

Physics 274 - General Physics III: Syllabus¹

Spring Semester 2015, University of Hawaii at Manoa

Class meets Mon, Wed, Fri 12:30 – 1:20 pm, Watanabe Hall 420

Web Page: http://www.phys.hawaii.edu/~sevahsen/phys274_spring2015/

Instructor:	Prof. Sven E. Vahsen	Phone:	(808) 956 2985
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Office Hours:	Tue 1-2 pm, Thu 9-10 am	Grader:	Tanis Leonhardi

Course Description

Modern Physics with Calculus: Physical Optics, Introduction to Relativity, Quantum Mechanics, Atomic and Nuclear Physics, Particle Physics and Cosmology.

Prerequisites

Physics 152 or 272 and Math 243 (or concurrent) or Math 253A (or concurrent).

Required Materials

- Textbook: "University Physics", 13th edition (Young and Freedman) Volume 2 and 3.
- License for Mastering Physics (included with new copies of textbook)

Learning Goals

- Understand the main concepts in each book chapter (see yellow end-of-chapter summaries), and be able to apply these concepts when solving problems of similar difficulty as the written homework.
- Know all material presented in class, including derivations that are not in the book. For this reason class attendance is strongly encouraged.

Examinations

2 Midterms (1h, each covers about 1/3rd of material), Final (2h, cumulative)

Evaluation

Homework & Quizzes (20%)

Two midterms (2×20%=40%)

Final (40%)

¹ created 1/12/2015. Check course webpage for updates.

Tentative Schedule

We will work through the course material (chapters 35 – 44) in the same order as the book. We will skip chapter 42. We will spend approximately one week on each of chapters 35 and 36, and two weeks on each of the remaining chapters.

Midterm 1	tbd
Midterm 2	tbd
Final Exam	Monday May 11, 12:00 -2:00 pm

Please note: test dates may change. The pace of the class will be adjusted as needed. An up-to-date, more detailed schedule is maintained in a Google Calendar on the course web page.

Homework

- Weekly, written homework: Usually due Wednesday at the beginning of class. Your homework will be corrected by the grader, and returned in class. **Please always show your work. Just writing down the final answers (even if correct), will only get you a small fraction of the possible score. Honest collaboration is encouraged. Copying from the solutions manual is strictly prohibited!**
- Mastering Physics: One or two relatively straightforward homework problems may be due on days when no written homework is due. This will help you study in synch with the lectures.

Note from the Professor

*Welcome to Physics 274! I will do my best to help you learn the material. **For physics questions: do not email - please come by during office hours instead.** If you need to meet at a different time, then please email me to set up an appointment.*

Homework assignments and important announcements will be made in class when possible, but some information may instead be announced via the course webpage. Please check it regularly: http://www.phys.hawaii.edu/~sevahsen/phys274_fall2014/

Good luck with the course!

Sincerely,
Sven Vahsen