

PH 104: Experimental Investigations

Fall 2008

Room: SB2 101

Class Meeting: Thursday, 2-4 pm

Instructor: Greg Bostrom

Email: gbostrom@pdx.edu

Office hours: Tuesday 2-3 pm. SB2, Room 101

Blackboard information: A manual (subject to some changes) can be found here, as well as this syllabus. Other announcements and relevant information will also be posted here. The class PH104 should show up on your class list when you sign in to Blackboard (at <https://bb.pdx.edu>)

I will however, provide handouts at the beginning of class which you will turn in before you leave.

In this class we will be performing simple experiments that will help promote and clarify understanding of basic physical principles. Most data collection will be visual observations, though we will take measurements when needed. It is preferable that you prepare yourself for each lab by doing the recommended background reading in the *Conceptual Physics* textbook to get the most out of the lab experience, though I will give a short lecture at the beginning of each period reviewing the important physical principles used in that day's lab. There will also be some review material on the lab handouts.

In addition to the physics review and experimental procedure, the lab handouts will contain fill-in-the-blank responses. These are to be completed by each person in your lab group and submitted individually--each person will be receiving his or her separate score on the lab, though the work is done communally.

Grading

There will be 7 labs, one make-up week, and a lab final.
The Point breakdown is as follows:

70 points Labs (10 points each)
20 points Final Exam
10 points for Participation in lab experiments

100 points total

Participation points will be based on your involvement in conducting the lab experiments (working with the equipment, discussing questions with the group, etc.) throughout the term.

Letter Grades:

100-90 A
89-80 B
79-70 C
69-60 D

Tentative schedule:

Week	Lab	Relevant Conceptual Physics Chapter
1 (Oct 2)	Introduction and Measurement	
2 (Oct 9)	Projectile Motion	2, 3
3 (Oct 16)	Accelerated Motion and Gravity	2,3
4 (Oct 23)	Friction	4
5 (Oct 30)	Pendulum	8
6 (Nov 6)	Work, Energy and Pulleys	7
7 (Nov 13)	Torque and Levers	8
8 (Nov 20)	Make Up Lab Session	
9 (Nov 27)	Thanksgiving, NO CLASS	
10 (Dec 4)	Final Exam	
Finals Week	No Class	