

PHYS:1702 Physics II Laboratory, Spring 2020

TA: Adam Zieser
Office: 658C VAN
E-mail: adam-zieser@uiowa.edu
(answered before 6:00 PM)

Lab Manual: *Experiments in Electricity, Magnetism, & Light*
Chuck Williamson and John A. Goree, Fall 2019/Spring 2020/Summer 2020

Laboratory: Topics of this laboratory include electricity and magnetism. A pre-lab (to be turned in before the start) and a lab report are required for each lab. Pre-lab points deducted at a rate of 1pt/min for tardiness until 10 minutes late, after which a student will receive a 0 for the lab and be unable to participate. Each student will be graded using the top nine out of 10 lab scores, meaning one missed lab will not detrimentally affect your grade.

What To Bring To Lab:

- The entire lab manual. Some experiments refer to previous ones, the instrument glossary, or the computer glossary—which you won't have if you only bring individual chapters. Additionally, the worksheets for each lab are at the end of the manual.
- Completed pre-lab questions to turn in before the start of lab. Late pre-labs will not be accepted. The purpose of pre-labs is to encourage you to read the lab before you arrive.
- A pencil. Mistakes are made, and pen is difficult to erase.
- A calculator. In long calculations, computers or phones can be slow.

Lab Schedule:

PHYS:1702:0015 (353 VAN, 3:30pm - 6:20pm M)

PHYS:1702:0017 (353 VAN, 7:00pm - 9:50pm M)

| | | | | |
|---|--|---|---|---------------------------------------|
| Jan 27, E1: Charge Measurement & Log-Log Plotting | Feb 3, E2: Coulomb's Law | Feb 10, E3: Electric Fields & Equipotentials | Feb 24, E4: Parallel Plate Capacitor | Mar 2, E5: Ohm's Law |
| Mar 9, E6.5: Magnetic Force on a Wire | Mar 30, E9: Torque on Magnetic Dipole | April 6, E8: Faraday's Law | April 13, OS1: Oscilloscopes | April 27, E11: RLC Circuits |

Laboratory Organization:

| | |
|--------------|--|
| Beginning: | turn in your completed pre-labs |
| Introduction | discuss procedure, physics, and apparatus |
| Remainder: | perform lab and fill out worksheets |
| End: | leave completed worksheets at your workstation |

- Log off computers at the end, but *do not shut them down*
- Turn off lab equipment when finished (especially battery powered devices)
- No food or drink in the lab
- Generally leave your lab station in good condition when you leave—points can be deducted

Physics Help Center: The physics tutorial is located in room 310 VAN—hours are posted on the door. All times posted are available to you, but students will theoretically receive priority treatment during the sessions assigned to the TA of their class. You can find me there 10:30am - 12:30pm T W R F

Makeup Labs: There are no makeup labs. If you can not attend your lab and wish to attend the other scheduled lab in the week, contact me by email a week in advance for permission. As stated in the University's Course Exam Schedule Conflict Policies: "When there is a conflict between an exam scheduled outside of class time and a regularly scheduled course, the regularly scheduled course will take precedence." Also to reiterate: a student's lowest lab score (including an absent) will be dropped at the end of the semester, meaning only 9 will be graded.

Grading: Grading will be relatively lenient, but points can be easily lost from missing units and insufficient analysis question answers. Grades will be posted to ICON weekly, and graded reports will be brought to the lab.