

SYLLABUS FOR PHY-132: University Physics I Laboratory  
FALL 2005

INSTRUCTOR: Dr. Gary B. Adams  
OFFICE: PSF-423    PHONE: 727-6511  
E-MAIL: gary.adams@asu.edu

CLASSES:				OFFICE HOURS: (Tentative)		
PHY 131	8:40-9:30	MWF	PSF-173	9:40-10:30	MWF	PSF-306
PHY 131	12:15-1:30	TTH	PSF-173	1:40- 2:30	T	PSF-306
				1:40- 2:30	TH	PSF-366
				2:40- 3:30	TH	PSH-352

(Help Study)

NOTE: All Office Hours are open to all of my students.

## I. INTRODUCTION

PHY-132 is the 1-credit laboratory course accompanying PHY-131, University Physics II, which covers the subject of Electricity and Magnetism. PHY-131 must be taken at the same time as (or either before) PHY-132.

For logistical and economical reasons the material covered in the two courses is not coordinated in time. The expectation is that, over the course of the term, material learned in one course will enhance the understanding of the material received in the other.

The manual for this laboratory is online at

<http://www.public.asu.edu/~gbadams/f05/132/132syll.html>

You are responsible for downloading these pages for each experiment, reading them beforehand, and bringing them with you to the appropriate lab; this requires a weekly visit to the class web site. The manual is in pdf format. The final page of each experiment description is a Pre-Lab Quiz, which must be turned in at the beginning of your lab period. DO NOT PRINT OUT YOUR LABS ON THE PRINTERS IN THE LAB ROOMS.

## II. COURSE FORMAT AND POLICIES

### A. Schedule

The course during this Fall Semester begins on Wed., Aug. 31 and concludes on Fri., Dec. 2. There are no Mon. or Tue. classes. A schedule of experiments and meeting dates is distributed with this Syllabus. IMPORTANT NOTE: NO FOOD OR DRINK IS ALLOWED IN THE PHYSICS LAB ROOMS.

Each experiment period will begin by collection and discussion of the PRE-LAB QUIZ for that experiment. The Pre-Lab Quiz for each experiment is available online as a part of

each lab description. You may get help with the Pre-Lab Quiz at your instructor's office hours, at your TA's office hours, or in Help-Study.

Help-Study sessions are for the students' benefit in gaining assistance with the conceptual and procedural basis of an experiment. Beginning Mon., Aug. 29, the Help-Study Hall (PSH-352) will be staffed by volunteer faculty and Teaching Assistants several hours each day between 8:40 and 3:30. Teaching Assistants associated with this course, and your instructor, will keep some of their office hours in the Help-Study Hall.

## **B. Laboratory and Grading Policy**

There are eleven experiments scheduled for the term. Your best nine labs will count towards your final grade, i.e. two labs will be dropped. THERE ARE NO MAKE-UP LABS for any reason; if you miss a lab FOR ANY REASON, then that lab must be one of your two drops.

Students will work together in teams of three. To receive credit for an experiment, you must (a) perform the experiment with your teammates, AND (b) submit a lab report on the experiment. Data, and any analysis done during the lab period using the Graphical Analysis computer program should be essentially identical for the three students in a team. All handwritten data must be taken IN INK, with no erasures or "white-outs" (errors are to be lined out) on  $8\frac{1}{2} \times 11$  quadrille sheets ( $5 \times 5$  - AKA engineering paper). You must record your own copy of any data taken by hand. If the original data are on computer, you must print a hardcopy in class for yourself. ALL DATA SHEETS AND NECESSARY COMPUTER PRINTOUTS MUST BE INITIALED AND DATED BY YOUR TA BEFORE YOUR LEAVE THE LAB. The SIGNED sheets must be stapled to your report. Otherwise, you will receive zero credit for that report.

REPORT DUE DATE: Reports are due no later than 1:00 PM one week following your experiment. ZERO CREDIT WILL BE GIVEN FOR LATE REPORTS. Your Lab TA will give you the number of a drop box for your lab reports. The drop boxes are located on the third floor of PSH-wing, in the hallway adjacent to room 352. ZERO CREDIT WILL BE GIVEN FOR LAB REPORTS THAT ARE MISTAKENLY PLACED IN THE WRONG DROP BOX. It is the student's responsibility to be careful when dropping a report in the designated box.

Your grade for each lab will consist of two parts: (1) your Pre-Lab Quiz, which can only be turned in at the beginning of your lab period, 20 points, and (2) your lab report, 80 points. You may word process your report, or you may write it by hand. If you choose to write by hand, your report must be neat and legible. Your TA will deduct points for a messy or illegible report; however, the TA will mark only the formal report, not your

original data and notes. Do not hesitate to record any and all useful information on your data sheets during the experiment.

Even though your data and computer analysis should be identical to that of your two teammates, the rest of your lab report must be your own original work. It is encouraged that you discuss the experiment and analysis with your lab partners, and you must document this collaboration on the title page of your report; however, you may not copy the work of someone else with or without their approval. **ACADEMIC DISHONESTY IN ANY FORM WILL NOT BE TOLERATED.**

Any and all students involved in academic dishonesty will be subject to one of the following three actions: (1) the student will be given a zero on a portion of the course; (2) the student will be expelled from the course with a failing grade; or (3) the student will be expelled from the course with a failing grade and the case will be referred to the Dean for further action or penalties. The instructor will decide which action is to be taken based on the circumstances of the case, and will notify the student of the action taken. Examples of academic dishonesty include, but are not limited to: copying someone else's Pre-Lab Quiz, fabricating a data sheet, altering your data sheet after the experiment has been completed, altering your graded lab report and requesting a reconsideration of your lab grade, using a false name and/or ID, copying someone else's lab report, allowing someone else to copy your lab report or Pre-Lab Quiz, hiring someone to write a lab report for you, or having another person attend a lab session for you.

Graded reports will be returned one week after they have been submitted. If you believe an error has been made in grading your lab report, you must submit a regrade request **IN WRITING** to your TA within two school days of receiving your grade; explain carefully **IN WRITING** why you deserve more points, staple this sheet to your graded lab, and return it to your TA. Your lab report will not be regraded after the deadline. If you are unable to see your TA in person, go to the physics department office (PS F470) and ask the receptionist to time-stamp your report and place it in your TA's mailbox.

Your final lab grade will be the average of your nine best lab grades. The approximate grade scale will be

$$A \geq 90 \quad B = 80 - 89.9 \quad C = 70 - 79.9 \quad D = 60 - 69.9 \quad E < 60$$

The plus-minus grade scale will be used. Adjustments will be made for different grading practices by different TA's, and the actual final grade scale will depend on the final distribution of grades. You will be able to follow the section and class averages throughout the semester on the class website. Completion of less than seven labs is an automatic *E*.

### C. Relation to Lecture

It is impossible to coordinate exactly the laboratory work with material covered in the PHY-131 lecture. Some students may encounter a physical principle in the lab before learning about it in lecture; while other students may wait a week or more after learning the relevant theory before doing the associated experiment. In either case, it is expected that material encountered in each course will eventually be reinforced by material from the other course in such a way as to enhance understanding.

### D. Withdrawal

Withdrawal policies are established by the University (see the Fall 2005 Bulletin.) The deadline for course withdrawal is Oct. 30. Incompletes are an alternative offered by the University for students who are succeeding in a course, but who, because of unavoidable circumstances, are unable to complete the coursework in the allotted time. Students who are granted an incomplete must, in general, repeat the course from the beginning and complete all work within one calendar year. You **MUST** have a passing grade at the time that you request an incomplete, otherwise your request cannot be considered.

#### Fall 2005 Lab Schedule

Labs Meet Wednesday to Friday

Labs Meet in PSH-364

Dates	Experiment
8/24-8/26	No Lab
8/31-9/2	Intro/Review of GA
9/7-9/9	Oscilloscope
9/14-9/16	Electric Fields
9/21-9/23	Electric Potential
9/28-9/30	Capacitors
10/5-10/7	Ohm's Law
10/12-10/14	Electric Power
10/19-10/21	Current Balance
10/26-10/28	Magnetic Fields
11/2-11/4	RC Time Constant
11/9-11/11	No lab
11/16-11/18	LRC Circuits (Phases)
11/23-11/25	No Lab
11/30-12/2	Resonance in LRC Circuits

*Beginning Aug. 30, this information, plus course info updates, will be available on the internet at <http://www.public.asu.edu/~gbadams>*