Instructor: Dr. Steve Oshrin  
Office: Speech and Hearing 119  
Telephone: 601-266-6842  
Class time: M-W 11:00 – 12:15

Instructional Objectives:

Students in this class will:

- learn about the relationship of auditory anatomy and physiology to the electroacoustic measurement of hearing
- learn about the instrumentation used in electroacoustic measurements of hearing
- learn about the procedures, methods and appropriate use of electroacoustic measurements of hearing
- learn to interpret test results and implement appropriate follow-up actions

Instructional Outcomes Assessment

Meeting the instructional objectives may be determined on the basis of:

- class participation
- interpreting test results
- periodic quizzes
- exam scores and a final examination

Remediation: students who are not progressing satisfactorily in the course may be required to participate in remedial activities, instruction and/or assignments.

This course is designed to meet the following certification standards for the Certificate of Clinical Competence in Audiology from the American Speech-Language-Hearing Association (2012):

**Standard IV-A: Foundations of Practice**

The applicant must have knowledge of:

A3. Normal aspects of auditory physiology and behavior over the life span
A9. Patient characteristics (e.g., age, demographics, cultural and linguistic diversity, medical history and status, cognitive status, and physical and sensory abilities) and how they relate to clinical services
A10. Pathologies related to hearing and balance and their medical diagnosis and treatment
A11. Principles, methods, and applications of psychometrics
A13. Instrumentation and bioelectrical hazards
A14. Physical characteristics and measurement of electric and other non-acoustic stimuli
A15. Assistive technology
A19. Legal and ethical practices (e.g., standards for professional conduct, patient rights, credentialing, and legislative and regulatory mandates)
A20. Health care and educational delivery systems
A21. Universal precautions and infectious/contagious diseases
A24. The use of instrumentation according to manufacturer’s specifications and recommendations
A25. Determining whether instrumentation is in calibration according to accepted standards
A26. Principles and applications of counseling
A27. Use of interpreters and translators for both spoken and visual communication

**Standard IV-B: Prevention and Identification**
The applicant must have the knowledge and skills necessary to:
B1. Implement activities that prevent and identify dysfunction in hearing and communication, balance, and other auditory-related systems
B3. Screen individuals for hearing impairment and disability/handicap using clinically appropriate, culturally sensitive, and age- and site-specific screening measures

**Standard IV-C: Assessment**
The applicant must have knowledge of:
C1. Measuring and interpreting sensory and motor evoked potentials, electromyography, and other electrodiagnostic tests for purposes of neurophysiologic intraoperative monitoring and cranial nerve assessment
The applicant must have knowledge and skills in:
C2. Assessing individuals with suspected disorders of hearing, communication, balance, and related systems
C3. Evaluating information from appropriate sources and obtaining a case history to facilitate assessment planning
C4. Performing otoscopy for appropriate audiological assessment/management decisions, determining the need for cerumen removal, and providing a basis for medical referral
C5. Conducting and interpreting behavioral and/or electrophysiologic methods to assess hearing thresholds and auditory neural function
C8. Evaluating auditory-related processing disorders
C9. Evaluating functional use of hearing
C10. Preparing a report, including interpreting data, summarizing findings, generating recommendations, and developing an audiologic treatment/management plan
C11. Referring to other professions, agencies, and/or consumer organizations

Other readings (written and/or internet) to be assigned as necessary.

**Grading:** Grading will be based on quiz scores, exam scores, practical exams, class discussions and participation, and attendance. Make-up exams are at the discretion of the instructor and require a physician’s excuse. Each quiz will be worth 10 points, each exam will be worth 100 points and the final exam will be worth will be worth 150 points.

The total number of points you earn in this class will be divided by the total
number of possible points. That percentage will be used to determine your
grade according to the following scale:

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<tr>
<th>Percent</th>
<th>Grade</th>
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<tr>
<td>90-100</td>
<td>A</td>
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<td>81-89</td>
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<td>71-80</td>
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<td>65-70</td>
<td>D</td>
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<td>&lt;65</td>
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**Attendance:** You are allowed 3 absences without penalty. For absences in excess of 3, 5% will be deducted from your final grade for each cut. Please be on time for class!

**Office hours:** My office is located in room 119. I am generally available most of the day; feel free to drop in to see me or make an appointment through the departmental secretary.

**Knowledge and Skills**

In this course you will acquire knowledge (areas of content that you can recall, relate and use) and skills (the learned capacity to do some task). Your acquisition of knowledge and skills will be assessed during the course of the semester (through formative assessment) and at the end of the semester (through summative assessments). Formative assessments will measure your progress during the course of the semester; the summative assessment will determine if you have acquired the knowledge and skills expected of students completing the course. Students who are not progressing satisfactorily may be provided with remedial activities or assignments.

**Learning Outcomes**

Learning outcomes are behaviors that are observable and measurable; at the completion of this course you will be able to:

- identify the structures in the auditory system that contribute to the evoked responses for hearing
- discuss the evolution of electrophysiologic measurements of hearing
- describe the diagnostic uses for evoked response audiometry
- describe the methodology used to obtain evoked responses from the auditory system
- acquire evoked responses from the auditory system
- analyze the evoked responses and assess the diagnostic implications of the responses

**Tentative Topic Listing**

1. Introduction
   a. role of site-of lesion testing in oto-neurology
   b. use of evoked response audiometry as a objective test of hearing
   c. review of anatomy/physiology of auditory system
   d. effects of pathologies on auditory system
II. Evolution and Development of evoked response audiometry

III. Selection and administration of appropriate ERA tests
   a. determining appropriate tests
   b. selection of test parameters
   c. preparation of subject

IV. Interpretation of test results

V. Reporting test findings

Additional Information

USM Academic Honesty Policy: http://www.usm.edu/student-handbook/academic-honesty

AMERICAN WITH DISABILITIES ACT (ADA):
If a student has a disability that qualifies under the American with Disabilities Act (ADA) and requires accommodations, he/she should contact the Office for Disability Accommodations (ODA) for information on appropriate policies and procedures. Disabilities covered by ADA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact ODA if they are not certain whether a medical condition/disability qualifies.

Mailing address:
118 College Drive #8586, Hattiesburg, MS 39406-0001;
Telephone (601) 266-5024; TTY: (601) 266-6837; Fax: (601) 266-6035

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