

College Physics I Laboratory

Course Syllabus - Fall 2019

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Office Hours: Tue: 11:00 AM--12:30 PM in CHCB 129

Wed: 11:00 AM—12:30 PM in CHCB 129

Please feel free to stop by or make an appointment for other times.

COURSE WEBSITE: Grades and lab materials will be posted on the Moodle site for this course

Overview

The goal of the laboratory is to help students in understanding the concepts of physics taught in the classroom and to develop the required laboratory skills and techniques. The laboratory work will include measurements, calculations errors and uncertainties involved in the measurements with proper calculations and graphical analysis and display of data. It is essential that you keep up from the start as the concepts in this course build on each other.

Learning Objectives

The goals of this course are:

To learn how to take proper measurements and data recording

Interpret results statistically and graphically

Understand the theoretical concepts through proper experiments

Required Materials

You will need the following materials for the course:

Lab write ups/ Weekly labs

Scientific calculator

Pens/pencil

Flash drive to save data or record data with hand in a notebook

Laboratory: There will be a total of 11 labs in the semester. Out of these 10 labs will be counted towards your final grade. The reason for this is so students may miss one lab (unplanned absence, emergency) without consequence. **You are required to attend the labs, take measurements, and keep a notebook for each lab. There will be no opportunity for make-up labs.** Each week, a few days before lab, you should download and print a copy of the current lab, read it, and bring it with you to lab. You are expected to have read the lab instructions prior to arriving at the lab and to have completed the associated pre-lab quiz. **Pre-lab quizzes will be taken on Moodle and close at 11:00 am the Tuesday before lab.** The experiments are designed to take approximately two hours for measurements and an additional one to two hours needed outside of lab for data analysis as well as preparation for the next lab. This is consistent with the time expectations for a one-credit course.

Grading

Your grade for the course will be determined by a combination of pre and post lab quizzes. **There will be no make-up labs so attendance is mandatory.** The grading for the course will be broken down as follows:

Pre-Lab Quizzes: 20%

Post-Lab Quizzes: 80%

This course can only be taken with the traditional grading option. Plan on letter grades being assigned based on the traditional grading curve: 100-90% A, 89-80% B, etc.

Couse Guidelines and Policies

Student Conduct Code

The Student Conduct Code at the University of Montana embodies and promotes honesty, integrity, accountability, rights, and responsibilities associated with constructive citizenship in our academic community. This Code describes expected standards of behavior for all students, including academic conduct and general conduct, and it outlines students' rights, responsibilities, and the campus processes for adjudicating alleged violations. Full student conduct code.

(<http://www.umt.edu/student-affairs/dean-of-students/default.php>)

Disability Modifications

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. (<https://www.umt.edu/dss/default.php>) If you think you may have a disability adversely affecting your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommasson Center 154 or call 406-243-2243. I will work with you and Disability Services to provide an appropriate modification.

| Lab Schedule for Physics 206 – Fall 2019 | | | | |
|--|-----------------|--------|---------------|------------------------------|
| Week of (Monday – Friday) | | Week # | Holidays | 206 lab Tuesday/Wednesday |
| Mon, Aug 26, 19 | Fri, Aug 30, 19 | 1 | | No Lab |
| Mon, Sep 2, 19 | Fri, Sep 6, 19 | 2 | Labor Day | Introduction to uncertainty |
| Mon, Sep 9, 19 | Fri, Sep 13, 19 | 3 | | Measuring g |
| Mon, Sep 16, 19 | Fri, Sep 20, 19 | 4 | | Force Table |
| Mon, Sep 23, 19 | Fri, Sep 27, 19 | 5 | | Centripetal Force |
| Mon, Sep 30, 19 | Fri, Oct 4, 19 | 6 | | No Lab |
| Mon, Oct 7, 19 | Fri, Oct 11, 19 | 7 | | Collisions |
| Mon, Oct 14, 19 | Fri, Oct 18, 19 | 8 | | Ballistic Pendulum |
| Mon, Oct 21, 19 | Fri, Oct 25, 19 | 9 | | Angular Momentum |
| Mon, Oct 28, 19 | Fri, Nov 1, 19 | 10 | | No Lab |
| Mon, Nov 4, 19 | Fri, Nov 8, 19 | 11 | | Buoyant Force |
| Mon, Nov 11, 19 | Fri, Nov 15, 19 | 12 | Veteran's Day | Hooke's Law |
| Mon, Nov 18, 19 | Fri, Nov 22, 19 | 13 | | Standing Waves |
| Mon, Nov 25, 19 | Fri, Nov 29, 19 | 14 | Thanksgiving | No Lab |
| Mon, Dec 2, 19 | Fri, Dec 6, 19 | 15 | | Heat and Work |
| Mon, Dec 9, 19 | Fri, Dec 13, 19 | 16 | Finals | No Lab |
| Mon, Dec 16, 19 | Fri, Dec 20, 19 | 17 | | |