Syllabus

Physics 2B: General Physics II

Reedley College

Schedule #51068

Lecture: Mondays 9:00am – 11:50am in PHY 70

Lab: Wednesdays 9:00am – 11:50am in PHY 70

Contact Information:

Instructor Name: Kurt Shults

Email: kurt.shults@reedleycollege.edu

Office Hours:

Tuesdays 1:00 – 3:00pm in PHY 71

Thursdays 1:00 – 3:00pm in PHY 71

Fridays 9:00 – 10:00am via Zoom https://scccd.zoom.us/j/86599414811

Required Course Materials:

- TEXTBOOK: Open Stax – College Physics
  - ISBN-10: 1-947172-01-8
  - ISBN-13: 978-1-947172-01-2
  - **THIS TEXTBOOK IS AVAILABLE FREE ONLINE:** College Physics - OpenStax
- Calculator (graphing or non graphing)

Course Description:

The topics covered in this course include electricity, magnetism, light, atomic and nuclear physics.

Prerequisites: Physics 2A

Advisories: English 1A or 1AH

Student Learning Outcomes:

In this course, students will -

- Apply algebra and trigonometry to solve physical problems in topics such as:
  - Electrostatics
  - Electric fields
  - Electric potential
  - Magnetism
  - Optics
  - Modern physics

Calendar:

- January 16th – Martin Luther King, Jr. Day, no classes held
- January 20th - Last day to drop a Fall 2022 full-term class for full refund
- January 27th - Last day to drop a Fall 2022 full-term class in person to avoid a "W"
- February 17th – Lincoln Day, no classes held
- February 20th – Washington Day
- March 10th – Last day to drop a full-term class
- April 3rd – 7th – Spring recess, no classes held
- May 15th - 19th – Finals week

Exams:

There will be three midterm exams (each worth 10% of the overall grade) and one final exam (worth 20% of the overall grade). The exams will be held during lab hours. The exams contribute **50%** of your semester grade, so 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 **20%** of your semester grade. Homework assignments with due dates will be posted on Canvas, completed assignments will be turned in on due dates at the end of lab.

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:

% Grade for the Class	Letter Grade for the Class
90.0% -100%	A
80.0%-89.9%	B
65.0%-79.9%	C
55.0%-64.9%	D
0%-54.9%	F

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

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.**
- Any student needing accommodations should inform the instructor. Students with disabilities 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.

Course Schedule

Spring 2023 PHYS 2B Schedule				
	Dates	**Lecture - Mondays (9:00 - 11:50 AM)**	**Lab - Wednesdays (9:00 - 11:50 AM)**	**Important Dates**
Week 1	1/9 - 1/15	Chapter 16/17 - Oscillatory Motion and Waves/Physics of Hearing	No Lab	
Week 2	1/16 - 1/22	**No Class (Martin Luther King, Jr. Day)**	Lab 1 - Standing Waves and Resonance	1/16 - Monday Holiday (Martin Luther King, Jr. Day)
Week 3	1/23 - 1/29	Chapter 13 - Temperature, Kinetic Theory, and the Gas Law	Lab 2 - Kinetic Theory of Gases (Online)	
Week 4	1/30 - 2/5	Chapter 14/15 - Heat and Heat Transfer Methods/Thermodynamics	Lab 3 - Entropy Checkers	
Week 5	2/6 - 2/12	Chapter 18/19 - Electric Charge and Electric Field/Electric Potential	Homework Session; **Homework Set #1 Due**	**2/8 - Homework Set #1 Due (HWs #1, #2, #3)**
Week 6	2/13 - 2/19	Midterm Exam #1 Review	**Exam #1 (Ch. 13-17)**	2/17 - Friday Holiday (Lincoln's Day)
Week 7	2/20 - 2/26	**No Class (Washington's Holiday)**	Lab 4 - Electrostatic Field Mapping	2/20 - Monday Holiday (Washington's Day)
Week 8	2/27 - 3/5	Chapter 20 - Electric Current, Resistance, and Ohm's Law	Lab 5 - Resistive Circuits	
Week 9	3/6 - 3/12	Chapter 21 - Circuits and DC Instruments	Lab 6 - Capacitance (Online)	
Week 10	3/13 - 3/19	Chapter 22 - Magnetism	Lab 7 - Magnetism (Online)	
Week 11	3/20 - 3/26	Chapter 23 - Electromagnetic Induction, AC Circuits, and Electrical Technologies	Homework Session; **Homework Set #2 Due**	**3/22 - Homework Set #2 Due (HWs #4, #5, #6, #7)**
Week 12	3/27 - 4/2	Midterm Exam #2 Review	**Exam #2 (Ch. 18-22);**	
Spring Recess	4/3 - 4/9	**No Class**	**No Class**	
Week 13	4/10 - 4/16	Chapter 24 - Electromagnetic Waves	Lab 8 - Ray Optics	
Week 14	4/17 - 4/23	Chapter 25 - Geometric Optics	Lab 9 - Geometric Optics	
Week 15	4/24 - 4/30	Chapter 26/27 - Vision and Optical Instruments/Wave Optics	Homework Session; **Homework Set #3 Due**	**4/26 - Homework Set #3 Due (HWs #8, #9, #10, #11)**
Week 16	5/1 - 5/7	Midterm Exam #3 Review	**Exam #3 (Ch. 23-27)**	
Week 17	5/8 - 5/14	Chapter 28/29 - Special Relativity/Quantum Physics	Final Exam Review	
Week 18	5/15 - 5/19	**Final Exam will be held on Monday, May 15 at 9:00 AM in PHY 70**		