

## Physics 2225 - Physics for Scientists and Engineers - Lab 2

### Fall Semester 2011

Location: \_\_\_\_\_ Time: \_\_\_\_\_  
 Instructor: \_\_\_\_\_  
 Office: \_\_\_\_\_ Office Hours: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Email: \_\_\_\_\_

#### Course Description

The purpose of this class is to introduce you to the art of making physical measurements using instrumentation, and to develop basic skills in error analysis and report writing. This class is designed to work concurrently with Physics 2220.

#### Course Requirements and Grading

Your grade for this course will be based on 200 points: completion of 12 labs (total 120 points, 10 points each) and for four reports (total 80 points, 20 points each). Each lab will be performed with a partner. You are strongly encouraged to attend all labs. If you are unable to attend a lab, you must talk with your instructor to determine if alternative arrangements are possible.

Report requirement is 1-2 pages of text, with any supplemental figures after. Reports will be written on the labs listed below. Reports 2 and 3 will be critiqued by the instructor, and then returned to the student for a revision and final submission. Report 4 will be submitted only once with no revisions.

#### Schedule

<u>Week</u>	<u>Lab Description</u>	<u>Requirement</u>	<u>Report Due Dates</u>
Aug 29 - Sep 2	Error Analysis and Uncertainty		
Sep 5 - 9	<b>Labor Day: Sep 5</b>		
Sep 12 - 16	Error Analysis (distributions) and lab writing	Report 1	
Sep 19 - 23	Refraction and Thin Lenses (Graphing)	Report 2	Report 1 due
Sep 26 - 30	Interference		Report 2 Draft due
Oct 3 - 7	Electric Potentials and Fields		Report 2 Returned
Oct 10 - 14	Writing Full Reports		Report 2 Final due
Oct 17 - 21	<b>Friday Schedule: Oct 20, Fall Break: Oct 21</b>		
Oct 24 - 28	Simple Resistive Circuits	Report 3	
Oct 31 - Nov 4	RC Circuits		Report 3 Draft due
Nov 7 - 11	Resonance in a Driven LCR Circuit		Report 3 Returned
Nov 14 - 18	Build RC Circuits	Report 4	Report 3 Final due
Nov 21 - 25	<b>Thanksgiving Break: Nov 23 - 25</b>		
Nov 28 - Dec 2	Optical Spectroscopy		Report 4 due
Dec 5 - 9	Inverse Photoelectric Effect and Planck's Constant		
Dec 12 - 16	<b>Finals Week</b>		

### Students with disabilities

If a student has a disability that will likely require some accommodation by the instructor, the student must contact the instructor and document the disability through the Disability Resource Center, preferably during the first week of the course. Any requests for special consideration relating to attendance, pedagogy, taking of examinations, etc., must be discussed with and approved by the instructor. In cooperation with the Disability Resource Center, course materials can be provided in alternative formats--large print, audio diskette or Braille.