Physics 4, Winter 2017
Lab Syllabus

General Information

- All lab sections meet in Wilder 218. Afternoon sections meet from 2:20–5:20 pm; evening sections meet from 7:00–10:00 pm.

- There is no general lab manual, but procedures for each individual lab are posted on Canvas.

- Section assignments and TA information (including TA office hours) are posted on the Canvas site. TA assignments are summarized in the table below.

- TA Office hours are focused on lab assignments, but are also available for homework assistance and general questions about course material.

- If the specified office hours for your TA do not work well for you, please don’t hesitate to email your TA to make an appointment.

- Students are free to attend the office hours for any TA in the course, not just the TA for their lab section.

- Emergency meeting location: If the fire alarm goes off during lab, please exit the lab immediately and meet behind Wilder near the Observatory so that we can account for all students in the lab section.

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<th>Sections</th>
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Lab Format

Each lab meeting will begin with a brief introduction to the lab stations, pertinent safety information, and a brief review of class material pertaining to the lab. Please do not begin working on the activities before these opening remarks.

A sign-in sheet will be passed around at the beginning of each lab. Please sign in to receive your full participation grade. If you do not sign in, you may not receive credit for any lab work for that particular lab session.

Labs will typically be completed in pairs, though in some cases groups of three may be necessary. You are free to work with whomever you please, and you are not required to work with the same person each lab. However, you are not permitted to work alone.

You will have three hours to complete each lab. This should be ample time, and your TA will be available to provide assistance. Some of these labs are a little involved, but the TAs are here to help you navigate them as smoothly as possible. A minor struggle is good for the learning process, and working through that struggle is a rewarding experience. However, if you are completely lost or not sure how to get started, ask for help! Your TA will be glad to assist you.
The format for written assignments will vary somewhat from week to week, but the work generally has three components:

- The first is the “Prelab,” an exercise intended to get you prepared for the actual laboratory session. You are expected to complete the prelab before arrival and turn it in at the beginning of the lab session.

- Second is the “Lab Writeup,” which may be in the form of a worksheet or set of questions about how you conducted your experiment. The intent is to help you think about the activities while you are still in the moment. When a writeup is included in the lab, it is to be completed in lab and turned in when you leave.

- Finally, “Lab Homework” is a written assignment to be completed after lab and turned in within the week following your session. This assignment may take a variety of forms, from completion of a worksheet to answering questions to writing a formal report.

The lab experience should be challenging, but also fun. Take advantage of this opportunity to explore, learn, and collaborate!

**Expectations**

Please print and read through the lab procedure before arriving. Sorry, but **there is no printer available to you in the lab for printing procedures, prelabs, writeups, or homework.**

Labs will begin promptly at the scheduled starting time each week. Being late to lab is an inconvenience to the entire class since everyone must partner up, and in being late you will miss the introduction given each lab. Being more than fifteen minutes late could result in your being turned away from the lab and being forced to complete it on a different day.

Prelabs must be completed prior to arriving at the lab; there will be no opportunity for completing them after arrival. Please hand in prelab as soon as you arrive. Late prelab assignments will not be accepted. It’s important for you to make a conscientious effort to prepare your prelabs carefully. Think about each question or exercise and use it to help you develop an understanding of the work you will be doing in lab. Unless the prelab is a prepared worksheet, please type your prelab for submittal.

Lab homework assignments are due one week after the lab session, at the start time of your lab. For example, if you attend the Wednesday 7:00–10:00 pm lab, then your lab is due the following Wednesday at 7:00 pm. Please turn in lab homework directly to the TA at the beginning of lab or into the lab homework dropbox, located in the lobby of Wilder immediately to your left as you enter the building. This lobby is also where your assignments will be returned. Unless the homework is a prepared worksheet, please type your homework for submittal.

*If you use any resources in preparing any handed-in material, be sure to cite any sources you consulted.* Use the internet with great caution; it contains much information that ranges from inadequately sophisticated to downright incorrect. *Do not quote or paraphrase sources unless you are reporting on that source. In general, develop your own descriptions and explanations.*

Although the labs involve considerable collaboration and much shared effort, in general you are expected to prepare your own written work independently of your lab partner. The individual lab
procedure documents describe any exceptions to this general rule. Follow the instructions in the lab procedure.
Grading

In general the following rubric will be used for lab assignments, but note that since the lab format is somewhat variable, the rubric may vary somewhat as well.

- Prelab (20 pts) Careful preparation of the prelab is important to success with the entire exercise. It will be scored on the completeness, accuracy, and cogency of your responses.

- Lab Writeup and Participation (20 pts) Writeups are to be completed during the lab session. Be sure to answer all questions coherently and demonstrate that you both completed and understood the experiment.

- Homework (60 pts) Lab homework is your opportunity to develop your understanding of the lab and the underlying subject matter in a broader context. The homework will take different forms from week to week. It will be graded on the overall quality of your data, your understanding, and your presentation. In preparing your lab homework assignment, be sure to take a professional approach to presentation, and concentrate on using the assignment to formulate clear and complete explanations.

Late Work and Make-Up Policy

Prelabs are due at the beginning of each lab session, and will not be accepted late without good reason. Lab writeups and homework are due one week from the lab session by the start time of your lab, as discussed in the previous section. Late work will be deducted 20 points per day late.

If you cannot attend lab during your regular session, please reschedule to an open lab section through Canvas. You are permitted only two switches, including both temporary and permanent switches. If you attend another lab section, or there is a substitute TA for your lab section, please turn your writeup and homework in to the TA who ran the lab section you actually attended. Please see the “Labs” section on Canvas for further information regarding switching labs.

If you cannot attend another lab section, please contact your lab TA to schedule a makeup time. One setup of each lab is left up in the lab for one week following the lab session. As stated in the lab policy document on Canvas, “the only reason a lab setup will be put back up (after the one week makeup period) is if you are sick for the entire makeup period and physically could not make it to the lab.” Because this is department policy, TAs have no control or flexibility with the extended absence makeup policy.