

University of Florida
College of Public Health & Health Professions Syllabus
Course Number: SPA 6133L – Hearing Aid Analysis Lab
Semester: Fall 2023
Delivery Format: On-Campus
Course E-Learning: Canvas

Instructor Name: Emily A. Gaines, Au.D., CCC-A
Office: HPNP 2144
Email Address: emily.gaines@phhp.ufl.edu
Office Hours: By appointment in-person or via Zoom
Preferred Course Communications: email
Classroom: HPNP G110, D2-92
Lab Meeting Time: Mondays, 11:35 AM to 12:35 PM (Lecture course right before)

PURPOSE, CONTENT AND OUTCOME

Course Overview:

Analysis and description of the electroacoustical properties and fitting of hearing aids. This course is combined with the lecture course SPA 6340.

Course Objectives and/or Goals: (as measured by lab assignments):

Students will demonstrate knowledge and application of:

- Make earmold impressions
- Complete electroacoustic analysis on hearing aids through lab activities
- Perform a listening check and trouble shoot a hearing aid
- Perform the hearing aid check in procedure
- Complete real ear analysis on hearing aids through lab activities

Course Materials and Technology:

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>

Course Content Schedule

Schedule is subject to change based on class needs. Changes will be announced AND posted in the syllabus section on Canvas. Additional reading assignments may be posted in Canvas throughout the semester.

Week and/or Date(s)	Topic(s)	Readings to prepare for next class	Assignments/labs/exams
Week 1 8/28	Syllabus, Introduction and history of hearing aid distribution, Evidence-based practice in hearing aids	EMHA Ch. 1-3, Compression for Clinicians Ch. 2	Hearing Aid Check practice
No Class 9/4	Labor Day NO CLASS		
Week 2 9/11	Hearing aid candidates and the hearing aid delivery process	EMHA Ch. 8-9, Compression for Clinicians Ch. 3, MicroSonic Earmold Manual	Hearing Aid Check practice
Week 3 9/18	Hearing and styles and applications, Basic Acoustics Applied to Amplification, Earmold Impressions and Earmolds	EMHA Ch. 5-6, Compression for Clinicians Ch. 4, The Compression Handbook	Hearing Aid Check Lab due Earmold Impression practice
Week 4 9/25	Hearing Aid Evaluation/Selection, Pre-Fitting Measures	EMHA Ch. 10-11, Compression for Clinicians Ch. 6, The Compression Handbook	Concept map on hearing aid delivery due Earmold Impression practice
Week 5 10/2	Hearing Aids: How They Work, Compression	EMHA Ch. 14	HA Fitting/programming practice * Earmold Impression Lab due
Week 6 10/9	Beginner HA Fitting	EMHA Ch. 13-14	HA Fitting/programming practice *

Week 7 10/16	Electroacoustic Analysis Standards and Prescriptive Formulae		HA Fitting/programming Lab due * Electroacoustic practice
Week 8 10/23	MIDTERM EXAM	EMHA Ch. 16-17, Compression for Clinicians Ch. 5 ANSI HA standard Verifit manual	MIDTERM EXAM Electroacoustic practice
Week 9 10/30	Basic Verification: Probe Mic Measurements and Clinical Applications of Verification	EMHA Ch. 15, Ch. 19 Verifit Manual ANSI HA standard	Electroacoustic Lab due Real-ear Measure practice
Week 10 11/6	Behavioral Verification, Validation of Hearing Aids, Report Writing Intro	Verifit Manual	Real-ear Measures practice
Week 11 11/13	Questionnaire Presentations	EMHA Ch. 18 Verifit Manual	Real-ear Measures practice Questionnaire Presentations due
Week 12 11/20	Basic Patient Orientation and HA Troubleshooting, Case Studies, Report Writing	Compression for Clinicians, Ch. 8-9	Real-ear Measures Lab due
Week 13 11/27	Advanced Hearing Aid Features Introduction		Hearing Aid Report due
Week 14 12/4	FINAL EXAM		FINAL EXAM

Blue font indicates labs and readings for lab course attached to this course.

*HA fit/programming lab is subject to change.

ACADEMIC REQUIREMENTS AND GRADING

Lab Assignments

1. Hearing aid check lab (due 9/9/2022) (20 points)
 - a. The purpose of this lab is to learn how to check the function of a hearing aid, including its sound and features. You will complete a hearing aid check on 5 hearing aids of different style and manufacturer, noting the settings and any issues with the hearing aids. We will first practice these in class and the rest of lab can be completed in your own time. This lab is worth 20% of your final grade.
2. Earmold impression (EMI) lab (due 9/30/2022 with an option to continue to turn in new ones for improvement) (20 points)
 - a. Complete two “perfect” earmold impressions on another person. You will receive video and written instructions on how to complete earmold impressions as well as practice them in class, first with a manakin and then with each other. Complete at least ten impressions (five per ear) before 9/30/2022. Choose one pair for grading that will be turned in before 9/30/2022. You can continue to turn in more earmold impressions throughout the rest of the semester to improve your grade and practice if you want. The impressions will be graded based on Westone’s five criteria, parts of the impression (i.e., concha, canal length, helix, tragus, and oto-dam). This lab is worth 20% of your final grade.
3. Hearing aid fitting/programming lab (due 10/7) (20 points)
 - a. This lab is designed to give you experience with hearing aid software and connecting and making changes to hearing aids. Complete the initial fitting of three hearing aids or pairs of hearing aids from different manufacturers using NOAH and the appropriate software according to instructions provided and instruction videos. Save settings to both the hearing aids and the NOAH software. Submit a printed report with feedback and issues. This lab is worth 20% of your final grade.
4. Electroacoustic and hearing aid check lab (due 10/28) (20 points)
 - a. This lab is designed to practice checking hearing aid function relative to ANSI standards for quality. You will complete electroacoustic testing on three hearing aids from different manufacturers. This includes both ANSI testing at full-on gain and user gain according to the ANSI standard. Save the measurements on the Verifit to a USB drive and submit them as PDFs on Canvas. This lab is worth 20% of your final grade.
5. Real-ear measures (REM) and verification lab (due 11/18) (20 points)
 - a. This lab is designed to give you experience with real-ear measures and how to program hearing aids to meet prescriptive output targets. You will complete real-ear measures for program three hearing aids from different manufacturers to fit a mild to moderate sensorineural hearing loss. Save the measurements on the Verifit to a USB drive and submit them as PDFs on Canvas. Also save the settings and session in NOAH and submit a report on Canvas. This lab is worth 20% of your final grade.

Requirement	Due		Points	% of final grade
HA Check Lab	9/9	Canvas	20	20%
EMI Lab	9/30	Canvas	20	20%
Fit Lab	10/7	Canvas	20	20%
EA Check Lab	10/28	Canvas	20	20%
REM Lab	11/18	Canvas	20	20%
Totals			100	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>

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 the labs and exams.

A5. **Calibration and use of instrumentation** according to manufacturers' specifications and accepted standards

E8. **Selecting and fitting appropriate amplification devices and assistive technologies**

E9. **Defining appropriate electroacoustic characteristics of amplification fittings based on frequency-gain characteristics, maximum output sound-pressure level, and input-output characteristics**

E10. **Verifying that amplification devices meet quality control and American National Standards Institute (ANSI) standards**

E11. **Conducting real-ear measurements to (a) establish audibility, comfort, and tolerance of speech and sounds in the environment and (b) verify compression, directionality, and automatic noise management performance**

Instructional Methods: SPA6133L is a graduate level course focused on hands-on hearing aid application. You are expected to actively engage in the course throughout the semester. Please come to class prepared by completing all out-of-class assignments/readings. This preparation gives you the knowledge or practice needed to efficiently complete the lab assignments.

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.phhp.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