

## Physics 275 Syllabus - Fall 2007

### Professors Fred Wellstood and Chris Lobb

#### What the course is about:

Physics 275 is the second course in the introductory lab course sequence Physics 174-275-276. The course is intended mainly for physics students, but other science and engineering students who have a desire for a more rigorous introduction to experimental science can also enroll. Experiments are mainly chosen in the general area of mechanics. A major component of the course is to understand the theory and applications of error analysis at an introductory level. The Lab meets for four hours each week in Room 3203 of the Physics Building.

**Web Site:** To get the latest information on Physics 275, check the web site at:

**\* Prerequisites:** The prerequisites for the course are Physics 174 and Physics 171 (or 161).

**\*Meeting CORE requirements:** Please note that you must be simultaneously enrolled in Physics 272 in order to receive credit for a CORE physical sciences laboratory course.

**Lab sections:** There are four lab sections:

Lab section	Day	Time	Instructor	TA
0101	Monday	2-5:50 PM	Lobb	Li
0301	Tuesday	2-5:50 PM	Wellstood	Islam
0201	Wednesday	2-5:50 PM	Lobb	Li
0401	Thursday	2-5:50 PM	Wellstood	Islam

#### Instructors:

Prof. Fred Wellstood, [well@squid.umd.edu](mailto:well@squid.umd.edu)

Office: 0367 Physics, phone: 301-405-7649,

Web Page: <http://www.physics.umd.edu/people/faculty/wellstood.html>

**\* Office Hours:** You may stop by my office at any time. If you can't find me, please make an appointment by phone or e-mail.

Prof. Chris Lobb, [lobb@squid.umd.edu](mailto:lobb@squid.umd.edu), Office: Room 1365 Physics,

phone: 301-405-6130, Web Page: <http://www.physics.umd.edu/people/faculty/lobb.html>

**\* Office Hours:** You may also stop by my office at any time. If you can't find me, please make an appointment by phone or e-mail.

#### Teaching Assistants:

Kazi Islam, [kri@umd.edu](mailto:kri@umd.edu)

Tak Chu Li, [tcli@umd.edu](mailto:tcli@umd.edu)

**\* Arriving late to class:**

Classes at Maryland begin right on the hour. It is important that you arrive on time so that you can get instructions for the lab and have time to finish. If you arrive more than 10 minutes late, you may not be allowed into the lab and will have to make it up during another section.

**\* Making Up Missed Labs:** You should make every effort not to miss your regularly scheduled lab. If you miss your regular lab section, you should make that lab up by going to another section that week or by scheduling a makeup lab with the instructors **before your next lab.**

**\* Texts**

- “A Practical Guide to Data Analysis for Physical Science Students” by Lyons
- “Physics 275 Lab Manual” – Summer 2007 edition

**\* Grading:**

50% Spreadsheet Lab Report & Homework

20% Midterm

20% Final

10% Class Participation

*Missing one Lab (and not making it up) will cost one letter grade in your final grade. Missing one homework set will cost one-half of a letter grade in your final grade.*

**\*Homework** is assigned at the end of each Lab. You will turn your homework and any revisions to your lab by uploading your modified Excel spreadsheet file to Blackboard. You can turn in your report and homework anytime during the week, but by no later than 2 PM on the Monday of the week after you had the lab. Corrected homework should be available the following week. **No credit will be given for late homework unless you are seriously ill and provide a written note from your physician.**

**\* General Comments on the Lab report and Homework:** Finishing all the lab reports and homework sets is very important. If you can't completely finish a lab and homework set, it is still important to turn in what you do have. When you are working on your report or homework, feel free to discuss among yourselves to try to figure out what is going on. By all means get together in small groups and discuss. However, do not use these discussions as an excuse to copy someone else's report or homework solution, or let someone else copy yours. That is cheating, and is strictly forbidden. It is also very self-defeating since the other part of your grade will come from tests. The right way to proceed is to first work through the report and problems by yourself and arrive at a definite answer. With this preparation, you can then discuss intelligently with your colleagues and see if you have missed something essential. Of course, you can always ask one of your instructors. **One final thing,** if you miss something fundamental in a lab or test, you will probably be assigned extra problems to solve until you master the concept.

### Important Dates (preliminary)

Aug. 29-30	No Labs
Sept. 3-6	Labor Day Week – No labs
Sept. 10-13	Experiment 1 - <i>Introduction and Review</i>
Sept. 17-20	Experiment 2 - <i>Dice</i>
Sept. 24-27	Experiment 3 - <i>Decay</i>
Oct. 1-4	Experiment 4 - <i>Position, Velocity and Acceleration</i>
Oct. 8-11	Experiment 5 - <i>Free fall of a mass</i>
Oct. 15-18	Experiment 6 - <i>Review</i>
Oct. 22-25	<b>Practical Exam</b>
Oct. 29-Nov.1	Experiment 7 - <i>Standing Waves on a String</i>
Nov. 5-8	Experiment 8 - <i>Mass and Spring Oscillator</i>
Nov. 12-15	Experiment 10 - <i>Measuring g with a pendulum</i>
Nov. 19-22	Thanksgiving Week - No labs
Nov. 26-29	Experiment 11 - <i>Review</i>
Dec. 3-6	<b>Practical Exam</b>
Dec. 10-11	Make-up labs
Dec. 12	Exam study day - Physics 275 does not have a final exam