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1-2014

PHSX 206N.05: College Physics I Laboratory

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PHSX 206N Section 5—2014 Spring Syllabus

Instructor Information

- Instructor: Dr. Benjamin Grossmann
 - E-mail: benjamin.grossmann@umontana.edu
 - Office Phone: (406) 243-2013
 - Office Location: CHCB 232
 - Office Hours: Tuesday 2:10 pm–4:00 pm, Friday 9:10 am–11:00 am
If you need to meet with me outside my office hours, you can make an appointment.
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Course Information

- Course Request Number: 33121
 - Credits: 1
 - Lab Schedule: Thursday 3:10 pm–5:00 pm
 - Lab Location: CHCB 225
 - Corequisite: PHSX 205N (College Physics I)
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Course Overview

The goal of the laboratories is to both aid students in quantitative laboratory techniques and conceptual understanding of physics. The material covered will be commensurate with the lecture courses with which the labs are paired. The quantitative laboratory techniques will include reading an array of measuring instruments, handling of error that results from the measuring instruments, understanding the distinction between precision and accuracy, and proper display of their data. It is essential that students keep up from the start as the concepts in this course build on each other.

Learning Objectives

The goals of this course are:

1. To teach students how to properly take measurements and record data.
 2. To teach students how to interpret results both statistically and graphically.
 3. To experimentally confirm theories presented in lecture.
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Laboratory

There will be 11 two-hour labs during the semester. Ten of those labs will count towards the student's final grade. The reason for offering 11 labs but only counting 10 is so students may miss one lab (unplanned absence, or emergency) without consequence. Students with planned absences may attend a different laboratory section during the same week with the permission of both instructors. Students are required to attend the labs, take measurements, and keep a notebook for each lab. There are no make-up labs. At the beginning of the first lab, there is a section on laboratory techniques, which explains how to handle error analysis, graphing, and other key issues that come up while keeping a laboratory notebook.

Each week, a few days before lab, students should download and print a copy of the current lab, read it and bring it with them to their lab meeting. Students are expected to have read the instructions prior to arriving at the lab and to have completed a short pre-lab. Before performing the next experiment students will be given an open notebook quiz on the previous week's lab. Approximately ten to fifteen minutes will be allotted for completing the lab quizzes.

The experiments are designed to take approximately two hours for measurements and an additional two hours outside of class for data analysis as well as preparation for the next lab. This is consistent with time expectations for a one credit course.

Grading

Your course grade will depend on a combination of pre-labs and laboratory quizzes as follows:

- Laboratory Quizzes: 90%
- Pre-labs: 10%

This course can be taken for a traditional letter grade only. Due to the number of laboratory sections, we strive for consistency between sections. As a result, grades will fall within roughly the same distribution for each section. This distribution is 20–25% A's, 20–25% B's, 20–25% C's, and 20–25% D's and F's.

Note: The last day to add/drop via CyberBear is February 14. The last day to drop without the Dean's signature is April 7.

Academic Honesty

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online.

[The Student Conduct Code \(http://life.umt.edu/vpsa/student_conduct.php\)](http://life.umt.edu/vpsa/student_conduct.php)

Students with Disabilities

University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. 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 Lommason Center 154 or (406) 243-2243. I will work with you and Disability Services to provide an appropriate modification.

[Disability Services for Students \(http://life.umt.edu/dss/\)](http://life.umt.edu/dss/)

Complaint Procedure

If anyone is having issues with the way that the course is being taught or the way that material is being presented I hope that you will come to me first to express your concerns. If you feel that you cannot come to me with these issues, you can contact the chair of the department, Dr. Dan Reisenfeld, CHCB 132.