

# Syllabus

## Physics 4B: Physics for Scientists and Engineers Reedley College – Spring 2024

Schedule #50062

**Lecture:** Tuesdays 9:00 – 11:50 AM in PHY 70

**Lab:** Thursdays 9:00 – 11:50 AM in PHY 70

### **Contact Information:**

Instructor Name: Kurt Shults

Email: kurt.shults@reedleycollege.edu

Office Telephone: (559) 494 - 3000 ext. 3664

### **Office Hours:**

Mondays/Wednesdays 4:00 – 4:50pm in PHY 71

Tuesdays/Thursdays 1:00 – 1:50pm in the Math Center

Fridays 9:00 – 9:50am via Zoom: <https://scccd.zoom.us/j/85308900116>

### **Required Course Materials:**

- TEXTBOOK: Giancoli, Douglas C., Physics for Scientists & Engineers Volumes 1-3 (4th Edition) ISBN-13: 978-0131495081
  - **THIS TEXTBOOK IS AVAILABLE TO RENT FROM THE LIBRARY!**
- Calculator (graphing or non-graphing)

### **Course Description:**

This physics course covers mechanical waves, thermodynamics, electricity, and magnetism.

**Prerequisites:** Physics 4A

**Corequisites:** Mathematics 6

**Advisories:** English 1A or 1AH

### **Student Learning Outcomes:**

In this course, students will -

- Apply algebra, trigonometry, and calculus to solve physical problems related to
  - Electricity and magnetism
  - Temperature and kinetic molecular theory
  - Thermodynamics

- Electric potential of various charge configurations
- Capacitance of various electrical systems
- Heat transfer
- Electric field
- Thermal expansion
- Apply dimensional analysis to determine the units for an unknown quantity or to check the validity of equations
- Identify the complementary roles of experimental investigation and theoretical explanation in science

**Calendar:**

- January 8<sup>th</sup> – Spring 2024 Semester Begins
- January 15<sup>th</sup> – Martin Luther King, Jr. Day, no classes held
- February 16<sup>th</sup> – Lincoln Day, no classes held
- February 19<sup>th</sup> – Washington Day
- March 1<sup>st</sup> - Last day for degree and certificate of achievement candidates to file application for May 2024 completion date
- March 8<sup>th</sup> – Last day to withdraw from college or to be dropped from 18-week classes
- March 25<sup>th</sup> – 29<sup>th</sup> – Spring recess, no classes held
- May 13<sup>th</sup> - 17<sup>th</sup> – Finals week
- May 17<sup>th</sup> - End of Spring Semester 2024

**Exams:**

There will be three midterm exams (each worth 10% of the overall grade) and one final exam (worth 25% of the overall grade). The exams will be held during lab hours. The exams contribute **55%** of your semester grade, they are very important to prepare for.

**Makeup exams will be given with preapproval only.** Further details will be given during the semester.

**Homework:**

Homework is **15%** of your semester grade. Homework assignments with due dates will be handed out during lecture and posted on Canvas, completed assignments will be turned in at the end of lab on their due dates.

Late homework will be accepted with a 30% reduction in score.

**Laboratory:**

This class has a lab that is **mandatory**. The lab scores make up **20%** of your grade.

**If you miss more than three labs, you will automatically fail the course!**

I will drop your lowest lab score. There will also be one online make-up lab available at the end of the semester.

Students must arrive to lab within the first 15 minutes of the beginning of lab, if a student arrives later than 15 minutes after the start of lab, they will not be allowed to participate in the lab and will receive a zero for that lab.

Make plans to attend every lab session on time!

**Participation/Quizzes:**

There will be weekly quizzes given at the start of each lab related to topics covered in the previous week. Quizzes make up **10%** of your grade.

**Grading Policy:**

<b>% Grade for the Class</b>	<b>Letter Grade for the Class</b>
90.0% -100%	A
80.0%-89.9%	B
70.0%-79.9%	C
60.0%-69.9%	D
0%-59.9%	F

<b>Category of Classwork</b>	<b>% of Class Grade</b>
Midterm Exams	30% (10% each)
Homework	15%
Labs	20%
Participation/Quizzes	10%
Final Exam	25%

**STUDENT SUCCESS:**

- Technology Support: <https://www.reedleycollege.edu/campus-life/technology-help.html>
- Tutoring Services: <https://www.reedleycollege.edu/academics/tutoring-services/index.html>
- COVID-19 information is uploaded to the Reedley College site: <https://www.reedleycollege.edu/covid-19/index.html>
- DSPS contact information:
  - Hours: Monday – Friday 8:00 am – 5:00 pm
  - Phone: 559-638-0332

- See more DSPS information here: <https://www.reedleycollege.edu/student-services/disabled-student-programs-and-services/index.html>

## **Academic Dishonesty**

Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.

### **CHEATING**

Cheating is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another's work, supplying one's work to another, giving or receiving copies of examinations without an instructor's permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely. 48 Administrative Policies 2022-2023 Reedley College Catalog

### **PLAGIARISM**

Plagiarism is a specific form of cheating: the use of another's words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights. Incidents of cheating and plagiarism may result in any of a variety of sanctions and penalties, which may range from a failing grade on the particular examination, paper, project, or assignment in question to a failing grade in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents

Important Notes:

- **All first week assignments need to be completed and submitted by the due date to avoid possibly being dropped from the class.**
- Students who may need accommodations for this class are encouraged to notify the instructor and contact DSPS early in the semester so that reasonable accommodations may be implemented as soon as possible. All information will remain confidential.