

Syllabus for PHYS 1602L
Fall 2021

Overview

This is a one credit hour course, and it is normally taken concurrently with Physics class (1501 or 1601). The topics covered will be similar to those in lecture, although not necessarily at the same time. You will probably want to refer to your regular physics text for supporting material.

Instructor of Record

Forrest Charnock

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* Note: e-mail sent to Dr. Charnock MUST include your COURSE (Physics 1602L) and SECTION

While Dr. Charnock is the Instructor of Record, your primary contact throughout this semester will be your Teaching Assistant (TA).

Grading

Lab Reports This includes the pre-lab sheets (which must be turned in at the beginning of class to receive credit), all the pages from your lab manual containing the data that you obtain during lab time each week, as well as answers to review questions given by the TA in the lab. There are 12 lab reports worth 20 points each. Reports are to be submitted at the end of each lab period.

Quizzes: Every 3 weeks, there will be quiz that covers the material from the previous three labs.

Class Participation: All labs must be completed. Barring extraordinary circumstances, you will be expected to participate in your regularly scheduled lab period and complete the measurements and calculations alongside your lab partners.

While make-up labs will be arranged for those who are unable to attend a regularly schedule, this is to be used rarely. Permission must be obtained ahead of time to attend a make-up session.

Any lab that is not completed will be assigned a zero. If three or more labs are not completed, and F may be assigned for the final grade regardless of the final average score.

Lab reports and class participation make up 80% of the final grade.

Quizzes will make up 20% of the final grade.

The following scale defines the canonical threshold for each grade; the final thresholds may be lower:

Letter	Cutoff	Letter	Cutoff
A	$\geq 94.00\%$	C	73.34–76.66%
A–	90.00–93.99%	C–	70.00–73.33%
B+	86.67–89.99%	D+	66.67–69.99%
B	83.34–86.66%	D	63.34–66.66%
B–	80.00–83.33%	D–	60.00–63.33%
C+	76.67–79.99%	F	< 60.00%

Adjustments may be made to this scale at the end of the semester based on how each TA's grade distribution compares to the distribution in the overall course.

Most work is done in lab and late work is not accepted. To receive full credit, lab reports must be turned in before leaving the lab unless the instructor indicates otherwise

Lab Makeup Policy

Attendance at all lab sessions is mandatory. If you must miss a class, you must have a valid excuse, and make arrangements ahead of time with me to make up the lab at another time during the same week.

- Make-ups are will only be allowed if you have a good reason (e.g. illness, death, school related activity). Social events, include Greek functions, do not qualify
- Multiple absences and make-ups will be cause for a reduced course grade.
- If you are unable to make up a lab or test the same week it is missed, you may be allowed to make up that lab later if you provide documentation (a letter from a Dean or physician) for your absence to me.

Honor Code

The Vanderbilt Honor Code applies to all work done in this course. Violations of the Honor Code include, but are not limited to

- Copying another student's answers on a pre-lab, lab questions, review questions, or quiz;
- Submitting data as your own when you were not involved in the acquisition of that data; and
- Copying data or answers from a prior term's lab (even from your own, in the event that you are repeating the course).

Accommodation Policy

If you need course accommodations due to a disability, if you have relevant medical information to share with me, or if you need special arrangements in case the building must be evacuated, please contact your TA as soon as possible. If you have a reason to need extra time on tests or other accommodations, please provide your TA with your letter from Student Access, and we work with you to make arrangements.

How to Get the Most from This Lab Course

1. Before class:

- Read the overview of the lab in your manual. Use your textbook as a resource to understand the concepts involved in the lab in more detail.
- (b) Complete the pre-labs.
- (c) Come prepared with questions on any material you do not understand.

2. During class:

- Pay attention to explanations presented by the TA during class.
- ASK QUESTIONS!! This is not only a way for you to better understand the material, but to also provide feedback to the instructor.
- Work together and efficiently with your lab partner: there may be another class coming into the lab after you. Some of the labs take longer than others.

3. After you are finished and before you leave:

- Check over any work you've done to try to cut down on calculation errors
- Clean your work station and turn off all of the equipment. Have your lab TA initial the end of your report.
- Ask questions if there are any concepts that are still not clear to you
- Turn in your report, neatly stapled in the correct page order.

Lab Schedule:

There are a total of 12 labs held weekly.

No labs on the weeks of Fall Break and Thanksgiving Break.

Currently, we plan to do the labs in the sequence they appear in the lab manual, but this may change. If the sequence is changed, you will be told at least one week ahead.

Lab 1: Electrostatics

Lab 2: Geometric Optics – Reflection and Refraction

Lab 3: Geometric Optics – Lenses

Lab 4: Building and Analyzing Simple Circuits I

Lab 5: Building and Analyzing Simple Circuits II

Lab 6: Introduction to Capacitors

Lab 7: Magnetism

Lab 8: Inductors and RL Circuits

Lab 9: Alternating Current and Impedance

Lab 10: Wave Optics

Lab 11: Spectroscopy and Fluorescence

Lab 12: Polarization of Light