

AUD 811 Hearing Disorders
(Line #: 51971)
Spring 2008
(3 credit hours)

Class Meetings: Thursdays, 9:00-11:45; Dole 3048

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Office Hours: *after* class or by appointment

Course Description

This course provides a study of disorders of the auditory system including anatomical, physiological, perceptual, and audiological manifestations of pathologies affecting hearing.

Course Objectives/Learner Outcomes

The goal of this course is to increase the student's knowledge of a range of disorders affecting the auditory system, the typical treatment options available, and expected outcomes on a battery of widely used audiometric testing procedures. Particular attention will be paid to patient symptoms, appropriate interpretation of these symptoms, choice and interpretation of tests, and criteria for medical referral.

ASHA Certification Standards:

This course is designed to cover the following KASA categories required for certification in audiology: B2, B4, B8, B10, B16; C1, C2, C3, C4, C6; D1, D2, D3, D4, D5, D6, D7, D8, D11, D12, D13, D14, D16; E1, E3, E4, E6.

Course Materials

Required Materials:

1. Northern, J.L., Ed., (1996). Hearing Disorders (3rd Ed.), Boston: Allyn and Bacon.
2. Additional recommended readings will be available electronically through Blackboard. You will need Adobe Acrobat Reader to access these files.

On-line Resources:

1. Blackboard course website at <http://courseware.ku.edu>

Assignments

1. *Medical Terminology Definitions*

You will each be assigned a set of medical terms to define. You should consult a medical dictionary at the library to complete this assignment. Brad Stach's *Comprehensive Dictionary of Audiology* may also be a good resource. You may **not** use internet dictionaries to complete this assignment. This assignment is due on **January 24**. On the due date you should hand in 2 hard copies of your answers along with an electronic copy. You should list the terms, your definitions,

and the reference sources. I will grade and return one hard copy. I will compile the definitions into a set of materials to be handed out to the class as a reference.

2. "Clinic Report" for Example Cases

You will be assigned 2 example cases throughout the semester. The case information provided to you will include case history information and results for a variety of audiologic tests. Your job will be to select the most appropriate tests for making diagnostic and rehabilitative recommendations and then write a case report summarizing the case history information, the results of the pertinent tests, and the recommendations for the client. An example of choosing appropriate tests: Otoacoustic and/or evoked potential information might be available for a given case, but if they are not necessary for establishing a diagnosis and/or do not add any additional information they should not be tested and, therefore, should not be included in the write-up. You may discuss these cases with your classmates. However, the written case report must represent your own independent work.

- **First Clinic Report Due: 2/14**
- **Second Clinic Report Due: 4/3**

3. Short Disorders Papers

You will be assigned 2 disorders, one will be a disorder of the external or middle ear and the second will be a disorder of the inner ear or the retrocochlear/central auditory system. You will be responsible for writing 2 short (3-5 page, double-spaced) papers discussing each of these disorders (one paper per disorder). In your papers, you should develop a summary of the disorder that includes information about the disorder, presenting symptoms, lists of other conditions considered in the differential diagnosis, description of how the specific diagnosis is made, and a review of treatment options. You should consider *both* an audiology and a medical perspective. You are expected to use primary references in your paper and should use the APA style for referencing. No website references or references to your class notes/lecture materials (i.e. personal communication) are allowed. If you find good websites, you should include a separate list in the references where you list the URLs for websites with good information regarding the disorder. However, these websites cannot serve as reference material for the paper, they will be listed for future reference purposes only.

On the date these are due you should turn in 2 hard copies and one electronic copy of the papers. One hard copy will be graded and returned to you. I will then compile the papers into a book that will be distributed to the class at the end of the semester. Because this will become a reference for future use by you and your classmates, if serious factual errors are present in your paper, you will be asked to revise it to correct the factual errors prior to your paper being included in the book. A rubric for grading this assignment will be distributed during the 2nd week of class.

- **First Paper Due: 3/13**
- **Second Paper Due: 5/1**

4. Observation of Ear Surgery

You are required to observe one ear surgery during the course of the semester. This observation can take place with either Dr. Hinrich Staecker at KUMC or with Dr. Bradley Thedinger at one of several sites in the KC metro area. A one-page (double spaced), summary report is due by class

time on **May 1**. Please see the handout “Surgery Observation Assignment” for additional details, including contacts for scheduling.

5. *Case Report and Presentation*

Over the course of the semester, select one diagnostic case to write up and present in class. The case should be selected from among the clinical experiences you are enrolled in for this semester and can include those seen at your observations sites, in the Cleft Palate Clinic, or from one of your practicum experiences. In both the oral presentation and the written case report, include referral information, chief complaint, symptoms, pertinent history, audiologic findings (including an audiogram – maintain confidentiality!), results for other diagnostic tests, conclusions (including etiology, if known), and recommendations.

Note that in preparing this case report you should not in any way inconvenience or otherwise burden the clinical staff at any of the clinics or practicum sites for which you may be drawing your case information. This means that you should keep this assignment in mind from the start of the semester. If you see a case you think might be interesting to present, make notes of the required details on the day you see it. Do not expect help in recreating the case weeks or months after the client/patient was seen. If I get reports of complaints from clinic sites regarding this assignment, the student involved will have his or her grade lowered by as much as 2 letter grades for this assignment.

The presentations will be given in class on **May 8**. The written case report is to be handed in on **May 8** as well.

Audio or Video Taping Lecture

Course materials prepared by the instructor, together with the content of all lectures and review sessions presented by the instructor are the property of the instructor. Video and audio recording of lectures and review sessions without the consent of the instructor is prohibited. On request, the instructor will usually grant permission for students to audio tape lectures, on the condition that these audio tapes are only used as a study aid by the individual making the recording. Unless explicit permission is obtained from the instructor, recordings of lectures and review sessions may not be modified and must not be transferred or transmitted to any other person, whether or not that individual is enrolled in the course.

Academic Misconduct

Students are expected to observe all University guidelines pertaining to academic misconduct. As stated in the University Senate Rules and Regulations (2.6.1):

“Academic misconduct by a student shall include, but not be limited to, disruption of classes; threatening an instructor or fellow student in an academic setting; giving or receiving of unauthorized aid on examinations or in the preparation of notebooks, themes, reports or other assignments; knowingly misrepresenting the source of any academic work; unauthorized changing of grades; unauthorized use of University approvals or forging of signatures; falsification of research results; plagiarizing of another’s work; violation of regulations or ethical codes for treatment of human and animal subjects; or otherwise acting dishonestly in research.” Academic misconduct will not be tolerated and will be dealt with in accordance with all University rules and regulations.

Non-Academic Misconduct

The scope and content of the material included in this course are defined by the instructor in consultation with the responsible academic unit. While the orderly exchange of ideas, including questions and discussions prompted by lectures, discussion sessions and laboratories, is viewed as a normal part of the educational environment, the instructor has the right to limit the scope and duration of these interactions. Students who engage in disruptive behavior, including persistent refusal to observe boundaries defined by the instructor regarding inappropriate talking, discussions, and questions in the classroom or laboratory may be subject to discipline for non-academic misconduct for disruption of teaching or academic misconduct, as defined in the Code of Student Rights and Responsibilities (CSRR), Article 22, Section C, and the University Senate Rules and Regulations, Section 2.4.6. Article 22 of CSRR also defines potential sanctions for these types of infractions.

Accommodations

The staff of Services for Students with Disabilities (SSD), 135 Strong, 785-864-2620 (v/tty), coordinates accommodations and services for KU courses. If you have a disability for which you may request accommodation in KU classes and have not contacted them, please do so as soon as possible. Please also notify the instructor in writing (e-mail is acceptable) within one week of receiving this syllabus so that appropriate accommodations for this course can be discussed.

If a scheduled exam, lab exercise, or quiz is in conflict with a mandated religious observance, you must notify the instructor in writing (e-mail is acceptable) within one week of receiving this syllabus so that an alternative arrangement can be made in advance of the scheduled requirement.

Grading

Grades will be based on points earned on the following:

Exam 1	17.5%
Exam 2	17.5%
Final Cumulative Exam	25%
Medical Terms	2%
Clinic Report 1	5%
Clinic Report 2	5%
Disorder Paper 1	10%
Disorder Paper 2	10%
Surgery Observation	3%
Case Report and Presentation	5%

The final grade for the course will be based on the following:

90-100%	A
80-89%	B
70-79%	C
60-69%	D
<60%	F

These grade boundaries may be adjusted slightly depending on the distribution of final scores.

AUD 811 Spring 2008 Topic Outline and Schedule

Date	Topic	Readings
1/17	<p>Introduction to Course</p> <p>The Otologic Evaluation</p> <p>Clinical Decision Theory</p> <p>Brief Diagnostic Audiology Review</p> <p>***Medical Terminology Assigned</p> <ul style="list-style-type: none"> • Due 1/24 	<ul style="list-style-type: none"> • Review Material <ul style="list-style-type: none"> ○ Ch. 1 & 2 provide a review of anatomy and physiology of the peripheral auditory system. I assume that you are familiar with these topics and will not review them here. ○ Ch. 4 & 5 provide a review of diagnostic audiology you may wish to consult them, or better yet, your Diagnostic Aud. material from last semester. • Otologic Evaluation <ul style="list-style-type: none"> ○ Ch. 3, 7, 8
1/24	<p>MEET IN DOLE 3000</p> <p>Diagnostic Audiology:</p> <ul style="list-style-type: none"> • Principles of Acoustic Immittance • Multifrequency Audiometry • Wideband Reflectance <p>***Medical Terminology Due</p>	<ul style="list-style-type: none"> • Multifrequency Tympanometry: <ul style="list-style-type: none"> ○ Hunter and Margolis (1992) ○ Margolis et al. (2003) • Wideband Reflectance <ul style="list-style-type: none"> ○ Feeney et al. (2003)
1/31	<p>MEET IN DOLE 3000</p> <p><i>Brief Overview of Embryology</i></p> <p>Pinna & Ear Canal:</p> <ul style="list-style-type: none"> • Normal Pinna and Ear Canal Variants • Abnormal Pinna Variants and Lesions • Congenital Defects of Pinna and Ear Canal • Disorders of the Ear Canal <p>Tympanic Membrane/Middle Ear:</p> <ul style="list-style-type: none"> • Normal Tympanic Membrane/Middle Ear Characteristics • Tympanic Membrane/Middle Ear Disorders <p>***1st Clinic Report Assigned</p> <ul style="list-style-type: none"> • Due 2/14 	<ul style="list-style-type: none"> • Embryology <ul style="list-style-type: none"> ○ pp. 189-190 • Pinna and Ear Canal <ul style="list-style-type: none"> ○ Relevant sections Ch. 7 ○ Roeser and Roland (1992) • Tympanic Membrane/Middle Ear <ul style="list-style-type: none"> ○ Relevant sections Ch. 7 ○ AAP Guidelines for Acute Otitis Media ○ AAP Guidelines for Otitis Media with Effusion ○ Ch. 10 – Otitis Media but less current than the AAP Guidelines
2/7	<p>TM & Middle Ear Disorders (cont.)</p>	<p>Note: It is most likely that Otitis Media will be discussed here.</p>

2/14	<p>Syndromes & External/Middle Ear Disorders</p> <ul style="list-style-type: none"> • <i>Brief</i> Genetics Review • Syndromic Conductive Hearing Loss <p>-----End Exam 1 Material-----</p> <p>Inner Ear/Cochlear Disorders</p> <ul style="list-style-type: none"> • Congenital Disorders <ul style="list-style-type: none"> ○ Syndromic Sensorineural Hearing Loss <p>***First Clinic Report Due</p>	<ul style="list-style-type: none"> • Congenital Disorders <ul style="list-style-type: none"> ○ Relevant sections Ch. 7 and 14
2/21	EXAM 1	
2/28	<p>Inner Ear/Cochlear Disorders (cont.)</p> <ul style="list-style-type: none"> • Congenital Disorders (cont.) <ul style="list-style-type: none"> ○ Nonsyndromic Hereditary ○ Other congenital malformations ○ Infectious agents 	
3/6	<p>Inner Ear/Cochlear Disorders (cont.)</p> <ul style="list-style-type: none"> • Meniere’s Disease • Noise Induced Hearing Loss 	<ul style="list-style-type: none"> • Meniere’s Disease <ul style="list-style-type: none"> ○ Ch. 12 ○ Gates (2005) – a more recent look at Meniere’s Disease • Noise Induced Hearing Loss <ul style="list-style-type: none"> ○ Ch. 13 ○ Lonsbury-Martin & Martin (2007)
3/13	<p>Inner Ear/Cochlear Disorders (cont.)</p> <ul style="list-style-type: none"> • Ototoxicity • Other Miscellaneous Inner Ear/Cochlear Disorders <ul style="list-style-type: none"> ○ Autoimmune Inner Ear Disease ○ Sudden Idiopathic SNHL ○ Ootosyphilis ○ Perilymph Fistula <p>***First Disorder Paper Due ***2nd Case Report Assigned</p> <ul style="list-style-type: none"> • Due 4/3 	<ul style="list-style-type: none"> • Ototoxicity <ul style="list-style-type: none"> ○ Ch. 11 • Other Misc. Disorders <ul style="list-style-type: none"> ○ Ootosyphilis – mentioned Ch. 12 ○ Fistula – mentioned Ch. 5
3/20	Spring Break – No Class	

3/27	Dr. Johnson out of town – No Class	
4/3	<p>Presbycusis Tinnitus</p> <p>-----End of Exam 2 Material-----</p> <p>Retrocochlear & Central Disorders</p> <ul style="list-style-type: none"> • Bell's Palsy <p>***2nd Case Report Due</p>	<ul style="list-style-type: none"> • Presbycusis <ul style="list-style-type: none"> ○ Ch. 15 • Tinnitus <ul style="list-style-type: none"> ○ Ch. 23
4/10	Exam 2	
4/17	<p>Retrocochlear & Central Disorders (cont.)</p> <ul style="list-style-type: none"> • Acoustic Tumors • Auditory Neuropathy/Auditory Dys-Synchrony 	<ul style="list-style-type: none"> • Acoustic Tumors <ul style="list-style-type: none"> ○ Ch. 16 ○ Relevant sections of Ch. 5, 7, 8 • Auditory Neuropathy/Auditory Dys-Synchrony <ul style="list-style-type: none"> ○ Rance (2005)
4/24	<p>Retrocochlear & Central Disorders (cont.)</p> <ul style="list-style-type: none"> • Central Auditory Disorders • Multiple Sclerosis 	<ul style="list-style-type: none"> • Central Auditory Disorders <ul style="list-style-type: none"> ○ Ch. 17 ○ Stach chapter (Ch. 17) in <i>Audiology: Diagnosis 2nd Ed.</i>; Edited by Roeser, Valente, Hosford-Dunn
5/1	<p>Retrocochlear & Central Disorders (cont.)</p> <ul style="list-style-type: none"> • Catch-up as needed <p>***Surgery Observation Report Due ***2nd Disorders Paper Due</p>	
5/8	<p>Wrap-Up and Case Presentations</p> <p>***Written Case Report Due</p>	
5/16	Final Exam 7:30-10:00 AM	