
Curriculum

Effective: January 2014
MANUAL PHYSICAL THERAPY CERTIFICATE PROGRAM

Program Director: Dr. Robert Boyles

The EIM Manual Therapy Certificate Program is committed to developing evidence-based physical therapist practitioners and clinician scientists around the world. We seek to produce highly skilled autonomous practitioners who are critical thinkers, reflective, empathetic, and lifelong learners. Manual Therapy Certificate graduates will be practitioners grounded in the principles of an evidence-based medicine and who are skilled in rapidly integrating that knowledge into their clinical practice.

Manual Physical Therapy Certificate Program Objectives:
1. Provide an innovative and cutting edge educational environment consistently across all clinical settings and for all participants through integration of state of the art learning tools with advanced professional clinical practice.
2. Develop physical therapists that value the principles of evidence-based practice and behave accordingly in their daily practice.
3. Develop practitioners skilled in the integration of eclectic orthopaedic manual physical therapy techniques and evidence-based practice principles into a clinical decision-making framework for the management of patients with musculoskeletal conditions.
4. Develop practitioners who confidently and professionally interact with physical therapy colleagues and other healthcare providers (general physicians, surgeons, nurse practitioners, physician assistants, etc).
5. Develop interest in and promote life-long learning by PTs leading to Fellowship training and advanced sub-specialty certifications.
6. Provide an efficient route for new graduates to become an ABPTS certified specialist in Orthopaedics.

Admission Requirements
1. All applicants must possess a current and valid license to practice physical therapy in one of the 50 United States, the District of Columbia, Puerto Rico, or US Virgin Islands. This license must not be under suspension, revocation, probationary status, or subject to disciplinary proceedings or inquiry.
2. All applicants must have completed either a Bachelor’s or Master’s Degree level CAPTE accredited professional physical therapy curriculum, or have had a state physical therapy board approve the applicant’s first-professional physical therapy program as “equivalent” to a US CAPTE accredited professional physical therapy program. Applicants who have graduated from a university outside of the US must provide a copy of their physical therapy degree equivalency evaluation for admission.

Curriculum
The EIM Manual Physical Therapy Certificate Program consists of 24 credit hours of blended online and onsite learning. The student has 3 years (36 months) of active enrollment to complete the program. The curriculum consists of the following outlined academic courses:

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*Denotes electives – MTC students must take 1 elective

24 credits
EVIDENCE BASED PRACTICE (EBP)

EBP 6100  Evidence-based Practice I  1 credit

This course is designed to improve the participant’s understanding and use of evidence-based practice; it’s history and impact on physical therapy practice. Using case scenarios, guided tutorials, and journal references, participants will learn how to ask clinically relevant questions, find and interpret the evidence, and apply this evidence to clinical practice. The goal of this course is to develop consumers and users of clinical research that will improve the quality and impact of the participant’s clinical practice on the patients they serve.

Course Objectives: At the end of the course the student will be able to or will have completed.

1. Define EBP and discuss its philosophy and fundamental principles.
2. Construct a well-built clinical question.
3. Search the literature using available search portals, engines and databases effectively and efficiently.
4. Critically appraise articles dealing with Intervention or Therapy for validity.
5. Discuss the application of current best evidence into clinical practice.
6. Discuss evaluation of your performance.
7. Identify key EBP resources and aides.

ORTHOPAEDIC MANUAL PHYSICAL THERAPY (OMPT)

OMPT 6120  Manual Therapy Model in Patient Management  1 credit

This course is designed to teach the basic patient management framework and manual therapy model used in EIM’s Manual Therapy Certificate Program. It will combine the interpretation of basic science knowledge with an approach based on presentation of signs and symptoms, and incorporate them into an EBP framework to develop dynamic critical thinking skills needed to complete a high quality differential evaluation and provide the most effective treatment possible. This course will focus on effective communication with the patient, the patient interview and objective examination to identify asterisk or comparable signs and generate clinical hypotheses, and the treatment principles (i.e., test/retest approach) used in the manual therapy model.

Course Objectives: At the end of the course the student will be able to or will have completed.

1. Accurately obtain a subjective examination, interpret the data from the subjective examination, plan and conduct an objective examination and interpret data from the objective examination.
2. Complete a thorough body diagram that outlines related and unrelated symptoms associated with the chief complaint, and accurately describe them (location, description, intensity, relationship, variability, and cleared areas).
3. Create a clinical hypothesis based on collected information, and modify that hypothesis accordingly as they progress through the evaluation (body chart, end of subjective, end of objective, response to treatment, follow-up evaluation).
4. Perform a targeted subjective and objective evaluation and examination that focuses on proving or disproving their clinical hypothesis, and uses the best clinical examination tests and measures according to current best evidence.
5. Determine the SINSS (severity, irritability, nature, stage, stability) of the patient/client’s symptoms from the subjective interview and use that to determine the depth of their physical examination.
6. Integrate examination techniques that have a high probability of contributing to the development and refinement of the working hypothesis(es).
7. Choose subjective and objective assessment measures (asterisk signs) to serve as dependent variables to measure initial, on-going, and long-term responses to treatment.
8. Establish treatment priorities that are appropriate to the working diagnosis and implement an evidence based plan of care to address the primary, contributory, or compensatory patient problems and assess the patient’s response to physical therapy intervention.
OMPT 6130  Mechanisms of Manual Physical Therapy  1 credit
Recent clinical research strongly suggests that manual therapy is an effective therapy for certain patients with musculoskeletal pain. Despite this realization, we still know very little about the mechanisms of its effectiveness. This course will provide an update on the biomechanical and neurophysiologic mechanisms of manual therapy. Special attention will be directed towards recent research investigating manual therapy’s effect on pain. Recently proposed models for explaining how manual therapy works will be emphasized in this class. Fellows-in-Training will also interact with leading researchers in this field during one or more live webinar sessions.

Course Objectives: At the end of the course the student will be able to or will have completed.
1. Describe different definitions and types of manual therapy with the goal of finding a common “language” for this course.
2. Compare and contrast mechanistic models of manual therapy that have been reported in the peer-review literature.
3. Discuss how mechanistic models reported in the peer-review differ from how manual therapy theory is typically taught and included in physical therapy clinical practice.
4. Identify common mechanistic pathways in peer-review models of manual therapy.
5. Research individual manual therapy mechanism pathways and assess the evidence to support their importance as an “active agent” in the effectiveness of manual therapy.
6. Identify clinical implications for knowledge of manual therapy mechanisms.
7. Explain to a patient how manual therapy works using current scientific evidence as a basis for that explanation.
8. Identify future research priorities in investigating how manual therapy work

OMPT 7080  MTC Program Capstone Examinations  Capstone credit
This capstone course consists of the final examination process for Manual Therapy Certificate Program students. MTC students will complete a final comprehensive written examination that focuses on medical screening, clinical reasoning, decision-making, and the application of manual physical therapy concepts. Students also complete a comprehensive technique examination to demonstrate competency in selected manual physical therapy interventions.

OMPT 7170  MTC Virtual Rounds and Case Presentations  1 credit
This capstone course for the Manual Therapy Certificate Program introduces the student to the Virtual Rounds environment. Students present patient cases and provide/seek feedback to/from peers and EIM Faculty. The course focuses on advanced clinical decision-making regarding clinical care in a collaborative virtual environment. Live virtual case tutorial sessions are typically conducted in the evenings. OMPT 6120 - Patient Management and the Manual Therapy Model is a prerequisite for this MTC Virtual Rounds course.

Course Objectives: At the end of the course the student will be able to or will have completed.
1. Clearly and concisely provide feedback on patient cases that includes key elements of the history, physical examination to include valid and reliable age-related tests and measures, diagnosis, prognosis and plan of care.
2. Independently present patient cases as evidence of application of EBP across a broad spectrum of patients.
3. Participate in peer-assessment and provide feedback to physical therapy colleagues that encourage the application of current best evidence into practice.
4. Demonstrate clinical decision making skills, including clinical reasoning, clinical judgment, and reflective practice.
5. Demonstrate mastery of clinical decision making in musculoskeletal care, with appropriate incorporation of manual physical therapy interventions, throughout the entire course of care.
6. Understand and apply the disablement, patient/client management, and ICF models in physical therapist practice.
7. Synthesize data from the examination and analyze data to make clinical judgments regarding patient/client management.
8. Select patient/client variables that allow research evidence to be collected and applied.
9. Incorporate evidence/consensus-based practice in the management of patients/clients.

ORTHOPAEDIC PHYSICAL THERAPY (ORPT)

ORPT 6110 Diagnosis and Management of Chronic Spinal Pain 1 credit

Pain is the primary reason why our patients seek physical therapy services, it is imperative that today’s evidenced-based physical therapist maintains a basic, accurate knowledge of the pain sciences. Nowhere is the nature of pain and suffering more misunderstood than in the arena of spinal pain. The data is overwhelming that we are not only harming a large number of people with invasive medical procedures that are targeted at the wrong area, we are also failing to implement current evidence in the pain sciences into the management of patients with spinal pain. This course will focus the student on actionable ways to successfully manage difficult spinal pain conditions.

Course Objectives: At the end of the course the student will be able to or will have completed.
1. Demonstrate knowledge of the current understanding of nociception, the experience of pain, and the nature of suffering.
2. Describe modulators of pain that increase or decrease the pain experience.
3. Choose the correct definition of terms used in the pain sciences.
4. Identify factors that influence the course of a patient/client prognosis.
5. Discuss current best evidence for various cognitive behavioral and education interventions in pain management.
6. Determine relevant factors and considerations that guide patient/client management for a given case with chronic spinal pain.
7. Use knowledge in the pain sciences related to structure, movement dysfunction, response to injury and disease and promotion of health and wellness to enhance outcomes for patients with chronic spinal pain.

ORPT 6510 Management of Lumbopelvic Disorders 5 credits

Patients with low back and pelvic/hip pain make up nearly 50% of all patients receiving outpatient physical therapy. This course is designed to enhance the student's knowledge and skill level in the evidence-based management of individuals with lumbopelvic spine and hip disorders and dysfunction. Classification systems, diagnosis, and outcomes assessment tools are discussed as components of the diagnostic process within the framework of evidence-based practice. The use of diagnostic imaging and medical screening for red flags is discussed to effectively screen for systemic and vascular disorders. Evidence-based treatment approaches, with special emphasis on manual therapy (mobilization/manipulation) and exercise, are reviewed to improve the student’s management of individuals with lumbopelvic musculoskeletal disorders. An intensive laboratory weekend is included to provide hands-on demonstration and practice of examination skills and selected manual therapy and exercise interventions for the lumbopelvic spine and hip regions.

Course Objectives: At the end of the course the student will be able to or will have completed.
1. Use knowledge in the foundational and clinical sciences related to structure, movement dysfunction, response to injury and disease and promotion of health and wellness to enhance physical therapy outcomes for patients with lower extremity disorders.
2. Participate in peer-assessment activities.
3. Demonstrate clinical decision making skills, including clinical reasoning, clinical judgment, and reflective practice.
4. Understand and apply the disablement and patient/client management models in physical therapist practice.
5. Examine patients/clients by obtaining a history, by performing systems reviews, and by selecting and administering valid and reliable age-related tests and measures.

6. Synthesize data from the examination and analyze data to make clinical judgments regarding patient/client management.

7. Determine a diagnosis that guides patient/client management.

8. Develop a diagnosis based on the disablement model.


11. Establish and manage a plan of care.

12. Provide physical therapy interventions to achieve patient/client goals and outcomes.

13. Select patient/client variables that allow research evidence to be collected and applied.


**ORPT 6520 Management of Lower Extremity Disorders** 5 credits

This course is designed to enhance the student's knowledge and skill level in the evidence-based management of individuals with lower extremity disorders and dysfunction. Classification systems, outcomes assessment tools, and the application of diagnostic imaging rules for acute lower extremity injuries are discussed as components of the diagnostic process within the framework of evidence-based practice. Diagnostic information for the medical screening of systemic and vascular disorders is also discussed. Evidence-based treatment approaches, with special emphasis on manual therapy and exercise, are reviewed to improve the student's management of individuals with lower extremity musculoskeletal disorders. An intensive laboratory weekend is included to provide hands-on demonstration and practice of examination skills and selected manual therapy and exercise interventions for the hip, knee and ankle regions.

**Course Objectives:** At the end of the course the student will be able to or will have completed:

1. Use knowledge in the foundational and clinical sciences related to structure, movement dysfunction, response to injury and disease and promotion of health and wellness to enhance physical therapy outcomes for patients with lower extremity disorders

2. Participate in peer-assessment activities.

3. Demonstrate clinical decision making skills, including clinical reasoning, clinical judgment, and reflective practice.

4. Understand and apply the disablement and patient/client management models in physical therapist practice.

5. Examine patients/clients by obtaining a history, by performing systems reviews, and by selecting and administering valid and reliable age-related tests and measures.

6. Synthesize data from the examination and analyze data to make clinical judgments regarding patient/client management.

7. Determine a diagnosis that guides patient/client management.

8. Develop a diagnosis based on the disablement model.


11. Establish and manage a plan of care.

12. Provide physical therapy interventions to achieve patient/client goals and outcomes.

13. Select patient/client variables that allow research evidence to be collected and applied.


**ORPT 6530 Management of Cervical and Thoracic Disorders** 5 credits

This course is designed to enhance the student's knowledge and skill level in the evidence-based management of individuals with cervical-thoracic spine and ribcage disorders and dysfunction. Classification systems, diagnosis, and outcomes assessment tools are discussed as components of the diagnostic process within the framework of evidence-based practice. The use of diagnostic imaging and medical screening for red flags is
discussed to effectively screen for systemic and vascular disorders. Evidence-based treatment approaches, with special emphasis on manual therapy (mobilization/manipulation) and exercise, are reviewed to improve the student’s management of individuals with cervical and thoracic spine musculoskeletal disorders. An intensive laboratory weekend is included to provide hands-on demonstration and practice of examination skills and selected manual therapy and exercise interventions for the cervical and thoracic spine regions.

Course Objectives: At the end of the course the student will be able to or will have completed.

1. Use knowledge in the foundational and clinical sciences related to structure, movement dysfunction, response to injury and disease and promotion of health and wellness to enhance physical therapy outcomes for patients with lower extremity disorders
2. Participate in peer-assessment activities.
3. Demonstrate clinical decision making skills, including clinical reasoning, clinical judgment, and reflective practice.
4. Understand and apply the disablement and patient/client management models in physical therapist practice.
5. Examine patients/clients by obtaining a history, by performing systems reviews, and by selecting and administering valid and reliable age-related tests and measures.
6. Synthesize data from the examination and analyze data to make clinical judgments regarding patient/client management.
7. Determine a diagnosis that guides patient/client management.
8. Develop a diagnosis based on the disablement model.
11. Establish and manage a plan of care.
12. Provide physical therapy interventions to achieve patient/client goals and outcomes.
13. Select patient/client variables that allow research evidence to be collected and applied.

ORPT 6540 Management of Upper Extremity Disorders 5 credits

This course is designed to enhance the student’s knowledge and skill level in the evidence-based management of individuals with upper extremity disorders and dysfunction. Classification systems, diagnostic clusters, and outcomes assessment tools are discussed as components of the diagnostic process within the framework of evidence-based practice. Diagnostic information for the medical screening of systemic and vascular disorders is also discussed. Evidence-based treatment approaches, with special emphasis on manual therapy and exercise, are reviewed to improve the student’s management of individuals with upper extremity musculoskeletal disorders. An intensive laboratory weekend is included to provide hands-on demonstration and practice of examination skills and selected manual therapy and exercise interventions for the shoulder, elbow, wrist and hand regions.

Course Objectives: At the end of the course the student will be able to or will have completed.

1. Use knowledge in the foundational and clinical sciences related to structure, movement dysfunction, response to injury and disease and promotion of health and wellness to enhance physical therapy outcomes for patients with lower extremity disorders
2. Participate in peer-assessment activities.
3. Demonstrate clinical decision making skills, including clinical reasoning, clinical judgment, and reflective practice.
4. Understand and apply the disablement and patient/client management models in physical therapist practice.
5. Examine patients/clients by obtaining a history, by performing systems reviews, and by selecting and administering valid and reliable age-related tests and measures.
6. Synthesize data from the examination and analyze data to make clinical judgments regarding patient/client management.
7. Determine a diagnosis that guides patient/client management.
8. Develop a diagnosis based on the disablement model.
11. Establish and manage a plan of care.
12. Provide physical therapy interventions to achieve patient/client goals and outcomes.
13. Select patient/client variables that allow research evidence to be collected and applied.