

**COURSE SYLLABUS**  
**CSD 856: Amplification I, 2 s.h.**  
**University of Wisconsin AuD Program**  
**Spring 2021**  
**MW 9:45-10:35**

**Class format will vary: There will be some online Zoom meetings at the regular class time, and also some asynchronous recorded lectures.**

**Professor:** Dr. Rebecca L. Warner Henning  
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**Office Hours:** Monday 12:45-1:45, Wednesday 10:45-11:45, & by appointment

**Reaching me by phone:** You are welcome to try calling my office anytime, but if you want to make sure I'll be available, please arrange a time with me beforehand. I receive office voicemails both in my office and remotely, so I will receive voicemails even on days when I'm not in the office.

**E-mail communication:** You are expected to check your school e-mail account at least once per weekday for any important class announcements. I typically reply to emails within two business days or sooner. I cannot guarantee that I will 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.** If you've emailed me with reasonable advance notice (see later in this paragraph), but I haven't replied within the timeframe given above, there is a chance I did not receive your message. Please check your sent-mail to see if it was actually sent, and try re-sending it or calling me. If you are emailing a question within 1-2 days or less of the deadline, I may not have time to reply/answer before the deadline. (I will try to reply, but often many urgent things come up at once). If I do not reply before the deadline, then you should submit your assignment by the deadline, using your best judgment to answer your question.

**Prerequisites:**

- At least second-semester AuD student status
- Concurrent enrollment in CSD 857 Amplification I Lab

**Required Readings:**

- Harvey Dillon, *Hearing Aids*, 2<sup>nd</sup> edition
- Additional required readings on Canvas.

**Credit Hour Policy Standard:**

This class meets for two 50-minute class periods each week, and carries the expectation that students will work on course learning activities (reading, studying, viewing recorded lectures, reviewing and organizing your notes, preparing for class, etc.) for about 2 hours outside of the classroom for every class period. We probably will not meet during every scheduled class period, and in that case, there will be recorded lectures to replace the class meetings. The information about class meeting times and expectations for student work are included in this syllabus.

### **Course Description:**

This course will cover much of the beginning to intermediate knowledge and skills that you will need to begin successfully fitting your patients with hearing aids! Amplification I is the first part of a roughly 2 1/2-semester course sequence on hearing aids. (Amplification II is the next course, and the 1/2 semester is in Pediatric Habilitation/Rehabilitation). The goal of this course is to cover the topics that will allow you to begin hands-on work with hearing aids in the clinic as soon as possible. Between lab and lecture, some topics include: the components and features of hearing aids, electroacoustic measurement and verification of hearing aids in couplers and real ears, taking earmold impressions, earmold and earshell acoustics, assessing patient needs and determining hearing aid candidacy, using prescriptive fitting strategies, and hearing aid repair and troubleshooting.

Even across 2 1/2 semesters, it is not possible to cover all of the information you will need to know about hearing aids, and the specific **technology will change by the time you graduate**. **Thus, my goal is to cover the important** foundation information upon which you can build the necessary habit of continued learning. Peer-reviewed journal articles (i.e., articles in journals such as *JAAA*, *Ear and Hearing*, *American Journal of Audiology*, etc.) are the best source of unbiased, evidence-based information about the effectiveness of various hearing aid technologies. A disadvantage of these journals, though, is that the peer-review process moves more slowly than changes in hearing aid technology.

If you need to learn about how the latest hearing aid technology works, the best sources of current information are audiologyonline and the manufacturers themselves (i.e., information from your sales rep, the manufacturers' websites, or audiologists who work in technical support at the manufacturer). The disadvantage of information from these sources is that, since it has not gone through the peer-review process, it is often biased toward overestimating the benefits of new technology and new features from that manufacturer. You should view any claims of benefits or the "latest and greatest" from these (non-peer-reviewed) sources with a critical eye; in some cases, the claims are true, but they may also be exaggerated or presented as marketing material / advertising rather than as objective, evidence-based information. As you gain more experience and knowledge in hearing aids and research methods over the next few years, you will hone your ability to differentiate true benefits from marketing hype.

### **Course Format and Expectations:**

- This class will sometimes meet online via Zoom at the designated time (9:45-10:35 am), and sometimes will have required asynchronous activities (typically recorded lectures) instead of or in addition to class meetings.
- **When attending a synchronous class, please remain attentive and engaged in the course.**
  - If you expect you will be unable to attend or focus on a synchronous course session (for example, if you are ill, or caring for someone who is ill, or caring for a dependent, etc.), please email me ahead of time if possible (or if it's not possible to email me ahead of time, then email me as soon as you reasonably can) to request an excused absence from the class. Zoom meetings will be recorded unless prevented by technical problems, and you can watch the recording at a better time. Please also read the bullets below about excused absences.
  - **Please do not try to attend a Zoom course while you are driving, or while you are doing anything else that requires your full attention for safety!** Please plan your schedule so you can attend class from an environment that allows you to pay attention to class. If this is not

possible on a particular day, please see the information in the previous and following bullets about requesting an excused class absence if necessary.

- Although excused absences may be necessary more often than usual due to the pandemic, I expect they will still be reserved for circumstances such as illness, caring for someone who is ill, personal or family emergency, etc. Otherwise, you should plan to attend class regularly, and excused absences should NOT be requested or used for reasons like vacation, work, convenience, or errands.
- Although I **highly recommend you participate with video whenever possible (it helps me and everyone else to feel connected when we can see each other's faces! 😊)** in any synchronous Zoom sessions, if you have bandwidth limitations or if your video will create repeated or disruptive distractions for others during the session, please disable your own video while the distraction is present, or for the entire session if necessary. It is NOT very distracting (so no need to disable video) if a family member or pet occasionally or calmly appears in the background; however it IS visually distracting if you move around a lot, or if you move your camera a lot, or if your pet repeatedly jumps all over you throughout class (in contrast to just calmly resting), or if a family member keeps asking you questions. I understand these things may happen, but please disable your own video if they occur for longer than a brief time.
- In general, please mute your own audio unless you are speaking. There may be some occasions when, due to a faster pace of the discussion, it may be better to leave your audio un-muted, but most of the time it works best if everyone except the current speaker has their audio muted.

#### **Student Privacy and Intellectual Property of Recorded Lectures:**

Lecture materials and recordings for this class are protected intellectual property at UW-Stevens Point. 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 share 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 Requirements:**

##### **Personal situations and/or difficulty meeting course requirements:**

If you are concerned that a family or personal situation may affect your ability to meet the class requirements, please discuss this with me (or with the graduate advisor or another faculty member on your home campus with whom you feel comfortable) so that we can be aware of the situation and figure out alternative arrangements if needed. It is far better to be proactive about discussing possible difficulties than to wait until your performance in the class has already suffered. I will not probe you for medical or personal information if you do not wish to share it; however, you will typically need to provide some type of documentation to at least one faculty member (either myself or the graduate advisor on your home campus) if alternative arrangements, such as extended deadlines or different exam dates, are needed.

**You must complete all of the following in order to pass this course:**

### Respect & Professionalism

As doctoral students, I expect you to be prepared for class, and to regularly attend class (including virtual class) with an attitude of respect, engagement, enjoyment, and professionalism. **I expect you to behave respectfully toward everyone in the class and myself.**

### Reflection Assignment

To encourage the process of learning and applying information, you are required to submit a reflection assignment during this class. The reflection must discuss application of the course material to a clinical situation. Your reflection may be submitted **at any time between March 8 and 1 pm on April 26.**

Here are the requirements for the reflection:

- It must be 2-3 double-spaced pages in length. (There will be no penalty nor advantage if it's longer than 3 pages, but it should not be shorter than 2 pages double-spaced).
- Background and/or description of the clinical situation or problem. Do not include any direct identifiers (such as the patient's name), and only include any demographic information and patient characteristics that are relevant to the points you'll be making. It's OK to be less specific (e.g., "The patient is in his 60s" instead of, "The patient is 65," or, "He is an avid runner," instead of, "He is currently training for his fifth Boston Marathon") to help protect privacy, if the specific information isn't truly necessary for your reflection. (If specific information is necessary for the points you'll be discussing, though, then please include the specific information).
- Description of the information from class (or related to this class) that you applied to this situation
  - Indicate how you obtained this information: lecture/class notes? Textbook? Another source such as audiologyonline or a manufacturer's website?
- Description of how you applied or used the information from this class
- Reflect and discuss: Did the situation go as you expected? With hindsight, would you do anything differently, or try a different idea? Did you (or another student or supervisor) try anything different at the time? (If the situation didn't go as expected, or if you'd try something different the next time, that doesn't necessarily mean a mistake was made this time. It might just mean that you also have some other ideas or possibilities).
- Reflect and discuss: How does this situation relate to your goals for this class, and/or your goals as an audiologist?

Grading for Reflection:

- **\*\*This assignment must be satisfactorily completed in order to pass the course.**
- Grades will be assigned as follows:
  - Meet all requirements by the deadline: 100%
  - Meet all requirements by 11:59 pm on the due date: 97%
  - Meet all requirements by 11:59 pm on the day after the due date: 91%
  - Meet all requirements by 11:59 pm two days after the due date: 85%
  - Meet all requirements by 9 am on the Monday following the due date: 75%
  - Meet all requirements by 9 am on the Tuesday following the due date: 50%
  - Meet all requirements after 9 am on the Tuesday following the due date: 0%; **\*\*however, note that even if your grade is 0%, you still must submit a reflection that meet the requirements in order to pass this course**

- \*\*If you believe you have an excused reason to turn in a late assignment and not receive a grade penalty, please let me know as soon as possible.
- **If you do not meet all requirements for this assignment, you will be required to submit a revised version that does meet requirements, but late penalties will apply to your grade.**

### Exams

There will be two online exams during class times in addition to the final exam. Exams will be open-book and open-notes, but **time will be limited so you should prepare as if they are closed-book exams.** I will be available over phone and email in case you have any questions on an exam. **You are not permitted to consult with your classmates or anyone else on an exam.**

The final exam will be comprehensive.

If you believe you will need to make up an exam due to an excused absence, please ask me about the possibility of a make-up as soon as you are aware of the situation. If it is for a scheduled absence, such as a professional conference presentation at the same time as the exam, you must make the request within the first two weeks of the semester, or as soon as your plans are known (which is typically at least 4-6 weeks in advance). Exams may only be made up for excused reasons such as illness, family emergency, unavoidable professional conference conflict at the same time as the exam, etc., and I will require documentation for the excused reason.

### **Students with Disabilities:**

I would like to hear from anyone who has a disability and may require accommodations. Please contact me as soon as possible at the beginning of the semester.

### **Religious Observances:**

I will accommodate religious beliefs according to UWS 22.03 if you notify me within the first three weeks of the semester regarding specific dates that you will need to change course requirements.

### **Academic Misconduct:**

Information on the policies that apply to all UW System students and faculty regarding academic misconduct can be found at this UW-Madison website:

<https://conduct.students.wisc.edu/misconduct/academic-integrity/>. You are also responsible for reviewing and understanding all of the information about avoiding plagiarism at this link, especially the information on successful and unsuccessful paraphrases:

<https://writing.wisc.edu/handbook/assignments/quotingsources/>. ***Plagiarism and/or cheating on any exam or assignment in this class may result in a reduced or failing grade for the cheated/plagiarized portion of the exam or assignment.***

**Grading:**

See the information on the separate handout, as well as on the next page.

Your final grade is determined by averaging your *percentage* (NOT total number of points) on the following components:

Reflection	10%
Midterm exams	28% each
Final exam	34%

**Grading Scale**

<b>UW – SP</b> Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	F
<b>Percentage</b>	100-92	91.9-90	89.9-88	87.9-82	81.9-80	79.9-78	77.9-72	71.9-70	69.9-68	67.9-60	<60
<b>UW – Madison</b> Letter Grade	A	AB		B	BC		C	CD		D	F

**ASHA Standards/Competencies:** The following American Speech-Language-Hearing Association (ASHA) Council for Clinical Certification (CFCC) 2020 standards for the Certificate of Clinical Competence in Audiology (CCC-A) are covered in this course (see table below). For standards that are partially covered, **the portion covered in this class is bolded.**

**Method of Assessing Competency:** All of these competencies are assessed via exams. For each competency, (a) passing grade(s) on the exam(s) covering the corresponding material will serve as documentation that the student has met competency. **A passing grade is a B or better. If a student fails to complete any of the tasks listed below, they will work with the course instructor to either redo the task or complete an additional task in order to demonstrate competency. If a student is not able to successfully complete this task, then an improvement plan will be initiated to remediate the skill in question. See the AuD handbook section on improvement plans.**

<b>ASHA CCC-A/CFCC (2020) standard; The student will demonstrate knowledge of (for items lettered A) and knowledge and skills in (for items lettered B-F):</b>
A4. Principles, methods, and applications of acoustics, psychoacoustics, and speech perception, with a focus on how each is impacted by hearing impairment throughout the life span
A5. Calibration [calibration only covered to a limited extent] and use of instrumentation according to manufacturers’ specifications and accepted standards
A16. Principles and practices of client/patient/person/family-centered care, including the role and value of clients’/patients’ narratives, clinician empathy, and shared decision making regarding treatment options and goals
A18. The role, scope of practice, and responsibilities of audiologists and other related professionals
<b>D4. Enhancing clients’/patients’ acceptance of and adjustment to hearing aids, hearing assistive technologies, and osseointegrated and other implantable devices</b>

E1. Engaging clients/patients in the identification of their specific communication and adjustment difficulties by eliciting client/patient narratives and interpreting their and/or caregiver-reported measures
E3. Responding empathically to clients'/patients' and their families' concerns regarding communication and adjustment difficulties to establish a trusting therapeutic relationship
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
E13. Conducting individual and/or group hearing aid orientations to ensure that clients/patients can use, manage, and maintain their instruments appropriately
E17. Identifying the need for—and fitting—electroacoustically appropriate hearing assistive technology systems (HATS) based on clients'/patients' communication, educational, vocational, and social needs when conventional amplification is not indicated or provides limited benefit

### Class Schedule

The following is a tentative schedule that is subject to change. I will announce all changes in class. Exam dates are carefully scheduled with several factors in mind, so I would prefer not to change them. If you have multiple exams on the same day or week and would like to request a change, you must do so **no later than Wednesday, February 3, by 8 am.** Requests cannot be considered after that time. I will consider all requests made by the deadline, and I will ask for feedback from all members of the class. I cannot guarantee that I will be able to honor all requests.

Day	Date	Topic	Required <u>Text</u> Reading (see Canvas for additional required readings)
W	Jan. 20	Course overview & HA fitting process overview; HA styles	Dillon chpt. 1
M	Jan. 25	HA components, features, & troubleshooting	Dillon chpt. 2; chpt. 4 pp. 121-25 ; chpt. 3 pp. 56-68, 73-80, highlighted sections
W	Jan. 27	HA components, features, & troubleshooting	Dillon chpt. 7, read all through top of p. 204, and then only highlighted sections
M	Feb. 1	HA components, features, & troubleshooting	
W	Feb. 3	Electroacoustic measurement of HAs in the test box	Dillon chpt. 4 pp. 82-96
M	Feb. 8	Electroacoustic measurement of HAs in the test box	

W	Feb. 10	Electroacoustic measurement of HAs in the test box	
M	Feb. 15	Electroacoustic measurement	
W	Feb. 17	Finish electroacoustic measurement; Start compression?	
<b>M</b>	<b>Feb. 22</b>	<b>Exam I</b>	
W	Feb. 24	Compression	Dillon chpt. 6; chpt. 12 section 12.1.7 (pp. 362-365)
M	March 1	Compression	
W	March 3	Compression	
M	March 8	Compression <b>First possible day to submit reflection (due no later than April 26 by 1 pm)</b>	
W	March 10	Verification & probe microphone measurements	Dillon chpt. 4 pp. 97-118
M	March 15	Verification & probe microphone measurements	
W	March 17	Verification & probe microphone measurements	
<b>M</b>	<b>March 22</b>	<b>Spring break</b>	
<b>W</b>	<b>March 24</b>	<b>Spring break</b>	
M	March 29	Finish verification & probe microphone measurements? Earmold & earshell acoustics	Dillon chpt. 5
W	March 31	Earmold & earshell acoustics	Dillon chpt. 5
<b>M</b>	<b>April 5</b>	<b>Exam II</b>	
W	April 7	Fitting strategies / prescriptive procedures	Dillon chpt. 10
M	April 12	Fitting strategies / prescriptive procedures	
W	April 14	Fitting strategies / prescriptive procedures	
M	April 19	Fitting strategies / prescriptive procedures Start feedback & feedback management?	Dillon chpt. 4 pp. 118-121; Dillon chpt. 8 pp. 234-239
W	April 21	Feedback and feedback management	Dillon chpt. 4 pp. 118-121; Dillon chpt. 8 pp. 234-239
<b>M</b>	<b>April 26</b>	Feedback and feedback management <b>Reflection due by 1 pm</b>	
W	April 28	Catch up	Dillon chpts. 9 & 12; chpt. 11 pp. 337-350
<b>Final exam date/time TBD during week of May 3</b>		<b>Final Exam</b>	