

Syllabus for Physics 274¹ - General Physics III - Fall 2011
Class: Mon, Wed, Fri 8:30 – 9:20 am in Watanabe Hall 420
Web page: <http://www.phys.hawaii.edu/~sevahsen/phys274/>

Instructor: Prof. Sven E. Vahsen Phone: (808) 956 2985
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Office Hours: Mon, Wed, Fri 9:30 - 10:30 am Grader: Maxyne Salvador

Course Description

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

Prerequisites

Physics 152 or 272 and Math 243 (or concurrent) or Math 253A (or concurrent), or instructor's consent

Required Materials (available from UH Manoa bookstore)

- Textbook: "University Physics", 12th edition (Young and Freedman). We will start out by reviewing chapters 35 & 36 (in Volume 2). The main part of the course is built around chapters 37 through 44 (Volume 3). If you don't own all three volumes of the textbook already, then purchasing volume 3 is sufficient.
- License for Mastering Physics (included with new copies of textbook)

Learning Goals

Students should 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.

Examinations

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

Evaluation

Homework (20%)
Two midterms (2×20%=40%)
Final (40%)

¹ created 8/18/2011. Check course webpage for updates.

Tentative Course Schedule

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

Midterm 1	October 3
Midterm 2	November 14
Final Exam	during week of December 12

Please note: none of the above dates are final. The pace of the class will be adjusted as needed. An up-to-date, detailed schedule is maintained in a Google Calendar on the course web page.

Homework

- Mastering Physics: There will be (typically two) relatively straightforward homework problems due at the beginning of each class. This will help you study in synch with the lectures.
- Written homework: Several more challenging problems are due each Wednesday before class. Please put your homework into the Physics 274 mailbox, located near the entrance of the 4th floor department office. 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.**

Note from the Professor

Welcome to Physics 274! I will do my best to help you learn the material. Please don't hesitate to contact me if you need assistance. Physics questions are easiest discussed in person, please come by during office hours for those. 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. So please check <http://www.phys.hawaii.edu/~sevahsen/phys274/> regularly.

Good luck with the course!

Sincerely,
Sven Vahsen