

PHYSICS 4C

Spring 2025

Instructor: Stephanie Dickson

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Office hours: Mondays in Science and Technology Village 12:30 PM – 1:20 PM, Tuesdays, S13, 12:30 - 1:20 PM, Wednesdays, S13, 1:00 - 1:25 PM

Final exam date: Tuesday, June 24, 1:45 to 3:45 PM

Text: *Physics for Scientists and Engineers*, 9th edition, by Serway and Jewett or equivalent

Prerequisites: Successful completion of Math 1C, Physics 4B, and concurrent enrollment in Math 1D.

The goals of this course are to understand fluids, thermodynamics, waves, and optics, and to solve the variety of problems in those topics.

The class will meet in person Monday through Thursday and remotely on Friday. The Friday class will meet synchronously; the Zoom link is available through the Canvas platform.

Homework: Working problems is the best way to learn this challenging subject. Each module has a homework problem set available in Canvas. Working additional problems from the text is recommended. The homework will not be collected, but one question will be similar to an in-class quiz on the due date.

Quizzes based on the homework will be held weekly. There will be a second in-class quiz each week based on lecture material. Your lowest quiz scores will be dropped.

Midterm Exams: There are two midterm exams consisting of four questions each. The first midterm covers fluids and thermo, the second focuses on waves and optics. Make-ups for midterms will be available only with prior consent. The make-up should be completed within three days of the exam date.

Labs meet once a week on Wednesday or Thursday depending on your lab section. Lab attendance is required. You may miss one unexcused lab only. A quadrille-ruled bound notebook, pen, scientific calculator, and ruler are required. Grading for lab is based on weekly quizzes, lab notebook and the lab final.

The final exam is a comprehensive exam with seven or eight questions similar to the midterm exams. It is an in-class exam.

To pass the class you *must* take the final exam (in both lab and lecture) and both midterm exams.

An "incomplete" can only be assigned if the student has completed 90% of the class work. The compelling reason would be a serious illness or equivalent.

There is no extra credit.

A student caught cheating will receive a zero score for the assignment in question. Subsequent incidents will be reported through Maxient.

Your grade will be based on:

Quizzes: 15%

Lab: 15%

Midterms: 40%

Final: 30%

According to the following percentages:

A: 92 %

A-: 90 %

B+: 88 %

B: 82 %

B-: 80 %

C+: 78 %

C: 60 %

D: 50 %

F: 49% and below

Student Learning Outcome(s):

- Critically examine new, previously un-encountered problems, analyzing and evaluating their constituent parts, to construct and explain a logical solution utilizing, and based upon, the fundamental laws of waves, fluids, optics, and thermodynamics.
- Acquire confidence in taking precise and accurate scientific measurements, with their uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physics theories.

Office Hours:

T	12:30 PM - 1:20 PM	S13
W	1:00 PM - 1:25 PM	s13
M	12:30 PM - 1:20 PM	s16