



# NATIONAL ACADEMY OF NEUROPSYCHOLOGY

## NEUROPSYCHOLOGY OF EPILEPSY AND EPILEPSY SURGERY SYLLABUS

This course will systematically review the major seizure disorders and syndromes. Students will learn how diagnostic tests, such as EEG and structural neuroimaging, are used in epilepsy evaluations. In addition, leading treatment options, including pharmacologic therapies and surgery, will be reviewed. Special emphasis will be placed on the known cognitive and behavioral consequences of specific epilepsy syndromes and antiepileptic drugs. Discussion of the role of neuropsychological assessment in epilepsy diagnosis and treatment will include pre- and post-surgical cognitive evaluation, cortical stimulation mapping, functional neuroimaging, and the intracarotid amobarbital (Wada) procedure. The cognitive and psychiatric disorders in epilepsy (including psychogenic nonepileptic seizures) will be considered.

### **COURSE DIRECTOR**

Gregory P. Lee, Ph.D.  
Professor of Neuropsychology & Director of Training  
Barrow Neurological Institute  
Phoenix, AZ

### **REQUIRED TEXT**

Lee, G.P. (2010). *Neuropsychology of Epilepsy and Epilepsy Surgery*. New York: Oxford University Press (ISBN-13: 978-0-19-537250-2) (ISBN-10: 0-19-537250-6)

Students should purchase the textbook from the vendor of their choice immediately after registration.

(Supplemental readings [not required] may also be offered throughout the course).

### **DURATION & CREDITS**

This is an 8-week online learning experience that combines assigned textbook reading, online material, supplemental discussion questions based on the readings, and student-instructor interactions via an online discussion board. The course is divided into four learning modules, each approximately 2 weeks in duration.

Students who successfully complete all course requirements receive 16 CE credits for psychologists.

The National Academy of Neuropsychology is approved by the American Psychological Association to sponsor continuing education for psychologists. The National Academy of Neuropsychology maintains responsibility for this program and its content.

Instructional Level: Advanced

## **COURSE FEES**

NAN Members: \$240

Non-members: \$400

## **WORKLOAD**

The DistanCE program expects that a MINIMUM workload of 2 to 3 hours of work per week is necessary to keep up with the course. For some who have had less exposure to clinical neuropsychology in a medical setting, more time may need to be devoted to keeping up with the course.

## **LEARNING OBJECTIVES**

Upon completion of the course, the learner will:

### **Module 1**

1. Describe differences between seizures and epilepsy.
2. Compare and contrast traditional classification of seizure disorders and epilepsy syndromes.
3. List the major partial and generalized epilepsies.
4. Identify and describe the primary causes of seizures and epilepsy and the relative importance and frequency of each for neuropsychologists.

### **Module 2**

1. Describe how different medical diagnostic processes are used to determine type of treatment.
2. List the major therapeutic and adverse physical and cognitive side effects of antiepileptic drugs.
3. Describe the special considerations involved in antiepileptic drug therapy for woman and children.
4. List the issues involved in suicidality and antiepileptic drug treatment.
5. Compare and contrast the major surgical treatment options for refractory epilepsy.

### **Module 3**

1. Describe the issues involved in neuropsychological test selection in epilepsy and epilepsy surgery patients.
2. List the major factors that may confound cognitive test interpretation in epilepsy patients.
3. Describe the cognitive deficits commonly seen in epilepsy.
4. Compare and contrast differences between patients with chronic epilepsy and psychiatric patients without epilepsy across the major psychological disorders.
5. List the epilepsy-specific psychological disorders.

## **Module 4**

1. List the purposes of neuropsychological assessment of epilepsy surgery patients.
2. Describe the important components of the medical and psychological evaluation for epilepsy surgery.
3. Compare the important medical and psychological factors in predicting prognosis after epilepsy surgery.
4. Describe how neuropsychologists conduct intracarotid amobarbital (Wada) evaluations and electro-cortical mapping studies of cognitive functions.

## **COURSE REQUIREMENTS**

To pass course requirements and earn continuing education credits or certificates of completion students must:

- complete all multiple choice posttest examinations, earning a cumulative percentage >74% correct and
- write a response to at least three (3) of the online Discussion Questions selected from any of the four modules and post these responses to the online course discussion forum.

The DistanCE online system automatically records performance on multiple-choice exams, which may be taken multiple times.

## **SCHEDULE**

### **Week 1:**

Introduction to Course

Review of Course Syllabus and Requirements

Technology Issues/Getting on the DistanCE Website

Begin Module 1: Classification of Epilepsy Disorders and Syndromes and Medical Diagnostic Work-up

For Epilepsy Diagnosis

Textbook (Lee): Chapters 1 & 2: pp. 3-38

### **Week 2:**

Complete Module 1: Classification of Epilepsy Disorders and Syndromes and Medical Diagnostic Work-up For Epilepsy Diagnosis

Textbook (Lee): Chapters 3 & 4: pp. 39-72

View Epilepsy Foundation DVD, How to Recognize & Classify Seizures and Epilepsy

Complete Module 1 Quiz

### **Week 3:**

Begin Module 2: Medical & Surgical Treatment of Seizure Disorders

Textbook (Lee): Chapter 5: pp. 73-93

**Week 4:**

Complete Module 2: Medical & Surgical Treatment of Seizure Disorders

Textbook (Lee): End of Chapter 11: pp. 224-246

Complete Module 2 Quiz

**Week 5:**

Begin Module 3: Neuropsychological Assessment and Cognitive and Psychiatric Disorders in Epilepsy

Textbook (Lee): Chapter 6: pp. 95-131

**Week 6:**

Complete Module 3: Neuropsychological Assessment and Cognitive and Psychiatric Disorders in Epilepsy

Textbook (Lee): Chapters 7 & 8: pp. 133-161

Complete Module 3 Quiz

**Week 7:**

Begin Module 4: Neuropsychological Contributions to Epilepsy Surgery

Textbook (Lee): Chapters 9 & Beginning of 10: pp. 165-196

**Week 8:**

Complete Module 4: Neuropsychological Contributions to Epilepsy Surgery

Textbook (Lee): Chapters End of 10 & Beginning of 11: pp. 196-224

Complete Module 4 Quiz

Complete Course Evaluation