General Physics Lab - PHYS 216L

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T 12:45 - 3:45 PM MSB 118
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Office Hours: M 2:00 - 3:00, RF 1:00 - 3:00 PM in LSF L103I or by appointment
Textbook **(required)**: PHYS 216L Lab Manual (same as 215L manual)

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 (subject to change)

Week of January 14:	Mapping Electric Fields
Week of January 28:	Capacitors
Week of February 4:	Ohm's Law & DC Circuit Fundamentals
Week of February 11:	Series and Parallel Circuits
Week of February 18:	Kirchoff's Laws
Week of February 25:	Mapping Magnetic Fields
Week of March 4:	Electromagnets
Week of March 18:	Faraday's Law (EM Induction)
Week of March 25:	Alternating Current (AC) Circuits
Week of April 1:	Reflection and Refraction
Week of April 8:	Lenses and Mirrors
Week of April 15:	Diffraction and Interference

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: 10%
5. Data and Results: 40%
6. Calculations: 10%
7. Conclusions: 20%

Each lab report will be weighted equally in determining the final grade, and I will drop the lowest lab. There is no final exam. **Lab reports are due by the following lab session. Late reports will be penalized 20% of the maximum score. 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. If the student is unable to attend a lab session, he or she must contact me in advance and arrange to attend a different session for that week. No credit will be given for labs that the student did not attend, nor does the student receive credit simply for attendance.

Note on Writing Reports

I will not generally deduct points for grammar or handwriting unless it becomes difficult to determine what the student is trying to communicate. 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). 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** (and not those of the lab manual nor their lab partner). 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. If you experience or witness discriminatory, abusive, or other unwanted behavior, you should contact me, the Title IX Coordinator, and/or campus police, as appropriate.