

PHYS 2219 WSU Fall 15 23884

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Course Description

We often forget that physics is a science based on experimental evidence and that it describes the physical environment around us. If all you did during your physics career was solve problems out of a book or record the brilliant derivations done on the chalkboard during a lecture, you would have a poor impression of what physics is all about. This laboratory section is designed to give you an opportunity to actually do physics for yourself. In addition, it is hoped that the concepts covered in lab will enhance those that you cover in the lecture portion of your physics course. You will learn about and utilize many experimental tools, including data collection, data analysis, the use of specific instruments, etc.

The work completed in this laboratory is worthy of a percentage of your total course grade, as per your particular instructor's policy. Do not hesitate to talk with either the course instructor or the lab instructor if you have questions about this arrangement.

General Information

Required Texts *Course Lab Manual* (Available in the bookstore)

Instructor John Armstrong

Office Hours SL 205, 9:30 - 11:30 MW, or by appointment

Email jcarmstrong@weber.edu (<mailto:jcarmstrong@weber.edu>)

Web [Lab Schedule](http://physics.weber.edu/lab/semesterschedulespring2013.html) (<http://physics.weber.edu/lab/semesterschedulespring2013.html>)

Phone 801.626.6215


Course Requirements

- Attend all labs sessions and complete all lab reports.
- Read the labs before you get to your lab section. A wise lab instructor once mused: "An hour of work in the lab can save a half hour of reading."
- A laboratory final exam will be administered. This exam will be administered and graded according to your course instructor's policy.
- **IMPORTANT NOTE:** Lab reports are due **at the end of the laboratory period**. Missed labs are difficult (and sometimes impossible) to make up. You should make arrangements with the lab instructor beforehand if you anticipate missing a lab session. Late labs will not be accepted.

Grading

Assuming that you show up for lab and conscientiously complete all of the work, you should do well in this part of the course. Each lab will be worth 10 points, and the average of all lab scores will be submitted to the course instructor at the end of the semester. A lab final will be administered and graded according to your course instructor's policy.

Here is a pdf copy of the grading rubric used for your labs:

[LabGradingRubric.pdf](https://weber.instructure.com/courses/372294/files/60069280/download) (<https://weber.instructure.com/courses/372294/files/60069280/download>) 
(<https://weber.instructure.com/courses/372294/files/60069280/download>)  (<https://weber.instructure.com/courses/372294/files/60069280/download>)

Academic Integrity

Regarding academic integrity, I will enforce policies as laid down in Section IV:D of the Student Responsibilities outlined in the Student Code. Specifically, no cheating or other forms of academic dishonesty will be tolerated. The first instance of cheating will result in a zero on that assignment. The second instance will result in failing the class. You will be working in groups, however, so you will be required to distinguish the difference between collaboration and cheating. When in doubt, make sure to give credit where credit is due.

Expectations and Responsibilities

This laboratory course is a critical (and required!) component of physics. Your assignments will require you to employ mathematical skills, problem solving, and critical thinking. I expect you to give yourself adequate time during lab to complete the assignments, and to put a good faith effort into all of your collaborative work. You should expect me to provide you with as much support as humanly possible, including technical/psychological math support and general sympathy. If you have questions about labs before (or after) they are due, my office hours are posted, and I can be available at other times if necessary. I am here to make sure you get as much out of this lab as you possibly can.

Emergency Closure

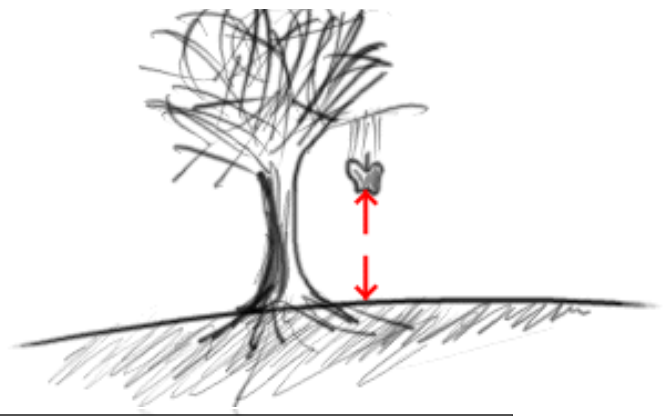
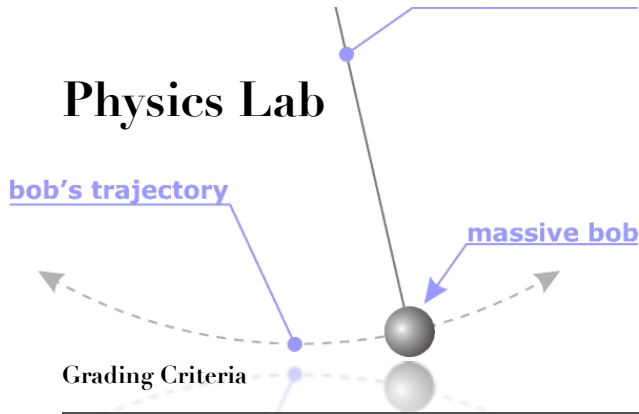
In the event of a campus emergency or campus closure, information will be posted to canvas or to the main University web site as soon as it is available. As always, your safety is the primary consideration. Regardless of the official closure instructions, *if you feel it is unsafe to travel to campus due to weather or other contingencies, follow your own best judgement*. Detailed instructions for any missed classes due to emergencies will be posted to canvas.

Special Accommodations

Any students requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary.

Date	Details
	Lab 0 - Making Measurements and Analyzing Data
	 (https://weber.instructure.com/courses/372294/assignments/2326891)
	Lab 1 - Position, Time, and Velocity (https://weber.instructure.com/courses/372294/assignments/2173722)
	Lab 10 - Sound Waves (https://weber.instructure.com/courses/372294/assignments/2173731)
	Lab 11 - Heat (https://weber.instructure.com/courses/372294/assignments/2173733)
	Lab 12 - Ideal Gas Law (https://weber.instructure.com/courses/372294/assignments/2173732)
	Lab 2 - Linear Motion (https://weber.instructure.com/courses/372294/assignments/2173723)
	Lab 3 - Falling Objects (https://weber.instructure.com/courses/372294/assignments/2173724)
	Lab 4 - Force Vectors (https://weber.instructure.com/courses/372294/assignments/2173725)
	Lab 5 - The Simple Pendulum (https://weber.instructure.com/courses/372294/assignments/2173726)
	Lab 6 - Collisions and Conservation (https://weber.instructure.com/courses/372294/assignments/2173727)
	Lab 7 - Rotational Dynamics (https://weber.instructure.com/courses/372294/assignments/2173728)
	Lab 8 - Simple Harmonic Motion (https://weber.instructure.com/courses/372294/assignments/2173729)
	Lab 9 - Standing Waves on a String (https://weber.instructure.com/courses/372294/assignments/2173730)

Physics Lab



Score	Criteria
10	Laboratory worksheets clearly display attention to detail; writing is neat and legible. All values have associated units and uncertainty is quoted where appropriate. Answers are correct. Drawings are used to illustrate key points and conclusions are clear, concise, and thoughtful. The results of the experiments are reviewed and put into context of the experimental uncertainty.
9	Lab worksheets are neat, clear, and legible; values are usually associated with units and uncertainty where appropriate. Not all answers are correct, but it is clear that the student knows they are incorrect, and an effort is made to put the answers in terms of issues raised in the experiment.
8	The lab worksheets are complete and answered thoroughly, but answers are incorrect, not associated with units, or not given with appropriate uncertainty. It is clear, however, that the student has worked through the lab and has made a good faith effort to understand the results.
7	The lab worksheets are complete and answered thoroughly, but answers are incorrect, not associated with units, or not given with appropriate uncertainty. The student has put forth only average effort to understand the results of the experiments, and has not endeavored to put the results in context.
6	Lab worksheets are incomplete or answers are terse. There are numerous errors with no effort to explain what may have happened in the experiment to produce them.
5	The student only partially completed the lab report.

