University of Florida
College of Public Health & Health Professions Syllabus
Department of Speech, Language, & Hearing Sciences
SPA6581-19359 Section 1E21: Cochlear Implants 2 (3 credit hours)
Semester: Spring, 2021
Delivery Format: On-campus and online as needed
Course Website: Canvas (http://elearning.ufl.edu)

Instructor Name:	Sterling W. Sheffield, Au.D., Ph.D. CCC-A
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Email Address:	s.sheffield@ufl.edu
Office Hours:	by appointment only
	Preferred Course Communications: canvas or email
Class Meeting Time:	M1-3 (7:25-10:25a)
Classroom:	HPNP G312

PURPOSE AND OUTCOME

Course Overview
Theoretical and applied understanding of cochlear implants and other implantable hearing technologies. Advanced topics in cochlear implant programming and critical evaluation of new techniques and technologies related implantable hearing devices. This course covers topics including: candidacy, programming considerations, selection and evaluation of assistive devices, habilitative/rehabilitative management, and billing and coding.

Relation to Program Outcomes
The content of this course is designed to allow you to fulfill the following CCC-A Standard IV: Knowledge and Skills Outcomes.

Standard IV-a: Foundations of Practice
   a9. Patient characteristics (e.g., age, demographics, medical history and status, cognitive status, and physical and sensory abilities) and how they relate to clinical services
   a14. Physical characteristics and measurement of electric and other nonacoustic stimuli
   a15. Assistive technology
   a24. The use of instrumentation according to manufacturer's specifications and recommendations
   a29. Consultation with professionals in related and/or allied service areas
Standard IV-c: Assessment
   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
   c9. Evaluating functional use of hearing
   c11. Referring to other professions, agencies, and/or consumer organizations
Standard IV-d: Intervention (Treatment)
   d1. The provision of intervention services (treatment) to individuals with hearing loss, balance disorders, and other auditory dysfunction that compromises receptive and expressive communication
   d2. Development of a culturally appropriate, audiologic rehabilitative management plan that includes, when appropriate, the following:

i.   Evaluation, selection, verification, validation, and dispensing of hearing aids, sensory aids, hearing assistive devices, alerting systems, and captioning devices, and educating the consumer and family/caregivers in the use of and adjustment to such technology

ii.   Determination of candidacy of persons with hearing loss for cochlear implants and other implantable sensory devices and provision of fitting, mapping, and audiologic rehabilitation to optimize device use

iii.   Provision of comprehensive audiologic treatment for persons with hearing loss or other auditory dysfunction, including but not exclusive to communication strategies, auditory training, speech reading, and visual communication systems

d7. Evaluation of the efficacy of intervention (treatment) services

Standard IV-f: Education/Research/Administration

f1. Measuring functional outcomes, consumer satisfaction, efficacy, effectiveness, and efficiency of practices and programs to maintain and improve the quality of audiologic services

f2. Applying research findings in the provision of patient care (evidence-based practice)

f3. Critically evaluating and appropriately implementing new techniques and technologies supported by research-based evidence

Course Objectives and/or Goals

Knowledge Objectives: Students will be able to:

1. The psychological issues for adult and pediatric CI users and their families
2. Programming methods for cochlear implants related to speech and music perception
3. Current implant systems and the future possibilities of implantable hearing devices
4. Collaboration with other professionals to create materials for cochlear implant users
5. Discuss deaf culture and their attitudes toward different assistive devices
6. Distinguish among the roles of the different professionals on the cochlear implant team.
7. Demonstrate knowledge of current assistive listening technologies and their benefits.
8. Critique the benefits and limitations of cochlear implants.
9. Demonstrate the protocol and terminology for programming a cochlear implant and evaluating outcomes for these patients.

Skill Objectives: Students will be able to:

1. Evaluate the histories of child and adult candidates for cochlear implantation based on audiological, medical and psychosocial criteria.
2. Evaluate the prognosis and treatment options of patients and families based on case histories.
3. Compare and contrast various FDA-approved cochlear implants.

Course Format and Instructional Style

SPA6581 Cochlear Implants 2 is a graduate level course providing detailed instruction, resources, discussion, and practice with cochlear implants and other implantable technology. To successfully address all of these topics during the semester a combination of lectures, readings, instructional videos, resources, class discussion, assignments and labs will be used. E-learning in Canvas will be used to facilitate discussion, distribute materials, and for assignment submissions during the semester. This course is planned to be primarily given in-person, but several lectures/class periods given by guest speakers will be provided remotely and we will plan to have a combination of in-person and remote participation due to the pandemic. The following are important instructions to help with the success of this course and format.

Please be patient: All of us (and particularly I) will have our (my) attention split between the virtual and physical learning environments, the learning experience will be different and potentially sometimes frustrating for all of us. It will be important for all of us to manage our expectations within this hybrid learning environment of virtual and physical spaces and provide caring and compassion for ourselves and our peers. Technical issues and delays in real-time response should be expected and treated with extra reserves of patience.

Bring your own device: Whether in-person or online / remote, have your device and a headset with microphone, so that you can log into the Zoom session and take part in breakout sessions and other learning activities (e.g., polling) in Zoom.

Focus on learning: When using technology during class, please be respectful and limit distracting activities. Social media, streaming entertainment, etc., as well as homework for other classes, should not be your focus during the synchronous sessions.

Be aware - I plan to record: Lecture from the synchronous sessions may/will be recorded. Please review the UF policies on recorded sessions at the end of the syllabus. You can opt not to have your camera on during the recorded lecture portions of the synchronous session, but I am asking that (unless technical issues with bandwidth or similar circumstances make it difficult) you do use your camera during the unrecorded breakout sessions.

Synchronous Learning Activities

In-person: Those of you in the campus section will attend classes in a format similar to traditional classroom learning. You **will attend by coming to the physical classroom on UF campus as scheduled.** However, you should be prepared to interact with classmates who are attending class online / remotely. Raise your hand to ask questions, or if it a question that can wait, type it into the Zoom chat. *From time to time, you may be asked about volunteering to assist with monitoring Zoom Chat, Raised Hands, or other inputs from the remote students.*

Online / Remote: Those of you in the online / remote designated section **will attend class virtually, in real-time in Zoom**. You will by logging into the virtual classroom in Zoom. Microphone, live chat, video conferencing solutions, and collaborative technologies will allow you to be active participants in the learning experience, despite not being physically present in the classroom. Use the Zoom Chat to ask questions. I will typically address questions at one time during specific break points in our learning activities. If your question needs immediate feedback, you can use the Raise Hand feature in Zoom to signal a question that might have less value out of the context of the moment.

You are expected to actively engage in the course throughout the semester. Please come to class prepared by completing all out-of-class 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. Your participation fosters a rich course experience for you and your peers.

DESCRIPTION OF COURSE CONTENT

Topical Outline/Course Schedule. Schedule is subject to change based on class needs, availability of guest lecturers, and unforeseen circumstances. Additional reading assignments may be posted throughout the semester to the course e-Learning site.

Week	Date(s)	Agenda/Topic(s)	Readings	Assignment Due
1	1/11	Review of candidacy, processing strategies, and factors affecting outcomes	Syllabus Wolfe Chs 4-6, 8, 21-22	Group presentation on review topics
2	1/25	Basic Programming	Wolfe Ch 7, 14	
3	2/1	**MED-EL visit (Dr. Kellie Hibbitts)**	Wolfe Chs 11, 17	Paper Assignment
4	2/8	**Cochlear programming visit (Dr. Crosson)**	Wolfe Chs 10, 16	
5	2/15	Basic Programming, Troubleshooting	Wolfe Chs 14, 20, 23	MED-EL Programming assignment
6	2/22	Billing and coding Red flags and troubleshooting	Wolfe & Schafer Ch 6???	Clinic resource guide draft
7	3/1	Pre-op assessment Post-op Clinical Assessment What are we missing in assessment?	Wolfe Ch 5-6, 19	Cochlear Programming assignment
8	3/8	**AB programming visit (Dr. Madeline Coffey)**	Wolfe Ch 9, 15	Midterm Exam Due
9	3/15	Sound processor options (Student presentations)	Manufacturer product guides Wolfe Chs 9-11	Student presentations on sound processor options due
10	3/22	**Non-traditional candidates (Drs. Hall and Letlow)**	Wolfe Ch 23	
11	3/29	**CI surgery (Dr. Si Chen)** BIDs, implantable hearing aids ABIs	Wolfe Ch 12, 25-28	AB programming assignment
12	4/5	Bilateral, Bimodal, Hearing preservation, SSD	Wolfe Ch 24	CI calibration and assessment
13	4/12	Objective measures and CIs	Wolfe Chs 13, 18	
14	4/19	**SLP's role and educational and intervention options and issues (Laura Mundorf, SLP)** Hearing assistive technology and CIs	TBD	Final clinic resource guide due
15	4/24-4/30	Final Exam Week	NA	Final Exam Due 4/27

Course Materials and Technology

Required/Recommended Textbooks:
1. Wolfe, J. (2018). *Cochlear implants: audiologic management and considerations for implantable hearing devices.* San Diego: Plural Pub.

Suggested books:
1. Wolfe, J., & Schafer, E.C. (2015). *Programming Cochlear Implants.* San Diego, CA.: Plural Pub.
2. Gifford, R. H. (2020). Cochlear Implant Patient Assessment: Evaluation of Candidacy, Performance, and Outcomes. San Diego: Plural Pub.

Each student is expected to have access to each Wolfe textbook (whether it is a borrowed library book, shared with a classmate, or purchased). The suggested textbooks are good resources for cochlear implants and are highly recommended for those interested in working in cochlear implants long term. Other supplemental 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*

ACADEMIC REQUIREMENTS AND GRADING

Examinations
Two exams will be completed out of class time and submitted for grading. The exams must be completed individually. Any collaboration will be considered a breach of the honor code and will earn the student(s) a grade of 0 for the assignment. Students should also be aware of the time limitations on each exam; studying is strongly encouraged. The midterm Exam will cover the topics from weeks 1-7. The final exam will be cumulative and cover the entire course. Question types for exams will likely be short answer, but may include matching, fill in the blank, page essays and will be focused on case study examples.

Assignments
1) Group presentations on review topics and sound processor products (due 1.11 and 3.15)
   a. These group presentations will be completed during class in groups of 2-3 to reinforce and expand on knowledge of critical aspects of cochlear implants you were introduced to in Cochlear Implants 1. One of the presentations will require preparation outside of class while the other will be mostly prepared for and given in class.
2) Paper Assignment (due 2.1)
   a. Each student will select one of several topics to write a 3-5 page paper providing evidence to an audiology clinic and CI team why they should add a new practice to their CI patient protocol. The paper must include evidence from the current and any relevant past research literature and present a reasonable argument for the change in clinical protocol.
3) Programming assignments (due 2.15, 3.15, and 3.29)
   a. Program a demo cochlear implant and submit the patient's program file on Canvas. Students will also submit a reflection paper after the last programming assignment on basic cochlear implant programming and the differences between companies.
4) Cochlear implant calibration and assessment (due 4.5)

a. Each student will complete a full cochlear implant candidacy evaluation on a volunteer of their choice. The volunteer does not need to be interested in a cochlear implant or even have hearing loss. The evaluation should be completed according to the protocol in the Wolfe 2018 textbook and discussed in class. The results of the evaluation will be summarized in a clinical cochlear implant evaluation report to be turned in on Canvas along with a one-page reflection report on the assignment.

5) Clinic Resource Guide

a. Each student is required to create a unique clinical resource guide on cochlear implants. The goal of this assignment is to create a personal resource (quick guide) for you to use in clinical settings. The information included within the guide may vary from person to person, due to personal preferences and needs. Suggested information for this guide includes: candidacy criteria, assessment protocols, programming techniques, and red flags or tips for troubleshooting. One draft is due 2/22, failure to meet this deadline will result in an automatic 10-point deduction on the final grade. The final product is due 4/19.

Requirement	*Due*		*Points*	*% of final grade*
Midterm Exam Final (Written)	3/8 4/27	Canvas Canvas	150 200	35%
Group presentations Programming assignments CI Cal & Assessment Paper Assignment	Varies Varies 4/5 2/1	Canvas Canvas Canvas Canvas	25 each 50 each 100 150	45%
Clinic Resource Guide	4/19	Canvas	100	10%
Attendance and participation	Every class	Class	100	10%
			Total	100%

Grading Scale

Points earned	95-100	90-94	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	<60	
Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	W
Grade Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0	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. in all 5000 level courses and above to graduate. A grade of C counts toward a graduate degree only if a sufficient number of credits in courses numbered 5000 or higher have been earned with a B+ or higher. In addition, the Bachelor of Health Science Program does not use C- grades.

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at:
http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

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 required 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. 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

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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.

The 5 P's of Student Responsibility for HyFlex Attendance during the Pandemic:

> Patience: Be patient with the faculty, TAs and peers! This is new. There will be tech challenges.

> Preparation: Be prepared for class! This applies to both the content and having your computer & headset/mic set-up ready to go.

> Participation: Stay focused. The more you focus and participate the more you learn. Ask questions! Whether you are in person or online / remote — **ask questions**. You are responsible for your own learning. Attending the synchronous sessions as scheduled and participating in the learning activities will facilitate your ability to succeed in this course.

> PPE and PHA (Personal Protective Equipment and Public Health Awareness): Follow UF guidelines and **wear your mask** if you are on campus in the classroom and in all face-to-face interactions. **Stay home if you are ill**, have any of the symptoms on the UF screening tool, or think you have been exposed to COVID. (See official policies below.)

Attendance and Recordings

Recordings are not intended to be a replacement or substitute for attending synchronous sessions. They are intended to be a stop-gap for those who miss class due to illness or life events that are unfortunately common during the pandemic. Recordings will be made available in Canvas. As soon as links are available, I will post these. If you miss a class meeting for any reason, make sure to communicate with your professor and TAs and check with a peer who attended and watch the recordings.

On Campus Face-to-Face

If you will have face-to-face instructional sessions to accomplish the student learning objectives of a course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.

Each course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.

Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.

Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.

If you are experiencing COVID-19 symptoms (https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html), please use the UF Health screening system (https://coronavirus.ufhealth.org/screen-test-protect/covid-19-exposure-and-symptoms-who-do-i-call-if/) and follow the instructions on whether you are able to attend class.

Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work (https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/).

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/.

Student feedback is invaluable to improving course content and assignments. In the past I have used evaluations to improve my teaching style, instruction tools, examinations, and assignments. Please provide detailed feedback that I can use to improve the class. It is also important to note that student evaluations influence faculty tenure and promotions, thus increasing the importance of your feedback.

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

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SUPPORT SERVICES

Accommodations for Students with Disabilities
Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting https://disability.ufl.edu/students/get-started/ . It is important for students to share their accommodation letter with their instructor and discuss their access needs, 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.

- 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.

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