LAB SYLLABUS  Physics 120L – General Physics I   Fall 2005

Instructor:  Prof. Steve Peterson / Dana 163 / 894.2077 / stpeterson@davidson.edu

Class:  1:00 – 4:00 pm TR in Dana 111

Web Page:  http://www.phy.davidson.edu/FacHome/swp/courses/Fall05-120L.html
            http://webphysics.davidson.edu/Course_Material/Py120L/Py120L.html

Objectives:  The labs are designed to complement what is done in class. In lab, we will investigate many of the concepts and phenomena that you meet in the lecture part of the course. You will become proficient in the use of the computer to take and analyze data and report results. The lab will also be an opportunity to learn experimental techniques and experience working in a more research-type environment.

Class Time:  We will have 12 lab periods during the semester, although only 10 labs are listed in the manual. Each lab will start with a 20-30 minute introduction, followed by the lab itself. Expect to be in the lab for the whole three hours each week. You may well be out early some weeks, but this can never be guaranteed, and will certainly not always be the case. Do not rush to get out early, as this will be reflected in your grade.

Lab Partners:  The labs will normally be done in pairs and you may choose your own lab partner, but there will be a lab partner rotation midway through the semester.

Attendance:  Attendance is required. Don’t miss lab.

Materials:  You will need a dedicated lab notebook. A standard spiral bound, line paper notebook with pockets is suggested. You will turn in your finished lab notebook before you leave the lab each week.

Pre/Post Lab:  Pre-lab exercises will usually be assigned via the web the week before a lab, and they are to be done and submitted two hours before you arrive to lab. There will also be a few post-lab exercises in addition to the pre-labs and they are due before the next laboratory session.

Format:  The lab write-up should include (in this order):

– Name, partner’s name, date
– Number and title of experiment
– Abstract or Purpose (this is NOT procedure)
– Apparatus schematics or additional lab procedures ONLY if different from or supplementary to the lab manual
– ALL data in tabulated form (printouts of spreadsheets, and/or written)
– Analysis of Data (Graphs, Linear Fits, Error Analysis, Sources of Error)
– Summary of Results / Conclusion (address the Purpose)

You must work together, but the computations and conclusions should be your own. In the conclusion, you should discuss possible cause of any discrepancy and possible improvements, if larger disagreements are found. Copying a lab or portion of the lab, even from your partner, is a violation of the honor code.

Grading:  Lab grades will be based on pre/post-lab exercises (20%), performance in lab, and lab write-ups (80%)