**COURSE SYLLABUS**

# **COMD 856: Amplification I, 2 s.h.**

**University of Wisconsin AuD Program**

**Spring 2017**

**MW 2:00-2:50**

**Room 234 CPS on UWSP campus**

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**Office Hours:** Monday and Wednesday 3-4, Friday 11:00-noon, & by appointment

**Reaching me by phone:** You are welcome to try calling my office anytime, but if you want to *guarantee* that I’ll be available, please arrange a time with me beforehand.

**E-mail:** I check my e-mail several times during the day. I will usually reply to you within 1-2 business days. Although I sometimes read and/or respond to emails on evenings and weekends, I cannot guarantee that I always will (sometimes I’m out of town or busy with other things), so please plan ahead to avoid last-minute weekend or late-night “emergencies”.

***\*\*Very Important re: e-mail communication:*** Because this is a distance education class, it is important to maintain reliable e-mail communication. If you send me an e-mail that requires a reply from me, and you do not receive one within 2 *business days*, *you* are responsible for contacting me again. (Typically, the only reason I wouldn’t reply within 2 business days is if I did not receive the e-mail). First, double-check your sent-mail folder to be sure you really sent me the original e-mail. (Occasionally students have thought they sent me a message, only to check their sent-mail and see that they never did, or they accidentally sent the message to someone else). Second, be sure you have not exceeded your university e-mail storage space. (You will probably be prevented from sending and receiving messages if you exceed your storage quota). If neither one of these is the problem, then you can try re-sending the message or calling me at my office phone number above. If you re-send the message (rather than calling) and I still don’t reply within 1 business day, this suggests that I still did not receive your message, and please call my office phone number ASAP. Leave a voicemail message if I do not answer.

**Prerequisites:**

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

**Required Readings:**

* + Harvey Dillon, *Hearing Aids,* **2nd edition**
  + Additional readings available online or on the course D2L website.

**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 1/3-semester course sequence on hearing aids. (Amplification II is the next course, and the 1/3 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 1/3 semesters, it is not possible to cover all of the information you will need to know about hearing aids, and the 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, *Hearing Journal*, 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. You should view any claims of benefits or the “latest and greatest” from these (non-peer-reviewed) sources with a skeptical 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.

**Student Requirements:**

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

Classroom Etiquette & Professionalism

As doctoral students, I expect you to attend class with an attitude of respect, engagement, enjoyment, and professionalism. Here are my specific expectations:

* Come to class prepared. I can spend class time clarifying difficult concepts and clearing up genuine misunderstandings, but I cannot spend class time simply reiterating information that has already been covered (in the reading or in class).
* Check your university e-mail account at least once per weekday.
* Communicate necessary information to me (in person or via e-mail or telephone), such as asking for clarification if you don’t understand something, informing me if there is a problem, or informing me if you need to be absent from class.
  + If you are concerned about a grade you received and would like some advice on how to do better, please contact me. Do not, however, argue about why you should receive a higher grade; instead, word your inquiry in a way that shows you accept your grade, but want to understand how you can do better in the future. If you honestly do not understand what you did wrong to receive a certain grade, feel free to ask after you have double-checked with your notes and readings. (i.e., “Dr. Henning, I had 5 points taken off for this question. I went back and reviewed the notes and reading and compared them to my answer, but I still do not understand what I did wrong.”) If it turns out that I truly made a mistake, I will correct the mistake and adjust your grade accordingly.
  + Please feel free to politely contact me if you believe I have made an error, either mathematical or factual, in grading. This is rare, but it can happen. If an error has occurred, I will correct it and adjust your grade accordingly.
* Ask questions when you have them (either in class or outside of class, in person or via e-mail or telephone). Before asking me, though, double-check with your class notes, reading assignment, and/or syllabus to see if your question can be easily answered from those sources.
* Treat your classmates and me with respect and tolerance, understanding that everyone learns differently, and understanding that nobody (including me) is perfect and that everyone sometimes makes mistakes. The students who learn the most are those willing to make mistakes and learn from them.
* Remain engaged in class. In distance education, it is common for students at the “remote” campus to act kind of like they are watching TV. They talk among themselves more, walk around the room, get up and leave the room, etc. All of these things are extremely distracting to me and to the other students. I ask all of you to act as though I am in the room with you. I understand that occasionally you may need to leave the room or talk to your neighbor, but I ask you to keep these behaviors to a minimum. If there is a problem or misunderstanding, please bring it to my attention. If something funny happens at one campus and you are all laughing, share it with the rest of us so that we can all feel more connected.
* Cell phones must remain silenced and not in use during class. If you have a true emergency situation that may require you to take a call during class, please inform me of that possibility ahead of time.
* If you bring a laptop or tablet to class, I expect that you are using it for class activities. Please do not distract your classmates by using it for non-class activities.
* Regular class attendance. I understand that you may occasionally need to miss class for either excused or “unexcused” reasons; however, repeated absences are not appropriate in this class. Regardless of your reason for missing class, you are responsible for contacting me as soon as reasonably possible and making up any missed work. If you miss more than two classes, I may ask you to provide me with documentation for excused absences. *More than two absences for unexcused, undocumented reasons could, depending on the circumstances, result in an improvement plan for lack of professionalism.* Excused absences are for reasons such as illness, death in the family, personal or family emergency, etc.

Reflections

To encourage the learning process (see the powerpoint for the first class), you are required to submit two reflections during this class. The reflections must discuss application of the course material to a clinical situation. One reflection may be submitted at any time between February 6 until **2 pm on March 8,** and the other may be submitted at any time between March 15 until **2 pm on April 26.**

Here are the requirements for each reflection:

* Each one must be 1-2 double-spaced pages in length.
* 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 Reflections:

* \*\*These assignments 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: 95%
  + Meet all requirements by 11:59 pm on the day after the due date: 90%
  + 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 reflections 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.

Exams

There will be two in-class exams in addition to the final exam. All exams must represent only your own work. If you have any questions on an exam, feel free to ask me or the exam proctor; you are not permitted to consult with your classmates or anyone else.

The final exam will be comprehensive.

If you believe that 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, you must make the request within the first two weeks of the semester, or as soon as your travel 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, professional conference, 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://students.wisc.edu/student-conduct/misconduct/academic-integrity/>. We will review the basics of plagiarism and citation in class, and you are also responsible for reviewing and understanding all six pages available from this link, especially the information on successful and unsuccessful paraphrases: <http://www.wisc.edu/writing/Handbook/QPA_plagiarism.html>. *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:

### Reflections (average of the two) 10%

In-class exams 28% each

Final exam 34%

Grading Scale

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **UW – SP** Letter Grade | A | A- | B+ | B | B- | C+ | C | C- | D+ | D | F |
| **Percentage** | 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 |
| **UW – Madison** Letter Grade | A | AB | | B | BC | | C | CD | | D | F |

**Objectives for Students:**

The following course objectives line up with the requirements of the American Speech-Language-Hearing Association (ASHA) for certification of audiologists.

\* I/D/M indicates level of mastery = introductory/developing/mastery

|  |  |  |  |
| --- | --- | --- | --- |
| **The student will. . .** | **ASHA Ref** | **Level**  **I/D/M** | **Method of Assessment** |
| Describe how hearing aid components, signal processing, and technological features work, and apply the technology to appropriate patients and patient situations. | D2 | I | Exams |
| Use hearing aid fitting procedures to appropriately determine gain and output, and explain the rationale behind the procedures. | D2 | D | Exams |
| Describe the correct methods (test signal types, test signal levels, etc.) to measure and interpret hearing aid electroacoustic gain and output using couplers, test boxes and probe microphone measures. | A24, D2 | D | Exams |
| Describe the acoustic effects of earmold and earshell characteristics and modifications. | D2 | D | Exams |
| Assess patient needs related to amplification, and describe and explain the factors involved in making that determination. | C9, D2, F1 | D | Exams |

**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 (including to coordinate with Amp. II so that you can have extra time), 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 Monday, January 30, by 5 pm.** 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.

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| --- | --- | --- | --- |
| **Day** | **Date** | **Topic** | **Required Text Reading (see D2L for more required readings)** |
| W | Jan. 18 | Course overview & HA fitting process overview; HA styles  Introduction to HA components? | Dillon chpt. 1;  Dillon chpt. 2; chpt. 4 pp. 121-25 (HA components) |
| M | Jan. 23 | HA components, features, & troubleshooting | Dillon chpt. 2;  chpt. 4 pp. 121-25 ;  chpt. 3 pp. 56-68, 73-80, highlighted sections |
| W | Jan. 25 | HA components, features, & troubleshooting | Dillon chpt. 7, read all through top of p. 204, and then only highlighted sections |
| M | Jan. 30 | HA components, features, & troubleshooting |  |
| W | Feb. 1 | Electroacoustic measurement of HAs in the test box | Dillon chpt. 4 pp. 82-96 |
| M | Feb. 6 | Electroacoustic measurement of HAs in the test box |  |
| W | Feb. 8 | Electroacoustic measurement of HAs in the test box |  |
| M | Feb. 13 | Finish electroacoustic measurement;  Compression | Dillon chpt. 6;  chpt. 12 section 12.1.7 (pp. 362-365) |
| W | Feb. 15 | Compression |  |
| **M** | **Feb. 20** | **Exam I (class begins early): 1:40-2:55 pm** |  |
| W | Feb. 22 | Compression |  |
| **M** | **Feb. 27** | **Class begins at 2:20 due to Amp. II exam;**  **Compression** |  |
| W | March 1 | Finish compression?  Start verification & probe microphone measurements? | Dillon chpt. 4 pp. 97-118 |
| M | March 6 | Verification & probe microphone measurements |  |
| W | March 8 | Verification & probe microphone measurements |  |
| M | March 13 | Verification & probe microphone measurements |  |
| W | March 15 | Finish verification & probe microphone measurements?  Start feedback & feedback management? | Dillon chpt. 4 pp. 118-121;  Dillon chpt. 8 pp. 234-239 |
| **M** | **March 20** | **Spring break** |  |
| **W** | **March 22** | **Spring break** |  |
| M | March 27 | Feedback & feedback management | Dillon chpt. 4 pp. 118-121;  Dillon chpt. 8 pp. 234-239 |
| **W** | **March 29** | **Exam II (class begins early): 1:40-2:55 pm** |  |
| M | April 3 | Feedback & feedback management |  |
| **W** | **April 5** | **No class (AAA): view recorded lectures on earmold & earshell acoustics** | Dillon chpt. 5 |
| **M** | **April 10** | **No class: view recorded lectures on earmold & earshell acoustics** | Dillon chpt. 5 |
| W | April 12 | Start fitting strategies / prescriptive procedures | Dillon chpt. 10 |
| M | April 17 | **Class begins at 2:20 due to Amp. II exam;**  Fitting strategies / prescriptive procedures |  |
| W | April 19 | Fitting strategies / prescriptive procedures |  |
| M | April 24 | Fitting strategies / prescriptive procedures |  |
| W | April 26 | Finish fitting strategies / prescriptive procedures?  HA candidacy, selection, fitting, & fine-tuning | Dillon chpts. 9 & 12; chpt. 11 pp. 337-350 |
| M | May 1 | HA candidacy, selection, fitting, & fine-tuning |  |
| W | May 3 | HA candidacy, selection, fitting, & fine-tuning |  |
| **Monday May 8, 1-3?** | | **Final Exam** |  |