

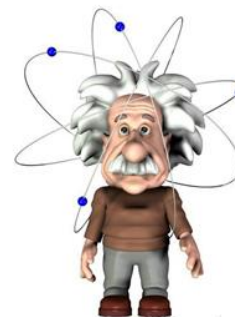
Physics 2A: General Physics I Syllabus

Reedley College – Spring 2024

Revised January 7, 2024

Course Description:

This physics course covers Newtonian mechanics, including kinematics, forces, angular momentum, gravity, properties of solids, *etc.*



Lectures: Mondays & Wednesdays 1:00 PM – 2:15PM in

Forestry & Natural Resources, Lecture Room 4 at Reedley College

Audio recording of many lectures will be uploaded to Canvas.

.pdf files for all lecture material will be uploaded to Canvas AFTER the lecture is given.

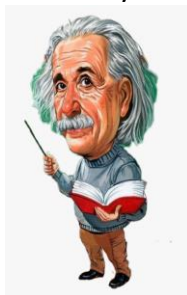
Labs: Fridays 1:00 PM – 3:50PM in **PHY 70** at Reedley College

PHYS-2A-50058

Contact Information:

Instructor Name: Mike Bisset

Email: mike.bisset@reedleycollege.edu



Office Hours:

Mondays & Wednesdays 3:00PM - 4:00pm in PHY 70 or 75

Fridays 4:10am - 4:50pm in PHY 70 or 75 --- most weeks

Tuesday, Thursday via Zoom – more info TBA

I am also available to meet with you, either in person or on-line by appointment.

You need to reach out to me, and then we will definitely schedule time.

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](https://openstax.org/books/college-physics)
- A calculator (graphing or non graphing) is strongly recommended

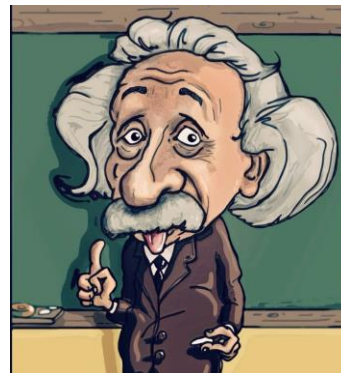
Prerequisites: Math 4A

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:
 - Kinematics
 - Vector quantities
 - Newton's laws
 - Conservation of energy and momentum
- Apply knowledge in the areas of mechanics, properties of matter, sound and waves in other science-related courses.



Some discussion of fluids may be covered if time allows.

If not, fluids will be covered in Physics 2B.

Calendar:

- January 19 (F) Last day to drop a full-term class for full refund
- January 26 (F) Last day to register for a full-term class in person with add authorization
- January 26 (F) Last day to drop a full-term class to avoid a "W" in person
- January 28 (Su) Last day to drop a full-term class to avoid a "W" on Self-Service
- January 28 (Su) Last day to add a full-term class with add authorization on Self-Service
- March 8 (F) Last Day to drop a Spring 2024 full-term class
(letter grades assigned after this date)
- May 17 (F) Last day to change a class to/from Pass/No-Pass grading basis
- January 15 (M) Martin Luther King, Jr. Day (HOLIDAY)
- February 16 (F) Lincoln Day (HOLIDAY)
- February 19 (M) Washington Day (HOLIDAY)
- March 25th - 29th – Spring Recess, no classes held
- May 13th - 17th – Finals week

Exams:

There will be two midterm exams (each worth **20%** 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 **65%** of your semester grade, so they are very important to prepare for.

Exams will have a multiple-choice part and a calculation part of roughly equal weight.

You may re-take the calculation part (only) as many times as you wish outside of class time.

Further details will be given during the semester.

Homework:

Homework is **15%** of your semester grade.

Homework assignments with due dates will be posted on Canvas.

I will assign some homework problems from your textbook,

BUT I will only score problems I assign which are NOT from your textbook.

Detailed solutions to all problems in the textbook are free online at

https://www.youtube.com/@GlaserTutoring/playlists?view=50&sort=dd&shelf_id=1

Completed assignments will be turned in on due dates at the start of lab.

Late homework will be accepted with a 20% reduction in score.

Laboratory:

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

Make plans to attend every lab session if possible! **Lab scores are typically very generous, so**

missing labs (score = 0) will hurt you! Missed labs can be made up on some Friday afternoons

without penalty. There may be quizzes given for a few labs. Scores of such quizzes will be

included in your lab score.

Grading Policy:

I do curve-grade, so the scores on the exams may not tell you exactly what your final score will be.

After each test, I will display a score distribution for that exam, and tell you what it means.

Basically, things only go up, not down.

Category	% of Class Grade
Midterm No. 1	20%
Midterm No. 2	20%
Homework	15%
Labs, incl. quizzes	20%
Final Exam	25%

Tentative Schedule for Physics 2A Spring 2024

Week		Date	Chapter	Lecture #	Subject	Homework
1	M	Jan. 8	1	1	What are science & physics?	
1	W	Jan. 10	1	2	Units, accuracy & precision	
1	F	Jan. 12	--		LAB 1 Measurements	
2	M	Jan. 15	--		HOLIDAY MLK B-day	
2	W	Jan. 17	1-2	3	1-D kinematics	
2	F	Jan. 19	--		LAB 2 Graphing	
3	M	Jan. 22	2	4	acceleration	
3	W	Jan. 24	2	5	Solving equations	
3	F	Jan. 26	--		LAB 3 Projectile motion	
4	M	Jan. 29	2	6	Falling objects	
4	W	Jan. 31	3	7	2-D kinematics, vectors	
4	F	Feb. 2	--		Homework session	
5	M	Feb. 5	3	8	Projectile motion	SET #1 due
5	W	Feb. 7	3		Examples of solving equations	
5	F	Feb. 9	--		LAB 4 Vector addition	
6	M	Feb. 12	4	10	Newton's Laws	
6	W	Feb. 14	4	11	Applying Newt. II	
6	F	Feb. 16	--		HOLIDAY Lincoln B-day	
7	M	Feb. 19	--		HOLIDAY Washington B-day	
7	W	Feb. 21	1-3	13	REVIEW	SET #2 due
7	F	Feb. 23	--		*** EXAM #1 ***	
8	M	Feb. 26	4	14	Friction	
8	W	Feb. 28	4-5	15	Friction, drag forces	
8	F	Mar. 1	--		LAB 5 measuring friction	
9	M	Mar. 4	5	16	Drag, elasticity	
9	W	Mar. 6	5	17	Elastic forces, start Ch. 6	
9	F	Mar. 8	--		free day --- no lab	
10	M	Mar. 11	5	18	Newton's 3 Laws	
10	W	Mar. 13	6	19	Tension, Normal force, start friction	
10	F	Mar. 15	--		LAB 6 determine g w/inclined plane	

Tentative Schedule (continued)

Week		Date	Chapter	Lecture #	Subject	Homework
11	M	Mar. 18	6	20		
11	W	Mar. 20	6	21		
11	F	Mar. 22	--		Homework session	
12	M	Apr. 1	7	22		
12	W	Apr. 3	4-6	23	REVIEW	SET #3 due
12	F	Apr. 5	4-6		*** EXAM #2 ***	
13	M	Apr. 8	7	24		
13	W	Apr. 10	7	25		
13	F	Apr. 12	--		LAB 7 Center of Mass	
14	M	Apr. 15	8	26		
14	W	Apr. 17	8	27		
14	F	Apr. 19	8	28	lecture, NO LAB	
15	M	Apr. 22	9	29		
15	W	Apr. 24	9	30		
15	F	Apr. 26			LAB 8	
16	M	Apr. 29	9	31		
16	W	May 1	10	32		
16	F	May 3	--		Make-up LAB time	
17	M	May 6	10	33		
17	W	May 8	10	34		
17	F	May 10	7 - 10		REVIEW	SET #4 due
18	M	May 13	--		FINALS WEEK	
18	W	May 15	--		FINALS WEEK	
18	F	May 17	--		FINALS WEEK	

I suspect that we may fall behind this somewhat ambitious schedule.

Then I will scale back the schedule accordingly.

Previous physics courses taught at Reedley College

Physics 2A Spring 2023

		X			
		X	X	X	
		X	X	X	
<hr/>					
	F	D	C	B	A

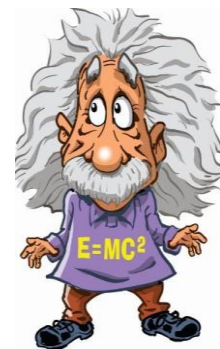
Physics 2B Fall 2023

				X	
			X	X	X
			X	X	X
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	F	D	C	B	A

includes only students who took the final exam

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>
- 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.



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

Warning: I am strongly disturbed by cheating. It is simply NOT worth it!!!!

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