



# Teaching and Demonstrating Nerve Conduction Studies and Electromyography in PT Education Programs

A.J. Robinson, Physical Therapy, Ithaca College, Ithaca, NY;

J.T. Mills, Rehabilitation and Reintegration Division, Office of the Army Surgeon General, Alexandria, VA;

---

A Two-Day Preconference Course – APTA's 2012 Combined Sections Meeting  
Chicago, IL

February 7-8, 2012

Register online at [www.apta.org/CSM/registration](http://www.apta.org/CSM/registration)

Online session preselection will help you plan your CSM meeting schedule in advance.

---

## Course Overview:

This 2-day preconference program provides a conceptual understanding of nerve conduction studies (NCS) and needle electromyography (EMG) accompanied by hands-on experiences to prepare the PT academic program educator to teach and demonstrate these evaluative procedures to entry-level physical therapy students. The speakers will provide discussion and participant performance of selected motor nerve conduction and sensory nerve conduction tests. In addition, the speakers will demonstrate how to safely insert needle electrodes into skeletal muscles to examine their electrical activity at rest and during voluntary contraction in normally innervated skeletal muscles. Course faculty will discuss the similarities between a clinical neuromuscular exam and the NCS/EMG exam and the value of understanding the EMG/NCS exam to improve students' basic clinical skills. This course is specifically designed to assist educators in using the educational curriculum guidelines on electrophysiological examination and evaluation prepared by the Section on Clinical Electrophysiology and Wound Management.

Upon completion of this course, you'll be able to:

- Discuss the anatomical and physiological basis for basic nerve conduction studies and needle clinical electromyography.
- Use and adjust a modern electroneuromyograph for the purposes of the demonstration of nerve conduction studies and electromyography.
- Perform motor and/or sensory nerve conduction studies on the peripheral nerves of healthy adults.
- Safely perform needle insertion and EMG examination of superficial muscles of the upper and/or lower limbs of healthy adults.
- Discuss how the understanding of the EMG/NCS exam can improve students' basic clinical exam skills.
- Read an EMG/NCS report and interpret and integrate the results into a prognosis to select of intervention(s) for patients.
- Compare and contrast the nerve conduction and electromyographic findings.

## Preconference Course Pricing

PT/PTA Section Member: \$400

APTA PT/PTA Non-Section Member: \$500