Week 11: Reading & Homework Assignment # 8

**Lecturer:** Prof. Steven Errede  serrede@illinois.edu  
Office: 435 Loomis (4th floor, SW corner)  
Office Phone: 333-0074.  HEP Sec’y’s:  441 Loomis (333-4452)  
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)  
**Another good book:**  “The Acoustical Foundations of Music” 2nd Ed., John Backus, Norton

**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

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**Homework Assignment For Week 11:**  As you do this week’s reading assignment: See Below…..

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**Final grade based on:**

- $\Sigma$HW’s: 20%  
- MT: 15%  
- FE: 30%  
- FP: 35% (= $\Sigma$ mid-term & final oral presentations, final written report).
Homework Assignment For Week 11: n.b. this is HW # 8 !!!

1.) Work through the derivation of the linear superposition of two complex periodic signals in P406 Lect. Notes 11, p. 5-10

2.) Work through the derivation of complex standing waves, P406 Lect. Notes 11, p. 20-21,

3.) Turn in your above derivations as HW # 8.

⇒ If you have not done this type of studying before, it is a very useful/helpful/powerful technique for deeper learning of any subject - anything…