Course Syllabus 46296 PHYS 4A-05
and 46297 PHYS 4A-06
(6 units, 5 hours lecture 3 hours lab)
De Anza College
Spring 2019

Instructor: Dr. Atousa Chaharsough-Shirazi
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Lab instructor: Eduardo Luna
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Office Hours: Th and F 10:20 am-10:50 am or by appointment
Location S13

Start/End Date: 8/4/19-28/6/19

Days/Times: M-F 9:30 am-10:20 am

Location of class: S32

Final exam: Tuesday 6/25 9:15 am-11:15 am

Materials: -*Physics for scientists and engineers* 8th or 9th edition by Serway and Jewett (new or used, you don't need the access code), required
-Course notes posted on Canvas

Prerequisite: PHYS 50 with a grade of C or better, or the equivalent (including high school Physics); MATH 1B or MATH 1BH (may be taken concurrently)

Course description: A rigorous introduction to the physical laws that describe and explain the motion of bodies. Analyze the structure of classical mechanics and its applications to problem solving using verbal logic, critical analysis, and mathematical models. Investigate general scientific procedures as a quantitative interplay between experimentation and theory employing statistical methods, graphical techniques, and measurement theory.

Course Objectives: The goal of this course is to cover the three conservation laws of classical mechanics: energy, momentum, and angular momentum. This includes the necessary details to successfully manipulate those laws: kinematics, vectors, problem solving techniques, mathematical techniques, and various definitions including Newton's universal law of gravitation and then a little about oscillations at the end of the course. In our text, this amounts to covering chapters 1 through 15, but skipping chapter 14 though because fluids are covered in 4C at De Anza College.

Grade Breakdown:

Exams (2 midterms)	40%
Final Exam (comprehensive)	35%
Lab	15%
Quizzes/homework	10%

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My grading scale:

92-100%	A
90-91 %	A-
88-89%	B+
82-87%	B
80-81%	B-
78-79%	C+
65-77%	C
55-64%	D
below 55%	F

Exams:

There will be two midterm exams and one final exam. Because the class is only 50 minutes the midterms or the final may be performed in multiple days. The midterms are *not* cumulative but the final exam is cumulative. All the exams are closed-book, closed-notes and cell phone usage of any kind is not allowed during tests. If you arrive late for an exam, you won't be given extra time to finish it. On exams, once the first person has turned it in and left the room, no further latecomers will be given tests.
Important: You need to bring a picture id with you on exam days.

NO make-up exams will be given without the <u>PRIOR</u> **consent** from the instructor (not just a prior notification to the instructor). You must make arrangements to make-up the exam <u>as soon as possible</u>; if you wait too long (i.e., two or three days) to take your make-up exam, it is too late and you will not pass the class. One of the two exams can be made up if the absence is excused and you get the instructor's permission before the test but making up both exams is not allowed. To pass the class you *must* take the final exam (in both lab and lecture) and all other exams. **No exam score will be thrown out.**

Your total exam score will be computed on the basis of a "weighted" average. Your highest exam score of the two exams given will be **doubled** and then added to the lower score. That sum will then be divided by three and will be your average midterm exam score.

Cheat sheets or note cards will be not allowed during exams or quizzes. I will provide you the list of formulas needed.

 No questions are allowed on the day of an exam regarding exam material. This does not apply to quizzes, just exams and the final. Any other type of questions on exam day is, of course, fine.

 A grade of zero points will be assigned to any work done if a student has been found cheating.

 Your lowest lecture quiz score will be dropped.

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Exams schedule:

Midterm 1	TBA
Midterm 2	TBA
Final exam	Tuesday 6/25 9:15 am-11:15 am

Class attendance:

Note that it is important for you to come to class and participate in discussions to learn the material. Moreover, not everything covered on the exams will be adequately covered in the readings-much of the materials will be available *only* in class like the videos shown in the class.

Regular class attendance is required. Class attendance will be recorded each class period. I will be free to drop you from the course if you miss three classes. If you must miss a class due to illness or personal emergency you need to contact me.

An "incomplete" will only be assigned as a final course grade when a *serious* illness or some other severe problem is encountered by the student.

It is the responsibility of the student, not the instructor, to ensure being dropped or withdrawn from the course.

Communication:

Announcements are made in-class and through email. Please check your emails regularly.

Academic integrity:

If you are having trouble with any part of an assignment, come to my office hours (or e-mail me, or talk to me before or after class). My office hours are there for **your benefit**. Do not cheat yourself! When you copy or cheat, you are not learning the material. Consequences for cheating can vary from getting a "0" on the assignment to being dropped from the class and reported.

Student code of conduct:

Students are expected to treat others with courtesy and respect. Refer to student Code of Conduct in the 2018-2019 Catalog.

Student Learning Outcome(s):

*Critically examine new, previously un-encountered problems, analyzing and evaluating their constituent parts, to construct and explain a logical solution utilizing, and based upon, the fundamental laws of mechanics.
*Gain 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.