

Physical Science I – PSCI 101-2

Hunter R. Sims, PhD

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T/TH 8:30 – 9:45 AM LSF L102

Office: LSF L103H

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

Textbook (required): *An Introduction to Physical Science, 14th Edition*, James Shipman, Jerry D. Wilson, Charles A. Higgins, Omar Torres

ISBN: 9781305079120 (e-book rentals are available, earlier editions are likely OK)

Other materials (required): A calculator (any kind, but you may not use your phone)

Rule 0.

No one is born knowing how to do physics or math. If you are struggling, please speak with me as soon as possible or accept help when it is offered.

Learning Goals

By the end of this course, the student will

- Gain an appreciation of how science investigates and reveals the natural world
- Be able to describe the physical principles at work in the real world
- Be able to convert a physical scenario into a problem that can be solved mathematically
- Gain experience interpreting scientific claims

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 with 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

All work 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 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, the Title IX Coordinator, and/or the Vice President of Student Affairs, as appropriate.

Tentative Schedule (subject to change)

1. What is science?
2. Units and Measurement
3. Position, Velocity, and Acceleration
4. Kinematics (including freefall)

Exam 1

5. Newton's Laws of Motion
6. Newton's Laws applied, friction
7. Theory of Universal Gravitation
8. Work and Simple Machines

Exam 2

9. Conservation of Energy
10. Momentum
11. Electricity and Electrical Circuits
12. Magnetism

Exam 3

13. Sound and Waves
14. Thermal Energy
15. Atomic Theory

Final Exam (cumulative, emphasis on topics not covered in Exams 1-3)

Evaluation

The final grade will be determined on a typical 10-point scale and is broken down as follows

- Grade from Lab Course: 20%
- Participation: 5%
- Quizzes: 5%
- Reading Checks: 5%
- 3 Exams: 15% each
- Final Exam: 20%

Attendance of all sessions is expected and will be factored into Participation, but **do not come to class if you are sick** (COVID or otherwise). Absences need not be documented, **but all students are responsible for all material covered and all assignments regardless of attendance**. If you are ill (COVID or otherwise) or quarantining I will work with you to help you keep up with the course and make up work as needed. In order to do this I need to know ASAP (after deadlines have passed does not qualify as ASAP). Please be aware that you are not obligated to inform me of a positive COVID-19 test or diagnosis, but if you do so I am expected to pass that information along to the University (which you should do anyway).

Quiz/Exam Tardiness Policy: Students will not be allowed to begin a quiz or exam after the first student has finished.