

PHY 4B – Physics for Scientists & Engineers**SYLLABUS**

Class Hours/Room No T F 2 p.m. – 4:50 p.m. Phys 70 (Lec & Lab)

Class Number 52050
Instructor Gerald (Jerry) Rude
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Office Hours Tuesday 11 a.m. – 12 p.m. Location: Annex 5
 Thursday 9 a.m. – 10 a.m. Location: Virtual (email)

Course Objectives:

In the process of completing this course, students will:

1. complete assignments and lab reports outside of class requiring the application of concepts studied in class.
2. use the scientific method for experiments illustrating basic ideas in physics, producing results which must be compared and/or correlated with what has been presented in class lectures.
3. develop new ideas using previously held knowledge as their foundation.
4. use the appropriate language of physics and mathematics in order to solve problems in physics.
5. use problem solving processes developed in this course requiring sound reasoning skills that enhance responsible decision-making.

Learning Outcomes:

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

1. apply basic concepts and fundamental laws in thermodynamics, electricity, and magnetism.
2. solve problems in thermal expansion.
3. differentiate the heat transfer mechanisms of conduction, convection, and radiation.
4. apply the First Law of Thermodynamics.
5. understand the relationship between temperature and molecular kinetic energy.
6. apply basic concepts and fundamental laws in electricity and magnetism.
7. calculate the electric potential of various charge configurations.
8. relate electric field and electric potential.
9. determine the capacitance of various electrical systems.
10. solve basic problems involving electrical circuits.

Course Prerequisite:

Physics 4A – First semester calculus
 **MATH 6 – enrolled in third semester calculus

Textbook:

Title: Physics for Scientists & Engineers 4e
 Authors: Giancoli, D.
 Publisher: Pearson

Canvas

Canvas is used for announcement and general class related information

Homework Assignments:

Homework is assigned for each chapter on **MasteringPhysics**. There will occasionally be HW assigned in class and turned in during class. Homework will contribute 10% to your final grade.

PHY 4B – Physics for Scientists & Engineers**Laboratory:**

This class has a lab that is mandatory. There are data sheets that you will need to complete as part of your lab activity that is due at the end of each lab session. You are required to follow a number of safety precautions in the laboratory.

Participation:

Participation will be assessed every class period based on activities in class and online reading assignment. Participation makes up 15% of the final grade, please come to class prepared, with written notes from the reading assignment, and take the quiz.

Tests:

There will be three midterm exams as well as a final exam. Early tests can be arranged with a very good reason. A more **difficult** late test can only be arranged if you have an excuse verified by an impartial party (i.e., a doctor or a court note). Exams will comprise 60% of your final grade.

Grading:

10% of the final grade points are from homework assignment
15% of the final grade points are from laboratory work
15% of the final grade points are participation points
60% of the final grade points are from exams

Final grade is assigned using following scale:

90 - 100% A
80 - 89% B
70 - 79% C
60 - 69% D
< 60% F

- ❖ If you have perfect attendance and your grade is within 1 point (or 1%) of the next higher letter grade, the instructor will award you the next higher letter grade.

PHY 4B – Physics for Scientists & Engineers**Important Dates:**

Class begin	Monday	01/09/2018
Last day to register	Friday	01/19/2018
Last day to drop this class to avoid a “W”	Friday	01/26/2018
Last date to drop this class	Friday	03/09/2018
No classes:		
	Monday	01/15/2018
	Friday	02/16/2018
	Monday	02/19/2018
	Mon - Fri	03/26 – 03/30/2018
Final Exam	Tuesday	05/15/2018 2:00 pm – 3:50 pm

Attendance:

Attendance will be taken at beginning of each class. Students are expected to attend all class meetings, be on time, and be in class the entire class session. Students who leave the classroom before the end of class will be counted as tardy

Students will be dropped from the class if they fail to attend the first class session of the semester. During the semester up to final drop date, any student who missed more than two weeks of class meetings will be dropped from this class (4 classes).

Student Conduct:

Students are expected to conduct themselves in a responsible manner in the classroom. Specific rules and regulations have been established in Board Policy 5410. Failure to adhere to the accepted standards will result in disciplinary action. Campus Policies on Student Conduct is described in [Reedley College Class Schedule](#).

Late Add Policy:

For those of you adding the course after the first day, it is your responsibility to make up all late work. Special arrangements can be made to make up missed material. Please let me know if you are having any challenges financially or otherwise in adding the course. I can assist you with the process.

Accommodations for students with disabilities:

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.

Plagiarism and Cheating Policy:

Cheating and plagiarism is prohibited in the class. Incidents of cheating and plagiarism will result in a failing grade on the particular examination or assignment in question. Two incidences of cheating will result in a failing grade for the class.