Basic Electroneuromyography Training Program

ROCKY MOUNTAIN UNIVERSITY OF HEALTH PROFESSIONS

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Curriculum

The curriculum is designed to introduce the student to the assessment and implementation of sound scientific principles in the electrophysiologic evaluation of patients with neuromuscular disabilities.

This program offers study at the beginning levels of electrophysiologic testing and knowledge of neurophysiology, pathology and pathophysiology. The program is designed to meet the scholarly and clinical needs of the beginning and intermediate electroneuromyographer. The curriculum includes neuroanatomy, neurophysiology, electromyography, motor and sensory nerve studies, late responses, pathophysiology, muscle and nerve pathology, clinical examination skills, marketing strategies, and case study presentations.

The program is designed for practitioners to continue professional work obligations while attending two intensive weeks of courses (7 days each) and completing an optional one-day of written and practical examinations.

The Basic ENMG Program is committed to the development of the specialist who can:

- Demonstrate proficiency in nerve studies of the upper and lower extremities and correctly interpret the results;
- Demonstrate proficiency in electromyography (EMG) of muscles of the cervical and lumbosacral paraspinals, upper and lower extremities, and correctly interpret the results;
- Demonstrate proficiency in F-wave and H reflex testing and correctly interpret the results;
- Integrate current best practices into the assessment for each patient;
- Modify practice strategies to optimize results.

Week 1: $2,750

August 18-24, 2008

(7 days, 9 hours per day/63 total contact hours)

ENMG 100 Anatomy and Physiology of Nerve and Muscle (9 contact hours)

Examination of neuromuscular anatomy and physiology including the comparison of the peripheral and central nervous systems with emphasis on membrane excitability, neuronal signals, motor and sensory integration, classification of nerve and muscle fibers, neuromuscular transmission, muscle contraction, anatomy of the brachial and lumbosacral

plexus and the electrophysiologic basis for electrical testing. Lecture and laboratory. Instructor: Michael Skurja, PT, DPT, ECS.

ENMG 101 Electromyography (9 contact hours)

Introduction to instrumentation including use of the oscilloscope, amplifiers, filter systems and electrodes. Introduction and analysis of electrophysiology including the dipole and quadrapole. Introduction to and analysis of normal electromyographic insertional activity, spontaneous activity and motor unit potentials. Introduction, interpretation and practice in electromyography of selected muscles from the upper extremities and the cervical paraspinals. Lecture, demonstration, and practice. Instructor: Michael Skurja, PT, DPT, ECS

ENMG 201 Electromyography (9 contact hours)

Introduction of analysis of abnormal insertional activity, spontaneous activity and motor unit potentials. Introduction and practice in electromyography of selected muscles from the upper extremities including the, sternocleidomastoid and upper trapezius. Review of techniques from ENMG 101. Lecture, demonstration, and practice. Instructor: Michael Skurja, PT, DPT, ECS.

ENMG 102A Nerve Studies (9 contact hours)

Introduction to basic instrumentation including use of the oscilloscope, amplifiers, filter systems and electrodes. Introduction to nerve studies. Introduction and performance of motor conduction studies of the median nerve recording from the thenar eminence and from the second lumbrical. Introduction and performance of sensory conduction studies of the median nerve recording from the thumb, index, middle and ring fingers. Discuss pathology of the median nerve and how it relates to nerve studies. Lecture, demonstration and practice. Instructor: Darin White, PT, DPT, ECS

ENMG 102B Nerve Studies (9 contact hours)

Introduction and performance of motor conduction studies of the ulnar nerve recording from the hypothenar eminence and the first dorsal interosseous muscle, and ulnar segmental studies across the elbow. Introduction and performance of sensory conduction studies of the ulnar nerve recording from the ring and little fingers, and ulnar sensory studies across the elbow. Discussion of pathology of the ulnar nerve and how it relates to nerve studies. Lecture, demonstration and practice. Instructor: Darin White, PT, DPT, ECS

ENMG 102C Nerve Studies (9 contact hours)

Introduction and performance of motor conduction studies of the anterior interosseous (median), and radial nerves. Introduction and performance of sensory conduction studies of the radial nerve. Introduction and performance of F-wave studies of the median and ulnar nerves. Discussion of pathology. Practice studies from ENMG 102A-C. Lecture, demonstration and practice. Instructor: Richard P. Nielsen, PT, DHSc, ECS

ENMG 102D Nerve Studies (9 contact hours)

Introduction and performance of motor conduction studies of the suprascapular, axillary, and spinal accessory nerves. Introduction and performance of sensory conduction studies of the lateral and medial antebrachial cutaneous nerves. Discussion of pathology. Practice studies from ENMG 102A-D. Lecture, demonstration and practice. Instructor: Richard P. Nielsen, PT, DHSc, ECS

Week 2: $2,750

December 8-14, 2008

(7 days, 9 hours per day/63 total contact hours)

ENMG 200 Pathology (9 contact hours)

Overview of nerve and muscle pathology including demyelination, axonal degeneration, axonal sprouting, axonal regeneration and classification of nerve injuries. Problem solving and correlation of normal and abnormal electromyography (EMG) and nerve conduction studies (NCS) data with specific pathological conditions including entrapment syndromes of the peripheral nerves and plexopathies. Lecture and discussion. Instructor: David Greathouse, PT, PhD, ECS

ENMG 301 Electromyography (9 contact hours)

Introduction and practice in electromyography of muscles from the lower extremities and lumbosacral paraspinals. Review of techniques from ENMG 101 and ENMG 201. Lecture, demonstration, and practice. Instructor: Michael Skurja, Jr., PT, DPT, ECS

ENMG 204A Nerve Studies (9 contact hours)

Introduction, performance and interpretation of motor conduction studies of the fibular (peroneal) nerve (traditional study recording from the extensor digitorum brevis and special study recording from the anterior tibialis). Introduction, performance and interpretation of sensory conduction studies of the superficial peroneal nerve. Introduction and performance of the peroneal F-wave testing. Evaluation of reports that integrate pathology with testing. Discussion of mononeuropathies involving the lower extremities. Lecture, demonstration and practice. Instructor: Lisa DePasquale, PT, DSC, ECS

ENMG 204B Nerve Studies (9 contact hours)

Introduction, performance and interpretation of motor conduction studies of the tibial (traditional study and special studies of the medial and lateral plantar) nerve. Introduction, performance and interpretation of sensory conduction studies of the medial nerve. Evaluation of reports that integrate pathology with testing. Discussion of mononeuropathies involving the lower extremities. Lecture, demonstration and practice. Instructor: Lisa DePasquale, PT, DSC, ECS

ENMG 204C Nerve Studies (9 contact hours)

Introduction, performance and interpretation of motor conduction study of the femoral nerve. Introduction, performance and interpretation of sensory conduction studies of the sural and saphenous nerves. Introduction, performance and interpretation of the tibial H-reflex test. Evaluation of reports that integrate pathology with testing. Discussion of mononeuropathies involving the lower extremities. Lecture, demonstration and practice. Instructor: Darin White, PT, DPT, ECS

ENMG 300 Pathology (9 contact hours)

Problem solving and correlation of normal and abnormal electromyography (EMG) and nerve conduction studies data with radiculopathies (cervical and lumbar), polyneuropathies (diabetic and alcoholic), myopathies, plexopathies and motor neuron disease. Review of EMG reports. Lecture and discussion. Instructor: Michael Skurja, Jr., PT, DPT, ECS

ENMG 304 Marketing, Medico-legal Issues, Administrative Issues and Pathology Review. (9 contact hours)

Introduction to marketing, pertinent medico-legal and administrative issues, report generation and formatting, patient examination and review of specific pathology. Instructor: Richard P. Nielsen, PT, DHSc, ECS

Examination for Certification
Varying Dates: $700

(8 contact hours)

To obtain a Certification in Basic Electroneuromyography students are required to pass an optional one-day written and practical examination that will be administered at Rocky Mountain University of Health Professions, Provo, Utah. The examination is typically offered 3 to 4 times per year

ENMG 400 Written Examination (4 contact hours)

The written examination is an essay, multiple choice and fill in the blanks format. A calculator will be required. A maximum of 3 hours will be permitted for the test.

ENMG 401 Practical Examination (4 contact hours)

The practical examination will cover electromyography and nerve studies. Each student will be permitted a maximum of 4 hours to complete the examination.