Week 12: Reading & Homework Assignment # 9

Lecturer: Prof. Steven Errede serrede@illinois.edu
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Office Hours: Anytime (by appt. preferred…)

Lab TAs: Matt Ziemann mrziema2@illinois.edu
Office Hours: Wednesdays, 10:00-11:00 am 6105 Eng. Sci. Bldg. (or by appt.)

John Whitman jwhitma2@illinois.edu
Office Hours: Mondays, 12 noon-1:00 pm 6105 Eng. Sci. Bldg. (or by appt.)

Course Textbook(s): Physics 406 Lecture Notes (posted on P406 website – see below)
“The Science of Sound”, 3rd Ed. Rosssing, Moore & Wheeler, Addison-Wesley

Course Website: http://courses.physics.illinois.edu/phys406/
http://courses.physics.illinois.edu/phys193/  

All lecture notes, lab handouts, additional references, previous student final project reports
(and much more) are available on the P406 (and P193) website(s). Please check these out!

Course Organization:

A. Lectures: Tuesdays & Thursdays, 12:30-1:50 pm, in the POM Lab (6105 ESB).
We will also have various demos using equipment in the POM Lab (6105 ESB).

B. Friday Labs: Lab1 @ 11:00 am -1:50 pm, Lab2 @ 2:00-4:50 pm in the POM Lab (6105 ESB)

First part of the semester will consist of doing various simple/short experiments using
equipment and/or software in the lab. Will discuss this in the 1st lab session(s) this coming Friday.
Second part of semester, labs will be focused on student project(s) – more on this below.

C. Weekly Reading and Homework Assignments: HW due following week on Thursday, in class.
D. Take-Home Midterm Exam: Tuesday, March 8, 2016, Due: Thursday, March 17, 2016
E. Midterm Project Oral Presentations: Brief! In class – Tues & Thurs, March 8 & 10, 2016
F. Final Project Oral Presentations: Brief! In class – Thurs, April 28 & Tues, May 3, 2016
G. Take-Home Final Exam: Tuesday, April 26, 2016, Due: Friday, May 6, 2016
H. Final Project Written Report: Due: Friday, May 13, 2016

Reading Assignment For Week 12: Please read Physics 406 Lect. Notes XII – Parts I & II.

Homework Assignment For Week 12: As you do this week’s reading assignment: See Below.....

Final grade based on:
ΣHW’s: 20%
MT: 15%
FE: 30%
FP: 35% (= Σ mid-term & final oral presentations, final written report).

Freshman “Discovery” POM Course (less technical)
Homework Assignment For Week 12: *n.b. this is called HW # 9 !!!*

1.) Work through the derivation of the Instantaneous vs. Complex 3-D Vector Sound Intensity, *p. 4-8 of Physics 406 Lecture Notes “Time Domain vs. Frequency Domain Sound Field Quantities”.*

2.) Turn in your above derivation as **HW # 9**.