

# Syllabus: GP2 Lab

Spring 2021

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## Info

- **Contact:** [vabe@nyu.edu](mailto:vabe@nyu.edu)
- **Room:** Meyer 222
- **Class hours:**
  - Sec 07: Mon 1.30pm-3.50pm
  - Sec 11: Mon 4.00pm-6.20pm
  - Sec 04: Thu 11.00am-1.20pm
  - Sec 08: Thu 1.30pm-3.50pm
- **Office hours:** <https://nyu.zoom.us/j/91270104640>
  - Tue/Wed/Fri 4.00pm-5.00pm ET (or by appointment—please ask)
- **Github:** <https://github.com/vaabe/phys12>

## Description

This laboratory course is intended to help you understand the basic principles of waves, electromagnetism, and optics. There are 10 labs in total:

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Feb 11	1 - Sonometer
Feb 18	
Feb 25	2 - Resonance Tube
Mar 4	3 - Electrostatics
Mar 11	4 - Electric Field Mapping
Mar 18	
Mar 25	5 - Voltage, Current, Resistance
Apr 1	6 - Charge to Mass Ratio of Electron
Apr 8	7 - Current Balance
Apr 15	8 - Induction
Apr 22	
Apr 29	9 - Snell's Law
May 4	10 - Eye

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## In-Person vs Remote

You choose at the beginning of the semester whether you're going to take this course in-person or remotely. The department's policy is that you should stick to your choice throughout the semester (to the extent that you can; obviously we'll make reasonable exceptions due to covid).

## In-Person Labs

If you're taking the course in-person, you will perform the experiments individually. You should read the manual before coming to class so you know what to expect. [At the very least you should skim over the theory. E&M is non-trivial and it'll be easier if you actually understand what you're observing].

## Remote Labs

Each week we'll post the relevant lab materials (data, videos, simulations, etc) in the [google drive folder](#). You should base your report on the data we provide. There will be two or three zoom office hours each week. These meetings aren't mandatory but I encourage you to show up and ask questions. Besides from that you'll be working fairly independently, and it's your responsibility to manage your time and keep up with the schedule.

## Assignments

Each week you will write a report on the experiment you performed that week. I will mark your submission out of 10:

- **Theory:** /2
- **Experiment Setup:** /2
- **Results:** /6 (split into three subsections)
  - **Presentation of data:** /2
  - **Analysis of results, discussion questions:** /2
  - **Sources of error:** /2

I've also posted a guide with more detailed advice on writing reports. Give it a read if you're stumped for ideas.

## Deadlines

Reports are due at the beginning of the next scheduled session (i.e. Thursdays). Please be reasonable.

## Resubmission

Throughout the semester I'll allow you to resubmit two reports for a better grade. Email me.