



EDSP 555
DHH: Audiology - Amplification (2 units)

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Dates: FRI 1/8--3/19/2010

CARE Center 2:00-4:00pm

Location: HEI CARE Ctr

Office Hours: F 1:00-2:00
4:00-4:45

Course Description

This course will focus on the principles and practice of selecting, fitting, and verifying amplification, cochlear implants, and assistive listening devices in infants and children. Areas of study will include the structure and function of hearing aids, FM systems, and cochlear implants, analysis of the function of these devices, and practical implications of this knowledge for teachers of the deaf and hard of hearing.

Course Objectives/Candidate Outcomes

The course will meet CCTC Level 1—Education Specialist Standards for Deaf and Hard of Hearing (17, 19, 23, 24, and 25) and CED/CDC Standards for the Preparing Teachers of Students Who are Deaf or Hard of Hearing (1.1, 1.2, 1.3, 1.4, and 3.3)

Outcome I: Academic Excellence & Critical Inquiry and Reflection

Demonstrate knowledge of how to represent content accurately and competently by affectively applying strategies and techniques in their field of study. Engage in reflective activities, critically analyze their practice and apply higher order thinking skills to a wide array of investigative pursuits.

- 1) Students will demonstrate familiarity with the instrumentation of hearing aids, cochlear implants, and Assistive Listening Devices by labeling diagrams and by listing, describing, and/or recognizing the components of their functions (CCTC Standard 23, 25, 26); (CED standard 1.2, 1.3); (K, S, D).
- 2) Students will demonstrate familiarity with methods of hearing aid measurement/aided behavioral evaluations of young children by writing summaries of observations and by listing, describing and/or recognizing test procedures and decision-making processes; (CCTC Standard 23, 25); (CED Standard 1.2, 1.3); (K, S, D).

- 3) Students will demonstrate knowledge of techniques for management of FM technology and classroom amplification and listening environments by listing, describing and/or recognizing the procedures used, their relationship to hearing loss and amplification, and the decision-making processes involved. (CCTC Standard 23, 25); (K, S, D).

Outcome II: Community & Service

Demonstrate the ability to create and support collaborative learning communities in their professional fields of practice. Bridge theory and practice by experiencing various dimensions of the community through active service engagements.

- 4) Students will observe hearing aid and cochlear implant fittings and other aspects of maintenance, trouble-shooting, and post-fitting assessment in the community-based audiology clinic. (CCTC Standard 13, 24, 16, 25, 10, 22, 29, 28) ; (K, S, D).

Outcome III: Ethics, Values and Diversity

Understand and adhere to the values and ethical codes of the university, of schools they work in, and of their professional organizations. Create inclusive, unified, caring and democratic learning communities that value all individuals regardless of background or ability, and equitably support their learning and development.

- 5) Students will demonstrate familiarity with assessment, selection, fitting, verification, and follow-up related to provision of sensory hearing devices in diverse populations of children by providing written evaluations of case studies, and by listing, describing and/or recognizing test procedures and decision-making processes. Discussion will include professional Codes of Ethics; (CCTC Standard 23, 25); (K, S, D).
- 6) Students will demonstrate basic knowledge of techniques for management of classroom amplification with diverse populations by listing, describing, and/or recognizing the procedures used, their relationship to hearing loss and amplification; and the decision-making processes involved. (CCTC Standard 23); (K, S, D).

READINGS:

Texts:

Madell and Flexer: *Pediatric Audiology: Diagnosis, Technology, and Management*

Eisenberg: *Clinical Management of Children with Cochlear Implants*

Handout packet

Additional suggested readings:

Dave Sindrey: *Listening Games for Littles*

Adeline McClatchie and MaryKay Therres: *AuSpLan*

Northern and Downs: *Hearing in Children*

Course Topics:

- The instrumentation of hearing aids, cochlear implants, and Assistive Listening Devices, labeling diagrams and listing, describing, and/or recognizing the components of their functions

- Methods of hearing aid measurement/aided behavioral evaluations of young children by writing summaries of observations and by listing, describing and/or recognizing test procedures and decision-making processes
- Management of FM technology and classroom amplification and listening environments, listing, describing and/or recognizing the procedures used, their relationship to hearing loss and amplification, and the decision-making processes involved
- Collaborative learning communities in their professional fields of practice
- Hearing aid and cochlear implant fittings and other aspects of maintenance, troubleshooting, and post-fitting assessment in the community-based audiology clinic
- Values and ethical codes of the university, of schools, and of professional organizations
- Inclusive, unified, caring and democratic learning communities that value all individuals
- Assessment, selection, fitting, verification, and follow-up related to provision of sensory hearing devices in diverse populations
- Written evaluations of case studies
- Management of classroom amplification with diverse populations

Course Outline/Schedule
(subject to adjustment based on availability of observation opportunities)

*An outline of the day's lecture will be provided at the start of each class.
 Students should come to class with the manual of handouts, materials to take notes,
 and 10 blank tabular and 10 blank graph audiograms each week.*

Observations will be scheduled depending upon the CARE Center schedule

Jan 8. Review of Hearing aids:

Basic parts, how they work

Extras: VC, program switches, directionality

Earmolds

Feedback

DEMO different kinds, EMs

Reading:

>Hearing Aid packet A (Luxford/Derebery Chapter 3 p27-38)

>Hearing Aid packet B (Kramer Chapter 9 p288-306)

(> Read ahead: American Academy of Audiology (www.audiology.org);

Search: Pediatric Amplification Protocol 2003)

Jan 15. Circuitry

digital vs analog, advantages

bands

programs

compression vs pk-clipping

FMs and other ALDs

Reading:

>American Academy of Audiology (www.audiology.org); Search: Pediatric Amplification Protocol 2003
>Hearing Aid packet D (Lux/Dere Ch 7 p 83-94)
[Supplemental if you have it, OR get it from JTC library: Northern and Downs Chapter 9 p303-339)

Jan 22. **Quiz**

How to set to audiogram
Principles of peds vs adults
DSL
EAA, Real ear measurements
Reading over next two weeks:
>Hearing Aid packet B (Kramer p. 306-319)
>Eisenberg: Chapter 3
>Hearing Aid packet E (Lux/Dere Ch4 p39-49)

Jan 29. Verification:

Functional gain, WT, NBN, what does it mean?
Speech aided, what does it mean?
LDL
Reading:
>*Hearing Aid packet B (Kramer p. 306-319)*
>*Eisenberg: Chapter 3*
>*Hearing Aid packet E (Lux/Dere Ch4 p39-49)*
>Hearing aid packet F (Lux/Dere Ch 6 p67-82)

Feb 5 **Quiz**

Middle ear implant technologies
Review for midterm

Feb 12 EXAM

Reading:
>Eisenberg—Chapters 1 and 2
>(Read ahead: Chapters 11, 13, 19, 20)

Feb 19 Cochlear implant candidacy

Reading:
>Eisenberg Chapters 11, 13, 19, 20
>NAD position papers 1993 and 2000

Feb 26. **Quiz**

Cochlear implants: devices
Reading:
>Websites: www.cochlear.com, www.advancedbionics.com, www.medel.com
Explore both equipment information and their habilitation programs:
Cochlear-HOPE, Sound and Beyond programs

Advanced Bionics-The Listening Room, Tools for Schools
MedEl-Bridge, Kids Corner
>Eisenberg Chapter 21

March 5. Mapping and Post Implant Assessments

Reading:

>Eisenberg Chapters 6, 10, 15, 16

[>Supplemental: Sindrey, McClatchie/Therres]

Mar 12. **Quiz**

FMs for hearing aids and cochlear implants

Reading:

> Madell and Flexer Chapter 20

Mar 19. **Quiz**

Case studies

Review for final

Hand out take-home part of final

Mar 26. Final exam

Course Requirements

This course will consist of the following components:

1. 10 class sessions PLUS final exam
2. Lectures
3. Readings will be assigned in advance of the lecture on that subject. **BECAUSE OF THE VOLUME OF READING FOR THIS COURSE, READING AHEAD AND READING REVIEW ARE ENCOURAGED**
4. Quizzes, to include implementation of facts, interpretation of audiograms, electroacoustic analysis, and real ear measurements at the beginning class sessions as noted in the syllabus
5. Observations and written summaries of clinic observations as schedule permits
6. Practicum: electroacoustic analysis, real-ear measures, troubleshooting.
7. Two proctored examinations (midterm and final; there is a take-home component to the final.)
8. **The CENTERPIECE ARTIFACT for this course is the final examination.**

Grading

Quizzes: 25 points each x5 = 125 points

Midterm: in class =100 points

Final: in class =100 points

Take-home =100 points

425

Evaluation of State Requirements = 20 points

Total: 445

A 96-100

A- 90-95

B+ 88-90

B 83-87

B- 80-82

C+ 77-79

C 73-76

C- 70-73

F Below 70

Rubric for Quizzes:

	Target	Acceptable	Unacceptable	Total
Organization	Student presents correct information in logical sequence based upon the format given by the instructor	Student presents correct information in an understandable sequence but does not adhere to the format given by the instructor	Interpretation is incorrect or lacks clear description or presentation and does not adhere to the format given by the instructor	
Subject Knowledge	Student demonstrates full understanding of the information given	Student demonstrates understanding of the information given but may make some errors in detail	Student does not fully understand the information or is unable to communicate understanding	
			Total Points:	125

Rubric for written assignments, including observations, short answer and essay answers on examinations:

Target	Acceptable	Unacceptable	Total
Written assignments reflect understanding of concepts from lectures and readings. Entries are thorough and demonstrate the student's ability to think flexibly and relate together multiple principles of the discipline of pediatric audiology	Written assignments reflect content from lectures and readings but may lack detail and may not draw on multiple concepts and principles of the discipline of pediatric audiology.	Assignments reflect content of lectures and readings only minimally and do not demonstrate and understanding of the relationships among the multiple principles of the discipline of pediatric audiology.	
Written assignments use correct spelling and grammar, are descriptive but adhere to the point.	Written observations may contain an occasional lapse of spelling or grammar and may include a small amount of information not germane to the questions, or may omit less than critical information that may better address the question.	Written observations contain many spelling and grammar errors, do not articulately address the questions, and/or do not fully respond to the content of the questions.	

Total Points: 300

Rubric for class participation (Not graded but considered in borderline grade situations, with the exception of unacceptable listening skills and behavior

	Target	Acceptable	Unacceptable	Total
Attendance / Promptness	Student is always prompt and regularly attends classes unless the instructor is notified in advance.	Student is late to class rarely and only with a reasonable excuse, and the instructor is notified in advance	Student is often late or absent and does not inform the instructor in advance	

Level Of Engagement In Class	Student participates in class discussion by asking questions and volunteering to share knowledge	Student answers questions and shares knowledge if directly asked but may choose to ask questions outside of class	Student asks no questions and makes no contributions to class discussion, in or outside class , yet demonstrates inadequate mastery of the information	
Listening Skills	Students are attentive when others are speaking and contributes appropriately without interruptions or disruption		Student is inattentive or engaged in a non-related activity when others are speaking, or interrupts, or offers comment that is inappropriate, or offers comment in an inappropriate manner*	
Behavior	Student never displays disruptive behavior during class.		Student displays disruptive behavior during class.*	
Preparation	Student is always fully prepared for class with assignments and required class materials.	Student is prepared for class with assignments and required class materials, although occasionally preparation may be less than thorough.	Student is habitually unprepared for class with assignments and required class materials, and/or assignments are frequently less than thorough.	
*A student who is discourteous or disruptive at any time will be asked to leave the class			Total Points:	0

Note: A grade of B or above must be achieved for coursework to count towards a credential or professional development degree.

USD Policy Statements

Academic Integrity

All members of the University community share the responsibility for maintaining an environment of academic integrity since academic dishonesty is a threat to the University. Acts of academic dishonesty include: a) unauthorized assistance on an examination; b) falsification or invention of data; c) unauthorized collaboration on an academic exercise; d) plagiarism; e) misappropriation of resource materials; f) any unauthorized access of an instructor's files or computer account; or g) any other serious violation of academic integrity as established by the instructor.

It is the responsibility of the instructor to determine whether a violation has occurred. An act of academic dishonesty may be either a *serious violation*, or, if unintentional, an *infraction* (a non-serious violation of course rules). If the instructor determines that an infraction (as opposed to a serious violation) has occurred, the instructor can impose penalties that may include: a) reduction in grade; b) withdrawal from the course; c) requirement that all or part of the course be retaken; and d) a requirement that additional work be undertaken in connection with the course or exercise. Students may formally challenge the instructor's determination of infraction (see below).

Instructors shall report all violations, whether, infractions or serious violations, both to the Dean's office and the student using the Academic Integrity Violation Preliminary Worksheet. The Associate Dean will contact the student and ensure she or he is aware of the Academic Integrity policy. The Associate Dean will appoint a hearing committee *only* when: 1) the instructor reports that a serious violation occurred, or 2) the instructor reports that an infraction occurred *and* the student wishes to appeal the determination of infraction.

The hearing committee will include, in addition to the Associate Dean, a faculty member and two students from the School of Leadership and Education Sciences, and a faculty member from outside the School of Leadership and Education Sciences. If the hearing committee determines that a serious violation has occurred it also will determine sanctions to be applied which may include: a) expulsion from the University; b) suspension from the University for up to one year; c) a letter of censure; and d) imposition of a period of probation. If the hearing committee determines an infraction has occurred the penalty imposed by the faculty member will be upheld. If the hearing committee determines that no serious violation or infraction has occurred, it will request the instructor to take action consistent with that determination. If the hearing committee determines that expulsion is the appropriate sanction the student may appeal to the Provost.

Grade of Incomplete

The grade of "Incomplete" ("I") may be recorded to indicate that the requirements of a course have been substantially completed, but, for a legitimate reason, a small fraction of the work remains to be completed; and that the record of the student in the course justifies the expectation that he or she will complete the work and obtain a passing grade by the deadline. It is the student's responsibility to explain to the instructor the reasons for non-completion of the work and to request an "Incomplete" grade prior to the posting of final grades. The instructor should discuss with the student the conditions and deadline for completion, whenever possible, and should document the conditions and deadline using the Petition for Grade of Incomplete. The "Incomplete" grade is not

counted in the computation of the grade point average, nor is credit earned for the semester/session for which the grade was authorized.

Students who receive a grade of "Incomplete" must submit all missing work no later than the end of the tenth week of the next regular semester; otherwise, the "I" grade will be counted as an "F". (Students who receive a grade of "Incomplete" in the spring semester need to complete their work by the tenth week of the fall semester.) A faculty member assigning a grade of "Incomplete" will complete a Petition for Grade of Incomplete, indicating the reason for the "Incomplete", and attach a copy of the form to the grade roster when turning in grades. A copy of this form will be placed in the student's file. Disqualification or Scholastic Probation may be the result if the work is not finished within the posted deadlines and the "Incomplete" turns into an "F."

Students receiving financial aid should be aware that taking an "Incomplete" grade may affect their eligibility for financial aid by their failure to earn the appropriate amount of credit within a year. When the work is completed, a Removal of Incomplete or Change of Grade form will be completed by the instructor and signed by the Assistant Dean. One copy is then placed in the student's file and the original is sent to the Registrar.

Student Dismissal

Students may be dismissed from the Graduate Programs in the School of Leadership and Education Sciences for the following reasons:

1. Violations of academic integrity.
2. Failure to maintain established grade point average of 3.0 for all coursework.
3. Failure to make satisfactory academic progress toward their degree.
4. Failure to complete time limits for degree.
5. Failure to make satisfactory progress in the development of academic and practitioner skills.
6. Violations of Ethics Code(s) as established by applicable field of study and program area.
7. Violations of USD policies and the Student Code of Rights and Responsibilities, including academic dishonesty and plagiarism, as listed in the Student Handbook which is published online at <http://www.sandiego.edu/archways>.
8. Failure to maintain cooperative relationships with other students and/or faculty or failure to maintain satisfactory delivery of services to clients during fieldwork, including, but not limited to: internships, student teaching, practicum or service learning.

Requests for Accommodation

Reasonable accommodations in accordance with the Americans with Disabilities Act will be made for course participants with disabilities who require specific instructional and testing modifications. Students with such requirements must identify themselves to the University of San Diego Disability Services Office (619.260.4655) before the beginning of the course. Every effort will be made to accommodate students' needs, however, performance standards for the course will not be modified in considering specific accommodations.

A complete listing of USD academic policies may be found at:

http://www.sandiego.edu/soles/documents/2009-2010LT_Handbook.pdf