



Department of Communication
Sciences and Disorders
UNIVERSITY OF WISCONSIN-MADISON

CS&D 832: Pediatric Audiology

Spring semester, 2021

MW 8:15-9:30 AM, remotely via Zoom <https://uwmadison.zoom.us/j/93183836600>

The first class day will be January 20th, 2021 and the final class day will be April 28th

INSTRUCTOR

Rachel Lee, Au.D., CCC-A 338 Goodnight Hall
Office #: 608/262-6467 Cell #: 608/422-1126 E-mail: rachel.lee@wisc.edu

INSTRUCTOR AVAILABILITY

Due to the COVID-19 pandemic, office hours will be conducted remotely upon request. Occasional exceptions may be made following physical distancing and health recommendations at the discretion of the instructor.

READER/GRADER

Lauren O'Neil, B.S. E-mail: leoneil@wisc.edu

CREDITS

3 credits. The credit hours are met by three hours (i.e., 150 minutes) of classroom or direct faculty instruction and a minimum of six hours of out of class student work each week over approximately 15 weeks.

COURSE DESCRIPTION

Per UW-Madison Catalog 2020-2021:

Study of normal physical, social, cognitive, speech and language and auditory development in children, the causes and effects of childhood hearing loss, hearing screening and the principles of early intervention, and the behavioral and objective assessment of hearing in children. Enroll Info: Grad st & cons inst, Com Dis 850, 851, 852, 858

Requisites: Graduate/professional standing

INSTRUCTIONAL MODALITY

Blended. The mode of instruction for this course is synchronous remote learning and self-directed lab work outside of regularly scheduled class time. Synchronous learning will occur via Zoom:

<https://uwmadison.zoom.us/j/93183836600>

REQUIRED TEXTS

Tharpe, A.M., & Seewald, R. (Eds.) (2017). *Comprehensive Handbook of Pediatric Audiology*, (2nd ed). CA: Plural Publishing

Katz, J. (2014). *Handbook of Clinical Audiology*, 7th Edition. Lippincott Williams and Wilkins: Philadelphia, PA.

RECOMMENDED TEXTS

Madell, J., & Flexer, C. (2013). *Pediatric Audiology: Diagnosis, Technology and Management*, (2nd ed). NY: Thieme Publishers

Schwartz, S. (2007). *Choices in Deafness: A Parent's Guide to Communication Options*, (3rd ed). Woodbine House: Bethesda, MD.

COURSE WEBPAGE

Access through <http://canvas.wisc.edu/>

All course materials (syllabus, lectures, assignments) will be available on [Canvas](#). Lecture slides will be made available at least one hour before class. *It is the student's responsibility to check for updates.*

Please log-in to Zoom via the Canvas page. Doing so ensures you can access all of the features of Zoom available through your UW account.

[Technology Guidelines and Recommendations](#) for instruction. Students should consult these resources prior to the start of the semester.

REGULAR AND SUBSTANTIVE STUDENT-INSTRUCTOR INTERACTION

Instructor will engage with students via direct instruction, via feedback on student work, and by providing information about the course content. Instructor will regularly interact with students at scheduled class times and additionally as requested during office hours.

COURSE LEARNING OUTCOMES

Upon successful completion of this course, students will be able to

- Describe embryological development of the human ear and discuss its relationship to childhood hearing loss.
- Integrate knowledge of genetics into pediatric audiology clinical practice.
- Demonstrate how childhood disorders can affect the auditory system.
- Describe typical childhood development and its effects on clinical practice, including selection of appropriate tests, procedures used, and appropriate interventions.
- Accurately measure and interpret a child's hearing ability by eliciting an effective case history and obtaining electrophysiological and behavioral test results as needed.
- Describe and justify the EHDI system and identify barriers and solutions to successful progression through this system.
- Develop culturally competent, family centered, evidence based recommendations for the pediatric audiology population.
- Develop leadership skills and use them in your pediatric audiology practice.
- Identify children with auditory processing disorders (APD), develop an evaluation test battery for auditory processing disorders using behavioral and physiological measurements.

COURSE CONTENT

This course consists of six units in the following order

- I. Embryology and Genetics
- II. Causes of Childhood Hearing Loss
- III. Pediatric Hearing Assessment
 - Behavioral assessment
 - Objective assessment & test battery
- IV. EHDI + Communication Opportunities
- V. Special Considerations
- VI. Case Presentations

COURSE REQUIREMENTS AND GRADING

You must complete all requirements and assignments to a satisfactory degree, regardless of your grade in the rest of the class, to pass the class.

- **Unit Quizzes:** 25% (4 @ 6.25% each)
- **Cause of Hearing Loss Presentation:** 5%
- **Case Study Presentation:** 15%
- **VRA Lab Assignment:** 10%
- **CAPD Lab Assignment:** 10%
- **Class Participation:** 5%
- **Final Exam:** 30%

UNIT QUIZZES

Unit quizzes will be administered at the end of each unit on Canvas. You can complete them on your own time, but once you start each quiz will have a time limit. You may only take the quiz once, but you can use your notes. You must take the quiz by yourself and cannot share questions/answers with your classmates. The questions will contain a combination of multiple choice, true/false, fill-in-the-blank, and short answer questions, but there may be long answer questions. See the schedule for specific quiz dates.

STUDENT PRESENTATIONS

Two presentations will be given during class; an informal cause of childhood hearing loss presentation and a case presentation. See the [assignment description](#) for additional information.

LAB ASSIGNMENTS

1. **VRA:** Students will participate in a lab related to the topic of Visual Reinforcement Audiometry (VRA). You will need to work on the lab in pairs outside of class time. Instructions and a rubric for the lab will be provided after the VRA lecture.
2. **CAPD:** Students will participate in a lab related to the topic of CAPD. You will need to work on the lab outside of regular class time. Although you may work with a partner or in a group for parts of the lab, the lab write up should be done individually. You will be given instructions for the lab and lab assignment after the first CAPD lecture.

CLASS PARTICIPATION AND PREPARATION

You are expected to come to class prepared, and to make contributions to class regularly. Participation is worth 5% of your overall grade. My expectation is that you will participate at least once a week, by either contributing to the course discussion, posting a question/thought on the class on the week's Canvas

Discussion board, or responding to a classmate’s question/thought on the Canvas Discussion board*. If you opt to contribute via the Canvas Discussion board, your contribution must show *graduate*-level analysis of the content. Your contribution must be made by the following Sunday, at 11:59 pm, for credit (e.g., week of March 15, contribution must be made by March 21 at 11:59 pm).

*In Unit 4 we will be discussing Communication Opportunities. During this week, you will *all* be required to contribute to the Canvas Discussion to earn that week’s participation points. You will be assigned to different chapters from *Choices in Deafness* (see below) and must post both a comment and a response to a classmate’s post to earn full participation points. The due dates for this assignment are different than in a normal week. See [course schedule](#) for dates.

Chapter	Students
Chapter 9	Lexi, Felicia, Ally, Danielle
Chapter 10	Regan, Veronica, Kelsey, Hannah
Chapter 11	Kiersten, Avery, Sarah, Karley
Chapter 13	Elisabeth, Bailey, Erin

FINAL EXAM

The final exam will be available on Monday, May 3rd at 8:00 AM and must be submitted by 11:59 PM. The exam will be open-book and will contain cases, with short and long essay questions. You must not share the questions with your classmates, and must work alone on the exam. Failing to do so will result in a “0” grade for the exam. Even though the exam will be open-book, it will require you to synthesize information from the entire semester, and will require good clinical decision-making. If you are not able to attend an exam due to illness or emergency, please contact Dr. Lee in advance. Unexcused absences for the final exam will result in a “0” grade for the exam.

GRADING SCALE

UWSP Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	F
Percentage	100-92	91.9-90	89.8-88	87.9-82	81.9-80	79.9-78	77.9-72	71.9-70	69.9-68	67.9-60	<60
UW-Madison Letter Grade	A	AB		B	BC		C	CD		D	F

GENERAL GRADING INFORMATION

If you do not understand why you earned a particular grade, please feel free to talk to me or our reader/grader about it. If we believe that a change in grade is warranted following our discussion, I will make the change. If you believe we made a mathematical or factual error in grading, please let me know. If you believe there was a factual error, please provide a clear explanation and refer to specific slides or page numbers from the reading(s) to substantiate your claim.

What your grade means:

A: Strong to excellent work that demonstrates mastery of concepts and exceeds the minimum expectations for an AuD student. "A" work is precise, accurate, and incorporates all relevant details.

A-/B+: Solid work that demonstrates an understanding of essential concepts and meets expectations for an AuD student. There may be some inaccuracies of details or less clarity than "A" work.

B: Demonstrates understanding of the essential core/critical concepts, although there are inaccuracies or misunderstandings of some information. "B" work meets the minimum expectations for an AuD student, but the student is encouraged to improve his/her performance to develop a stronger foundation for future classes, clinical experiences, and licensing and certification exams.

BC or B- and below: The work does not meet the minimum expectations for an AuD student. There are inaccuracies or conceptual misunderstandings that the student must overcome to be competent in the fundamentals of the audiology profession.

POLICIES

E-mail communication

I recommend that you check your school email account at least once per weekday for any important class announcements, and I will do the same. However, I cannot guarantee that I will always check email on evenings and weekends, so please plan ahead to avoid last-minute weekend or late-night emergencies. **You are not permitted to turn in an assignment late because you are waiting for a reply from me.**

Class attendance

You are expected to attend class regularly. Repeated absences, especially unexcused absences, may result in failure of the class, or the need for a written improvement plan to improve attendance. Excused absences will be granted for reasons such as illness/injury, family emergency or major event, travel to a professional conference, etc. All absences must be discussed with me as soon as possible and before class, unless there is truly a last-minute emergency. I reserve the right to ask you for documentation of excused absences, especially if you have repeated absences. If you are concerned that a family or personal situation will cause you to miss class repeatedly, please discuss this with me so that we can agree upon a solution.

Late assignments

- Unexcused late assignments turned in up to 60 minutes late will receive no penalty.
- A penalty of minus two percentage points will apply to assignments received 61 minutes late through 11:59 pm on the due date.
- A penalty of minus three percentage points will apply to assignments received from 12:00 am through 11:59pm the day after the due date.
- If unexcused late assignments are turned in beyond the day after the due date, they will receive a penalty of minus three percentage points for the day after the due date, followed by a penalty of minus five percentage points for each subsequent day they are late.

Excused late assignments

Excused late assignments will be allowed (without penalty) for illness, emergency, etc. For a late assignment to be excused, you must discuss this with me BEFORE it is due, unless there is truly an unexpected last-minute emergency, in which case you must discuss it with me as soon as possible. I reserve the right to ask for documentation of excused reasons.

DIVERSITY, EQUITY, AND INCLUSION

“Diversity is a source of strength, creativity and innovation for the University of Wisconsin-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities and opinion enrich the university community.” - *Excerpt from UW-Madison’s Institutional Statement on Diversity.*

I want our learning environment to be one that supports a diversity of thoughts, perspectives, and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, etc.). To help accomplish this:

- If you have a name and/or set of pronouns that differ from those that appear in your official records, please let me know!
- If you feel like your performance in this class is being impacted by your experiences outside of class, please don’t hesitate to come and talk with me. I want to be a resource for you.
- I, like many others, am still in the process of learning (and unlearning) about diverse perspectives and identities. If something was said in class (by anyone) that made you feel uncomfortable, please talk to me about it.

PRIVACY OF STUDENT RECORDS AND THE USAGE OF AUDIO RECORDED LECTURES

See information about [privacy of student records and the usage of audio-recorded lectures.audio-recorded-lectures/](#)

Usage of Audio Recorded Lectures

Lecture materials and recordings for CS&D 832 are protected intellectual property at UW-Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1]. Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor’s express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university’s policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

STUDENT RULES, RIGHTS, & RESPONSIBILITIES

UW-Madison [Badger Pledge](#)

UW-Madison is actively implementing measures to protect the safety, health and well-being of all students and instructors, particularly during the COVID-19 pandemic. Preserving the health of our campus communities will be a broadly shared responsibility; we must work together to prevent the spread of the virus and to promote the collective health and welfare of our campus and surrounding community.

UW-Madison [Face Covering Guidelines](#)

While on campus, all employees and students are required to wear [appropriate and properly fitting](#) face coverings while present in any campus building unless working alone in a private, unshared laboratory

or office space; when traveling alone in a private vehicle; and when exercising outside in a way that maintains 6 feet of distance from others.

Students with disabilities or medical conditions who are unable to wear a face covering should contact the [McBurney Disability Resource Center](#) or their Access Consultant if they are already affiliated. Students requesting an accommodation unrelated to disability or medical condition, should contact the Dean of Students Office.

Students who choose not to wear a face covering may not attend in-person classes, unless they are approved for an accommodation or exemption. All other students not wearing a face covering will be asked to put one on or leave the classroom. Students who refuse to wear face coverings appropriately or adhere to other stated requirements will be reported to the [Office of Student Conduct and Community Standards](#) and will not be allowed to return to the classroom until they agree to comply with the face covering policy. An instructor may cancel or suspend a course in-person meeting if a person is in the classroom without an approved face covering in position over their nose and mouth and refuses to immediately comply.

Quarantine or Isolation Due to COVID-19

Students should continually monitor themselves for COVID-19 symptoms and get [tested](#) for the virus if they have symptoms or have been in close contact with someone with COVID-19. Students should reach out to instructors as soon as possible if they become ill or need to isolate or quarantine, in order to make alternate plans for how to proceed with the course. Students are strongly encouraged to communicate with their instructor concerning their illness and the anticipated extent of their absence from the course (either in-person or remote). The instructor will work with the student to provide alternative ways to complete the course work.

ACADEMIC POLICIES

All students should be aware of the expectations for academic integrity at the University of Wisconsin. The following information is from Academic Misconduct Rules and Procedures: Guide for Instructors prepared by the Office of the Dean of Students, 75 Bascom Hall (Fall 2001):

[Academic Integrity](#): Academic honesty requires that the course work (drafts, reports, examinations, papers) a student presents to an instructor honestly and accurately reflects the student's own academic efforts. UWS 14.03 defines academic misconduct as follows:

"Academic misconduct is an act in which a student:

- (a) seeks to claim credit for the work or efforts of another without authorization or citation;
- (b) uses unauthorized materials or fabricated data in any academic exercise;
- (c) forges or falsifies academic documents or records;
- (d) intentionally impedes or damages the academic work of others;
- (e) engages in conduct aimed at making false representation of a student's academic performance
- (f) assists other students in any of these acts."

Examples include but are not limited to: cutting and pasting text from the web without quotation marks or proper citation; paraphrasing from the web without crediting the source; using another person's ideas, words, or research and presenting it as one's own by not properly crediting the originator; stealing examinations or course materials; signing another person's name to an attendance sheet; hiding a book knowing that another

student needs it to prepare an assignment; collaboration that is contrary to the stated rules of the course, or tampering with a lab experiment or computer program of another student.

If academic misconduct has occurred, the student may be subject to one or more of the following penalties: an oral or written reprimand, a lower grade or a failing grade in the course, university disciplinary probation, suspension, or expulsion. See additional information regarding academic misconduct at <http://www.wisc.edu/students/UWS14.htm> or www.uwsp.edu/dos/Pages/Academic-Misconduct.aspx

Academic Misconduct

The use of another person’s work without proper referencing is considered to be plagiarism and is not acceptable. Work in which plagiarism is found will receive the grade of an “F”. Students found to be using materials for assistance on examination that are not allowed by the instructor will receive an “F” for that examination.

Students with Disabilities

If you are a student with a documented disability and wish to discuss academic accommodations to complete reading or written assignments, examinations, quizzes, or oral reports, please contact me within the first two weeks of the semester to discuss your needs.

Religious Conflicts

In accordance with University of Wisconsin policy (UWS 22), any potential conflict between class requirements and religious observance must be made known to an instructor within the first two weeks of class. The student must notify the instructor of the specific day(s) or date(s) of specific religious observances for which the student seeks relief from academic requirements.

ASHA Standards

Standard	Knowledge Area	Type of Documentation/Experience
A1.	Embryology and development of the auditory and vestibular systems, anatomy and physiology, neuroanatomy and neurophysiology, and pathophysiology.	Exam
A1.	Genetics and associated syndromes related to hearing and balance.	Exam
A1.	Normal aspects of auditory physiology and behavior over the lifespan.	Exam
A3.	Normal development of speech and language.	Exam
A3.	Language and speech characteristics and their development across the lifespan.	Exam
A2.	Effects of chemicals and other noxious elements on auditory and vestibular function.	Exam
A8, A16.	Patient characteristics (e.g., age, demographics, cultural and linguistic diversity, medical history and status, cognitive status, and physical and sensory abilities) and how they relate to clinical services.	Exam, Presentation
C4.	Pathologies related to hearing and balance and their medical diagnosis and treatment.	Exam
AA4.	Principles, methods, and applications of psychoacoustics.	Exam
A15. A16. D1-9.	Principles and applications of counseling.	Exam, presentation
A17-18, B5.	Consultation with professionals in related and/or allied service areas.	Exam, presentation

B1-2.	Implement activities that prevent and identify dysfunction in hearing and communication, balance, and other auditory-related systems.	Exam
B11-12.	Screen individuals for speech and language impairments and other factors affecting communication function using clinically appropriate, culturally sensitive and age-and site-specific screening measures.	Exam
C1-3, E1.	Evaluating information from appropriate sources and obtaining a case history to facilitate assessment planning.	Exam, presentation
C4, C7-11, C13-16.	Conducting and interpreting behavioral and/or electrophysiologic methods to assess hearing thresholds and auditory neural function.	Exam, presentation
C7, C12.	Conducting and interpreting otoacoustic emissions and acoustic immittance (reflexes).	Exam
C15.	Evaluating auditory-related processing disorders.	Exam, lab
A10, C3, E5.	Evaluating functional use of hearing.	Exam
B9, B13, C1, E20	Referring to other professionals, agencies, and/or consumer organizations.	Exam, presentation

Course Schedule

The schedule is tentative and subject to change. Any changes will be announced in class, by email, or on Canvas.

Unit	Date	Topic	Readings <small>(required, recommended) T&S: Tharpe & Seewald, 2017</small>	Deadlines
Introduction	Wed, Jan 20	Introduction, Syllabus Review		
Unit 1: Embryology and Genetics	Mon, Jan 25	Embryology for Audiologists	T&S Chapter 1 p.3-16; Embryologic Chart (Canvas); Embryologic Development table (Canvas); <i>Moore & Linthicum, 2007 (Canvas)</i>	Choose topic for presentations by Jan 25th at 8:15 AM
	Wed, Jan 27	Embryology for Audiologists	T&S Chapter 1 p.3-16 T&S Chapter 2 p. 23-30; Embryologic Development table (Canvas); Embryologic Chart (Canvas); <i>Moore & Linthicum, 2007 (Canvas)</i>	
	Mon, Feb 1	Embryology for Audiologists: Abnormalities	T&S Chapter 1; p.16-19	Submit part I presentation PPT to Canvas by Feb 1 at 8:15 am
	Wed, Feb 3	Genetics for Audiologists	T&S Chapter 6, p.133-135; Jones & Jones, Ch. 3 (Canvas)	
Unit 1 Quiz: Due Sunday, Feb 7th at 11:59 PM				
Unit 2: Causes of Childhood Hearing Loss	Mon, Feb 8	Hereditary: non-syndromic	T&S Chapter 5 p.106-112; T&S Chapter 6, p.135-137 <i>Mahdieh, Rabbani, & Ilnoue, 2012 (Canvas)</i> <i>Katz, Chapter 25</i>	Part I of presentations

	Wed, Feb 10	Hereditary: non-syndromic and syndromic	T&S Chapter 5 p.106-112; T&S Chapter 6; 137-145; Guidelines for Audiologists on the Benefits and Limitations of Genetic Testing (Canvas)	Part I of presentations
	Mon, Feb 15	Hereditary: non-syndromic and syndromic		Part I of presentations
	Wed, Feb 17	Non-hereditary: environmental factors	T&S Chapter 5 p.112-117; T&S Chapter 9; <i>Clinical Practice Guideline: Otitis Media with Effusion (AAP) (Canvas)</i>	Part I of presentations
	Mon, Feb 22	Non-hereditary: environmental factors		Part I of presentations
Unit 2 Quiz: Due Sunday, Feb 28th at 11:59 PM				
Unit 3: Pediatric Hearing Assessment	Wed, Feb 24	Developmental Milestones Pediatric Case History	T&S Chapters 3 & 4	
	Mon, Mar 1	Behavioral evaluations: BOA & VRA	T&S Chapter 23, p.591-598; Guidelines for the Audiologic Assessment of Children, ASHA (Canvas); Audiologic Guidelines for the Assessment of Hearing in Infants and Young Children, 2013 (Canvas) <i>Madell & Flexer, Chapters 6 & 7</i>	VRA lab assignment opens
	Wed, Mar 3	Behavioral evaluations: CPA & speech perception	T&S Chapter 23, p.598-605; Guidelines for Audiologic Screening (Canvas); <i>Madell & Flexer, Chapter 10</i> <i>Madell & Flexer, Chapter 8</i>	
	Mon, Mar 8	Behavioral evaluations: Other considerations	T&S Chapter 24; <i>Madell & Flexer, Chapter 9 (Canvas)</i>	
	Wed, Mar 10	No Class: Work on VRA lab		
	Mon, Mar 15	Objective measures	T&S Chapters 20, 21	
	Wed, Mar 17	Clinical applications of electrophysiology	Katz, Chapter 14 <i>Madell & Flexer, Chapter 15</i>	VRA lab due by 11:59 PM
Unit 3 Quiz: Due Sunday, Mar 21st at 11:59 PM				
	Mon, Mar 22	No Class: Spring break in Stevens Point		
	Wed, Mar 24			
Unit 4: EHDI + Communication Opportunities	Mon, Mar 29	Early Intervention & Newborn Hearing Screening	T&S Chapters 15, 18; Katz, Chapter 23 NIH Consensus Statement (Canvas); JCIH 2019 Position Statement (Canvas); Wisconsin Sound Beginnings ; <i>Madell & Flexer, Chapter 4 (Canvas)</i>	
	Wed, Mar 31	Communication Opportunities	Special Education Eligibility - WESP DHH ; Wisconsin School for the Deaf ;	Communication Opportunities Discussion Board

			Wisconsin Families for Hands & Voices Choices in Deafness: Groups assigned to Chapters 9, 10, 11, 13 (Canvas)	Opens
Unit 5: Special Considerations	Mon, Apr 5	Auditory Neuropathy Spectrum Disorder (ANSD)	T&S Chapters 11, 12; Guidelines for Auditory Neuropathy (Canvas) <i>De Siati et al., 2020 (Canvas)</i>	
	Wed, Apr 7	CAPD Guest Speaker: Amy Hartman, AuD, CCC-A	T&S Chapter 13	Communication Opportunities Discussion posts due by 8:15 AM
	Mon, Apr 12	CAPD Guest Speaker: Amy Hartman, AuD, CCC-A	TBD	
	Wed, Apr 14	CAPD Guest Speaker: Amy Hartman, AuD, CCC-A	TBD	CAPD Lab Assignment Opens
	Mon, Apr 19	Mild and Unilateral Hearing Loss	T&S Chapter 37; Unilateral Hearing Loss, Best Practice Guidelines, 2011 (Canvas) <i>Lieu, Tye-Murray, & Fu, 2012 (Canvas)</i> <i>Madell & Flexer, Ch. 31 (Canvas)</i>	
Unit 4 & 5 Quiz: Due Sunday, April 25th at 11:59 PM				
Unit 6: Case Presentations	Wed, Apr 21	Case Study Presentations		Part II of presentations
	Mon, Apr 26	Case Study Presentations		Part II of presentations
	Wed, Apr 28	Case Study Presentations		Part II of presentations CAPD Lab Assignment Due 11:59 pm
Mon, May 3		Final Exam (due by 11:59 PM)		