

Physics 4B SYLLABUS

- **Schedule # 55060 Fall 2021**
 - **Lecture class: Online**
 - **Lab class: Face to Face on Fridays from 9AM – 12 PM in PHY 70**

Contact Information:

- Instructor Name: Lauren J. Novatne
- Phone Number: 638 – 3641 ext. 3434
- Email: lauren.novatne@reedleycollege.edu

Office hours:

- Office hours: Posted Online

Required Course Materials:

- Textbook: **“Physics for Scientists and Engineers with Modern Physics”**, Giancoli, 4th edition, Pearson/Prentice Hall Publishers

Calendar

- Holidays: Monday September 6th, Thursday November 11th, Thursday and Friday November 25th & 26th
 - THE CAMPUS IS CLOSED ON THESE HOLIDAYS
- Final Exams week December 6th – 10th
 - Last day for students to drop a semester-le and qualify for a refund: Friday, August 20th
 - Last day for students to register for a semester-length course and last day to drop full-length class to avoid a “W” Friday, August 29th
 - Last day for students to change a semester-length course to or from Pass/No-Pass grading option Friday, September 10th
 - Last day for students to drop a semester-length course (a letter grade must be assigned after this date) Friday, October 8th

Final Exam: unknown at this time – watch the announcements on our Canvas page

Course Objective:

This course covers the topics of classical mechanics, properties of matter, gravitation, fluid mechanics, oscillatory motion and mechanical waves.

Students will gain skills in understand the complementary roles of experimental investigation and theoretical explanation in science, apply dimensional analysis to determine the units for an unknown quantity or to check the validity of equations, correctly report the units of an observable when it is measured or calculated and distinguish between important physical observables, such as velocity, acceleration and force.

Course Outcomes:

Upon completion of this course, students will be able to:

- A. apply basic concepts and fundamental laws in thermodynamics, electricity, and magnetism.
- B. solve problems in thermal expansion.
- C. differentiate the heat transfer mechanisms of conduction, convection, and radiation.
- D. apply the First Law of Thermodynamics.
- E. understand the relationship between temperature and molecular kinetic energy.
- F. apply basic concepts and fundamental laws in electricity and magnetism.
- G. calculate the electric potential of various charge configurations.
- H. relate electric field and electric potential.
- I. determine the capacitance of various electrical systems.
- J. solve basic problems involving electrical circuits.

Exams:

There will be two midterm exams and one final exam. The exams have conceptual questions that are multiple choice in format. There are also some detailed physics problems that will need to be solved. The exams contribute **70%** of your semester grade, so they are very important to prepare for. Make up exams are not available except in **documented extreme conditions**. Notes from doctors or police officers (for car accidents) or jury summons will be the type of documentation accepted to allow a make-up exam. If you know that you will not be present in class for a scheduled exam, you must contact me PRIOR to the end of the class session within which the exam is given. ***Make up exams will be offered only for the occasion of your illness, a jury summons or an emergency (such as an auto accident). Otherwise, you will not be offered a make up exam.***

Laboratory:

This class has a lab that is mandatory. There are lab reports that will be mostly provided for you. You will turn them in when they are due, at the end of each session. The reports will constitute **10%** of your semester grade.

In class problem solving:

There will in class problem solving sessions for many class sessions, instead of homework assignments. The problems will be provided for you as worksheets in class. You will be graded on what is observed while you are in class. The problem solving sessions will be worth **15%** of your grade.

Attendance:

Attendance is worth **5%** of your semester grade. You will be granted **3 excused absences**. An excused absence requires that you email me or leave a voice message **BEFORE** the end of the class that you are missing. I will **NOT** accept messages from your classmates – **YOU** need to contact me.

Essential Notes and Videos:

I will post notes and a screen capture video that uses pictures and diagrams from the textbook. These videos will be about 15 minutes in length, and cover the minimum concepts and important computational skills needed for success in the class. You are expected to watch the videos and read the notes before the discussion topic is due. In addition to these “home brew” notes and videos, I will post links to other videos that I hope you find helpful in learning the material.

Grading Policy:

% Grade for the Class	Letter Grade For the Class		Category of classwork	% of Class Grade
90 – 100 %	A		Exams	70%
80- 89 %	B		In class problem solving	15%
65 – 79 %	C		Lab Reports	10%
55 – 64 %	D		Attendance	5%
0 – 54 %	F			

Diversity Statement:

Respect for Diversity: It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students’ learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

Accessibility Accommodation

A support dog will be present in my office, adjacent to the classroom. She will remain in a crate and will not disrupt office hours or class sessions. If you have an allergy to or anxiety about dogs, please let me know. We will work out a solution that allows you access to me without the presence of the dog.

If you have any other concerns about the presence of the dog, you may contact Dean of Instruction, Marie Harris, at 638- 0353.

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the rehabilitation Act, please contact me as soon as possible.