Sports Physical Therapy Certificate Program

Curriculum
Effective: January 2014
SPORTS PHYSICAL THERAPY CERTIFICATE PROGRAM

Program Director: Dr. Teresa Schuemann

The EIM Sports Physical Therapy Certificate (SPTC) 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. Sports Physical Therapy Certificate graduates will be practitioners grounded in the principles of evidence-based medicine and who are skilled in rapidly integrating that knowledge into their clinical practice.

Sports 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 Residency and/or Fellowship training and advanced sub-specialty certifications.
6. Provide an efficient route for new graduates to become an ABPTS certified specialist in Sports.

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.
3. Must also have attained one of the following:
   • Current licensure as an Emergency Medical Technician (EMT),
   • Current certification as a Certified Athletic Trainer (ATC), or
   • Current certification as an Emergency Medical Responder from the American Red Cross. Completion of the EIM Emergency Medical Response course is preferred to attain the necessary pre-requisite certification and familiarize the potential participant to the distributed learning model utilized throughout the program.

Curriculum

The EIM Sports Physical Therapy Certificate Program consists of 20 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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBP 6100</td>
<td>Evidence-based Practice I</td>
<td>1</td>
</tr>
<tr>
<td>ORPT 6520</td>
<td>Management of Lower Extremity Disorders</td>
<td>5</td>
</tr>
<tr>
<td>ORPT 6540</td>
<td>Management of Upper Extremity Disorders</td>
<td>5</td>
</tr>
<tr>
<td>SPPT 6110</td>
<td>Basic Science in Sports Physical Therapy</td>
<td>1</td>
</tr>
<tr>
<td>SPPT 6120</td>
<td>Sports Nutrition and Performance Enhancement</td>
<td>1</td>
</tr>
<tr>
<td>SPPT 6130</td>
<td>The Female Athlete*</td>
<td>*1</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>SPPT 6140</td>
<td>Sports Across the Ages*</td>
<td>*1</td>
</tr>
<tr>
<td>SPPT 6150</td>
<td>The Overhead Throwing Athlete*</td>
<td>*1</td>
</tr>
<tr>
<td>SPPT 6160</td>
<td>The Tactical/Occupational Athlete*</td>
<td>*1</td>
</tr>
<tr>
<td>SPPT 6170</td>
<td>The Performing Artist*</td>
<td>*1</td>
</tr>
<tr>
<td>SPPT 6510</td>
<td>Sports Physical Therapy Competencies</td>
<td>5</td>
</tr>
<tr>
<td>SPPT 7170</td>
<td>Sports Certification Virtual Rounds</td>
<td>1</td>
</tr>
<tr>
<td>SPPT 7080</td>
<td>SPTC Capstone Examinations</td>
<td>N/C</td>
</tr>
</tbody>
</table>

*Denotes electives – SPTC students must take 2 electives

**NOTE:** SPPT 6000 - Emergency Medical Response for the Sports Physical Therapist or equivalent is a pre-requisite for this program.
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 PHYSICAL THERAPY (ORPT)

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 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.

**SPORTS PHYSICAL THERAPY (SPPT)**

**SPPT 6000  Emergency Medical Response for the Sports Physical Therapist**  
N/C (pre-requisite)

This course is a pre-requisite for the Sports Physical Therapy Residency and Certification Programs if the participant is not already a Certified Athletic Trainer or EMT. The topics covered include Medical professional CPR/AED and Medical professional First Aid including O2 administration, epinephrine administration, airway insertion and diabetic emergency management. Sport-specific topics consist of Sports PT First Aid including Fracture management, spinal cord immobilization, Mild Traumatic Brain injury (MTBI) primary assessment and management, and thermal injury/emergency prevention, evaluation and management.

**SPPT 6110  Basic Science of Sports Physical Therapy**  
1 credit

This course provides current best evidence for basic science of injury and healing as well as Sports Biomechanics including running gait cycle, throwing, golf, cycling, swimming, and jumping/landing biomechanics.
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 soft tissue (ligament, tendon, and muscle) injuries.
2. Demonstrate understanding of timelines for optimal rehabilitation of soft tissue injuries to include age related differences.
3. Explain the inflammatory process of soft tissue injuries and the evidence basis of clinical management options to include pharmacology, thermal modalities, and manual therapy techniques.
4. Establish and manage a plan of care, incorporating evidence-based practice, for the management of soft tissue and articular cartilage injuries.
5. Synthesize data from a sport specific biomechanical examination and analyze the data to make clinical judgments to optimize patient/client outcomes.
6. Understand risk factors for soft tissue and articular cartilage injuries, and apply these in order to create injury prevention programs.
7. Understand optimal imaging techniques for the evaluation and management of soft tissue injuries.
8. Demonstrate understanding of soft tissue healing and incorporation (ie. Ligamentization, etc) following surgical intervention.
9. Demonstrate proper evaluation and correction of mechanics related to throwing, cycling, swimming, golf, running, jumping/landing to include gender and age related differences.

SPPT 6120  Sports Nutrition and Performance Enhancement  1 credit
This course provides current best evidence for Sports nutrition including hydration guidelines as well as dietary intakes for the active and athletic individual. Further instruction will include performance enhancement issues including vitamin supplementation, steroid usage, creatine and normal drug testing procedures.

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

1. Compare and contrast the caloric value, metabolic pathway for utilization, and physiologic need for the three macronutrients.
2. List common micronutrients important to health and athletic performance (vitamins and minerals).
3. Describe the macronutrient intake distribution ranges for athletes.
4. List common micronutrient deficiencies in female athletes.
5. Provide guidelines for hydration of the athlete, pre, during and post competition.
6. Describe the adverse effects of inadequate hydration for the athlete.
7. Provide the mathematical evidence for weight loss or gain using a food intake/energy expenditure log.
8. List and discuss the pros and cons of nutritional and other “legal” supplements for ergogenic purposes, including but not limited to creatine, ginseng, caffeine, etc.
9. Describe the adverse effects of banned ergogenic aids such as anabolic steroids and growth hormone.
10. Describe the procedures used for drug testing at the NCAA and international levels.

SPPT 6130  The Female Athlete  1 credit
This course provides current best evidence for the female triad including the pre-participation screening addendum, jumping biomechanics, ACL prevalence and prevention strategies and life spectrum issues including pregnancy and master athlete issues.

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

1. Demonstrate content area knowledge of the Female Triad in order to ensure application in sports physical therapy clinical practice including pre-season/participation screening procedures as well as evaluation of athletic injury.
2. Use knowledge in the foundational and clinical sciences related to evaluation of athletic movement to further develop and refine evaluation and rehabilitation for the female athletic movement, specifically jumping and cutting mechanics.
3. Use of current best evidence and knowledge in the foundational and clinical sciences related to athletic movement to enhance physical therapy outcomes for female athletic patients including injury prevention including but not limited to ACL injury.
4. Discuss current best evidence for various ACL and ankle sprain injury prevention strategies
5. Use of current best evidence to enhance clinical decision-making, evaluation and rehabilitation to ensure the best clinical outcomes of the female athletes with life spectrum issues including but not limited to pregnancy, osteopenia or osteoporosis.

**SPPT 6140**  **Sports Across the Ages**  
This course provides current best-evidence for both the young and master athlete including basic science of growth, implications for sports participation, rehabilitation, and common injury for each of these populations, physiology of aging and its implications for athletic performance.

**Course Objectives: At the end of the course the student will be able to or will have completed.**
1. Demonstrate content area knowledge related to the physiology of aging to ensure appropriate clinical application with master athletes.
2. Use knowledge in the foundational and clinical sciences related to evaluation of athletic movement to further develop and refine evaluation and rehabilitation for the master athlete.
3. Use of current best evidence and knowledge in the foundational and clinical sciences related to athletic movement to enhance physical therapy outcomes for master athletes in relation to aerobic endurance, anaerobic capacity, power development and balance enhancement.

**SPPT 6150**  **The Overhead Throwing Athlete**  
This course provides an overview of the biomechanics and pathomechanics of the overhead throwing athlete. Current, best-evidence on the examination, assessment, and intervention for common injuries seen in the upper extremity, lower extremity, and spine will be covered for this unique population.

**SPPT 6160**  **The Tactical/Occupational Athlete**  
This course discusses the unique requirements of the tactical/occupational athlete to include those of the military, police force, firefighters, and other occupations that have high physical demands. Current, best-evidence will be discussed regarding screening for injury risk, best practices for injury prevention, factors related to wellness, physical examination, and rehabilitation strategies for common injuries seen in these environments.

**SPPT 6170**  **The Performing Artist**  
This course provides an advanced study in the treatment of the performing artist, from novice to professional, and is inclusive of dancers, musicians, and aerialists/gymnasts. Using current, best-evidence, this course will discuss manual and neuromuscular intervention strategies for chronic and severe conditions as well as management strategies for acute injuries to allow for performance participation.

**SPPT 6510**  **Sports Physical Therapy Competencies**  
Sports Physical Therapy is a specialized practice that focuses on prevention, evaluation, treatment, rehabilitation, and performance enhancement of the physically active individual. In order to become a productive member of a sports medicine team, the sports physical therapist needs to be versed in many facets of care of the athlete. Many of these facets will be covered in this course including: Preventive and supportive taping; Pre-participation Screenings; Functional Movement Screenings including corrective exercise prescription; Evaluation, instruction and treatment of Athletic Movement.
Course Objectives: At the end of the course the student will be able to or will have completed.

1. Incorporate information from self-report measures, history and pre-participation musculoskeletal screenings to guide evidence-based decision-making and recommendations to a team physician re: sports participation and/or need for rehabilitation.
3. Demonstrate clinical examination skills for athletic movement.
5. Select and demonstrate neuromuscular training and therapeutic exercise interventions based on current best evidence for the rehabilitation of the physically active individual.

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 a patient case 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. Participate in peer-assessment and provide feedback to physical therapy colleagues that encourage the application of current best evidence into practice.
3. Demonstrate clinical decision making skills, including clinical reasoning, clinical judgment, and reflective practice.
4. Demonstrate mastery of clinical decision making in musculoskeletal care, with appropriate incorporation of manual physical therapy interventions, throughout the entire course of care (initial examination through discharge).
5. Understand and apply the disablement, patient/client management, and ICF models in physical therapist practice.
6. Synthesize data from the examination and analyze data to make clinical judgments regarding patient/client management.
7. Select patient/client variables that allow research evidence to be collected and applied.
8. Incorporate evidence/consensus-based practice in the management of patients/clients.

SPPT 7080 SPTC Program Capstone Examinations

This capstone course consists of the final examination process for Sports Physical Therapy Certificate Program students. SPTC students will complete a final comprehensive written examination that focuses on medical screening, clinical reasoning, decision-making, and the application of sports physical therapy concepts. Students also complete a comprehensive technique examination to demonstrate competence in selected sports physical therapy interventions.

SPPT 7170 Sports Certification Virtual Rounds

This course focuses on advanced decision-making regarding clinical care in a collaborative virtual environment. The focus of Virtual Rounds is to further develop each student’s clinical decision making skills and EBP skills providing high quality, evidence-focused feedback to the residents on presented cases. Enrollment in SPPT 7170 - Sports Certification Virtual Rounds is concurrent with enrollment in each of the extremity Clinical Management Courses (ORPT 6520 and ORPT 6540) with VR activity taking place within the respective course sections during the last 4 weeks of each management 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 a patient case 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. Participate in peer-assessment and provide feedback to physical therapy colleagues that encourage the application of current best evidence into practice.
3. Demonstrate clinical decision making skills, including clinical reasoning, clinical judgment, and reflective practice.
4. Demonstrate mastery of clinical decision making in musculoskeletal care, with appropriate incorporation of manual physical therapy interventions, throughout the entire course of care (initial examination through discharge)
5. Understand and apply the disablement, patient/client management, and ICF models in physical therapist practice.
6. Synthesize data from the examination and analyze data to make clinical judgments regarding patient/client management.
7. Select patient/client variables that allow research evidence to be collected and applied.
8. Incorporate evidence/consensus-based practice in the management of patients/clients.