

## Course Syllabus for CMSD 4150 Hearing Science

Fall 2002  
T/Th 9:30-10:45 AM (72)  
Miller Plant Sciences  
Bldg. 1061 Room 2401

Instructor: Holly Kaplan, PhD, CCC-A  
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Office Hours: T/Th 2:00-4PM, By appointment

Text: Yost, W.A.  
Fundamentals of Hearing-an introduction (4th edition)

***There will be no class Thursday, October 31<sup>st</sup>, (Gator Day) & Thursday, November 21<sup>st</sup>, Thursday, November Nov 28<sup>th</sup>, (Thanksgiving).***

**UGA Undergraduate Catalogue Course Description:** Physics of sound and the physiological and psychological bases of auditory function.

**Dr. Kaplan's Course Description:** This course is designed to introduce the principles of the physics of sound including its measurement. The anatomy and physiology of the normal hearing mechanism is discussed as well as a basic introduction to pathophysiology of the auditory mechanism. The psychological and cultural aspects of sound perception are discussed.

**Prerequisites, corequisites, and cross-listings for the course:** Prerequisite is CMSD 4120 (usually done concurrently) or permission of department.

### Learning Outcomes:

- Student will be able to define the basic principles of the physics of sound.
- Student will be able to identify the basic anatomy of the human auditory mechanism.
- Student will be able to delineate the basic physiology of the human auditory mechanism.
- Student will be able to define basic concepts related to psychoacoustics.
- Analysis and synthesis of the basic concepts of anatomy, physiology, physics and psychophysics will be demonstrated through a passing grade on two tests and a comprehensive final, and through completion of a major group project.

### Course Requirements:

1. Assigned Reading and information on WebCT.
2. Three Exams (25% each)—As we finish the material, the examination date/time will be announced well in advance in class. The third exam will be the final on Tuesday, **December 17<sup>th</sup> from 7-10PM**. Tests will be multiple choice, short answer, listing,

and labeling of diagrams. Make-up examinations will only be given with a written medical excuse or with written permission from the Dean of Student Services. Make up examinations will be in a different format from the original examination.

3. Project (25%)—a creative activity related to this course—idea must be approved by instructor. You will be assigned a group. Please realize the project must be significant enough to provide a grade for 3-4 people. **Due: Nov. 26<sup>th</sup>.**
  - Diagrams or models of the anatomy of the ear with a written explanation or report related to anatomy included.
  - Videotape related to sound, anatomy or psychoacoustics
  - Website devoted to Hearing Science
  - Annotated bibliography on a topic in Hearing Science
  - CD with different sounds, music delineating principle of physics and psychophysics of sound
  - Curriculum for K-12 devoted to Hearing Science
4. Attendance is highly recommended. Any given day that there is absolutely, hardly anybody in class, we will have a quiz. Being there will help your grade in this class.

### **Course Outline:**

Hearing and Hearing Science  
The Basics of Sound--Sinusoids  
Reading: Chapters 1 & 2

The Basics of Sound  
Sound Transmission  
The Complexity of Noise  
Reading: Chapters 3 & 4

Analysis of Sound  
Decibels/Logarithms  
Readings: Chapter 5, Appendix B  
*Berlin, C. "Programmed Instruction in the Decibel" in Northern, J. Hearing Disorders 3<sup>d</sup> ed (1996). Allyn and Bacon.*

TEST # 1

The Ear: Outer and Middle  
The Ear: Inner  
Reading: Chapters 6 & 7

The Ear: Peripheral Auditory Nervous System and those miraculous hair cells  
Neural Responses  
Reading: Chapters 8 & 9, Appendices E & F

The Central Auditory Nervous System

Reading: Chapter 15

Abnormal Auditory System

Reading: Chapter 16

TEST #2

Auditory Sensitivity

Masking

Reading: Chapters 10 & 11

Binaural Hearing

Loudness and Pitch

Reading: Chapters 12 & 13

Auditory Perception

Reading: Chapter 14

Appendix D

Test #3 or Final Examination—comprehensive.

**Attendance Policy:** It is in the best interest of the student to attend class, however attendance will not be taken. Any time class is determined to be “empty” a pop quiz for extra credit may be given.

**Examination Make-up Policy:** A medical excuse or excuse from the Dean of Student Affairs office is necessary for a make-up examination. Make-up examinations will be in an alternate format.

**Honor Code and Academic Honesty Policy:** All academic work must meet the standards contained in ‘A Culture of Honesty.’ All students are responsible for informing themselves about those standards before performing any academic work. An example of what might constitute a violation of these policies specific to this class would be cutting and pasting information from a web based document for your class project without giving credit to the author of the website.

Based upon previous students complaints regarding academic honesty, hats, coats, backpacks, notes, books, and notebooks must be left at the door during examinations. Please show yourself and your classmates some respect and do not wear pajamas to class. PLEASE TURN ALL CELL PHONES/PAGERS TO SILENT RING OR OFF.

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

All CMSD classes are available for Honors Options. Please schedule an appointment with me to discuss an appropriate Honors project.

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