Course Syllabus for CS&D 860, Fall 2018

Course Subject, Number and Title
CS&D 860: Physiological Assessment in Audiology II

Instructor: Cynthia G. Fowler
Fall, 2018

Credits:
Credits: 2 semester hours

Format: 1 lecture/discussion session per week

Canvas Course URL  www.learnuw.wisc.edu

Course Designations and Attributes
Required course for the AU.D. program

Meeting Time and Location  Class meets from 2:30-4:10 PM on Mondays

Instructional Mode  Face-to-face.

How Credit Hours are met by the Course

Traditional Carnegie Definition – One hour (i.e. 50 minutes) of classroom or direct faculty/instructor instruction and a minimum of two hours of out of class student work each week over approximately 15 weeks, or an equivalent amount of engagement over a different number of weeks.

INSTRUCTOR

Instructor Title and Name
Cynthia Fowler, Ph.D.

Instructor Availability
- One hour before class, whenever my office door is open, or by appointment
- We will be using Learn@UW for the class. I will post announcements on the “News” section of the course. Be sure to check it regularly.
OFFICIAL COURSE DESCRIPTION

Course Description
Advanced study of physiological measures used by audiologists in threshold and diagnostic evaluations, including acoustic immittance, middle and long latency auditory evoked potentials, and P300, and MMN. Course includes an introduction to evaluation of the balance system.

Requisites
Graduate/professional standing
Grad st, cons inst, Com Dis 850, 851, 852, 853, 858, 859, con reg in 861

LEARNING OUTCOMES

Course Learning Outcomes
- By the end of the class, the student will be able to do the following:
- Describe advanced concepts of middle ear analysis, including multifrequency tympanometry
- Describe when these methods are appropriate in clinical assessment.
- Describe some of the advanced auditory evoked potentials, including the middle and late auditory evoked potentials and the cognitive potentials
- Explain when and why these physiological potentials are useful in clinical assessments

GRADING

Exams = 75% @ 25% each, and Presentation @ 25%
REQUIRED TEXTBOOK, SOFTWARE & OTHER COURSE MATERIALS

Required texts:


Recommended texts (optional):

- Wiley T.L. & Fowler C.G. *Acoustic Immittance Measures in Clinical Audiology: A Primer*, Singular Publishing Group, Inc., San Diego, CA, 1997. (Relevant chapters will be posted). Students typically like this book as an overview of tympanometry, but it is getting old. If you do want to purchase it, you can find cheap books online.
- Hunter L.L. and Shanaz N. 2014. *Acoustic Immittance Measures*. Plural Publishers, Inc San Diego. This book does overlap quite a bit of the information that is in the Katz book, so it isn’t required that you purchase it. I will post some of the relevant chapters and you can let me know if they are helpful.
- Additional readings accompany each topic.

EXAMS, QUIZZES, and OTHER MAJOR GRADED WORK

- The first quiz is online, in class, and closed book.
- The second and third quizzes are take-home, online, and open book.

HOMEWORK & OTHER ASSIGNMENTS

- Assignments and tests are to be submitted online

RULES, RIGHTS & RESPONSIBILITIES

- See the Guide’s to *Rules, Rights and Responsibilities*

ACADEMIC INTEGRITY

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison’s community of scholars in which everyone’s academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in
disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to studentconduct.wiscweb.wisc.edu/academic-integrity/.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

McBurney Disability Resource Center syllabus statement: “The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.” http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php

DIVERSITY & INCLUSION

Institutional statement on diversity: “Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.” https://diversity.wisc.edu/

Course content and meeting dates.

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<th>Date</th>
<th>Topic</th>
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<td>Sept 10</td>
<td>COURSE LOGISTICS, PRINCIPLES OF AI, and VECTOR TYMPANOMETRY</td>
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ACOUSTIC IMMITTANCE: VECTOR TYMPANOMETRY


Sept 17. ACOUSTIC IMMITTANCE: MULTIFREQUENCY, COMPONENT TYMPANOMETRY


**Sept 24. ACOUSTIC IMMITTANCE: ACOUSTIC REFLEXES**


**Oct 1. Acoustic Reflectance**


Oct 8 MFT and Reflectance Cases

Oct 15 Quiz 1 (in class)

Oct 22. INTRODUCTION TO ADVANCED AEP


Oct 29. AUDITORY MIDDLE AND LATE POTENTIALS


Kraus N, McGee TJ, & Comperatore (1989). MLRs in children are consistently present during wakefulness, stage 1, and REM sleep. Ear Hear, 17:419-429

Galambos, Makeig, & Talmachoff, Proc Natl Acad Sci 78:2643-2647


**Nov 5. CORTICAL EVENT RELATED POTENTIALS (MMN AND P300)**


**Nov 12. AUDITORY STEADY STATE POTENTIALS**


**Quiz 2 (online)**

**Nov 19. STUDENT PRESENTATIONS**: Tympanomtry-multifrequency; resonance; norms in special populations

**Nov 26. STUDENT PRESENTIONS**: Middle ear measures: energy reflectance; measures in disorders; specific applications of acoustic reflexes
PRESENTATIONS:

You will make one presentation (20 minutes) to the class that investigates in more depth one of the topics covered in class.

Your responsibilities regarding the presentation are the following:

Choose your topic and have it approved by October 1.

One week prior to the presentation, you will email a draft copy of your powerpoint presentation to the instructor. I will review and comment on the draft and get it back to you for corrections, suggestions, etc. At this time, also send me by email 1 peer-reviewed article on your topic. These will be posted for the class members, who should read the articles and be prepared to engage in a discussion of the topic on the day of presentation.

You will email to the class and me the finished presentation in NO LATER than 5 PM the day before the presentation.

Members of the class should print out the presentations and have them ready by the start of the class.

The presentation should contain the following elements: Title page, Outline, Short literature review, case (if appropriate), and “take home points”, and references. References must be from the primary, peer-reviewed literature, although you may use illustrations from the web.