

Physics 221 Lab Syllabus



Section 221005, Fall 2006

Lab location: Room 508 in the Nielsen (Astronomy and Physics) building

Lab time: 11:15 AM - 1:10 PM on Tuesdays

Recitation time: Room 608, 10:10 AM - 11:00 AM (the hour preceding the lab)

Instructor: Usama al-Binni Email: ualbinni@utk.edu

Office and tutoring hours: For tutoring, I'll be available in room 201 or 203 on Mondays, between 12:10 AM and 1:20 PM. For office hours, you can contact me to set up a meeting, and if we can't meet you can email me at any time.

Laboratory manual:

Selected Introductory Physics Experiments

by James E. Parks

Thomson Custom Publishing, ISBN 0759310211

Available at the UT Book and Supply Store

Webpage: <http://web.utk.edu/~ualbinni/221> (Please follow its contents regularly)

Lab Guidelines:

- **Attendance:** Attendance is mandatory, both in the recitation hour and in the lab. Remember that this basically a practical course, and accordingly, most of what you learn in it is done during the time you spend in the lab.
- **Quizzes:** Each lab we will have a small quiz in the material of the preceding lab period and in the material of the lab you're about to do, so missing labs will hurt your grades, both directly and indirectly.
- **Absence and Make-ups:** If for some reason you are unable to attend the lab, inform me as soon as you can, and preferably **before the lab**, so we can try arranging attendance in some other section, if possible. The last week of April is reserved for lab make-ups, however, deferring your lab to that time should be a last resort, if you are unable to do the experiment during the time it is offered. Bear in mind, however, that if you do not come up with an official excuse, you will get a zero for that lab. But no matter what, before the end of the semester, **you must complete all labs and turn in all lab reports!**
- **Participation and Preparation:** Come to the lab and recitation prepared. Check the schedule of experiments before you come to the lab, and read through the experiment in the manual and any related sections in the Serway and Faughn text. Before each recitation I will assign one or two problems from your homework that you need to turn in to me with detailed solution, not just a final answer.
- **Recitation:** We will have one hour for recitation per week where a discussion of problems relating to the theoretical part of the course will be conducted.

Grading:

The lab grade, which makes **20%** of the overall course grade, is divided up as follows:

- *Lab Reports:* 60%
- *Quizzes, Homework, and Pre-Lab Work:* 30%
- *Participation:* 10%

Please supplement the above guidelines with the ones from the 'Teaching Assistant Manual', pp. 10-14. See course's website for more details.

PHYSICS 221 LABORATORY SECTION 5
Schedule of Experiments Fall 2006 Semester

August 23	Classes Begin
August 23 - August 25	No Labs
August 31	Statistical Analysis, Propagation of Errors, and Linear Regression
September 7	Statistical Analysis, Propagation of Errors, and Linear Regression
September 14	Force Table
September 21	Acceleration Due To Gravity
September 28	Conservation of Mechanical Energy
October 5	Conservation of Linear Momentum
October 10-13	No Labs - Fall Break Oct 12 & 13
October 19	Centripetal Force
October 26	Boyle's Law
November 2	Simple Harmonic Motion
November 9	Standing Waves
November 16	Refraction
November 21-24	No Lab - Thanks Giving Holidays 23 & 24
November 30	Simple Lenses
December 5	Classes End-Lab Makeups/Lab Final
December 6-7	Study Period