

University of Florida
College of Public Health & Health Professions Syllabus
Course Number: SPA 5304 – Principles of Audiologic Evaluation
Semester: Fall 2023
Delivery Format: On-Campus
Course E-Learning: Canvas

Instructor Name: Emily A. Gaines, Au.D., CCC-A
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Office Hours: By appointment in-person or via Zoom
Preferred Course Communications: email

Classroom: DG-126
Labs: DG-114, D2-70, D2-67
Class Meeting Time: Wednesdays, 1:55 PM to 4:55 PM

PURPOSE AND OUTCOME

Course Overview

This course is designed to provide knowledge of the diagnostic tests (pure tone and speech audiometry, masking) used by audiologists and the practical skills to conduct the tests and interpret the results.

Relation to Program Outcomes

The content of this course is designed to help you meet the following 2020 Standards for the Certificate of Clinical Competence in Audiology. Content will be learned from assigned readings, lectures, and class discussions. Outcomes and will be assessed through labs and examinations.

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

B6. Conducting hearing screenings in accordance with established federal and state legislative and regulatory requirements

B8. Performing developmentally, culturally, and linguistically appropriate hearing screening procedures 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

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**

C12. Selecting, performing, and interpreting otoacoustic emissions testing

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

C15. **Selecting, performing, and interpreting tests to evaluate central auditory processing disorder**

D1. Identifying the counseling needs of individuals with hearing impairment based on their narratives and results of client/patient and/or caregiver responses to questionnaires and validation measures

D3. Facilitating and enhancing clients'/patients' and their families' understanding of, acceptance of, and adjustment to auditory and vestibular disorders

Course Objectives and/or Goals

Students will:

1. Complete a case history interview, subjective questionnaires, and identify significant symptoms.
2. Perform appropriate otoscopy and identify normal features
3. Conduct age-appropriate hearing screenings across the life span and make appropriate recommendations based on results.
4. Transcribe and interpret audiograms.
5. Select, perform, and interpret appropriate behavioral pure-tone audiometry
6. Select, perform, and interpret appropriate behavioral speech audiometry
7. Select, perform, and interpret a complete immittance test battery
8. Select, perform, and interpret tests for nonorganic hearing loss
9. Describe and perform testing for ototoxic hearing loss and hidden hearing loss
10. Plan hearing evaluation appointments based on referrals, case history, and questionnaires.
11. Interpret all hearing evaluations results for differential diagnosis to make recommendations and for counseling
12. Describe how and why sound booths, audiometers and transducers are calibrated
13. Describe standard safety precautions for cleaning/disinfecting equipment

Course Format and Instructional Methods

SPA5304 is a graduate level course providing detailed examination of diagnostic audiologic tests as well as their practical application. To successfully address all of these topics during the semester, a combination of lecture, class discussion, and in-person labs will comprise the majority of the class sessions. E-learning in Canvas will be used to facilitate discussion, distribute materials, and for assignment submissions during the semester.

You are expected to actively engage in the course throughout the semester. Please come to class prepared by completing all out-of-class readings and assignments. This preparation gives you the knowledge or practice needed to engage in higher levels of learning during the live class sessions. Similarly, you are expected to actively participate in the live class, whether virtual or in person. Your participation fosters a rich course experience for you and your peers that facilitates overall mastery of the course objectives.

COURSE CONTENT SCHEDULE

Topical Outline/Course Schedule. Schedule is subject to change based on class needs and changes will be posted in the syllabus section on Canvas. Additional reading assignments may be posted throughout the semester to Canvas in the Page for that day. Bolded readings are required, and the quizzes and class discussion will be based on them. The other readings are supplemental for more information and reinforcement.

Week	Date(s)	Topic	Lab	Readings	Assignment Due
1	8/23	Course overview, Calibration and instrumentation	Equipment orientation, Otoscopy, Daily Biologics	Syllabus, Scope of Practice, BSA Ear Examination, Audiometer Calibration, Audiometer Checklist, Kramer Ch. 6	
2	8/30	Case history, Otoscopy, Calibration and instrumentation, Standard safety precautions	Otoscopy, Case hx forms	Kramer Ch 7 & 12, AAA Childhood Screening Guidelines	
3	9/6	Pure-tone audiometry, and hearing screenings	Hearing screening, unmasked audiometry	BSA Practice Guidance Speech-in-Noise, An Abbreviated Word Recognition Protocol Based on Item Difficulty, Kramer Ch. 8	Otoscopy and Case Hx/Questionnaire Lab
4	9/13	Speech Audiometry	SRT and WRS	Kramer Ch. 10, BSA Tympanometry Guidelines	
5	9/20	Tympanometry & eustachian tube dysfunction	Tymps & Wideband acoustic immittance	ASHA Guidelines for Manual Pure-Tone Threshold Audiometry, Understanding the audiogram, Ascending Threshold Technique, BSA Recommended Procedure: Pure Tone Audiometry	Unmasked audiometry/screening lab
6	9/27	Audiogram transcription and interpretation, pure tone audiometry, & Masking Intro	AC & BC, beginning masking	Masking video, Kramer Ch. 9	
7	10/4	Masking for Pure Tones & Speech	Full audiometry with Masking	See Canvas for supplemental readings	Immittance lab

8	10/11	Typical full hearing evaluations	Full hearing evaluation with case history and otoscopy		Take Home Midterm Portion available on Canvas
9	10/18	Midterm Exam	Midterm Exam	ART Patterns, See Canvas for supplemental readings	Midterm Exam (Weeks 1-9)
10	10/25	Acoustic Reflexes, Case Studies	AR & decay	See Canvas for supplemental readings	
11	11/1	Diagnostic Audiology and planning, Case Studies	Full hearing evaluations , target areas	Clinical Practice Algorithms, Carhart and Jerger, ascending vs. descending	Full audiometry lab
12	11/8	Case Studies	Full hearing evaluations , target areas	AAA Ototoxic Monitoring Guidelines, Schlauch Non-organic	1st Lab hearing evaluation this week Clinic Resource Guide due
13	11/15	Hidden Hearing Loss & Nonorganic hearing loss, Ototoxic monitoring – Guest Lecturer to cover for Dr. Gaines	Stenger, ototoxicity, masking	Hall et al Crosscheck principle	
14	11/22	1 st wave of Case presentations	1 st wave of Full evaluations		Stenger & Ototoxicity Lab All Case Study Presentation Slides due regardless of presentation date
15	11/29	2 nd wave of Case presentations	2 nd wave of Full evaluations		2nd Lab hearing evaluation this week and next week
16	12/6	Final Exam	Final Exam		Final Exam

** Syllabus may be modified during the semester to facilitate student learning

DESCRIPTION OF COURSE CONTENT

Course Materials and Technology

Required Textbook 1: *Kramer & Brown (Plural Publishing). (2023). Audiology: Science to Practice, 4th Edition*

Required Textbook 2: *Kramer & Small (Plural Publishing). (2023). Audiology Workbook, 4th Edition.*

This workbook has useful exercises and case studies for much of the course's content. We will use some of the exercises and case studies.

Other readings will be available on Canvas.

Website: e-Learning in Canvas, accessed via <http://elearning.ufl.edu/>

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

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

Additional Academic Resources

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352-392-6420. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: Visit the Student Honor Code and Student Conduct Code webpage for more information.

On-Line Students Complaints: View the Distance Learning Student Complaint Process.

ACADEMIC REQUIREMENTS AND GRADING

The grading for this course includes four components worth the following percentages of your final grade: Examinations (30%), Labs (40%), Assignments (20%), and Quizzes (10%). Each component is described below. The labs and assignments will have rubrics posted with them while the examinations will have a rubric provided with your feedback.

Examinations

This course will have two exams. The midterm exam will be completed out of class time and submitted on canvas for grading. References can be used to complete the midterm and the purpose is to help you continue learning and reinforcing the concepts, so expect some work to find and learn answers. The exams must be completed individually even if they are take-home. Any collaboration will be considered a breach of the honor code and will earn the student(s) a grade of 0 for the exam. The midterm exam will cover the topics from weeks 1-8 and be worth 150 points. The final exam is comprehensive in nature and will include case-studies and be worth 175 points and be completed on the last day of class with a time limit of two hours. A practice quiz will be available around midterm to give you an idea of the format and types of questions to expect on the final exam. It will contain multiple choice, short answer, fill in the blank, and true-false questions.

Labs

The lab assignments are designed to help you practice clinical skills and understand clinical tests and are very "hands-on". You will work in pairs or small groups. The labs can sometimes be started in class and finished outside of class during your own time. You are encouraged to start early and

ask questions or bring up issues you have on the labs in class so they can be addressed. You will have access to the classroom and testing equipment at all times to complete the labs when convenient. You can repeat the labs or similar testing as much as needed for practice.

- 1) Otoscopy and Case history/questionnaire lab (30 points)
 - a. Complete otoscopy on 2 individuals (4 ears). Then draw pictures of your otoscopy findings and interpret those findings. Also, complete an adult and child case history and 2 hearing questionnaires.
- 2) Unmasked Audiometry/Screening Lab (30 points)
 - a. Complete a screening of each ear, one with an earplug, and complete a screening form with interpretation. Complete a comprehensive audiometric exam (speech, pure tone air and bone) on 2 individuals, without masking. Complete audiogram, interpret and describe findings as much as possible.
- 3) Full Audiometry Lab including masking (30 points)
 - a. Complete a comprehensive audiometric exam (speech, pure tone air and bone) on 3 individuals, with at least one of these having either asymmetric hearing loss, conductive hearing loss, or an earplug in one ear to simulate a hearing loss. Complete audiograms, interpret and describe findings appropriately.
- 4) Immittance Lab (30 points)
 - a. Complete tympanometry, wideband reflectance, and acoustic reflexes (ipsi and contra) on 2 individuals. Print results. Interpret those findings.
- 5) Stenger & Ototoxicity Lab (30 points)
 - a. Complete a Stenger test on at least one individual with asymmetric hearing loss or an earplug in one ear. Complete high-frequency threshold testing on at least one individual according to ototoxicity monitoring protocol guidelines. Interpret the findings for both tests.
- 6) 1st Lab Hearing Evaluation (100 points)
 - a. Complete a full diagnostic test battery on a volunteer patient in less than one hour. Interpret findings in a written report on the audiogram and answer verbal questions.
- 7) 2nd Lab Hearing Evaluation (150 points)
 - a. Complete a full diagnostic test battery on a volunteer patient, with possible simulated hearing loss, in less than 45 minutes. Interpret findings in a written report on the audiogram and answer verbal questions.

Assignments

- 1) Clinic Resource Guide (Due at 1st lab hearing evaluation) (50 points)

Each student is required to create a unique clinical resource guide. The goal of this assignment is to create a personal resource (quick guide) for you to use in clinical settings when completing hearing evaluations. The information included within the guide may vary from person to person, due to personal preferences and needs. The primary use of this resource guide will be to complete your lab hearing evaluations. This will be the only document, other than forms used for the evaluation (audiogram, etc.), that you can use during your lab hearing evaluations. Suggested information for this guide includes: pure tone guidelines, hearing loss severity ranges, tymp norms, and key report phrases. Drafts can be turned in for feedback throughout the semester. The final product can be in electronic or paper form.

2) Case Study & Presentation (150 points)

Each student will present an individual case study, highlighting the diagnostic information of a patient. Working with the instructor, each student will create an original patient with background information. You will need to decide which tests and in which order you will complete the testing. Working individually, you will then create a comprehensive diagnostic test battery and proposed results. The final project will be in two parts:

- 1) a formal written clinical report to be turned in via Canvas
- 2) a grand-rounds style PowerPoint presentation to be share with the class. You should be prepared to answer questions from the instruction and your classmates during the time of your presentation.

Quizzes

Most weeks we will have a reading quiz to be completed in Canvas at the beginning of class. These quizzes are not meant to be punitive, but to ensure we can all be active participants in the class discussions. The questions will be mostly thought provoking to encourage to come to class with opinions and questions. Each quiz will be worth 10 points for a total of 100 points or 10% of your final grade.

<i>Requirement</i>	<i>Submission method</i>	<i>Points</i>	<i>% of final grade</i>
Midterm Exam Final Exam	Canvas Canvas	150 175	30% total
5 Labs 1 st Hearing Evaluation 2 nd Hearing Evaluation	Class/Canvas Class Class	30 each 100 150	40% total
Clinic Resource Guide Case Study & Presentation	Class/Canvas Class/Canvas	60 125	20% total
Quizzes	Canvas	10 pts each	10% total
Totals		1000	100%

Grading Scale

Letter Grade	A	A-	B+	B	B-	C+	C-	D+	D	D-	E
Percentage	93-100	90-92.9	87-89.9	83-86.9	80-82.9	77-79.9	70-76.9	67-69.9	63-66.9	60-62.9	<60
Grade points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.33	1.0	0.67	0.0

Please be aware that a C- is not an acceptable grade for graduate students. The GPA for graduate students must be 3.0 based on 5000 level courses and above to graduate. A grade of C counts toward a graduate degree only if based on credits in courses numbered 5000 or higher that have been earned with a B+ or higher.

More information on UF grading policy may be found at:

<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#grades>

Make up Exams or Other Work

Late assignments will not be accepted unless prior approval is granted by the instructor. If there is a documented illness, family emergency or university-sanctioned activity which requires you to miss an exam or assignment deadline please contact the instructor immediately so other arrangements can be made.

Class Attendance

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. Personal issues with respect to class attendance or fulfillment of course requirements will be handled on an individual basis. Attendance will be verified by the instructor at the start of class. Serial tardiness and absences will result in points off your semester grade. Please note all faculty are bound by the UF policy for excused absences. Excused absences must be consistent with university policies in the Graduate Catalog

<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance> and require appropriate documentation. Additional information can be found here:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior

You are expected to be respectful to the course instructors, your classmates and all guest lecturers. This includes listening when others are speaking, no sideline chatter and playing your part in class discussions and activities. Communication between students and instructor should be respectful at all times. This includes class and lab interactions, e-mail, discussion boards, and other electronic communication.

Using personal electronic devices is not permitted, unless related to course activity. If you are found to be using devices inappropriately, you will be asked to put the device away and possibly leave class.

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.

Recording Within the Course

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person

injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Our class sessions may be audio visually recorded for students in the class to refer back with added captioning and for enrolled students who are unable to attend live.

Policy Related to Guests Attending Class

Only registered students are permitted to attend class. However, we recognize that students who are caretakers may face occasional unexpected challenges creating attendance barriers. Therefore, by exception, a department chair or his or her designee (e.g., instructors) may grant a student permission to bring a guest(s) for a total of two class sessions per semester. This is two sessions total across all courses. No further extensions will be granted. Please note that guests are **not** permitted to attend either cadaver or wet labs. Students are responsible for course material regardless of attendance. For additional information, please review the Classroom Guests of Students policy in its entirety. Link to full policy:

<http://facstaff.php.ufl.edu/services/resourceguide/getstarted.htm>

Online Faculty Course Evaluation Process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

SUPPORT SERVICES

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, it is strongly recommended you register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class or as soon as you believe you might be eligible for accommodations. 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 do this as soon as possible after you receive the letter. Students with disabilities should follow this procedure as early as possible in the semester. 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.

- **U 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>
- **University Police Department:** [Visit UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).
- **UF Health Shands Emergency Room / Trauma Center:** For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; [Visit the UF Health Emergency Room and Trauma Center website](#).

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.

Inclusive Learning Environment

Public health and health professions are based on the belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida's Non-Discrimination Policy, which reads, "The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act." If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: www.multicultural.ufl.edu

