

Physics 222 Lab Syllabus



Section 222009, Spring 2007

Lab location: Room 510 in the Nielsen (Astronomy and Physics) building

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

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 Tuesdays, between 12:10 AM and 1:20 PM. If you can't make it on that time, 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/222> (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:** (Almost) 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 222 LABORATORY SECTION 9
Schedule of Experiments Spring 2007 Semester

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|-----------------------------|------------------------------|
| August 23 | Classes Begin |
| January 10 - January 12 | No Labs |
| January 18 | Electric Fields |
| January 25 | Ohm's Law |
| February 1 | Instrument Amplifier |
| February 8 | Wheatstone Bridge |
| February 15 | Resistance vs. Temperature |
| February 22 | Electrical Energy |
| March 1 | e/m Ratio |
| March 8 | Ampère's Law |
| March 12-16 | Spring Break - No Labs |
| March 22 | RC & RL Circuits |
| March 29 | Photoelectric Effect |
| April 4-6 | No Lab - 4/6 Spring Recess |
| April 12 | Balmer Series |
| April 19 | Half-life of Ba-137m |
| April 25-27 | Lab Makeups/Lab Final |
| April 27 | Classes End |
| April 30 & May 1 | Study Period |