Physics 232 Laboratory Syllabus

Time
Day: Tuesday
Laboratory: 8:00am-9:55am
Room: 508 Nielsen Physics

Instructor
Alex Woods
Email: awoods9@utk.edu
Office Hours: Tuesday 3:25pm-4:35 (Room 201) or by appointment
TA Office: Nielsen 609-15 (room 609, desk 15)

Course Description
This is the supplemental laboratory phase of the Physics 232 course. The purpose of this laboratory is to expose you, in a hands-on laboratory setting, to the physics topics covered in lecture. You will be required to perform experiments covering a wide range of physics concepts in kinematics, heat transfer, electricity and magnetism, optics, and modern physics.

Course Materials
All of you should have a copy of the laboratory manual, Selected Introductory Physics Experiments by Dr. James Parks. Please make sure to bring this book to every laboratory session. Also, you will be allowed to use a scientific or graphing calculator.

Laboratory
You are expected to read the experiment before coming to the lab session. I will give a quiz at the beginning of several of the lab sessions. These quizzes will consist of material covered in lecture and the texts. There will be no makeup quizzes! Following the quiz, we will review specific problems or topics related to what you are covering in lecture. Generally, you will work in pairs to perform the experiments. I want partners to collaborate and have equal contribution when performing the experiments. At the end of the lab, data sheets may be printed out or sent electronically to another computer. Lab reports are due at the beginning of the following lab. Every student must write their OWN lab report. I will sometimes assign questions from the end of each lab that must be answered and handed in at the following lab period.

Lab Reports
Lab reports, when assigned, will be due at the start of the next recitation. This lab report will need to include all of the following:
Heading: Title, your name and your partner’s name, and the date you performed the experiment
Introduction: a clear statement about the scientific objective of the lab and a little on the theory behind it including relevant equations, variables and units
Procedure: Don’t quote the manual word for word, summarize what you did.
Data: All relevant data, spreadsheets
Results: Highlight relevant data points as results (Do not literally highlight them. Make a new table with them.). Also include any graphs or charts.
Conclusion: What does the data say happened? Include possible sources of error. What did you learn in the lab?

Computer Use
A substantial portion of your time in this course will be spent taking, recording, and analyzing data. This process will frequently require use of the computer terminals we have set up in the laboratory. While this course does not require more than a basic knowledge of computers, I would recommend that you familiarize yourself with Microsoft Excel, as it will prove a very useful tool for analyzing your data.

Attendance
Lab attendance is mandatory. I expect you to show up on time for every lab session. Do not be late. If you must miss lab due to extenuating circumstances (i.e. serious injury, illness, or a death in the family) it is your responsibility to contact me as soon as possible. I may allow you to make up the laboratory during the same week.

Grading Procedure
- Lab Reports  50%
- Quizzes  20%
- Questions  20%
- Participation  10%

Classroom Policies
Please respect your fellow students and please respect me. Do not come to class late. Do not talk when I am talking. Turn off your cell phones, beepers, and MP3 players and pay attention!

Academic Honesty
All students are expected to abide by the University Honor Statement. I will not tolerate cheating of any kind. In this course, cheating might include making up data, copying off your neighbor on quizzes, or handing in a lab report that is partially or fully identical to another student’s. If I catch you cheating, I will assign you a zero for whatever it is you are cheating on. A second offense will result in a grade of zero for the laboratory portion of the course and a report to the Office of Student Judicial Affairs.

Course Outline
The schedule of experiments can be found online at http://www.phys.utk.edu/labs/Spring%202011%20P232%20Schedule.pdf