

**AUD 811 Hearing Disorders**  
Spring 2007  
(3 credit hours)

Class Meetings: Thursdays, 9:00-11:45; Dole 3000

Class Instructor: Tiffany A. Johnson, Ph.D., CCC-A  
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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 Objective**

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.

**Course Materials**

*Required Materials:*

1. Northern, J.L., Ed., (1996). Hearing Disorders (3<sup>rd</sup> Ed.), Boston: Allyn and Bacon.
2. CD-ROM: Audiology: Disorders & Evaluation. Department of Veterans Affairs
3. 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. In-Class Presentations.*

You will be assigned disorders from the categories listed below. You will be responsible for presenting on a total of 3 disorders over the course of the semester. The presentations will be made during class at the appropriate point in the schedule. For each presentation, you should prepare a PowerPoint presentation to give in class and should bring to class a 1 page handout that includes a typed outline and reference list for your disorder. See the handout "Suggested Format for Presentation and Outline" for suggestions regarding preparing your presentation and handout. Note that when you are researching and preparing your presentation it is important to provide *both* an audiology and a medical perspective.

External Ear/Ear Canal/Tympanic Membrane/Middle Ear Disorders

1. Congenital Defects of Pinna and Ear Canal: Microtia/Anotia & Atresia/Stenosis
2. Otitis Externa: Acute, Chronic, & Necrotizing/Malignant
3. Tympanic Membrane Disorders: Perforations/Monomeres/Tympanosclerosis
4. Cholesteatoma: Acquired/Congenital/Iatrogenic

5. Trauma: Ossicular Discontinuity
6. Glomus Tumors: Glomus Tympanicum & Glomus Jugulare
7. Fibro-Osseous Lesions of the Temporal Bone: Osteogenesis Imperfecta & Paget's Disease

#### Inner Ear/Cochlear Disorders

1. Syndromes: Usher
2. Syndromes: Waardenburg
3. Syndromes: Pendred
4. Syndromes: Alport
5. Non-syndromic: Connexin 26
6. Other Congenital: Enlarged Vestibular Aquaduct
7. Infections: Cytomegalovirus (CMV)
8. Infections: Meningitis
9. Miscellaneous: Autoimmune Inner Ear Disease
10. Miscellaneous: Idiopathic Sudden Sensorineural Hearing Loss
11. Miscellaneous: Ootosyphilis

#### Retrocochlear/Central Disorders

1. Bell's Palsy
2. Multiple Sclerosis
3. Neurofibromatosis (NFII)

#### 2. *Paper.*

One of the above presentations shall be written in the form of a short (5-10 pages, double spaced) research paper. You may choose from any of the three presentation topics you were assigned, or you may choose another topic with the approval of the instructor. As for the presentation, your paper should include (but is not limited to) the following: a description of the disorder, an estimate of incidence, a description of the symptoms, a discussion of how the disorder is diagnosed (both from an audiologic and a medical perspective), and a description of the available treatment options.

The paper will be evaluated as follows:

75% Content: Accuracy and completeness, appropriateness of citations, inclusion of current (< 5 years old) and primary (non-book or web) references. You may include web references in a section describing resources for the disorder, but these **may not** be your main source of material for the paper.

25% Style: Logical organization, presentation clarity, conciseness, mechanics (grammar, spelling, punctuation), use of APA style for references.

The paper is due by class time on **May 3, 2007**. Points will be deducted for late submissions.

#### 3. *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 3, 2007**. Please see the handout "Surgery Observation Assignment" for additional details, including contacts for scheduling.

#### 4. *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.

The presentations will be given in class on **May 10, 2007**. The written case report is to be handed in on **May 10, 2007** 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 the following:

Exam 1	17.5%
Exam 2	17.5%
Final Exam	30%
Presentations	15%
Paper	10%
Surgery Observation	5%
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.



2/15	Continue TM & Middle Ear Disorders 5. Glomus Tumors <b>**Student Presentation**</b> 6. Fibro-Osseous Lesions <b>**Student Presentation**</b> 7. Miscellaneous Systemic Diseases	
2/22	<b>EXAM 1</b>	
3/1	<b>V. Syndromes &amp; External/Middle Ear Disorders</b> A. <i>Brief</i> Genetics Review B. Syndromic Conductive Disorders 1. Treacher-Collins 2. Goldenhar 3. Branchio-oto-renal <b>VI. Inner Ear/Cochlear Disorders</b> A. Congenital Disorders 1. Syndromic Sensorineural Disorders a. Usher <b>**Student Presentation**</b> b. Waardenburg <b>**Student Presentation**</b> c. Pendred <b>**Student Presentation**</b> d. Alport <b>**Student Presentation**</b> e. Stickler	Appropriate Sections Ch. 7 Ch. 14
3/8	2. Nonsyndromic Hereditary a. Connexin 26 <b>**Student Presentation**</b> 3. Other Congenital Malformations a. Enlarged Vestibular Aquaduct <b>**Student Presentation**</b> 4. Infectious Agents a. Cytomegalovirus (CMV) <b>**Student Presentation**</b> b. Meningitis <b>**Student Presentation**</b> B. Meniere's Disease C. Noise Induced Hearing Loss	Ch. 12 Ch. 13
3/15	D. Ototoxicity E. Other Miscellaneous Inner Ear/Cochlear Disorders 1. Perilymph Fistula 2. Autoimmune Inner Ear Disease <b>**Student Presentation**</b> 3. Sudden Idiopathic SNHL <b>**Student Presentation**</b> 4. Ootosyphilis <b>**Student Presentation**</b>	Ch. 11 Appropriate Sections Ch. 5 Appropriate Sections Ch. 12
3/22	<b>No Class – Spring Break</b>	
3/29	Continue Inner Ear/Cochlear Disorders <b>VII. Presbycusis</b>	Ch. 15
4/5	<b>EXAM 2</b>	
4/12	<b>VIII. Tinnitus</b> <b>IX. Retrocochlear &amp; Central Disorders</b> A. Auditory Neuropathy/Auditory Dys-Synchrony B. Bell's Palsy <b>**Student Presentation**</b> C. Multiple Sclerosis <b>**Student Presentation**</b>	Ch. 23 Appropriate Sections Ch. 7

4/19	D. Acoustic Tumors 1. Vestibular Schwannomas 2. Neurofibromatosis (NFII) <b>**Student Presentation**</b> 3. Other Miscellaneous Tumors	Ch. 16 Appropriate Sections Ch. 5, 7, 8
4/26	E. Central Auditory Processing Disorders F. Subcortical and Cortical Lesions	Ch. 17
5/3	Catch-up and Review <b>**Paper and Surgery Observation Report Due**</b>	
5/10	<b>X. Wrap-Up and Case Presentations</b> <b>**Written Case Report Due**</b>	
5/16	<b>Final Exam 7:30-10:00 AM</b>	