

# Technical Physics II Lab – PHYS 201L-3

Hunter R. Sims, PhD

[hunter.sims@fmarion.edu](mailto:hunter.sims@fmarion.edu)

[simsphysics.com/teaching](http://simsphysics.com/teaching)

Office: LSF L103H, (843) 661-1445

*Lab Meeting Time:* T 12:45 - 3:45 PM MSB 119

*Office Hours:* M–F 11:00 AM – 12:00 PM, M/TH 4:00 PM – 5:00 PM (or by appointment)

## Learning Goals:

By the end of this course, the student will

- Be comfortable recording data and observations from experiments
- Be able to apply lab skills and data analysis techniques to produce trustworthy results
- 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

## ADA Statement

If you have a disability that qualifies you for academic accommodations, I am happy to accommodate you. The [Office of Counseling and Testing](#) will provide me a letter listing your needs, but please come talk to me about how we can implement them in the context of this class. More information can be found in the [Student handbook](#).

## Academic Integrity

The labs will be completed collaboratively, but each lab notebook, report, and presentation must be the sole product of each student's brain and effort (in other words, all cheating or plagiarism will be reported and handled as detailed in the Student Handbook). For my part, I will not discriminate against any student for any reason. No discriminatory or hostile behavior toward fellow students or the Learning Assistant will be tolerated. If you experience or witness discriminatory, abusive, or other unwanted behavior, you should contact me, the Title IX Coordinator, and/or the Vice President for Student Affairs, as appropriate.

## Grading

Prelabs:	15%
Lab Notebooks:	35%
3 Formal Reports:	10% each
Final Presentation/Report:	20%

I will more thoroughly discuss the requirements and rubric for the formal reports in a separate document. The last four weeks of the course will allow students to design, perform, analyze, and present an experiment that expands upon one of the previous labs. Final Projects that merely replicate a previous lab will not receive a passing grade.

The prelab will contain questions and activities related to the coming week's lab and must be completed before your lab session. During each lab session, you will keep an electronic lab notebook (using Google Docs or Word) in which you

- Summarize any discussions you have with other students
- Record your ideas and/or plans for the day's activities
- Carefully lay out what you did and what happened
- Record any problems and how you fixed them
- Record any conclusions, observations, or thoughts

**Another student should be able to read your lab notebook and exactly replicate your work. This is science. Anything less is just an anecdote.**

### **Schedule of Labs** (subject to change)

Week of January 10:	<b>NO LAB</b>
Week of January 17:	Graphing with Excel
Week of January 24:	Calculating with Excel
Week of January 31:	Analyzing Data – Uncertainty
Week of February 7:	Analyzing Data – Distinguishability
<b>Formal Report I</b>	
Week of February 14:	Falling Objects – Graphing, Uncertainty, Distinguishability
Week of February 21:	Falling Objects – Modeling Experimental Data
<b>Formal Report II</b>	
Week of February 28:	Springs – Fidelity of Models
Week of March 7:	Springs – Modeling Dynamics
<b>Formal Report III</b>	
Week of March 14:	<b>SPRING BREAK – NO LAB</b>
Week of March 21:	Final Project – Initial Plans
Week of March 28:	Final Project – Final Plans, Beginning work
Week of April 4:	Final Project – Finalizing Work
Week of April 11:	Final Project – Presentations
Week of April 18:	<b>Final Report DUE : NO LAB</b>
Week of April 25:	<b>NO LAB</b>