Phys 102 Lab --- fall 2019

Course Information:

Instructor: Dr. L. Gan
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Office hours: Tue. 2:00pm-5:30pm
Wed. 4:00pm-5:30pm
Other hours by appointment only

Course Requirement:

- You should have read the lab write-up prior to coming to lab.
- Each student is required to write her/his own lab report. You are strongly encouraged to submit the lab report during the class. The **dead line** to submit the lab report is at 11:59pm on the same day of each lab class. You can submit either a hardcopy or a scanned lab report via e-mail as **a single attachment**.
- It is not allowed to leave during the class unless you have submitted a satisfactory lab report. Otherwise, a zero grade will be given for that lab.

Lab report Requirement:

1. **Cover page**: lab title, student's name, lab session.
2. **Data tables**: Your data should be neatly tabulated and labeled, listing the appropriate units.
3. **Data analysis**: graphs (if any) and calculations. The graphs can be made by Microsoft Excel. All graphs should have a title and the quantities on each axis named. The axes should also be labeled with the appropriate units. You must include all calculations you use in computing your experiment result. Only one printout of graph is required for each group with the names of all members in the group.
4. **Conclusions:** This section should comprise your experimental result and associated uncertainties.

Lab report grading:

Grades for individual labs will be assigned on following scales: 0, 1 and N. Students who miss a lab for an excusable reason will be assigned a grade of (**E**) for that lab.

0: Student was absent or failed to turn in lab report in a timely fashion. Students who miss lab will not be permitted to submit a report based on the data acquired from students who were present.

1: Satisfactory. Student's lab report demonstrated mastery of the subject of the lab and was substantially free of experimental, analytical or reporting errors.

N: Unsatisfactory. Student submitted a report that was incomplete or failed to demonstrate understanding of the subject of the lab. Any "N"s will be accounted as "0" for the final grade. However, student will be allowed to improve "N" to "1" by: (1) correcting the errors or re-writing the lab report; and (2) submitting the revised report on the same day when the original lab reports are returned to students in the class.

The grade **E** will be awarded those students who miss a lab but nonetheless provide documentation, in a timely manner, that their reason for missing lab was excusable. Acceptable excuses include 1) a medical crises involving members of the immediate family or a significant other, 2) a communicable or debilitating illness, 3) attendance at a funeral or the wedding of a sibling or parent. Non-excusable absences include, but are not limited to; car failure, work obligations, non-emergency medical care for a non-communicable condition, attendance at the weddings of friends or non-immediate relatives, attendance at social functions (reunions, etc.).

Makeup lab:

A common make-up experiment will be set up at the end of each semester. Students may perform this experiment in order to make up one unexcused lab absence.

Lab Schedule:

Lab Title	Dates
1. Equipotential Surfaces	August 26, 27, 28
2. Experimental Techniques in	September 9. 10 11
3. Ohm's Law	September 16, 17, 18
4. Resistors in Combination	September 23, 24, 25
5. Joule's First Law and Heat Transfer	Sept 30, Oct 2, 3
6. Determination of the Earth's	October 7, 8, 9
7. Snell's Law	October 14,
8. The Focal Length of a Thin Converging Lens	October 21, 22, 23
9. Diffraction	October 28, 29, 30
10. Using the Spectrometer	November 4, 5, 6
Make-up Lab: The Mercury Spectrum	November 11, 12, 13