

October 8-11, 2009: Electrophysiology: Auditory (AUD7120)

Course Instructor:

Charles Berlin, Ph.D.,
Professor Emeritus, LSU School of Medicine, Kresge Institute, New Orleans, LA,
Adjunct Professor, Audiology, Nova Southeastern University.
Research Professor, Communication Sciences and Disorders, University of South Florida

Charles I. Berlin is a clinic and research trained audiologist with a Doctor of Philosophy (PhD). His work has been integral in both audiology and otolaryngology fields. Berlin, now retired, was professor at Louisiana State University School of Medicine, Department of Otolaryngology and Bio communication, and director of the Kresge Hearing Research Laboratory of the South in New Orleans.

He is the recipient of the American Academy of Otolaryngology, Head and Neck Surgery's highest award, the Presidential Citation; the recipient of the Frank J. Kleffner Award for Lifetime Clinical Achievement from ASHA; and the recipient of the Lifetime Career Research Award from the American Academy of Audiology. He was also a founding Member of the Advisory Board to the National Institute of Deafness and Other Communication Disorders.

EVENT CONTENT DETAILS

Target Audience: Audiologists and Audiologic Physicians

Expected No. of delegates: 30

Students will study cochlear physiologic and auditory neurophysiologic evaluation procedures, including evoked responses for all latencies and otoacoustic emissions. Interpretation of test results will be discussed in relation to underlying anatomy and physiology.

Objectives: The objectives to be met in acquiring this goal are as follows:

After successful completion of the course, students will:

1. Describe the endocochlear, cochlear, compound action and summing potentials.
2. Describe the anatomical structures that contribute to various evoked potentials.
3. Describe the principles of operation of otoacoustic emissions and evoked potentials systems, and explain how manipulating stimulus and acquisition parameters affects the responses obtained.
4. Interpret the results of otoacoustic emissions tests
5. Describe OAE and ABR findings typical of auditory neuropathy.
6. Describe the use of electrophysiologic tests in the assessment of central nervous system function and describe the use of these tests in the evaluation of auditory processing.

7. Compare and contrast the various exogenous vs. exogenous responses in auditory processing assessment
8. Compare and contrast the various methods of attaining estimates of hearing sensitivity using evoked potentials.
9. Explain how non-pathologic factors affect the ABR.
10. Describe the MLS ABR, and stacked ABR techniques.

Method of event evaluation: BAA evaluation form

Course Schedule:

Day One

9-10 AM	Introduction & Discussion of Course Objectives
10am-Noon	Components of Auditory Physiology
1pm-2pm	Cochlear Physiology / Auditory neurophysiology
2pm-3pm	Cochlear Physiology / Auditory Neurophysiology (continued)
3pm-4pm procedures	Thinking about evoked potentials and otoacoustic emissions; clinical use of
4pm-5pm	Case studies and the case history

Day Two

9am-11am	Exogenous and Endogenous evoked potentials
11am-Noon	The middle and late latency responses
1pm-2:30pm	Event related potentials, the P300 response, Mismatch Negativity
2:45-5:00pm Case studies	Outcome Measures; assessing auditory processing; neuropathologic findings;

Day Three

- 9am-Noon The early evoked potentials
- 1pm-3pm Technical aspects of the ABR
- 3pm-5pm Threshold estimates, clinical findings,

Day Four

- 9am-Noon Neurological Testing
- 1pm-3pm Hot topics: Auditory neuropathy/dys-synchrony
- 3pm-5pm Grand Rounds Case Presentations

