

University of Florida
College of Public & Health Professions Syllabus
SPA 6311 MEDICAL AUDIOLOGY (3 credits)
Spring 2021

Delivery Format: In-Class
Course: E-Learning: Canvas

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Office Hours: By appointment only
Preferred Course Communications: email

PURPOSE AND OUTCOME

Course Overview

This course explores the role of audiologist in medical contexts and the most common disorders encountered there. Practical information about etiology, audiometric findings of these disorders, as well as appropriate referral and management will be discussed. The class also explores the collaboration between audiologists and medical professionals.

Relation to Program Outcomes

The content of this course is designed to help you meet the following CCC-A Standard IV: Knowledge and Skills Outcomes and will be assessed through the assignments and exams.

- A1. Genetics, embryology and development of the auditory and vestibular systems, anatomy and physiology, neuroanatomy and neurophysiology, and pathophysiology of hearing and balance over the life span**
- A2. Effects of pathogens, and pharmacologic and teratogenic agents, on the auditory and vestibular systems**
- A3. Language and speech characteristics and their development for individuals with normal and impaired hearing across the life span**
- A4. Principles, methods, and applications of acoustics, psychoacoustics, and speech perception, with a focus on how each is impacted by hearing impairment throughout the life span**
- A5. Calibration and use of instrumentation according to manufacturers' specifications and accepted standards**
- A6. Standard safety precautions and cleaning/disinfection of equipment in accordance with facility-specific policies and manufacturers' instructions to control for infectious/contagious diseases**
- A7. Applications and limitations of specific audiologic assessments and interventions in the context of overall client/patient management**
- A18. The role, scope of practice, and responsibilities of audiologists and other related professionals**

B2. Establishing relationships with professionals and community groups to promote hearing wellness for all individuals across the life span

C1. Gathering, reviewing, and evaluating information from referral sources to facilitate assessment, planning, and identification of potential etiologic factors

C2. Obtaining a case history and client/patient narrative

C3. Obtaining client/patient-reported and/or caregiver-reported measures to assess function

C4. Identifying, describing, and differentiating among disorders of the peripheral and central auditory systems and the vestibular system

C5. Providing assessments of tinnitus severity and its impact on patients' activities of daily living and quality of life

C6. Providing assessment of tolerance problems to determine the presence of hyperacusis

C7. Selecting, performing, and interpreting a complete immittance test battery based on patient need and other findings; tests to be considered include single probe tone tympanometry or multifrequency and multicomponent protocols, ipsilateral and contralateral acoustic reflex threshold measurements, acoustic reflex decay measurements, and Eustachian tube function

C8. Selecting, performing, and interpreting developmentally appropriate behavioral pure-tone air and bone tests, including extended frequency range when indicated

C9. Selecting, performing, and interpreting developmentally appropriate behavioral speech audiometry procedures to determine speech awareness threshold (SAT), speech recognition threshold (SRT), and word recognition scores (WRSs); obtaining a performance intensity function with standardized speech materials, when indicated

C10. Evaluating basic audiologic findings and client/patient needs to determine differential diagnosis and additional procedures to be used

C11. Selecting, performing, and interpreting physiologic and electrophysiologic test procedures, including electrocochleography, auditory brainstem response with frequency-specific air and bone conduction threshold testing, and click stimuli for neural diagnostic purposes

C12. Selecting, performing, and interpreting otoacoustic emissions testing

C13. Selecting, performing, and interpreting tests for nonorganic hearing loss

C14. Selecting, performing, and interpreting vestibular testing, including electronystagmography (ENG)/videonystagmography (VNG), ocular vestibular-evoked myogenic potential (oVEMP), and cervical vestibular evoked myogenic potential (cVEMP)

Course objectives

Students completing this course will demonstrate knowledge of:

- 1) Administer a focused case history with the goal of correctly identifying and/or clarifying the patient's otologic problem.
- 2) Evaluate the areas of audiologic practice most subject to error, the audiologic errors of gravest importance, and practices which should be undertaken to prevent these errors.
- 3) Compare the prevalence of hearing disorders in children versus adults.
- 4) Project the potential signs and symptoms that a person would experience based on a stated lesion or disorder of the hearing mechanism.

- 5) Differentially diagnose disease-related causes of hearing impairment based on signs and symptoms reported in a case history.
- 6) Demonstrate how an audiologist can assess genetic factors that may play a role in hearing loss, while taking a case history.
- 7) Differentially diagnose drug-related causes of hearing impairment based on signs and symptoms reported in a case history.

Instructional Methods

Lectures, readings, course assignments, quizzes and exams

Quiz and Exam Taking Policy

Exams and quizzes will be given in class in paper and pencil format. Quiz dates and topics are designated on the syllabus. Exams are closed book and will be administered and proctored by the course instructor. The final exam will be cumulative.

Course Materials and Technology

Required Textbook:

Musiek, F. *Disorders of the Auditory System*. San Diego: Plural Publishing, 2012.

Other required readings will be articles listed for the class and will be accessible online via Canvas

Date	Topic	Readings
01/15	Course overview: Syllabus Course assignments	
01/22	Hereditary and Congenital Hearing Loss	Chapter 2 (Musiek Textbook) PLEASE REVIEW, I will not be reviewing anatomy Chapter 9 (Musiek)
01/29	Medical Terminology Audiologic, Vestibular and Radiologic Procedures	Chapter 3 (Musiek)
02/05	Outer Ear Disorders	Chapter 4 (Musiek) pages 105-109 Classification and diagnosis of ear malformations.pdf (CANVAS)
02/12	<i>Quiz 1: Outer Ear</i>	https://www.audiology.org/publications/guidelines-and-standards/infection-control-audiological-practice

	Ear canal examination and Cerumen Management Case Analysis	JAAA_Cerumen management professional issues and techniques.pdf (CANVAS) See videos in CANVAS for extra material
02/19	Middle Ear Disorders	Chapter 4 Pages 109-168
02/26	<i>Quiz: Middle ear</i> Inner Ear Disorders	Chapter 5 (Musiek)

03/05	MIDTERM	
03/12	Auditory nerve, Ototoxicity, TMJ	Chapter 6 (Musiek) Supplemental reading: Konrad-Martin, Dawn, Reavis, Kelly, McMillan, Garnett, Helt, Wendy, and Dille, Marylin. (2015). <i>Proposed Comprehensive Ototoxicity Monitoring Program for VA Healthcare</i> . Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4635678/ Poling, Gayla L. (2016). The five w's of ototoxicity monitoring: who, what, where, and when. Retrieved from https://www.mayo.edu/documents/poling-handout/doc-20274848
03/19	Vestibular Part 1, II, III	No readings required: For additional resources please contact me
03/26	NO CLASS	
04/02	<i>Quiz 3: Vestibular</i> Pediatric Vestibular ***If we do not get through 3/19 lecture, we will continue.	Supplemental Readings: <ul style="list-style-type: none"> • Pediatric Vestibular Disorders. Retrieved from https://vestibular.org/pediatric-vestibular-disorders (Links to an external site.) • McCaslin, Devlin L. (2016, June 13). 20Q: Pediatric Vestibular Disorders and the Role of the Audiologist. Retrieved from https://www.audiologyonline.com/a

		<p>rticles/20q-pediatric-vestibular-disorders-and-17145 (Links to an external site.)</p> <ul style="list-style-type: none"> • Valente, Maureen, and McCaslin, Devin L. (2011, March 1). Vestibular Disorders and Evaluation of the Pediatric Patient. Retrieved from https://leader.pubs.asha.org/article.aspx?articleid=2279008 (Links to an external site.) • Valente, Maureen, and McCaslin, Devin L. (2011, September 21). Vestibular Evaluation of the Pediatric Patient. Retrieved from Vestibular Disorders & Evaluation of the Pediatric Patient
04/09	<p><i>Quiz 4: Pediatric Vestibular</i></p> <p>Central Vestibular Disorders Auditory Hallucinations Auditory and Vestibular Wrap-up</p>	Chapter 7 and 8 (Musiek)
04/16	Class Presentations (In person or zoom?? Class vote)	
04/23	FINAL EXAM BINDER NOTEBOOK DUE	

Topic schedules are subject to change.

For technical support for this class, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

COURSE ASSIGNMENTS

Hearing Disorders Project. At the beginning of the semester, each student will select one hearing disorder for this project. The student will research the disorder and present the information in a presentation format (see course calendar for dates). Presentations will be uploaded to canvas. Each student will then also create an imagined patient with the hearing disorder, identifying the results from a test battery. The instructor will offer feedback throughout the semester. Students are expected to incorporate feedback to fully develop the individual projects.

Presentations should be about 20 minutes long and cover:

- 1) a definition of the condition,
- 2) a description of its incidence and/or prevalence, if known,
- 3) a description of how patients with this condition present (their major complaint and history),

- 4) diagnostic tests that are used for this condition and what results are expected from them (include standard audiometric test battery)
- 5) treatment options for patients with this condition

Resource Binder/Notebook. As a culminating project, students will create a resource guide specific to the topics of this class. This guide will serve as a resource in future clinical practice, studying for your praxis exam, and assist you in studying for the course. Your binder or notebook should be organized for ease of reading. Your binders/notebooks should include the following information and include 3-4 pathologies for each bullet point. Please include the normative data for each diagnostic test that is used to diagnose the pathology. This can be in hard copy form or electronically. If you choose to complete electronically please use a word document or PPT style and send me the PDF.

- Outer ear anatomy and pathology, test results and/or observations expected for those pathologies
- Middle ear anatomy, pathology, diagnostic test and expected results for those pathologies
- Inner Ear anatomy, pathology, diagnostic test and expected results for those pathologies
- Vestibular anatomy, anatomy, pathology, diagnostic test and expected results for those pathologies
- Central auditory system anatomy, retro-cochlear pathology, and expected results for those pathologies

ACADEMIC REQUIREMENTS AND GRADING

Requirement	Date	% of final grade
Hearing Disorders Project		10%
Resource Binder/Notebook		10%
Participation and Professionalism		5%
Midterm Exam		25%
Quizzes		15%
Final Exam		35%

Point system used (i.e., how do course points translate into letter grades).

Letter Grade	A	A-	B+	B	B-	C+	C	D+	D	D-	E
Percentage	93-100	90-93	87-90	83-87	80-82	77-80	70-77	67-69.9	63-67	60-62	<60
Points	925+	895-924	865-894	825-864	795-824	765-794	700-764	665-699	625-664	601-624	<600
Grade points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.33	1.0	0.67	0.0

For detail on the meaning of letter grades and university policies related to them, see the Registrar’s Grade Policy regulations at:

<http://gradcatalog.ufl.edu/content.php?catoid=8&navoid=149>

Exam Policy

Exams will be given in class in paper and pencil format. Exams are closed book will be administered and proctored by the course instructor. The final exam will be cumulative.

Policy Related to Make up Exams or Other Work

In general make-up exams will not be given. If you have an extenuating circumstance I must be contacted ahead of time so we can decide. Typically, an exam would be given before the actual exam date if you could not take it on the assigned day. You will not be given the same exam as the class for any approved makeup exams.

Policy Related to Required Class Attendance

Attendance is required. Personal issues with respect to class attendance or fulfillment of course requirements will be handled on an individual basis. Any unexcused absence will result in a 3-point reduction in your final grade. DO NOT BE TARDY.

****Any negative acts that go against the student expectations, roles and opportunities will affect your participation and professionalism grade.

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior

You are expected to attend each class and, once in class, you are expected to participate. Your questions, comments, and observations make the class lively and interesting and are an intrinsic aspect of professionalism.

Communication Guideline

Your participation in classroom discussions is essential to this course. Group discussion related to assigned readings and weekly lecture topics will be an integral part of the class meeting time and full participation is expected. Laptops may be used for note taking in class; laptop use during class for reasons outside of the course is distracting and will not be permitted.

Academic Integrity

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied:

“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of

Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

Online Faculty Course Evaluation Process

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>.

Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>

SUPPORT SERVICES

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, you must register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class. The Dean of Students Office will provide documentation of accommodations to you, which you must then give to me as the instructor of the course to receive accommodations. Please make sure you provide this letter to me by the end of the second week of the course. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu> . On line and in person assistance is available.
- You Matter We Care website: <http://www.umatter.ufl.edu/> . If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: <https://shcc.ufl.edu/>
- Crisis intervention is always available 24/7 from: Alachua County Crisis Center: (352) 264-6789 <http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.
