Physics 222 Lab Syllabus
Fall 2010

Instructor: Nicholas Sirica
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Office Hours: Friday 2:20-3:30 in the tutoring center, Room 201, or Monday 8:00-10:00 Nielsen Physics Building Room 603. If you wish to schedule an appointment outside of the time specified please e-mail me to schedule a time

Text: *Contemporary Introductory Physics Experiments* by Dr. James Parks, University of Tennessee – Knoxville, ISBN 978-0-7380-3083-8

Time and Place: Recitation will be in Room 608 beginning promptly at 9:05 and will last no later than 10:00 a.m. Following recitation lab will be held downstairs in room 510 and will last until 12:05 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. In order to better facilitate this process, each recitation session will begin with questions and problems from both lecture and lab followed by a brief quiz over this material. Once in lab, experiments will be performed in groups of two or three but each member must submit an individual lab report which is to be approximately two pages in length.

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 quiz; lab and 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.

Quizzes: Quizzes will be given following a review of the previous weeks lecture and homework. Similar to the exams that you will have in lecture, the quizzes will be closed notes and closed book with only simple calculators allowed. These quizzes will be primarily short answer, consisting of three questions from lecture, homework, and lab.

Lab Reports: Each student is required to write a two page lab report which is to be turned in at the beginning of recitation while attendance is being called. 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. Such formulas are to be formatted in Microsoft office equation editor.
   b) Any relevant historical background concerning the experiment. Please be sure to appropriately site any work or findings in which you used.

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 whatever 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. 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**

- 65% Lab Reports
- 20% Quizzes
- 15% 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).