Physics 222 Lab Syllabus
Fall 2012

Instructor: Nicholas Sirica
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Office Hours: Friday 11:15 a.m.-12:05 p.m. in the tutoring center, Room 201, or Monday 3:00 p.m.-4:30 p.m. Nielsen Physics Building Room 217. If you wish to schedule an appointment outside of these times, just send me an e-mail and we can definitely work something out.


Time and Place: Recitation will be in Room 608 beginning promptly at 1:30 p.m. and will last no later than 2:25 p.m. Following recitation, lab will be held downstairs in room 510 and will last until 4:30 p.m.

General Overview: The aim of the recitation and laboratory session is to better solidify the material covered in the previous weeks lecture. There is no better way of doing this than generating real data to be interpreted using the theory you spent a whole week learning. For this reason, half of recitation will be dedicated to review, while the other half will pertain to what we will be doing in lab. Hopefully, through structuring recitation in this fashion, you can begin to view your time in lab as being integral to the learning process. To help with this, we will not only work together on a number of example problems, but you will be assigned weekly worksheets or lab reports for you to take home and work on. While in lab, experiments will be performed in groups of two or three but each member must submit an individual lab report or worksheet.

Attendance and Make-ups: Attendance to each recitation and laboratory session is mandatory. Any missed recitation or lab will result in an automatic zero BUT fret not for the lowest worksheet or lab report will be dropped at the end of the semester. In other words, no lab make-ups will be performed. If you are tardy by more than 15 minutes then you will be marked as absent.

Worksheets: For the weeks where you will not be assigned a lab report, worksheets will be given out during lab. These will typically contain a series of questions which are aimed at showing you the forest through the trees. Typically these questions will require you to take what you have done during lab, and apply it to different, and hopefully relevant, situations. You may work with your lab partners when doing these exercises, but don’t just copy answers.

Lab Reports: Every other week, each student is required to write a two page lab report which is to be turned in at the beginning of recitation. If you will be absent the day of recitation, be sure to submit your lab report into my mailbox (Nielson 401b) prior to 9:00 a.m. on the Friday of the next scheduled lab. As said previously, a late submission is a zero. The general outline of a lab report is given as follows:

1) Title section (5 points)
   a) Your name
   b) Your partner’s name(s)
   c) Title of the experiment as written in the lab manual or on the lab schedule
   d) Date in which you performed the experiment

2) Introduction (25 points) This section will give the necessary background information of the experiment. such background includes
   a) Relevant theory and formulas used within the experiment. These formulas are to be formatted in Microsoft office equation editor.
   b) Any relevant historical background concerning the experiment.
3) **Experimental** (25 points) Briefly describe the experimental set-up including the necessary instruments needed to generate results. Do not simply list such equipment, but rather explain how it is that these instruments aid in the determination of what-ever it is you are trying to measure.

4) **Results and Discussion** (40 points) Using properly labeled tables and figures report your findings and draw some conclusions about what such data suggests. **Within the result section, you will be given no credit if you simply submit raw data.** Use this section to organize your thoughts and extract relevant information. This skill will serve you well not just in physics, but in life. Additionally, if appropriate, suggest further experiments which may support or refute your findings. Remember, in reporting numeric data always include a margin of error.

5) **Conclusion with Error Analysis section** (5 points) In this final section, summarize the aim of the experiment and site how your data measured up. That is give a percent difference between your value and that which may be found in the literature. Keep this section short and sweet.

**Grade Division**
50% Lab Reports  
40% Worksheets  
10% Attendance

**Honor Statement:** An essential feature of the University of Tennessee is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. By enrollment in this class, you pledge that you will neither knowingly give, nor receive, any inappropriate assistance in academic work in P232, thus affirming your own personal commitment to honor and integrity (Hilltopics, 2003).