



**United States Naval Academy
Physics Department
SP436 –Acoustics
Fall 2008**

Section 2141 Course Standing Orders

Objective: Study vibrating objects and the sounds they emit. Develop models to describe these phenomena. Study methods to measure the phenomena. Establish proper experimental technique in the laboratory.

Instructor: CDR Ed Tucholski, Ph.D.

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Extra instruction is best obtained by appointment, but I will try to accommodate drop in's as best I can.

Text: Kinsler, Frey, Coppens, Saunders, *Fundamentals of Acoustics*, Fourth Edition.

Grading: Your course grade will be calculated using the following percentages:

Exam 1	10%
Exam 2	10%
Exam 3	10%
Final Exam	25%
Quizzes	5%
Homework	20%
Lab	20%

Letter grades are defined as follows:

A > 90%
B > 80%
C > 70%
D > 60%

I reserve the right to adjust these guidelines by as much as 5% based on my judgment of your **effort** in this course.

Homework: **You won't learn Physics without doing homework problems.** Fighting your way through the homework problems is how you identify your misconceptions and apply concepts covered in the class. **I highly encourage you to work together on homework.** Just remember that you that you will need to solve problems independently during all exams and quizzes. Many students understand a solution once shown the correct method. A significantly greater understanding of Physics is required to solve a problem with nothing other than a blank sheet of paper, your calculator, and your own brain. If you continuously rely on others to think for you, you will not succeed in your Navy career.

Exams and Quizzes:

There will be 3 exams that will count for 30% of your final grade. These will be done during a regular class period or lab. The final exam will count for another 30% of your final grade. I may give a quiz periodically to make sure you are staying current.

Laboratory:

I'm an experimentalist – this is my favorite part of the course. As a Physics major you are required to take a lab course. You will learn the basic test equipment of an acoustician. You will often need to build the apparatus yourself. At the end of the semester you will complete a practical lab exercise. A laboratory report consisting of the following parts will be submitted for each lab.

1. Title
2. Abstract
3. Theory
4. Equipment
5. Procedure
6. Raw Data
7. Sample calculation
8. Required graphs
9. Results
10. Conclusions

In most cases, I will give you these sections as part of the lab handout.



E. J. Tucholski