Physics 4A Syllabus
Fall 2024

Class Details:

6 units
Lecture TTh 5:30-7:45pm, MLC105
Lab T or Th 7:55-10:45, S11

Instructor:

Megan Ulbricht

Email:

ulbrichtmegan@fhda.edu

Final Exam:

Tuesday December 10, 2024 6:15-8:15pm, MLC105

Office Hours:

T 1:30pm-2:20pm, S13
Th 4:30pm-5:20pm, S13

Text:

Physics for Scientists and Engineers, volume 1 by Serway and Jewett

It is not required but strongly recommended that you obtain a copy of the text. There is no need for a physical copy unless that is the format that you prefer (in other words, a pdf is fine). The bookstore lists the 10th edition but the edition is unimportant.

Course Description:

This course serves as an introduction to the basic laws and theories of classical mechanics. The topics covered in this course include kinematics in one and two dimensions, vectors and trigonometry as they relate to the physical world, Newton's Laws of motion, work, conservation of energy and momentum, rotational dynamics, equilibrium of rigid bodies, gravitation, and oscillations.

Important Dates:

Nov 11, Veterans Day, campus closed
Nov 15, Last day to drop with a W
Nov 28-Dec 1, Thanksgiving holiday, campus closed

Course Grade Distribution:

Homework	15%
Midterm I	15%
Midterm II	15%
Midterm III	15%
Lab	15%
Final	25%

Letter Grade Distribution:

Percent	Grade	Grade Points
>97%	A+	4.0
93% - 96.9%	A	4.0
90% - 92.9%	A-	3.7
87% - 89.9%	B+	3.3
83% - 86.9%	B	3.0
80% - 82.9%	B-	2.7
77% - 79.9%	C+	2.3
70% - 76.9%	C	2.0
67% - 69.9%	D+	1.3
63% - 66.9%	D	1.0
60% - 62.9%	D-	0.7
<60%	F	0.0

Homework:

Homework will be submitted online via Expert TA. A one-quarter-long subscription costs $23.34 and can be purchased online or at the bookstore. Click an assignment link on Canvas to get started with the program. Homework done on paper will not be accepted.

Some late homework will be accepted with deductions. Each problem completed after the due date will be docked 5% per day. For example, if 8 out of 10 problems are completed by the due date, you will keep all points earned on those 8 problems regardless of whether/when you complete the remaining two problems. If you finish the remaining problems 3 days after the due date, 3x5%=15% will be deducted from your score on those problems only. **Late work is accepted only until the end date of the assignment** when the answers become available. Closing dates can be found under the column labeled "end" on the Expert TA assignment list.

Exams:

There will be two midterms and one comprehensive final. The exams will include a multiple choice and a free response section, with the free response section accounting for roughly 75% of the points. The grading on the multiple-choice section is all-or-nothing. Partial credit will be awarded where appropriate on the free response problems. **There are no makeup exams.**

Bring a pencil and optionally, a scientific calculator to the exams. An equation list and scratch paper will be provided. No additional notes or materials are allowed on the exams.

If your final exam score is higher than your lowest midterm score, I will average your final exam score and your lowest midterm score and replace your midterm score with that value. For example, if your lowest midterm score is a 60% and you get 80% on the final exam, I will replace the 60% with (60% + 80%)/2 = 70%.

Communicating with classmates or having a phone or other web-enabled device out during an exam may constitute academic dishonesty and may result in a zero on the exam. Phones, tablets, and computers are not allowed out during exams.

Lab:

Attendance is mandatory. You may be dropped from the class or receive a non-passing grade if you have more than one unexcused absence in lab.

Academic Integrity:

An academic integrity violation will result in a score of 0 on the assignment or exam in question. Further disciplinary action may be taken on a case-by-case basis. Violations include communicating with a classmate or using a phone or other prohibited device during an exam, copying another student's work, allowing someone to copy your work, copying online solutions, and plagiarism.

Student Learning Outcome(s):

• Examine new, previously un-encountered problems by critically analyzing and evaluating their constituent parts, to construct and explain a logical solution utilizing, and based upon, the fundamental laws of mechanics.
• Acquire skill and confidence in taking precise and accurate scientific measurements, with their uncertainties, and then with calculations from them, analyze their meaning as relative, in an experimental context, to the verification and support of physics theories.

Office Hours:

T	01:30 PM	02:20 PM	In-Person	S13
TH	04:30 PM	05:20 PM	In-Person	