14th Annual Electrophysiologic Clinical Specialization
Examination Prep Course

January 20-22, 2017
24 Contact Hours

Purpose: This course is designed to assist students in preparation for the Electrophysiologic Clinical Specialist (ECS) Board Certification Exam. Students who do not desire to take the board certification examination will also find this course beneficial in problem solving for their electrophysiologic practice.

Content: There will be extensive discussion and problem solving regarding pathological conditions and abnormal electrophysiologic findings.

1. Pre Course Self-Study Requirements. Prior to the 2 ½ day onsite interaction with the faculty on January 20-22, 2017, students are required to review case studies and complete pretests. At least four (4) hours will be needed for this exercise.

2. The instructors are Mark E. Brooks, PT, DSc, ECS, OCS, William D. Eisner, PT, DSc, ECS, and Richard J. McKibben, PT, DSc, ECS. All the instructors are Board Certified as Electrophysiologic Clinical Specialists (ECS). Dr. Brooks has 23 years’ experience performing electroneuromyographic (ENMG) studies, and is licensed in Kentucky (001746) and Tennessee (009910). Dr. Eisner has 20 years’ experience performing ENMG studies, and is licensed (003233) in Kentucky. Dr. McKibben has 17 years’ experience performing ENMG studies, and is licensed in Georgia (004832) and Tennessee (001746).

3. Friday, January 20, 2016. The instructors are Mark E. Brooks, PT, DSc, ECS, OCS and Richard J. McKibben, PT, DSc, ECS. Class runs from 8:00 AM till noon and 1:00 to 5:30 PM
   - 8:00 to 10 AM: Lecture, discussion and problem solving
   - 10:00 to 10:15 AM: Break
   - 10:15 to noon: Lecture, discussion and problem solving
   - Noon to 1:00 PM: lunch
   - 1:00 to 3:00 PM: Lecture, discussion and problem solving
   - 3:00 to 3:15 PM: Break
   - 3:15 to 5:30 PM: Lecture, discussion and problem solving
4. **Saturday morning, January 21, 2016.** The instructors are Mark E. Brooks, PT, DSc, ECS, OCS and Richard J. McKibben, PT, DSc, ECS. Class runs from 8:00 AM till noon.
   - 8:00 to 10 AM: Lecture, discussion and problem solving
   - 10:00 to 10:15 AM: Break
   - 10:15 to noon: Lecture, discussion and problem solving
   - Noon to 1:00 PM: lunch

5. **Saturday afternoon, January 21, 2016.** The instructor is William D. Eisner, PT, DSc, ECS. Class from 1:00 to 5:30 PM
   - 1:00 to 3:00 PM: Lecture, discussion and problem solving
   - 3:00 to 3:15 PM: Break
   - 3:15 to 5:30 PM: Lecture, discussion and problem solving

6. **Sunday morning, January 22, 2016.** The instructor is William Eisner, PT, DSc, ECS. Class runs from 8:00 AM till 12:15 PM.
   - 8:00 to 10 AM: Lecture, discussion and problem solving
   - 10:00 to 10:15 AM: Break
   - 10:15 to 12:15: Lecture, discussion and problem solving

Presentations will be in a case study format with resource materials, and study guides on topics that will include but not be limited:

**Polyneuropathy**
- Multifocal Motor Neuropathy
- Alcoholic/Toxic Neuropathy
- Amyloid Neuropathy
- Diabetic Neuropathy vs. Diabetic Amyotrophy
- Guillain-Barre Syndrome
- CIDP/CSDN
- Charcot Marie Tooth Disease / HSMN

**Myopathy**
- Polymyositis
- Inclusion Body Myositis
- Dermatomyositis
- Muscular Dystrophy

**Focal Entrapment Syndromes / Mononeuropathies**
- Carpal Tunnel Syndrome
- Ulnar Neuropathy Elbow
- Ulnar Neuropathy Wrist
- Axillary Neuropathy
- Suprascapular Neuropathy
Femoral Neuropathy
Tarsal Tunnel Syndrome
Pronator Teres Syndrome
Meralgia Paresthetica
Bell’s Palsy
Radial Neuropathy
Peroneal Neuropathy
Anterior Interosseous Syndrome

Radiculopathy
  Cervical Radiculopathy
  Lumbar Radiculopathy
  Lumbosacral Radiculopathy

Plexopathy
  Neurogenic Thoracic Outlet Syndrome
  Brachial Plexopathy
  Lumbar Plexopathy
  Lumbosacral Plexopathy

Central Disorders
  Cervical Spondylitic Myelopathy
  Amyotrophic Lateral Sclerosis
  Spinal Muscular Atrophy
  Syringomyelia
  Post-polio Syndrome

Neuromuscular Junction Disorders
  Myasthenia Gravis
  Lambert Eaton Syndrome
  Botulism

Myotonic Disorders

Evoked Potentials

Additional presentations, resource materials, and evaluation tools will be included on topics including:

  Instrumentation
  Waveform recognition
  Anatomy and physiology
  Nerve injury and repair
Learning objectives:

1. Describe how the nerve conduction study and electromyographic exam can be used delineate between a pre-ganglionic and post-ganglionic lesion and further localize the site of injury in cervical radiculopathy.

2. Summarize what history, clinical exam, nerve conduction study, and electromyographic exam data in combination suggest the presence of motor neuron diseases.

3. Compare Seddon's and Sunderland's nerve injury classifications; be able to describe in detail each level of injury, the causes, expected nerve study and electromyogram findings and pathologies that exhibit these changes.

4. Discuss the etiologies, pathophysiology, clinical examination, laboratory and other diagnostic findings and EMG/NCS findings for presynaptic and postsynaptic neuromuscular junction disorders.

5. Describe the clinical course, patient presentation, clinical examination, and expected findings from the electrophysiological examination in polyneuropathies. Recognizing that polyneuropathy is not pathognomonic for specific disease, students will further be able to recognize, characterize and classify polyneuropathies by electrodiagnostic findings.

6. Describe and discuss the clinical presentation of patients with common upper/lower extremity/cranial neuropathies as well as the clinical electrodiagnostic characteristics expected conditions including, but not limited to carpal tunnel syndrome, ulnar neuropathy at the elbow, peroneal neuropathy at the knee, axillary neuropathy, suprascapular neuropathy, anterior interosseous syndrome/pronator teres syndrome, Bell's Palsy and brachial plexopathy.