Physics 224: Physics and Psychophysics of Music
Course Syllabus

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The Course: Lectures, MWF 9:35 – 10:25, Rutherford building, room 114
Book (optional): The Science of Sound, Rossing
Lecture notes: available in the bookstore and online
webpage: http://www.physics.mcgill.ca/∼guymoore/ph224

Intended Syllabus: What sound is
How sound is characterized
How human hearing works
What makes some sounds "musical"
Consonance, musical scales
Resonance, feedback
Basics of musical instruments
Voice
(Detailed schedule on course webpage)

Prerequisites: None. I will assume high school physics (force, inertia, Newton's Laws) and mathematics (algebra, logarithms, some trigonometry), though I will explain those concepts most important in the course. No music background is assumed, but knowledge of scales and intervals will be very useful.

Course Grade: See Reverse

Comments: Homeworks will be assigned on Wednesday and are due the next Wednesday, in class or in my mailbox by 17:00. Late assignments are accepted until Friday at 17:00 and are marked down 25%; homeworks later than that are marked but no points are given.

The textbook is optional; it may be of interest for music students. Lectures will mix blackboard, projector, sound producing and analyzing software, and demonstrations; attendance is recommended. Lecture notes are available in the bookstore and are posted on the course page. The course webpage will be useful but web access will not be required.

Grading Scheme

Grades will be based on 3 components:

- Homeworks: 30%
- Midterm: 25%
- Final: 45%

I will then re-calculate grades based on

- Homeworks: 40%
- Final: 60%

that is, dropping the midterm. For each individual student, the higher grade will be counted– that is, I will automatically drop the midterm grade if it is to the student's advantage.

The grading will be done using the standard McGill procedure that $85\% = A$, $80\% = A-$, $75\% = B+$, $70\% = B$, $65\% = B-$, $60\% = C+$, $55\% = C$, $50\% = D$, and $< 50\% = F$. I will stick strictly to this grading scheme (unlike in some past years).

My recommendation if you want a good grade is, first, do all homeworks. If pressed for time (we all are sometimes), do a quick, incomplete job or turn it in late. Half points are a lot better than no points, and almost all low grades in the past have resulted mostly from poor homework performance. Second, attend class regularly and learn the course material. Feel free to use my office hours–that is what they are for!

Students who receive a D or F grade have the option of writing a supplemental exam in May. The usual university rules for such supplemental exams will apply.