

Physics 111 Lab

When: 1:30-4:20pm

Section A: Monday Section C: Wednesday
Section B: Tuesday Section D: Thursday

Where: HAC 229

Instructors:	Sections	Phone	Office	email (@fandm.edu)	Office hours
Prof. Froney Crawford	A	4499	HAC 421	fronefield.crawford	TBA
Prof. Ned Dixon	B	4812	HAC 211	ned.dixon	TBA
Prof. Amy Lytle	C	4660	HAC 206	amy.lytle	TBA
Prof. Etienne Gagnon	D	4159	HAC 227	etienne.gagnon	TBA

Course content:

The laboratory section of the course serves two main purposes: to provide an additional method for exploring the concepts and methods of physics in a hands-on, real world situation, and to introduce the concepts and methods of experimental work in physics, with an emphasis on uncertainty. The lab content will generally correspond to that of the lecture portion of the course. Weekly lab handouts will be posted on Blackboard.

Attendance:

Attendance is required at all 12 labs. Absence from one lab will result in a grade of zero for that lab; absence from more than one lab will result in failure of the course. If you know ahead of time that you will have a conflict, you may arrange to attend the lab on a different day during the same week. It is your responsibility to contact the relevant instructors to make this arrangement.

Evaluation:

Lab work constitutes 15% of the Phys 111 course grade (see main course syllabus). Your work will be assessed according to:

- a) Participation: 3%
- b) 12 lab writeups: 12%

Notebook:

A lab notebook of the “Comp Book”, quadrille ruled, 10” x 7 7/8” sort should be used to take notes, document equipment and procedures beyond those provided in the lab handouts, and record all data, analysis, and conclusions. The lab notebook is a permanent record of experimental work. Do not use scrap paper; everything you write during lab should be written, in ink, in the lab notebook. Mistakes, when they are recognized, should be crossed out with one or two lines, not scribbled over.

Participation:

Experimental work is a collaborative and hands-on activity. As such, you are expected to engage with other students and the instructor in the performance of measurements and discussion of ideas during the lab period. Further details on evaluation of lab participation are provided in a separate document.

Lab writeups:

For each lab, each group will complete a lab writeup that is due by end of the lab session. Each lab handout will provide guidelines on the details to be included in the writeup, but will generally include a basic presentation of the raw data collected, analysis of the data, calculations, and a brief summary of the results. In addition, there will be several questions in the lab handout, the answers to which should be included in the writeup. Further details on evaluation of lab writeups are provided in a separate document.

Schedule:

Week	Experiment
Jan. 23	Experimental uncertainty
Jan. 30	1D Motion
Feb. 6	2D Motion
Feb. 13	Inclined Planes
Feb. 20	Work and energy
Feb. 27	Sandbox and Moon craters
Mar. 5	Mechanical Energy
Mar. 19	Momentum
Mar. 26	Statics
Apr. 2	Rotational motion
Apr. 9	Simple Harmonic Motion
Apr. 16	Standing waves

Academic Integrity:

For this course, you will perform labs and complete assignments in groups.. Working together is strongly encouraged. Any work you submit for evaluation must credit each of the students contributing to its content. If you use information or ideas from an outside source, you must reference it. Failure to properly reference others' work or presenting others' work as your own constitutes plagiarism. If you are not sure how or if to reference something, please ask.

For more information on academic integrity, please consult the section of the Catalog on "Academic Honesty," and the section of the College Life Manual on "Academic Misconduct."