Student Guidelines

Experiment

General Information

My instructor:

My seat number:

Lab Homepage: [http://www.phys.ufl.edu/labs/phylabs.htm](http://www.phys.ufl.edu/labs/phylabs.htm)

Sakai Homepage (prelab assessments): [lss.at.ufl.edu](http://lss.at.ufl.edu)

Prelabs are due by 7 am.

Supervisor, primary contact for make-ups:
Mr. Charles Parks
Room 1227A NPB
Phone: 392-0516
(email: parks@phys.ufl.edu)

Make-up labs are not scheduled by lab instructors.
Do not use email for make-up requests.

Director, alternate contact for make-ups:
Dr. Robert DeSerio
Room 1236 NPB
Phone: 392-1690
(email: deserio@phys.ufl.edu)

Lab Help Sessions are in Room 1215.

Experiments are not performed in the order in which they appear in the manual. The weekly schedule of experiments is given at the front of this manual.

Welcome

Physics is an experimental science. When several physical theories compete for acceptance, the choice goes to the theory that best explains experiments. In this class you will learn some fundamental aspects of experimental physics. You will

- observe physical phenomena in more detail than can be done in lecture.
- work with scientific equipment.
- learn how to compare experimental results with theoretical expectations.

We welcome suggestions and criticisms about the labs. The evaluation form that follows these Guidelines can be used for this purpose. You can also address your comments directly to Mr. Parks or Dr. DeSerio. Of course, the quality of your educational experience will depend on your attitude and effort.

Lab Manual

The lab manual is specially tailored for our labs. You must purchase a new lab manual as it is updated each semester.

The experiments are not performed in the order in the lab manual where they are arranged according to their two-letter code. Several Laboratory Schedules appear near the front of the manual. Be sure to follow the schedule for your course. Remove the schedule for other courses.
Attendance

You must **attend the lab section** you are registered for. If you miss a class, you must follow our lab make-up policy detailed below. You cannot attend a different section without approval by the lab supervisor.

Each lab session lasts for two periods. It is vital that you **arrive at the beginning of the period** so that you have the best opportunity to finish the experiment. Instructors will use their discretion to decide whether a student late for class will be permitted to stay. However, students arriving more than 30 minutes late will not be permitted to stay.

Make-up Labs

We do not provide make-up work for a first absence and the grade for your first absence will be dropped. Each semester, many students are unable to attend a scheduled session for a variety of valid reasons such as a family emergency, accident, sickness, or to attend an important family or university function. Thus, we provide one free drop; one report grade is always dropped from consideration in the final grade. There is no make-up lab for a first absence unless it is for obligations due to a religious holiday observance, military service, or jury duty and Mr. Parks is notified in person at least one week in advance of the absence. We will not provide make-up work for any other reason for a first absence. If you have prefect attendance, your lowest lab grade will be dropped.

Even though make-up labs are not given for a first absence, you must **notify Mr. Parks in person or by telephone of your first absence**. Failure to notify Mr. Parks will result in an **automatic 5 point deduction** on the grade of the make-up for the second absence. Make-up requests for frivolous absences (oversleeping, studying for a test, etc.) may be refused or the make-up may suffer a deduction. Make-ups for legitimate reasons (illnesses, family emergencies, school related travel, etc.) will be readily granted although supporting documentation may be requested.

If you have a second (or higher) absence, you must contact Mr. Parks as soon as possible to schedule a make-up lab. Labs must be made up within a few weeks of their scheduled date. Your **lab instructor cannot schedule a make-up**. Make-up requests must be made in person (Room 1227A) or over the telephone (392-0516). Email requests will not be accepted.

You must not wait until the week after the absence to request the makeup. Whenever possible and almost always if the absence is known in advance, make-ups will be scheduled in another regular lab section, typically in the same lab week as the absence. If the makeup request is made too late, the apparatus will have to be set up and proctored in a spare room at an available time and you may have to work without a partner.

If an instructor in another course schedules an exam that conflicts with your lab, you should notify the instructor that you already have a class scheduled at that time. If the exam time remains unchanged, contact Dr. DeSerio or Mr. Parks at least a week prior to the exam.

Help Sessions

Room 1215 is reserved for Help Sessions where you can practice the lab and receive guidance from a lab instructor. If you choose, you can complete the entire experiment while at the Help Session. However, you cannot use data or other work from the Help Session (or anywhere else) in the lab work submitted for grading.
You can use notes as long as they have been shown to and approved by your instructor.

**Prelabs**

A graded prelab assessment is due prior to every lab except the First Day Activity lab. The prelab consists of questions taken from material prior to the Procedure section of the lab writeup and any related textbook material. Prelab questions can be quantitative or qualitative. Each prelab is worth five points.

In the past, prelab assessments were handwritten assignments turned in at the beginning of the lab. Now, the prelabs are found on the Sakai e-Learning website. The printed versions of the prelabs are still found in the lab manual, but they will not be accepted as a substitute for the online prelabs. They can be used for practice.

There are many types of prelab questions. There are true/false, matching, multiple choice and calculated questions. For calculated questions, the units for the answer will always be given in the question. Never enter units with your answer, only enter the numerical value. For answers where scientific notation is needed, use the standard exponential notation typical of calculators and spreadsheets, e.g., 2.3E5 (be sure there are no spaces around the E) for \(2.3 \times 10^5\).

**Accessing prelabs**

The Sakai e-Learning login page is found at [lss.at.ufl.edu](http://lss.at.ufl.edu) (no www at the beginning). You can also reach it from a link on the physics lab homepage. You will need your Gatorlink user name and password to log into e-Learning. (For assistance with Gatorlink see [www.gatorlink.ufl.edu](http://www.gatorlink.ufl.edu).)

Explore your Sakai homepage to find your lab section web site and navigate to the **Test & Quizzes** section to find the prelabs which are named Prelab-XX, where XX is the two-letter code for the appropriate experiment as given in the lab manual. During the first or second week of labs, please also attempt the **Prelab Warmup** and the **Makeup Quiz**. The **Prelab Warmup** is an introduction to the prelabs and provides a rudimentary check of your internet browser. The **Makeup Quiz** covers some basics of the policy for make-up labs. Even though their grades don’t count, you should attempt both quizzes until you achieve a perfect score.

**Prelab deadline**

Prelab assessments are **due by 7 am** the day of your scheduled lab. Even if your lab is in the afternoon or evening, the deadline is 7 am. The deadline for a prelab assignment will not be extended.

You should not wait until the last minute to attempt your prelab. While Sakai is fairly robust, it does not work all the time. Your internet connection can fail and computers can crash. If you wait until the last minute, these problems will be catastrophic. If you attempt your prelab in a timely fashion, these issues can be resolved easily. Again, the prelab deadline will not be extended.

**Prelab attempts and duration**

You will have **one attempt** at the prelab assessment. Be sure that you submit the prelab for grading before exiting. A second attempt will not be given if the answers are not submitted properly.

You will have **two hours to complete** the prelab starting from the time it is first accessed. The two-hour limit is not extended by leaving the prelab without submitting it or by logging off the Sakai site.
Seating

Each week you will have a different seat and partner as given by the seating chart on the bulletin board just inside the lab room. As you enter the lab each week, use the chart to find your seat based on the current week number (1-12) and the seating number (1-18) that you were given at the beginning of the semester. The seating chart* also specifies who will sit on the computer side of the table.

If there are two people without partners, they can be paired together. If there is only one unpaired student, that person will perform the experiment alone. (The instructor will help if a second pair of hands is required.) There is never to be more than two people working together on any experiment.

Behavior

We expect students to behave properly in lab. No food is allowed and only drinks in closed containers are allowed. Loud or disruptive students will be removed from class and will receive an undroppable zero for the lab.

Sheets for data and comprehension questions must be blank when you enter the lab. Only the lab manual and a calculator can be out on the lab table. Any notes you have prepared can also be visible as long as they have been shown to and approved by your instructor. All other items, such as backpacks and books, must be placed on the floor. It is recommended that you remove from the manual those sheets for the data and comprehension questions that will be turned in; leave the other pages in the manual and check off your work as you go along.

The Lab

The work you submit must be your own. Except for raw data, do not copy your partner’s work. If anything besides data is copied between partners, points will be deducted from both papers. (See Academic Honesty below.)

Lab reports are due at the end of class. Late submissions will not be accepted. Additions to incomplete submissions will not be accepted. Extended time to complete the lab is not allowed. Exceptions to the time limit and other accommodations can be made for documented disabilities. Proper paperwork must be submitted to Mr. Parks and accommodations must be agreed to in advance.

The report must be neat and legible. It contains the following:

The Title Sheet, found on the reverse side of the data sheet, must include the title of the experiment and any information requested by your instructor. Comments to your instructor can be placed at the bottom of this page.

The Data Sheet must be complete, clearly labeled, include units, and have the correct number of significant figures. For data tables, labels and units should appear at the top of the column.

Spreadsheet output and calculations should show which formulas were used, should be performed correctly, and should include the units associated with any variables. Where appropriate, cancel units or change them to derived units (e.g., change kg · m/s² to N). Show all work but with many similar calculations, you need only show work for the first one.
Graphs are typically created on the spreadsheet analysis page and must have a title and the axes labeled with units. If a linear regression is performed, include the fitted line and its equation on the graph.

Comprehension Questions will probe your understanding of the theory, experiment and analysis. Answer in complete sentences that demonstrate your mastery of the apparatus, the measurements and the relationships between the data and predictions.

Leaving

Even if you are not finished with lab, you must turn in your work at the end of the class. Labs are due at the end of the period and you must leave so that the next class can enter. Failure to leave at the end of class will result in points being deducted from your lab. Before you leave, return the equipment to an orderly condition and close any computer programs that are running. The computers can be left on.

Academic Honesty

The academic honesty pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

Our University benefits when it is clear to all that copying another student’s work will not be tolerated. You are encouraged to interact with each other during labs. Always remember that the prelab assessments and all parts of the lab report must be your own work and not be copied from someone else. Specific infractions and penalties are

- Having an old report in your possession: The deduction is 1/2 a full report score.
- Copying from your laboratory partner: Both partners will get a deduction of 1/2 a full report score.
- Using an old report: A report score of 0 will be given.

All penalties are undroppable. Any second violation will result in a grade of E for the course and notification will be sent to the Office of Student Affairs.

Grading Policy

While there is always a degree of subjectivity in assigning letter grades, the following grade descriptions are appropriate:

A: Consistently demonstrates understanding of the physics under consideration. Shows up on time and well prepared. Works well with the instructor and partners. Excellent experimental technique and written reports.

B: Good to very good work. Occasional mistakes but very few omissions in the lab and reports.

C: Good effort with acceptable preparation and understanding. Written reports often have less-serious mistakes and an occasional serious error or omission.

D: Shows minimal effort, preparation, or understanding, consistently makes serious mistakes, several omissions.

E: Four (or more) missed experiments. Little effort or preparation. Often unacceptable reports.
Experience has shown that different instructors have different ideas about what constitutes an A (or any letter grade) in a course. In the physics laboratories where many different instructors may be teaching the same course material, typical variations might range from a A− average for an “easy” instructor to a C+ average for a “tough” instructor. To promote fairness and uniformity among the grades given by different instructors, each instructor is asked to give an average grade (not including E grades) in the range 3.20 to 3.40, where A = 4, A− = 3.67, B+ = 3.33, etc. The average is over all sections; one section could have a higher average than another. Therefore, different instructors will likely have different cutoffs. For example, an easy instructor may set the cutoff for an A− at 90% whereas a tough instructor may set it at 85% with both having the same distribution of letter grades.

Upon returning graded material, the instructor should also provide the average and the spread in these scores. This information is provided to help you evaluate your standing and so you can note whether there is any spread in the grading. With insufficient spread in the grades, an instructor may need to give out more Bs and less As and Cs. If you are concerned that this might apply to your instructor, or if your instructor is not providing sufficient grading information, please inform Mr. Parks as early in the semester as possible. Grades will be posted on the e-Learning course page at the end of the term and near the midterm so that you can assess your situation.

Grade disputes should be taken up with your instructor. Typically, supervisory personnel do not get involved with disputed grades.

Finally

Any situation not specifically covered by the Guidelines will be decided by the lab instructor and supervisory personnel.

Good luck and have fun with your adventures in physics lab.