

Course: SPPA 332 Audiological Procedures, 3 Semester Credits
Spring 2009
M-W-F 9:30 A.M. BH 180

Instructor: Darah Regal, AuD., CCC-A
Assistant Professor of Audiology
Bell Hall 157A, Office hours by appointment
Phone: 471-3469 Office
E-mail - dregal@andrews.edu

Required Textbooks: Martin, F. N. Introduction to Audiology, 7th edition (2000). Englewood Cliffs, N.J., Prentice Hall, Inc.

Martin, F. N. Exercises in Audiometry (1998). Needham Heights, MA, Allyn & Bacon.

Course Description: Study of auditory testing with an overview of differential diagnostic testing in the identification of auditory pathologies. Includes clinical masking and acoustic immittance measures. Special testing techniques for infants and the pseudohypacusis will be presented.

Course Objectives: By the end of this course, you will be able to:

1. Use masking appropriately for obtaining ear specific thresholds for air and bone conduction and speech.
2. Administer and interpret the immittance test battery of tympanometry, reflexes and reflex decay.
3. Explain the development of auditory behavior as it impacts the testing of infants and young children.
4. Identify characteristics in the test battery that suggest malingering, and administer at least one test to ascertain true thresholds.
5. Describe auditory response characteristics associated with cochlear, retrocochlear lesions and central auditory processing Identify tests useful in diagnosing these characteristics.

Course Requirements:

1. **Class Attendance:** Record will be taken during the first five minutes of class. Promptness is vitally important to the continuity of class discussion. If you find you will be unable to attend class, please notify the teacher **prior to the class** to make arrangements for making up the work and obtaining handout material. **Three absences will be allowed.** Three late entrances will be equivalent to one absence. You will sign your name on the sign-in sheet provided at the beginning of class. If you have 4 absences your final grade

will be reduced by one letter grade. If you have 5 absences you will need to drop the class.

2. **Quizzes:** To be announced, usually weekly.
3. **Examinations:** There will be four examinations throughout the quarter worth 75-100 points each. All examinations will remain in the possession of the instructor. After they have been graded they will be distributed for your review. They must be returned to the instructor to be recorded.

Quizzes missed due to an excused absence will be prorated. Tests missed due to an excused absence may be made up within three days after the absence.

4. **Practical Assignments:** The assignments are due at the beginning of the class period on the day specified in the course outline. **For each test, interpret the test results in the comments sections of the audiogram.**

Assignment 1 Pure tone air and bone, SRT and discrimination on 4 people with an earplug firmly placed in **one** ear. Interpret results in the comments section of the audiogram. 10 points each (total 40 points)

Assignment 2 On two class members and two non-class members do Acoustic immittance testing: tympanograms, ipsilateral and contralateral reflexes at 500, 1000, 2000, and 4000. Contralateral reflex decay at 1000Hz - both ears. Transfer tympanograms, static compliance, ear canal volumes and reflex information to the audiogram. Interpret all measures including ear canal volumes and static compliance according to the norms at the bottom of the audiogram. 10 points each (total 40 points)

Assignment 3 On two NON-CLASS MEMBERS and/or majors, conduct a hearing test. Instruct you client to fake a significant hearing loss in one ear. Complete the following tests: Pure tone air and bone, SRT, Speech discrimination ability, Stenger pure tone at 1000 and 2000, Stenger SRT and at least one other clever trick to prove malingering. Fill out an audiogram and write appropriate comments at the bottom of the audiogram.

Assignment 4

- A. You will be assigned three hearing disorders to research.
- B. Fill out audiogram - pure tone air, bone and speech - interpret results - see syllabus for when this part is due
- C. Complete an audiogram, filling out all appropriate test results, immittance, reflex, tone decay.
- D. You need to turn in a written report of the possible audiological findings for each audiological test. Explain why the results are appropriate for the disorder.

- E. Interpret your results on the bottom of the audiogram.
- F. Write a report to a physician explaining your results (Total 100 pts)

5. Other assignments as deemed necessary during the semester.

Late work will be discounted as follows: Assignments turned in within 24 hours of the due time will be discounted 5%. (Work turned in after class is considered late.) An additional 10% per day will be deducted until a 50% reduction has been reached (a total of 5 days late). No credit will be given for work turned in after that time.

6. Grading: Grades will be calculated on a percentage basis as follows:

94.0 - 100%	A
90.0 - 93.99%	A-
87.5 - 89.99%	B+
83.5 - 87.49%	B
80.0 - 83.49%	B-
77.7 - 79.99%	C+
73.5 - 77.99%	C
70.0 - 73.49%	C-
65.0 - 69.99%	D
Below 65%	F

7. Academic dishonesty including plagiarism, copying other students work, stealing quizzes or accepting stolen quizzes or exams is a serious offense. Possible consequences are a warning, reduced or failing grade, suspension or dismissal from the class, expulsion from the university, and/or degree cancellation.

8. Andrews University is committed to the education of all students on campus. If you qualify for accommodations under the American Disabilities Act, please see the instructor as soon as possible for referral and assistance in arranging such accommodations. @

9. CELL PHONE and EATING in class. In an effort to make the most valuable use of your time and mine, I am requesting that cell phones be turned OFF during class and that eating during class be discontinued. Cell phones ringing and/or vibrating are a distraction. If there is an emergency and you need to be reached by cell phone during class, you must discuss the emergency with me prior to class. Please plan to eat prior to class so that you can easily participate in class discussion and take notes.

10. E-Mail – you are responsible for checking you Andrews e-mail account for messages from class. Please check your e-mail on a regular basis for important messages.

Proposed Class Schedule

Jan.	7	Introduction - Review of the audiogram - Need for Masking	Martin Ch. 4
	9	What is Masking?	
	12	When to mask	
	14	Masking techniques	Martin Ch. 4
	16	Masking techniques for air conduction	
	19	NO CLASS – Holiday	Martin Ch. 4
	21	Masking techniques for bone conduction	
	23	Masking for Speech	Martin Ch 5
	26	Masking Review (9:10-9:50)	
	28	Acoustic Immittance – basic principles(9:10-9:50)	Martin Ch. 6
	30	Tympanogram (9:10-9:50)	
Feb	2	Tympanogram	Martin Ch. 6
	4	EXAMINATION 1	
	6	The Acoustic Reflex Prac. Assignment 4B due	Martin Ch. 6
	9	The Acoustic Reflex	Martin Ch. 6
	11	Acoustic Reflex	Martin Ch. 6
	13	Acousitc Reflex Decay	
	16	NO CLASS - Holiday	
	18		Martin Ch. 6
	20	Tone Decay	Martin Ch. 6
	23	OAE	
	25	Characteristics of cochlear pathology	
	27	Characteristics of retro-cochlear pathology	
March	2	Pseudohypacusis	Martin Ch. 12
	4	Pseudohypacusis	Martin Ch. 12
		Practical Assignment #1 Due	
	6	Pseudohypacsis	Martin Ch 12
	9	EXAMINATION 2	
	11	Testing children	Martin Ch. 7
		Practical Assignment #2 Due	
	13	NO CLASS - SPRING BREAK	

16 NO CLASS - SPRING BREAK
18 NO CLASS - SPRING BREAK
20 NO CLASS - SPRING BREAK

23

25 Development of auditory behavior

Martin Ch 7

27 Testing the infant under 3 months

Prac. Assignment 4C due

April 30 Testing infants age 6 months to 2
1 Testing children age 2-5
3 Testing children

Martin Ch. 7

6 Central auditory processing

8 **EXAMINATION 3**

Martin Ch. 11

10 Tests for CAP

13 Tests for Central Auditory Processing

15 Tests for CAP

17 ABR

Practical Assignment #3 Due

20 ABR

Martin Ch. 6

22 Review

Practical Assignment #4 Due

24 **NO CLASS - EXAM PREPARATION DAY**

Final Exam – Monday, April 27, 2008, 10:00 - 12:00