

Introductory Physics Lab - PHYS 215L

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M 1:30 - 4:30 PM MSB 119

Office Hours: TWR 1:00 - 3:00 PM in LSF L103I or by appointment

Textbook (**required**): PHYS 215L Lab Manual Fall 2018

Learning Goals:

By the end of this course, the student will

- Be comfortable recording data and observations from simple experiments
- Obtain a greater appreciation for the connection between classwork and reality
- Be able to express and discuss the results of an experiment in a clear manner that allows for the student's work to be reproduced by others

Schedule of Labs

Week of August 27:	Pendulum Periods
Week of September 10:	Position, Velocity, and Acceleration
Week of September 17:	Acceleration due to Gravity
Week of September 24:	Vector Addition
Week of October 1:	Projectile Motion
Week of October 8:	Newton's Second Law of Motion
Week of October 15:	Circular Motion: Centripetal and Centrifugal Forces
Week of October 22:	Work and Simple Machines
Week of October 29:	Elastic and Inelastic Collisions
Week of November 12:	Simple Harmonic Motion
Week of November 26:	Standing Waves

Grading

The Lab Report must contain the following 7 sections, which will be weighted as indicated

1. Title Page: 5%
2. Purpose: 5%
3. Theory: 10%
4. Procedure: 20%
5. Data and Results: 30%
6. Calculations: 10%
7. Conclusions: 20%

Each lab report will be weighted equally in determining the final grade. There is no final exam.

Lab reports are due by 5:00 PM the day following lab (Tuesday). Late reports will be penalized 20% of the maximum score for every partial day late (i.e. the maximum score for a report handed in the Wednesday following a Lab is an 80/100). Make sure to give me your report in person. If you are able to complete your report during the lab period, feel free to hand it in at that time.

Note on Writing Reports

I will not generally deduct points for grammar unless it becomes difficult to determine what the student is trying to communicate. I *will* deduct points if units are not used properly or if work is not shown as requested. Your report and results should reflect that all reasonable care was taken to perform the experiment correctly, but **the grade does not depend on getting a perfect result (in fact, this does not enter into your grade at all and would be a bit suspicious)**. It is more important to be able to describe your experiment and to give a good account of the source of errors (apart from simple human error).

I do not fully agree with the manual's directive that personal pronouns should never be used (scientific writing is far too stuffy and detached). Avoid overusing them (starting every sentence with "I" or "we" is not a good practice), but make a clear distinction between what is already known and what you, the student, did. Above all, give enough detail to allow another student to read your report and reproduce your results.

Academic Integrity

The labs are completed as a group, but each lab report must be the sole product of each student's brain and effort (in other words, all cheating or plagiarism will be reported and handled as detailed in the Student Handbook). There will of course be significant similarity in the reports within a group, but each student should use their own words. For my part, I will not discriminate against any student for any reason and will make any reasonable accommodations necessary to meet a student's needs. No discriminatory or hostile behavior toward fellow students will be tolerated.