SLHS 587A: Lab for Auditory Prosthetics I  
SLHS Room 107 ● Wednesdays 9:30 am – 12:00 pm

Description of Course
This is the laboratory portion of the first in a series of two graduate-level courses in amplification. The course covers the history of hearing aid manufacturing and fitting, as well as development and application of methods of fitting hearing aids to individuals with hearing loss. Basic and advanced treatments of hearing aid signal processing are included.

Instructor and Contact Information
Instructor: Tom Muller, Au.D., CCC-A  
Office Hours: By appointment  
Office Location: Room 436  
Office Phone: 626-5299  
Email: mullert@email.arizona.edu

Preceptor: Diane Cheek, B.A.  
Office Hours: By appointment  
Email: descheek@email.arizona.edu

Instructor: Tom Muller, Au.D., CCC-A  
Office Hours: By appointment  
Office Location: Room 436  
Office Phone: 626-5299  
Email: mullert@email.arizona.edu

Teaching Assistant: Jaclyn Tom, B.S.  
Office Hours: By appointment  
Email: jaclyntom@email.arizona.edu

D2L Website: SLHS 587A SP17 001

Course Format
This course format will include lectures, small-group activities, in-class discussions, and D2L-delivered content.

Course Objectives and Expected Learning Outcomes
After completing this lab, a student should be able to:
1. Recognize components of hearing aids and describe the function of each
2. Outline the procedures for performing electroacoustic analysis of hearing aids, including coupler, real ear and RECD measures
3. Troubleshoot and repair common hearing aid problems
4. Become comfortable with principles of fitting software
5. Verify hearing aid fittings and adjust hearing aid performance based on verification measures
6. Produce well-formed ear impressions using proper techniques
7. Analyze specific hearing aid function and processing
8. Describe effects of different earmold and shell characteristics

Absence and Class Participation Policy
Attendance at all scheduled labs is mandatory, as is the completion of all laboratory assignments. If a student is unable to attend a lab for any reason, they are to notify Diane Cheek or Jaclyn Tom prior to the missed lab and are responsible for reviewing missed content with their peers and completing missed assignments; otherwise, points for that lab will be forfeited.

The UA’s policy concerning Class Attendance, Participation, and Administrative Drops is available at: http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop

Rev. 6/23/2016
The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, [http://policy.arizona.edu/human-resources/religious-accommodation-policy](http://policy.arizona.edu/human-resources/religious-accommodation-policy).

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: [https://deanofstudents.arizona.edu/absences](https://deanofstudents.arizona.edu/absences)

**Course Communications**
Online communication will be conducted through official UA e-mail and D2L services.

**Required Texts or Readings**
Materials will be placed on the D2L website including information regarding class activities and student messages. Not every presentation will be uploaded prior to the scheduled date but do check for relevant notes and supplemental material. Students are responsible for checking D2L and downloading the material. If you miss a class, you must check with a peer to see if a handout or other materials were given.

**Final Practical Exam**
This laboratory will culminate in a comprehensive practical exam, composed of both written questions and hands-on skill demonstrations. A practical exam review will be provided during a scheduled lab session.

**Grading Scale and Policies**
Each student’s grade will be based on performance on the laboratory assignments and on a final, practical lab exam.

The lab exam will cover skills and knowledge demonstrated by the lab assignments. Point assignments will be:

- **Graded Labs**: 100 points
- **Practical Exam**: 30 points

Grading will be based on the following grading scale: >90% A, 80-89% B, 70-79% C, 60-69% D and <60% E.

Graded labs will be worth 100 points, independent of the number of assignments. We anticipate that there will be 13 lab assignments, but this policy allows for adding or subtracting an assignment based on the learning needs of the group. In order to be fair to all students, there will be **no re-grading**. Information in this syllabus may be subject to change with reasonable advance noticed as deemed appropriate by the instructors. The grading policy (except as noted in this paragraph) and attendance policy will not change.

Assignment due dates will be assigned on the day of that particular lab. They will generally be due between 1 to 2 weeks after the lab. **Work turned in late will lose 10%, and an additional 10% every 24 hours thereafter.**

**Requests for incomplete (I) or withdrawal (W)** must be made in accordance with University policies, which are available at [http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete](http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete) and [http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal](http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal) respectively.
Scheduled Labs

<table>
<thead>
<tr>
<th>Date</th>
<th>Lab</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Jan 11</td>
<td>1</td>
<td>Course and Lab Introduction</td>
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<tr>
<td>Jan 18</td>
<td>2</td>
<td>HA parts &amp; Manufacturer software</td>
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<tr>
<td>Jan 25</td>
<td>3</td>
<td>Minor repairs &amp; tube replacement</td>
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<tr>
<td>Feb 1</td>
<td>4</td>
<td>Modification, Troubleshooting and Repair</td>
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<td>Feb 9</td>
<td>5</td>
<td>Ear impressions <em>(Thursday starting at 2:00 pm)</em></td>
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<td>Feb 15</td>
<td>6</td>
<td>ANSI I (Verifit)</td>
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<td>Feb 22</td>
<td>7</td>
<td>ANSI II (Auricle) &amp; Config (Dr. Muller)</td>
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<tr>
<td>Mar 1</td>
<td>8</td>
<td>Validation I (Effect of probe tube position)</td>
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<td>Mar 8</td>
<td>9</td>
<td>Validation II (Real ear insertion gain)</td>
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<td>Mar 15</td>
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<td>SPRING BREAK</td>
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<tr>
<td>Mar 22</td>
<td>10</td>
<td>Validation III (Rear ear to coupler difference)</td>
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<td>Mar 29</td>
<td>11</td>
<td>Earmold selection</td>
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<tr>
<td>Apr 5</td>
<td>12</td>
<td>Validation IV (Directionality &amp; Noise reduction)</td>
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<td>Apr 12</td>
<td>13</td>
<td>Fine tuning</td>
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<td>Apr 19</td>
<td>14</td>
<td>Problem solving patient complaints: Appropriate questions to ask at a HA F/U appointment? How do you answer and what do you do?</td>
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<td>Apr 26</td>
<td>15</td>
<td>Practical exam review &amp; Clinic reference sheet</td>
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<tr>
<td>May 3</td>
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<td>Practical exam</td>
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Classroom Behavior Policy
To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).

Students are asked to refrain from disruptive conversations with people sitting around them during lecture. Students observed engaging in disruptive activity will be asked to cease this behavior. Those who continue to disrupt the class will be asked to leave lecture or discussion and may be reported to the Dean of Students.

Threatening Behavior Policy
The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See [http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students](http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students).

Accessibility and Accommodations
Our goal in this classroom is that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please let me know immediately so that we can discuss options. You are also welcome to contact the Disability Resource Center (520-621-3268) to establish reasonable accommodations. For additional information on the Disability Resource Center and reasonable accommodations, please visit [http://drc.arizona.edu](http://drc.arizona.edu).
If you have reasonable accommodations, please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

**Code of Academic Integrity**

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: [http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity](http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity).

The University Libraries have some excellent tips for avoiding plagiarism, available at [http://www.library.arizona.edu/help/tutorials/plagiarism/index.html](http://www.library.arizona.edu/help/tutorials/plagiarism/index.html).

Selling class notes and/or other course materials to other students or to a third party for resale is not permitted without the instructor’s express written consent. Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions. Additionally, students who use D2L or UA e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail addresses. This conduct may also constitute copyright infringement.

**UA Nondiscrimination and Anti-harassment Policy**

The University is committed to creating and maintaining an environment free of discrimination; see [http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy](http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy).

Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

**Additional Resources for Students**

UA Academic policies and procedures are available at [http://catalog.arizona.edu/policies](http://catalog.arizona.edu/policies).

Student Assistance and Advocacy information is available at [http://deanofstudents.arizona.edu/student-assistance/students/student-assistance](http://deanofstudents.arizona.edu/student-assistance/students/student-assistance).

**Confidentiality of Student Records**


**Subject to Change Statement**

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.