Rubric for Physics 2010 Project

You will work in groups of ~4, investigating some aspect of the physics of sound which interests you. This may include audio measurements of a physical system, building or modifying an existing apparatus, and/or library research on some advanced topic. Previous topics chosen by students include room tuning, loudspeaker cabinet modification, Faraday waves. Feel free to ask a professor to suggest ideas!

Proposal: Your group's first graded work on this project will be a one-page proposal for your project, describing the **concept** of your project, its **purpose** (why you are doing it), a list of **equipment** you will obtain and use for the project, and a **timeline** consisting of various "milestones" to meet along the way and with which to track your progress.

Presentation: Your group will make an oral presentation to the class, 15 minutes in length, including visuals (e.g. PowerPoint) and/or a demo. Double-spaced. You may put figures at the end.

Paper: Your group will also turn in a paper approximately 6-8 pages in length, graded for the following:

10pts   Abstract
Four to six sentence, complete overview of project, noting investigation, methods used, and results.

12pts   Introduction
Describe background (principles & priors), purpose, what you hoped or expected to achieve.
Include references to and remarks about other (prior) work/research in this area.

20pts   Methodology
Describe equipment, methods used.
Perhaps characterize "Before" state of system under investigation, or do so in Results, below.

25pts   Results (*SHOW* us what you found)
What you found… Explained in text. But you'll also need to *present your data*, either via graphs or tables. Any figures are captioned and numbered e.g. "Figure 1: Frequency spectrum of my dog's bark." Axes labeled & with units.
Note anything that didn't "work" and perhaps why.

12pts   Conclusion
Restate what you found, possibly any ideas for future work

6pts   References
Note literature or other works you referred to in preparing this paper (journal articles, books, class notes, web pages, tech. specs. Use citation format of the *Journal of the AES*.
You will earn one point for each reference cited, up to 6.

15pts   Text Quality
Spelling & Grammar are correct. Paragraph breaks for different subjects. Verb tense is consistent throughout paragraphs; number (singular vs. plural) is consistent.

In general, the guideline "Make it like a *J. AES* publication" will get you a long way.

Total grade for the project will be assigned as follows:
  10%   Proposal
  30%   In-Class Presentation
  50%   Paper
  10%   Group self-evaluation(s)

Important Milestones (see calendar on Syllabus for dates):
Proposals Due ; Status Updates; In-class Presentations; Papers Due