

**Course:** SPPA 332 Audiological Procedures, 3 Semester Credits  
Spring 2012  
M-W-F 9:30 A.M. BH 180

**Instructor:** Darah Regal, AuD., CCC-A  
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**Required Textbooks:** Martin, F. N. Introduction to Audiology, 11th edition (2011). 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. Testing procedures include 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 deficits. 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. More than 3 absences will negatively affect your

- final grade.
2. **Quizzes:** To be announced, usually weekly.
  3. **Examinations:** There will be four examinations throughout the semester 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 or made up within 2 days after the absence. Exams missed due to an excused absence may be made up within three days after the absence. Exams or quizzes missed due to illness require a note from a physician for the date of the exam or quiz.**

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 Masking Lab -Pure tone air and bone, SRT and discrimination on 4 people ( at least two clients should not be SPLAD majors) with an earplug firmly placed in **one** ear or one earphone placed on the head rather than the 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, 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 unless an excused absence is documented.

**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. All 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.

Jan	9	Introduction – Review of the audiogram – need for masking	
	11	What is masking?	Martin Ch. 6
	13	When to Mask	
	16	<b>NO CLASS – Holiday</b>	
	18	When to mask	Martin Ch. 6
	20	Masking techniques	
	23	Masking techniques for air conduction (9:00-9:40)	Martin Ch. 6
	25	Masking techniques for bone conduction (9:00-9:40)	
	27	Masking for Speech (9:00-9:40)	Martin Ch 6
	30	Masking Review	
Feb	1	Acoustic Immittance – basic principles	Martin Ch. 7
	3	Tympanogram	
	6	Tympanogram	Martin Ch. 7
	8	<b>EXAMINATION 1</b>	
	10	The Acoustic Reflex <b>Prac. Assignment 4B due</b>	Martin Ch. 7
	13	The Acoustic Reflex	Martin Ch. 7
	15	Acoustic Reflex	Martin Ch. 7
	17	Acoustic Reflex Decay	
	20	<b>NO CLASS</b>	
	22	Tone Decay	Martin Ch. 7
	24		
	27	Characteristics of cochlear pathology	
	29	Characteristics of cochlear pathology	
March	2	Characteristics of retro-cochlear pathology <b>Practical Assignment #1 Due</b>	
	5	Pseudohypacusis	Martin Ch. 13
	7	Pseudohypacusis	Martin Ch. 13
	9	<b>EXAMINATION 2</b>	Martin Ch 13
	12	Pseudohypacusis	Martin Ch. 13
	14	Testing children	Martin Ch. 8
	16	<b>NO CLASS - SPRING BREAK</b>	
	19	<b>NO CLASS - SPRING BREAK</b>	
	21	<b>NO CLASS - SPRING BREAK</b>	
	23	<b>NO CLASS - SPRING BREAK</b>	

	26	
	28 Development of auditory behavior	Martin Ch 8
	30 Testing the infant under 3 months	Martin Ch. 8
	<b>Practical Assignment #2 Due</b>	
April	2 Testing infants age 6 months to 2	Martin Ch. 8
	4 Testing children age 2-5	
	<b>Prac. Assignment 4C due</b>	
	6 Testing children	Martin Ch. 8
	9 Central auditory processing	Martin Ch. 12
	11 <b>EXAMINATION 3</b>	
	13 Tests for CAP	Martin Ch. 12
	16 Tests for Central Auditory Processing	
	18 Tests for CAP	
	20 ABR	Martin Ch. 7
	<b>Practical Assignment #3 Due</b>	
	13 ABR	Martin Ch. 7
	25 Review	
	<b>Practical Assignment #4 Due</b>	
	27 <b>NO CLASS - EXAM PREPARATION DAY</b>	

**Final Exam – Monday, April 30, 2012, 10:00 - 12:00**

# Masking Lab

Neatness 1 1 1 1 \_\_\_\_/4

Used proper symbols/air 1 1 1 1 \_\_\_\_/4

Used proper symbols/bone 1 1 1 1 \_\_\_\_/4

Speech - SRT - masking 1 1 1 1 \_\_\_\_/4

Speech - Discrimination - masking 1 1 1 1 \_\_\_\_/4

Used proper amount of masking  
Pure tone and speech 2 2 2 2 \_\_\_\_/8

Details 1 1 1 1 \_\_\_\_/4

Comments 2 2 2 2 \_\_\_\_/8

Total \_\_\_\_/40

Name \_\_\_\_\_

Date \_\_\_\_\_

# Immittance Lab

Neatness	1	1	1	1	____/4
Type and ECV correct box and accurate	1	1	1	1	____/4
Peak – recorded, drawn correctly	1	1	1	1	____/8
Volume – recorded, drawn correctly	1	1	1	1	____/8
Acoustic Reflex Decay	1	1	1	1	____/4
Acoustic reflex	2	2	2	2	____/8
Details	1	1	1	1	____/4
Comments	2	2	2	2	____/8

Total \_\_\_\_/40

Name \_\_\_\_\_

Date \_\_\_\_\_

## Malingering Lab

Neatness	1	1	1	3_____
Pure Tone Stenger	2	2	2	6_____
Symbols	2	2	2	6_____
Something Clever	2	2	2	6_____
Details	1	1	1	3_____
Comments	2	2	2	6_____
				30_____



# Audiological Procedures Research

Disorder	1	2	3	
Audiogram	15	15	15	_____/45
pure tone (5)				
speech/immit (5)				
results (5)				
Letter to Physician	6	6	6	_____/18
Audiological Findings	8	8	8	_____/24
Pure tone				
Immitance				
Tymp/reflex.				
Speech				
Tone Decay				
OAE				
ENG				
ABR				
References/neatness	4	4	3	_____/13
spelling, grammar				
			Total	_____/100

Name \_\_\_\_\_

Date \_\_\_\_\_