

**CMSD 3030
HEARING SCIENCE
FALL, 2006**

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Course Description UGA Bulletin: Physics of sound and the physiological and psychological bases of auditory function.

Dr. De Chicchis' Course Description: This course discusses the physics of sound, anatomy and physiology of the auditory system and the psychological bases of auditory function.

Prerequisite or Co-requisite: CMSD 4120 or permission of the department.

Learner Outcomes: At the end of this course the student should be able to:

1. Define, comprehend and discuss the basic principles of sound, its acoustic properties and the means by which sound characteristics may be altered during sound transmission. (III-A)
2. Identify and locate anatomical structures in the human auditory system and describe their functional role in analyzing auditory stimuli. (III-A; III-B; III-C)
3. Explain basic physiologic principles associated with the human auditory system. (III-A; III-B)
4. Discuss psychoacoustic aspects of auditory function (III-A; III-C)

Required Course Text: Introduction to Sound, Charles E. Speaks, Third Edition.

Recommended Course Texts:

Course Notes and Workbook for Introduction to Sound, Charles E. Speaks, Monica Ray Zobits, and Edward Carney Third Edition.

The Auditory System, *Anatomy, Physiology and Clinical Correlates*, Frank E. Musiek and Jane A. Baran

OFFICE HOURS: Office hours will be held on Monday 10:00 - 11:00 AM and Wednesdays from 2:15 to 3:15 PM If you cannot meet during those times and need some help please see me or send me an email to me in advance to arrange another time. I am always willing to me with students who are having difficulty with the materials. Do not hesitate to come to me if you need some extra help.

Course Requirements:

- A. There will be four examinations during the semester including the final exam, which will be comprehensive in nature **NOTE: YOUR FINAL EXAM FOLLOWS THE OFFICIAL EXAM SCHEDULE.**
- B. Each exam will carry equal weight.

- C. Make-up exams will be given **only** when a written medical excuse is provided to the instructor.
- D. You will be allowed 3 un-excused absences, after which, 1 point per absence will be deducted from your final grade.
- E. Students are expected to read the chapters in the textbook that are relevant to the class discussion.

HOMEWORK ASSIGNMENTS

A. Four homework assignments will be administered throughout the semester. Each assignment will be worth 10-15 points. The lowest homework grade will be dropped. The final homework grade will be the total points of your three highest grades. This total will be added to the total points you accumulate on your four exams.

COURSE OUTLINE:

I. Nature of Sound

Simple Harmonic Motion
Logarithms/Antilogarithms/Decibels
Chapters 1-4
Test 1

II. Complex Waves

Resonance and Filtering
Test 2

III. Distortion

Sound Transmission
Anatomy:
a. Outer Ear
b. Middle Ear
Test 3

IV. Anatomy con't:

a. Inner Ear
b. Central Auditory Nervous System
Test 4

V. Psychoacoustic Phenomena

Loudness
Pitch
Differential Sensitivity (Difference Limen - DL)
Intensity Discrimination

Frequency Discrimination
Binaural Hearing
Final Exam – Comprehensive

THIS COURSE SYLLABUS IS A GENERAL PLAN FOR THE COURSE. DEVIATIONS ANNOUNCED TO THE CLASS BY THE INSTRUCTOR MAY BE NECESSARY.

FINAL GRADES

Your final grade is determined by dividing the number of points that you accumulate from your exams and homework assignments throughout the semester by the total number of points available from those exercises. In other words, your grade is based on a percentage:
Total points earned / total points possible. The per cent breakdown is as follows:

A = 90 – 100%
B+=88-89%
B = 80 – 87 %
C+=78-79
C = 70 -77%
D+=68-69
D = 60 - 67%
F = 59% and below

HONOR CODE AND ACADEMIC HONESTY POLICY:

All academic course work must meet the standards contained in “A culture of Honesty.” All students are responsible for informing themselves about those standards before performing academic work. The policy, a portion of which is shown below, can be found at www.uga.edu/ovip/academic_honesty/culture_honesty.htm

All exams, and any academic work (e.g. homework, projects, term papers) are to be completed without assistance from former or current students, and without plagiarizing from the internet or other sources. Those violating this policy will be referred for disciplinary action.

The University of Georgia (the university) seeks to promote and ensure academic honesty and personal integrity among students and other members of the University community. A policy on academic honesty has been developed to serve these goals. Academic honesty is defined broadly and simply—the performance of all academic work without cheating, lying, stealing, or receiving assistance from any other person or using any source of information not appropriately authorized or attributed. Academic honesty is vital to the very fabric and integrity of the University. All students must comply with an appropriate and sound academic honesty policy and code of honest behavior. All members of the University community are responsible for and involved in bringing about an honest university, and all must work together to ensure the success of the policy and code of behavior. All members of the University community are responsible for knowing and understanding the policy on academic honesty. The statement on policy and procedures will be made readily available to all students and faculty to ensure understanding of the academic honesty system and its proper functioning. The entire University Community works together to operate the academic honesty.