PSY 5993 - #85899
RESEARCH PROJECT ON AUDITORY PERCEPTION
SYLLABUS, SPRING 2010
(3 Credits)

LECTURE/LAB:
*** To be announced. Tentatively, 1¼ hour on Tuesday and Thursday afternoons. ***
Psychoacoustics Lab, N625 Elliott Hall, 612.625.8557

INSTRUCTOR:
Professor Neal Viemeister - nfv@umn.edu
Office: N264 Elliott, 612.625.4024 (Office hours by appointment only.)

ASSISTANTS:
Dr. Mark Stellmack - stell006@umn.edu
Andrew Byrne - byrn0050@umn.edu

DESCRIPTION:
This course is an introduction to research in human auditory perception intended for undergraduate and graduate students. The format is a combination of lecture, seminar, and lab. Students will participate in lectures and discussions of principles of auditory perception and research design in psychoacoustics. Students will design and perform an experiment that may be used to prepare a manuscript to satisfy PSY 3902W requirements. The experiments will be closely related to the active research being conducted in the Psychoacoustics Lab (http://www.psych.umn.edu/psylabs/acoustic/).

The major goal of this course is to give students an opportunity to engage in hands-on research and to acquire expertise in the various dimensions of research, including design, data collection, data analysis, laboratory skills, background scholarship, and scientific communication.

Among the students' requirements for this course: attend and participate in discussions, prepare an oral presentation of the student's research, and prepare a proposal for future research based on the student's research or other recent, published research in psychoacoustics. Although not required, it is preferred that students have taken PSY 3001W (Research Methods), PSY 3031 (Sensation and Perception), PSY 3051 (Cognitive), and/or PSY 3061 (Biological Psychology) and that students are comfortable with math and quantitative analysis.

COURSE MATERIALS:
Handouts, selected book chapters, and journal articles.

GRADES:
LECTURE QUIZZES: [5@10pts] For the first several weeks, a brief quiz will be given to test your understanding of the material.
APA PAPER DRAFTS: [4@25pts] You will submit drafts for each section of an APA-style paper. (If for use in PSY 3902W, these will be graded Pass/Redo based on covering the major issues only.)
JOURNAL ARTICLE PRESENTATIONS: [3@10pts] 10-to-15-min presentations summarizing articles related to your project and/or final research proposal.
ORAL PROJECT PRESENTATION: [50pts] A 20-min PowerPoint presentation of your paper.
WRITTEN RESEARCH PROPOSAL: [100pts] 10-15-page research proposal as a follow-up to your project.

A = 349-380, A- = 342-348, B+ = 334-341, B = 311-333, B- = 304-310,
C+ = 296-303, C = 273-295, C- = 266-272, D+ = 258-265, D = 228-257, F = <228
TENTATIVE SCHEDULE

*** At first, there will be one lecture and one data collection time each week. Later, we will have lab meetings during those times, however the second session may not always be necessary. ***

Reading: Goldstein Ch.2, Rosenzweig Ch.3

*** HEARING TEST & START DATA COLLECTION ***

Reading: Goldstein Ch.2, pp.12-17

WEEK 3 (2/1): Sound, Auditory Filters, and Masking. Brief introduction to your research topics.
Handout: General research topics and major references.
Reading: Plack Ch.3, Goldstein pp.260-268

Reading: Plack Ch.4, Goldstein pp.272-279

Reading: Goldstein pp.299-303, Plack Ch.5

WEEK 6 (2/22): The Enhancement Effect.
Reading: Adaptation of masking.

WEEK 7 (3/1): Discussion of research projects.
Handout: Research project (stimuli) details.
Reading: Forward masking by enhanced components in harmonic complexes.

WEEK 8 (3/8): Signal Detection Theory and explanation of basic Method (adaptive procedures, etc.).
Handout: Project procedure details.
Reading: Enhancement in the marmoset inferior colliculus: Neural correlates of perceptual “popout”.
3/24 - METHOD DRAFT DUE.

*** SPRING BREAK ***

WEEK 9 (3/22): Outlining the Introduction. Individual help with drafts. (Times arranged.)
3/28 - INTRODUCTION DRAFT DUE.

WEEK 10 (3/29): Show project results and basic interpretations.
Handout: Sample PowerPoint presentation.
4/4 - RESULTS & DISCUSSION DRAFT DUE.

WEEK 11 (4/5): Project presentations.

4/18 - COMPLETE PAPER DUE.

WEEK 13 (4/19): Journal Presentations. Individual help with projects. (Times arranged.)


5/9 - WRITTEN RESEARCH PROPOSAL DUE.