



# Professional Enrichment Course

University of Pittsburgh School of Medicine  
Office of Medical Education

PEC Registrar – Denise Downs [d downs@pitt.edu](mailto:d downs@pitt.edu) 412-648-8749

## Rehabilitation Concepts in Muscle, Joint, Brain, & Nerve Physiology

<b>Enrollment Period:</b>	Spring 2022
<b>Course Dates:</b>	See below
<b>Student Max:</b>	10
<b>Class Year:</b>	MS1, MS2
<b>Course Director:</b>	Brad Dicianno, MD Email: <a href="mailto:dicibe@upmc.edu">dicibe@upmc.edu</a>
<b>Course Administrator:</b>	Isabel Z. Romanowski <a href="mailto:romanowskiiz@upmc.edu">romanowskiiz@upmc.edu</a>
<b>Location:</b>	See below
<b>Registration:</b>	Via Amp Up – You will receive an email with enrollment info
<b>Course Description:</b>	<p>This four-session professional enrichment course introduces students to rehabilitation concepts in the physiology of muscle, joints, brain and nerves.</p> <p>Sessions are held at various locations for hands-on experience and observation. The goal of this program is to explore the relationship among anatomy, physiology, and human motion. This course highlights ways rehabilitative efforts and technology can be used to diagnose and treat disorders of the neuromuscular system. Through both didactic and hands-on exposure at these sites, this series covers topics including:</p> <ul style="list-style-type: none"><li>• The use of musculoskeletal ultrasound to identify normal and pathological structures of joints</li><li>• The pathophysiology and treatment of traumatic brain injury and concussion.</li><li>• Anatomy of joints and techniques used to guide injections</li><li>• The use of Nerve Conduction Studies and Electromyography as a way to diagnose neuromuscular diseases.</li><li>• Basic pathology and effects of spinal cord injury, including management of spasticity</li></ul>

<b>Objectives:</b>	<ul style="list-style-type: none"> <li>• To understand the physiology of traumatic brain injury</li> <li>• To understand the anatomy of the major joints</li> <li>• To become familiar with Nerve Conduction Studies and Electromyography and understand their role as an extension of the physical examination.</li> <li>• To review nerve and muscle physiology, including muscle recruitment as demonstrated by EMG</li> <li>• To understand multimodal management of upper motor neuron spasticity including botulinum toxin injections and baclofen pump management</li> <li>• To understand the basic pathology of a spinal cord injury and related functional deficits based on level of injury</li> </ul>
<b>Pre-Requisites:</b>	None
<b>Requirements:</b>	Participate in all 4 course sessions

#### **Faculty:**

Dr. Gary Galang  
Dr. Amanda Harrington  
Dr. Kentaro Onishi  
Dr. Suehun Ho  
Dr. Jennifer Shen  
Dr. Jessica Berry

#### **January 4 (5-8 PM)**

Traumatic Brain Injury  
Location: Virtual teams meeting  
Instructor: Dr. Gary Galang

#### **January 31 (1-5PM)**

Musculoskeletal Exam and Ultrasound  
Location: Meet in Kaufmann Medical Building Suite 910 Conference Room  
Instructors: Drs. Kentaro Onishi and Suehun Ho

#### **February 8 (1-5PM)**

Electromyography and Nerve Conduction  
Location: Meet at inpatient Stroke Rehab Unit, Mercy Hospital, 6th Floor, Dining Room  
Instructor: Dr. Jennifer Shen

#### **February 25 (1-5PM)**

Spinal Cord Injury, Spasticity, Baclofen Pumps, and Botox Injections  
Location: Meet in Mercy Inpatient Spinal Cord Injury Unit Resource Room 7015  
Instructor: Drs. Amanda Harrington and Jessica Berry

#### **Special Instructions:**

Professional dress is requested for the spasticity and TBI groups. Please wear scrubs for the other two sessions. You will receive an outlook invitation from Isabel Romanowski for each of the four sessions. Please take it upon yourself to put these sessions and their locations on your own calendar as you will not receive reminders about the events.

