Application for Admission to Graduate study and non-refundable application fee.
2. Professional vitae or resume and one page narrative goal statement outlining academic and professional goals.

3. Official transcripts of all previous undergraduate and graduate level academic work and proof of degree.
4. Two Recommendation for Graduate Admission forms or two letters of reference.
5. Official scores for the Test of English as a Foreign Language (TOEFL) and GRE from applicants who are graduates of programs taught in a language other than English.
6. International Students must meet the application requirements described by Graduate Admissions.
7. Proof of licensure or registration or eligibility for licensure or registration in the State of Michigan. Students who do not have a license upon admission will be conditionally admitted until they provide proof of licensure. Proof of licensure is required to register for courses that require clinical hours.

## **FEES**

Special course fees are assessed for the manual therapy theory and technique classes (PT 510, 511) required for the certificate.

## **REQUIREMENTS FOR THE CERTIFICATE**

To fulfill the certificate requirements the student must complete, with at least a 2.5 grade in each course and an overall GPA of 3.0, a program consisting of PT 502, PT 510, PT 511, PT 601, PT 611, PT 631, PT 677 and 5 credits of electives which may include PT 503, PT 523, PT 526 or PT 695 or other advisor approved courses

## **COURSE DESCRIPTIONS**

### **PT 502 Evidence-based Clinical Practice (2 credits)**

This course will provide an overview of evidence-based practice and its application to examination, evaluation, diagnosis, prognosis, and intervention in physical therapy. The course will also include a review of frameworks for clinical decision making, qualitative and quantitative research designs, and methods of finding and assessing professional literature related to approaches used by health care professionals.

### **PT 510 Advanced Orthopedics I (2 credits)**

This course is designed to introduce basic orthopedic science, orthopedic practice principles, and treatment techniques required in the day to day management of patients with movement impairments, functional limitations, and disabilities due to musculoskeletal pathologies effecting the extremities. Clinically related orthopedic sciences including anatomy, biomechanics, pathology and radiology will serve as the foundation for technique application and overall patient management. Practice principles will include evidence based practice, clinical decision making skills, clinical hypothesis building, treatment planning and progression. The technique portion includes physical examination and interventions for the extremities including advanced active and passive motion examination, translatory movement evaluation, and select differential evaluation techniques. Soft tissue, articular, and therapeutic exercise interventions for the extremities will be emphasized.

Includes:

E1-Examination and Intervention for the Upper Extremity

E2-Examination and Intervention for the Lower Extremity

### **PT 511 Advanced Orthopedics II (2 credits)**

Building upon the basic science, practice principles and treatment techniques introduced in PT 510 this course will address the day to day management of patients with movement impairments, functional limitations, and disabilities due to musculoskeletal pathologies effecting the spinal column. In PT 511 patient management principles and technique application will be based upon clinically related orthopedic sciences including anatomy, biomechanics, pathology and radiology. Practice principles will include evidence based practice, clinical decision making skills, clinical hypothesis building, treatment planning and progression. The technique portion of PT 511 will include comprehensive active and passive motion testing, neurologic examination, and select differential evaluation techniques. Soft tissue, articular, and therapeutic exercise interventions for the spine will be emphasized.

Includes:

S1-Examination and Intervention for the Cervical and Thoracic Spines

S2-Examination and Intervention for the Lumbar Spine and Sacroiliac Joint

### **PT 601 Clinical Orthopedic Internship I (1 credit)**

This course is designed to provide supervised clinical practice in an orthopedic physical therapy setting. Students will apply principles and techniques taught in PT 510 & 511 to the management of live patients. Additional instruction in aspects of orthopedic physical therapy intervention will include coordination, communication, documentation, and patient/client-related instruction.

### **PT 611 Applied Movement Sciences (2 credits) (3 credits for MS students)**

This course focuses on common symptomatic movement related disorders associated with various orthopedic spinal and peripheral joint pathologies. Students will perform and prescribe movement/exercise interventions for patients with impairments associated with select musculoskeletal pathologies. Tissue healing, musculoskeletal biomechanics, motor skill development, and tissue response to exercise will be discussed.

## COURSE DESCRIPTIONS CONTINUED

### PT 631 Clinical Pharmacology of the Musculoskeletal System (1 credit)

Principles of pharmacology including drug nomenclature, classification, pharmacokinetics, approval and regulation are reviewed. Typical agents, their pharmacokinetics, adverse effects and specific physical therapy concerns are covered for the following: analgesic and anti-inflammatory drugs, skeletal muscle relaxants, cardiovascular drugs, anti-infectious agents, cancer treatments, anti-epileptic drugs, anesthetics, psychopharmacology and endocrine pharmacology.

### PT 677 Advanced Differential Diagnoses (2 credits)

This course is designed to facilitate the student in synthesizing examination skills in physical therapy with differential diagnosis skills; to develop screening strategies for patients presenting in a direct access environment; to refine the student's knowledge of referral systems and other professionals from whom the PT receives referrals; and to develop prognostic skills using algorithms and clinical decision trees.

## **ELECTIVES**

### PT 503 Diagnostic Imaging (2 credits)

Diagnostic imaging techniques (roentgenography, MRI, CT, etc.) as they apply to evaluation of the neuromusculoskeletal system are presented and discussed. Radiographic interpretation and imaging interpretation of various traumatic lesions and arthropathies that affect the musculoskeletal and associated systems will be conducted. Selected correlations with physical and laboratory findings will be discussed.

### PT 523 Craniomandibular Examination and Management (1 credit)

The course offers a comprehensive overview of temporomandibular anatomy, biomechanics, clinical examination, evaluation and intervention. Differential evaluation of other sources of head and facial pain are presented and discussed.

### PT 526 Advanced Arthrology (1 credit)

An advanced self-directed deep joint dissection course. Students will be assigned either a peripheral joint or spinal region to dissect. Student will palpate, dissect, and describe in detail the anatomy and arthrology of their assigned joint/spinal region. Each student will systematically destabilize their pro-section and in the process create an orthopedic instability. Ligamentous stress testing and translation joint play testing will occur during the destabilization of the pro-section.

### PT695 Special Topics in Physical Therapy (1 to 4 credits)

The content will focus on a range of theoretical or applied topics which are of current interest in physical therapy and are not addressed in other courses. May be taken more than once but for no more than 6 credits.

## **COMPUTER ACCESS**

Due to the nature of this program students must have basic computer skills to benefit from online learning experiences. Students must have use of a computer with internet access. If you do not own a computer Oakland University provides resources through a number of computer labs on campus. Students may also inquire at their local library regarding computer availability.

### **OMPT curriculum questions, please contact:**

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