

General Physics Lab - PHYS 215L

Hunter R. Sims, PhD

hunter.sims@fmarion.edu

simsphysics.com/teaching

Online, Optional Live Zoom Sessions MW 1:00 - 4:00

“Office” Hours: By appointment: We can communicate by email, Zoom, Discord, Hangouts, or any other agreeable method

Learning Goals:

By the end of this course, the student will

- Be comfortable recording data and observations from simple experiments
- Be able to express and discuss the results of an experiment in a clear manner that allows for the student’s work to be reproduced by others

Schedule of Labs (subject to change)

June 3:	Pendulum Periods
June 8:	Position, Velocity, and Acceleration
June 10:	Acceleration due to Gravity
June 15:	Vector Addition
June 17:	Projectile Motion
June 22:	Newton’s Second Law of Motion
June 24:	Elastic and Inelastic Collisions
June 29:	Simple Harmonic Motion
July 1:	Standing Waves (due July 2)

Attendance

Attendance of the twice-weekly Zoom sessions is optional, and lack of attendance will not negatively affect the student’s grade. Attendance may positively affect the student’s grade in that I will be able to directly answer questions and offer help.

Grading

Each lab report will be weighted equally in determining the final grade, and I will drop your lowest lab. There is no final exam. **Lab reports are due each Friday at 5:00 PM (with the exception of the final lab). As the summer session only lasts 5 weeks, there will generally be 2 reports due each week. Late reports will be penalized 20% of the maximum score.** Your score will be determined using the attached rubric. Your report and results should reflect that all reasonable care was taken to perform the experiment correctly, but **the grade does not depend on getting a perfect result.** If you will not be able to complete a lab on time, and you have a legitimate excuse, please let me know as soon as possible.

	Poor	Adequate	Exceptional
Completion of lab	Student attempted only a small portion of the lab. (0 - 5 pts)	Student did not fully complete the lab activity. (6 - 15 pts)	Student completed the lab activity. (16 - 20 pts)
Results	Results show little evidence of effort or carefulness. Units are not used (when needed) or are used incorrectly. (0 - 5 pts)	Some results are outside acceptable uncertainty/error bounds. Some units may be missing. (6 - 15 pts)	Results are reasonable and contain appropriate units. Some errors may be present. (16 - 20 pts)
Analysis	Analysis is incorrect and shows little understanding of the physical principles. (0 - 10 pts)	Analysis varies in correctness and/or completeness. (11 - 30 pts)	Analysis is correct and expressed coherently. Some errors may be present. (31 - 40 pts)
Conclusion	Conclusion questions are missing or contain no meaningful discussion (e.g. single-word answers).. (0 - 5 pts)	Conclusion contains significant errors in discussion of results and sources of uncertainty. (6 - 15 pts)	Conclusion gives reasonable interpretation of results and contains valid sources of uncertainty. (16 - 20 pts)

Academic Integrity

Each lab report must be the sole product of each student's brain and effort, even when completed in a group (in other words, all cheating or plagiarism will be reported and handled as detailed in the Student Handbook). There will of course be significant similarity in the reports within a group, but each student should use their own words. For my part, I will not discriminate against any student for any reason and will make any reasonable accommodations necessary to meet a student's needs. No discriminatory or hostile behavior toward fellow students will be tolerated. If you experience or witness discriminatory, abusive, or other unwanted behavior, you should contact me and/or the Title IX Coordinator, as appropriate.