

### 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, below):**

Proposals Due  
 Status Updates  
 In-class Presentations  
 Papers Due