

PHYS 272L Syllabus

Course

PHYS 272L: General Physics II Lab
Section 8 (Group II)
Spring 2019

Instructors

Edward Vause (TA)

Email: vause@hawaii.edu

Office hours: Mondays 9:30-10:20 a.m. and Fridays 12:30-1:25 p.m. in WAT 421.

Other TAs are available at other times (see schedule at WAT 421).

Dr. Philip von Doetinchem (supervising professor of PHYS 151L, 152L, 170L, 272L)

Email: philipvd@hawaii.edu

Office: WAT 430

Office telephone: (808) 956-3719

Website for labs: <http://go.hawaii.edu/boG>

Schedule

Thursdays, 3:00-5:50 p.m.

See the lab schedule at the end of this syllabus for the weekly topic and location (it's either PSB 111 or 112). Do *not* refer to page xi of the lab manual, since the actual order of the labs is different than what is there.

We are part of Group II.

Required Materials

The required lab manual is:

Harris, Frederick H. *General Physics Laboratory II: Electricity & Magnetism, Optics: Physics 152L and 272L*, 2nd ed.

(<https://he.kendallhunt.com/product/general-physics-laboratory-ii-electricity-and-magnetism-optics-physics-152l-and-272l-ebook>)

In addition to the lab manual, bring these materials to every lab meeting:

- Loose-leaf paper for recording notes and data
- Pen (all notes and data must be recorded using a pen)
- Scientific calculator (graphing calculator with large screen highly recommended)
- Wear closed shoes

Students should have access to a computer, printer, stapler, and a ruler outside of class.

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Grading

- Lab reports (60% of course grade)
 - Each student must perform and write a lab report for every lab.
 - Each student must write their own lab reports.
 - Each lab report or other assignment is due one week (seven days) after the lab is performed, at the beginning of class, unless otherwise specified.
 - Late lab reports incur a 15% late penalty and can be submitted up to two weeks beyond the due date. After this point, the student incurs **one missed lab** (see Missed Labs section below).
 - Lab reports must be submitted both electronically *and* as a hard-copy printout. Details regarding writing and submitting lab reports will be provided in a separate handout.
 - All lab reports carry the same weight in the final grade regardless of maximum possible score.
- Quizzes (40% of course grade)
 - A 10-15 minute quiz will be given at the beginning of each lab.
 - Students who arrive late and miss the quiz cannot take it later during the lab.
 - The quiz will cover material from the previous week's lab and the current lab.
 - All quizzes carry the same weight in the final grade regardless of maximum possible score.

The final letter grades are determined based on the class's distribution of scores.

Missed Labs

- Students must email the TA before or immediately after a missed lab. The student is responsible for arranging a make-up lab. The TA is not responsible for contacting the student after a missed lab to schedule a make-up lab.
- If the TA was not contacted on the same day of a missed lab, and the student cannot produce a doctor's note or other legitimate excuse, the lab cannot be made up. In this case, the student receives 0% for the lab report and quiz.
- **Two make-up labs are allowed.** Any further missed labs cannot be made up (see next bullet point). Special circumstances requiring exception to this rule should be brought to the TA's attention as soon as possible, and will be decided on a case-by-case basis with Dr. von Doetinchem.
- **Only one lab can be missed without making it up to be able to pass the class.** This will result in 0% for the lab report and quiz. A second lab that is missed and not made up will result in failing the course.

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Procedure for Making Up a Lab

If you know that you must miss an upcoming lab, follow this procedure:

1. Look at the E&M Labs Schedule on Laulima, and find another PHYS 152L or 272L section that you can attend. There are Group I and II sections, so use the lab schedule at the end of this syllabus to determine which lab the sections will be performing.
2. Email me to tell me which section you are going to attend. If you are unable to attend any other 152L or 272L section, tell me some time periods during which you are free to make up the lab. In general, however, you cannot expect the TA to perform a lab with you exclusively.
3. When you attend the other section, take the quiz if one is given, and give your lab report of the previous lab to the TA, unless we have arranged otherwise. Before leaving, ask the TA to sign your lab notes and data.

Other Expectations

- Every weekend, notes for the upcoming lab will be uploaded to Laulima. Students should print these notes to use them during the lab, or have some other way to view them, such as on a laptop or tablet computer. Other class materials will also be available on Laulima.
- It is within the discretion of the TA to decide whether a student who arrives late to class will be allowed to conduct the lab or must miss the lab. Generally, being late by more than 30 minutes results in a missed lab that should be made up at some other time (see Missed Labs section above).
- Students should expect to have to stay for the entire duration of the class period each week. If you finish the lab early, you should work on the calculations for the lab report.
- Each student must have the TA sign off on their data before leaving the class.
- Students will work in randomly assigned pairs that change about every two weeks.
- Students are responsible for checking their UH email regularly for announcements regarding this course.
- Students should keep all work graded work until the end of the semester in case of unforeseen issues arise.

Cheating

A student caught cheating will receive zero points for the lab report or quiz in question, and the incident will be reported to Dr. von Doetinchem for further discussion. The incident could cause the student to fail the course.

Student Learning Outcomes

1. Better understand physics concepts by seeing their applications in experiments.
2. Understand the importance of observation and experiment in scientific inquiry.
3. Obtain basic laboratory experience in the methods and techniques used by scientists.
4. Report and discuss the results of experiments in a scientific fashion.

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Lab Schedule

GROUP I

Date:	Experiment:	Room #
1/17	LED	
1/24	Electric Field Mapping	111
1/31	Electric Deflection	112
2/7	Oscilloscope	111
2/14	DC Circuits	112
2/21	Capacitors	111
2/28	Magnetic Field Mapping	111
3/7	Magnetic Deflection	112
3/14	Induction	111
3/28	Driven Oscillation	111
4/4	Natural Oscillation	112
4/11	Refraction of Light	111
4/18	Geometric Optics	112

GROUP II (our group)

Experiment:	Room #
LED	
Electric Deflection	112
Electric Field Mapping	111
DC Circuits	112
Oscilloscope	111
Capacitors	112
Magnetic Deflection	112
Magnetic Field Mapping	111
Induction	112
Natural Oscillation	112
Driven Oscillation	111
Geometric Optics	112
Refraction of Light	111