

# PHYS 2056

## Principles of Physics I Laboratory

### Course Syllabus

#### 1. General Information

##### Instructor

Prof. Cothran  
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##### Description

This laboratory course complements the PHYS 2051 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 part of this course gives you the opportunity to test out these concepts in real experiments and provides a fundamentally different way of understanding physics.

To get the most out of this opportunity, you must commit yourself to being actively engaged in the laboratory session. This means having thoughtful discussions with your lab partners about not only what you expect will happen, but also what your results say about what actually happened.

All lab content is posted online to Canvas. There is no textbook, aside from the text for the accompanying PHYS 2051 course, and all lab supplies and equipment are provided to you in lab. A calculator is strongly recommended; you may find it helpful to have a notebook (not required).

#### 2. Session format

You are expected to arrive on time and come prepared for the lab session. A graduate teaching assistant will lead your lab section.

There is a Canvas page for each lab where you can find the lab instructions as well as the report for you to complete. All reports must be *handwritten* and submitted electronically. See the Assignment Submission Guidelines on Canvas for details.

We expect you to work collaboratively and share the responsibilities of the lab with your lab partners. Please discuss your thoughts with your lab partner(s). However, the lab report is your own. You must turn in your own work: lab partners should not have verbatim responses to the questions in the lab report! Despite much discussion, you may not even agree with your lab partner on the answer to a question, so by all means write what you think is the correct response.

You are required to check in with a TA at several points during each lab before continuing on to the remainder of the lab activities. The purpose is *only* to ensure that you have an adequate data set for subsequent analysis, and NOT to indicate that the answers in your report are correct.

At the end of the session, you must reset your lab bench and sign out to your TA. Doing so records your attendance at the lab session and contributes to your lab report grade. To sign out, your lab station must be reset to the way you found it when you came in to lab! *Your TA may deduct a penalty from your lab report score if you do not reset your station properly.*

The lab is designed for you to be able to finish all of the experiments within the lab session as well as most of the report. You will not be permitted to stay beyond the lab session. The deadline for submitting your report is 24 hours after the end of your lab session.

Be safe in the lab. Follow all safety precautions, as well as your common sense!

Eating and drinking in the lab is not permitted.

### 3. 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.

Late reports are accepted, but deducted 10% per day late. No reports are accepted after the last day of class.

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%.

## 4. 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.*, documented 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, and before the last day of class. It is your responsibility to notify the instructor *in advance* for scheduled conflicts and to provide medical documentation of absence for illness.

### 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](#).

### 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 [here](#).