

Course Syllabus

PHYS 103

Principles of Physics I Laboratory

General Information

Instructor

Prof. Cothran
Regents Hall, room 122
cdc81@georgetown.edu

Description

This laboratory course complements the PHYS 101 lecture course. The lab topics include: kinematics, forces, momentum, impulse, work, energy, energy conservation, rotational dynamics, gravitation, oscillations, and fluids.

The concepts you learn in lecture are not simply abstract ideas: they constitute the framework that physicists use to represent how the world actually works. This laboratory course gives you the opportunity to test out these concepts in real experiments.

Whether in-person or via Zoom, you are expected to be present at the scheduled lab times for the section in which you are enrolled. There are two laboratory sections: one MW 10:15am – 12:45pm, and the other TR 10:15am – 12:45pm, all Eastern Standard Time.

If implemented, the distance learning strategy for this course is to emphasize prediction, analysis, and interpretation of experimental data. Through video recordings of the experiments, you will learn about the equipment and experimental methods, then analyze the resulting data using the Logger Pro data acquisition and analysis software. The synchronous format is important in order to promote a collaborative learning environment. However, we realize the current circumstances are quite difficult. Please contact Prof. Cothran to discuss accommodations.

To get the most out of this learning opportunity, please commit yourself to actively participate in the lab session with your lab partners: think through and discuss what you expect to observe, what the results say about what actually happened, and how you make sense of it based on the physical principles at work.

All lab content is posted online to Canvas. There is no textbook, aside from the text for the accompanying PHYS 101 course. A calculator is strongly recommended.

Session format

You are expected to arrive on time and come prepared for the lab session. The lab instructions are available on Canvas for you to review in advance. The report form will become available at the

start time of your session. You will complete the report as you work through the lab. An Instructor and/or a Teaching Assistant will lead your lab section.

We expect you to work collaboratively and share the responsibilities of the lab with your lab partners. However, the lab report is your own, so you do not have to agree with your lab partners on the answers to the questions asked in the report.

You are required to check in with your instructor or TA at several points during each lab before continuing on to the remainder of the lab activities. The purpose is to resolve any questions you have about the experiment prior to you beginning the analysis.

Most students will be able to finish their report by the end of the lab session, but the official deadline for submitting your report is 24 hours after the end of your lab session. See the Assignment submission guide for details on how to submit your report electronically.

If we are in-person, you must sign-out at the end of the session with your TA. *The sign-out contributes to your lab report grade: credit will not be given if you do not reset your lab station to the way you found it when you came in to lab!*

Be safe in the lab. Your instructor or TA will describe all necessary safety precautions – follow them, as well as your common sense!

Eating or drinking in the lab is not permitted.

Grading

You will be graded based on the quality of your experimental work, whether you used acceptable scientific standards to report results, and the accuracy of your answers to the questions in the report.

Your report is due no later than 24 hours after the end of your lab session. Late reports receive no more than half credit.

Unexcused missed labs receive 0 points.

Your final numerical grade is the average of your equally weighted lab report grades, which is then translated into a letter grade according to:

A range	$\geq 90\%$
B range	$\geq 80\%$
C range	$\geq 70\%$
D range	$\geq 60\%$
F	$< 60\%$

The + and – letter grade distinctions fall within 2% of the boundaries listed above; *i.e.*, an A– will be assigned to a numerical grade between 90% and 92%.

Policies

Summer commitment

Completing this course in five weeks requires an extreme level of dedication. No accommodation will be granted if you choose to miss class *e.g.* for vacation or family gatherings: you are responsible for completing all assignments on time.

Rescheduling labs

A request to reschedule a lab will be considered **ONLY** for the most extreme circumstances (*e.g.*, severe illness, death in the family, legal obligation, religious holidays, etc) and must be made up at the first available opportunity, preferably within the same week. It is your responsibility to notify the instructor *in advance*.

Switching sections is not permitted

You are required to attend the section for which you are registered.

Collaborative work

You will be working collaboratively with other students in this course. You are encouraged to discuss your thoughts with your fellow students and with the instructors and TAs.

Please keep in mind, however, that you must turn in your own work. Copying someone else's work without understanding it is a good way to guarantee that you won't learn anything, and it is a violation of the Honor System (<http://honorcouncil.georgetown.edu>).

Sexual misconduct

Georgetown University and its faculty are committed to supporting survivors of sexual misconduct, including relationship violence, sexual harassment and sexual assault. University policy requires faculty members to report any disclosures about sexual misconduct to the Title IX Coordinator, whose role is to coordinate the University's response to sexual misconduct. Georgetown has a number of fully confidential professional resources who can provide support and assistance to survivors of sexual assault and other forms of sexual misconduct. These resources include:

Jen Schweer, MA, LPC

Associate Director of Health Education Services for Sexual Assault Response and Prevention

(202) 687-0323

jls242@georgetown.edu

Erica Shirley

Trauma Specialist, Counseling and Psychiatric Services (CAPS)

(202) 687-6985

els54@georgetown.edu

More information about campus resources and reporting sexual misconduct can be found at: <http://sexualassault.georgetown.edu>.