

Introductory Physics Laboratory Survival Guide

September 6, 2007

This syllabus exists so as to inform you, the student, of the grading policies and new lab/recitation structures and to answer many of the common question you might have about the course..

When do we meet for lab?

There are six physics labs in the semester. Every other week you will do a lab, and on the alternating weeks you will go to a recitation.

How will the recitation be used?

A recitation is a time for the professor or teaching assistant and students to sit down in an informal session to discuss the material. It is not a lecture, but more of a question and answer session where you can bring up the areas of the material that you are having a difficult time understanding. Here it is appropriate to ask questions about homework problems, and such.

How do I need to prepare for the laboratory session?

At the beginning of the laboratory session your T.A. may give a short lecture on the upcoming lab. However, it is your responsibility to have read the entire lab manual for that week and to come prepared to answer questions (or take a quiz). Some of the lab equipment is a little complicated to use at first, so the TA may use this time to explain the usage of some equipment. It will help you immensely to try to finish the previous weeks lab write-up before going to your recitation. This way, if you are a little or completely confused, your T.A. can clear up any questions you might have, resulting in a better lab grade.

How am I graded?

Before you even begin the lab, you will take an in-lab quiz and you will have prepared your lab notebook. The in-lab quiz will be given in the first five minutes of your actual lab. (Yes, it is short!) Its purpose is to verify that the students have read the lab and understand the theory. The quiz will consists of two or three very basic theory or procedural questions. If you read the lab, and pay attention at the recitation, then you will do fine on the quiz. However, if you are late to lab, you will not be allowed to make-up a quiz. The pre-lab notebook exercise is designed to teach students how to keep a well organized and neat notebook. As you read the lab manual, you will see that data tables and other experimental values that need to be recorded are specifically noted and described. A good pre-lab notebook should have empty tables with clearly labeled rows and columns, as well as separate spaces for single values not belonging to the tables. These tables and blank spaces should correspond to the different parts in the lab. When you actually perform the experiments, you can simply fill in these empty spaces and tables in your notebooks. This allows you to see if you missed anything, and gives you a perspective as to where you are in the lab. Your T.A. will check your lab notebook before you begin your lab. The actual lab write-up is broken down into two parts: format and content. The format refers to all the individual parts of the lab, for example, procedure, results, conclusions etc.. A detailed description of how each section or part should be written is described in the sample lab write-up. Refer to this sample when writing your actual lab reports. The content refers to the text written under the format headings. You will be graded on clarity, completeness, and correctness. Further grading details are left to the discretion of the T.A. *These include penalties for unsafe laboratory practices.* The lab equipment needs to be handled carefully by all people in the lab. Some of the equipment came with safety glasses, and these glasses should be worn in appropriate situations. (No, you do not have to wear safety goggles while plotting data.) Goofing around in the lab can not only cause injury, but broken lab equipment. Horseplay and unsafe conduct can be cause for expulsion from the lab. Safety is Everyone's Job!

Is there anything else I need to know about labs?

Sure!

- At the beginning of the lab, the T.A will take attendance. At the end of each lab, the T.A. must sign and date everyone's lab notebooks. This is to ensure that every student is participating in the lab, and it also serves to confirm attendance at a lab, should the issue come up later.
- All labs must be typed.
- All labs are due in one week, at the beginning of the following recitation period. Labs turned in late are deducted one point for every day past the due date. Any incomplete lab grade will result in an "E" for your physics class. You must complete all the labs! If you cannot attend a lab, you must contact your T.A. before your lab meets. There will be make-up days at the end of the semester should you need to use them.
- Plagiarism is grounds for failing. Any students turning in near identical lab reports, or obviously copying from another student's work will receive a failing grade for that lab.
- Doctoring data is also grounds for failing. The purpose of these labs is not to get the "right" answer but to learn how to do experiments, analyze data and explain your results.

Now that I know the rules, what actual experiments are we going to do?

The experiments that you will be doing are contained in the Lab manual. The manual is available on the BCPS web page under "Resource Center". We look forward to working with you this semester! Good Luck and Happy Labbing!!!