Syllabus for Fundamentals of Physics 231
Electricity and Magnetism laboratory

Lab Instructor: Elton Freeman.
e-mail: efreema4@utk.edu
Office hours:
(i) I'm in the tutoring center from 3:25 p.m. to 4:35 p.m. on Tuesday, room 201 Nielsen Physics Building
(ii) I'm also in room 609, in Nielsen Physics Building from 9:00 a.m. to 11:00 a.m. and from 3:00 p.m. to 5:00 p.m. on Fridays.
Teaching assistants room #(423) 974-7801
"If you need have questions e-mail me we will set up a appointment at some other time than above if it conflicts with your courses."

My goals as your lab assistant is to help you to understand the experiments, to enjoy physics especially experimental.


Laboratory grades are divided by the following:
1. Laboratory Participation..................................10%
2. Laboratory Reports.........................................70%
3. Quizzes (take home)...........................................20%

(i) I expect that you show up to the labs and expect that everyone to get a chance to do their part of the experiment. For example, everyone in the group should have a chance to record the data, and use the equipment. I want everyone to get a chance to get a hands on understanding of the experiment.
(ii) Lab reports are due at the start of the next lab; you will turn them in to me before we start the next lab.

I am looking for the following in each lab report:

a. Title page, lab title, name, date of lab.

b. Introduction page will have the methods and introduce your lab assignment. What is the purpose of the lab you're doing and what do you hope to learn from it.

c. Draw pictures of the things we used in the lab and describe them.

d. Data: I want graphs and tables from the spreadsheet. "Save all of your data on a disk, just in case you find something wrong with your data, or make corrections."
e. Body of report, tell me about your data, graphs, and then make a correlation with the methods that you presented in the Title page. Tell me about errors, how can you have made the experiment better, what caused the errors.

f. Final of report: What are your conclusions with the experiment, "Your conclusions of the experiment." Do you agree or disagree with the theoretical methods that you introduced in the introduction, and what did you learn/interest in experiment.

g. In addition, I want a log, all researchers have a log book that they keep. The purpose of this log book is to keep up with what you done on a day to day basis, I want the date, the time and a brief description of what you did, what you learned or discovered, and you might want to put a Hypothesis, or the idea that may explain what you discovered. You may be able to do this on one page.

No Plagiarism is allowed and if you use a source then you must give the source of where you found the article in the report. Give sources at end of the report.

Quizzes will be take home, you will have one for each lab, and the questions from these quizzes will make you think at some important aspects of the experiment. These will also be turned in with the lab.

If you miss a lab, I expect a good excuse, a doctor's appointment, or a religious holiday. If your not here you need to have a really good reason. If you have a good reason we will try to schedule the lab so you can make it up.

I may give a short 13-minute introduction to the idea and method behind the experiment. I'll give you the important stuff before your start and then I'll let you go at it. I will also go around to different groups to monitor how you are doing or I might ask you questions that might be on your take home quizzes, so pay attention to your experiment.

My grading is not very hard on students who show interest, and constantly hard at work, and who show up for class usually learn the most.