

GENERAL INFORMATION
PHYSICS 197

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OFFICE HOURS: M, T, W, & Fri: 11– 12 p.m. & Th: 3 – 4 p.m.
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The following statements constitute only a partial summary of some but not all rules, policies, instructional philosophies, grading systems, materials required, etc., for Physics 197. Additional or amended rules, policies, etc., may be announced during scheduled class times in the future.

REQUIRED AND RECOMMENDED READING MATERIALS

Physics 197

Required textbook: Physics, 5th ed., by Halliday, Resnik, and Krane.
Assigned reading will include chapters 1 - 17, and 21 - 24

Recommended reading: Physics, 4th ed. Vol. 1., by Halliday, Resnik, and Krane
Physics for Scientists and Engineers, Vol. 1, 2nd ed., by Fishbane, Gasiorowicz, and Thornton.

Grading Policies

Grades are determined by scores received on quizzes.

Quizzes : 100%

Quizzes are principally composed of physics problems which required quantitative solutions.
Assigned homework will not be collected or graded but the solutions are available. (www.pcpepo.com)

For all work submitted for credit, the student must show his/her work or method appropriately, completely, and clearly. One may lose academic credit for any questions problem, or other course work if the method or reasoning is not correct or is not properly shown. Partial credit may be given for a partially correct method that is properly and clearly shown. **Each student can bring a simple, inexpensive, non-programmable scientific calculator for quizzes.** This class is not designed for “How to use the most expensive calculator”, but for “how to use your brain.”

Special Rules and Policies

1. If any rule, policy, or regulation concerning this course is broken by a student, then, penalties may be imposed on the student at the discretion of the instructor.
2. The instructor reserved the right to alter or waive any commitments, policies, or rules. Usually such changes are relatively rare and are made when the instructor believes that necessity, fairness, or reasonableness indicates the need for such changes.
3. No make-up quizzes are given.
4. Any student who violates course rules, or who participates in plagiarism, cheating, fraud, dishonestly or unfairness with respect to the course will be subject to **heavy academic penalties** such as an F grade for the course.
5. The students are responsible for anything that is presented or announced to the class during any scheduled class period and material sent via email.
6. In addition to the rules and policies stated by the instructor of this course, the student is subject to the rules and policies of Palomar College.
7. If you have any documented disability, please see the instructor within the first week/ two weeks so that we can discuss regarding appropriate accommodations.

Instructional Methodology and Philosophy

Students are expected to read assigned class notes and chapter in order to have a rough idea prior to the lecture.

During the lecture periods, the instructor will usually but not always discuss physics topics which are generally discussed in the required textbook and solve selected physics problems. The students are encouraged to ask questions related to the lecture material during the lecture period.

The lecture and course quizzes emphasize the conceptual, analytical, and quantitative understanding of the principles of physics. Critical thinking by the students must analytically solve quantitative physics problems for quizzes and homework exercises. Calculus, vector mathematics, and other mathematical skills will be needed for this course. This course is basically intended for students whose major field is physics, astronomy, engineering, chemistry, or closely related field. In addition, this course is intended to prepare students for the Physics 230 course.

The lecture is not to cover or present all required course information or every needed detail. Therefore, it is expected and required that the student will study and think independently, be resourceful, and demonstrate good personal initiative. The student should carefully study the lecture notes, the textbook and other references, solve problems, ask questions, and study with others, etc. The physics lab requirement also involved resourcefulness, analytical skills, etc.

Generally this course is difficult and demanding.

Course Suitability

After you have carefully considered all factors related to this course and you believe that this course is not in your best interest, too demanding, too time consuming, unreasonable, or etc., then, you may wish to seriously consider dropping this course. But, if you have a sincere desire to prepare yourself for future analytically rigorous science courses or other related endeavors and develop or improve your understanding of physics, problem solving skills, resourcefulness, etc., within the philosophy and structure to this course, then, it may be in your educational interest to remain in the course.

If you have any question, be sure to ask the instructor.

You can find homework questions and solutions at pceps.com, our engineering club site. Visit the site and click “courses” and you will find “Physics 230 & 231” courses. You will find helpful information beyond the homework and their solutions. If you are going into any engineering or physics field, you will benefit a lot from the club by joining them.

Student Learning Outcome

What's a Learning Outcome?

Student learning outcomes are general skills, knowledge, or masteries which students are expected to have after completing a course or program of study. The faculty responsible for a course or program get together and decide what overall qualities or abilities a successful student should have after completing a course or program; those become the student learning outcomes. Faculty do assess their outcomes; that is, they find a way to determine if their students are achieving those desired outcomes. However, these assessments are not necessarily part of the students' grades in the courses.

Physics 197

Successful students will be able to calculate the center of mass of any object.

CHAPTER HOMEWORK(197)

3	31,37,49, extra-see the bottom
2	19,25,41,50,58,78,89,115
4	16,19,26,96
5	3,8,42,51,72,82,83
6	4,7,8,20,21,26,35,49,52,53
7	2,5,35,46,50
8	7,8,23,29,70,85,135
9	15,17,20,27,49,85,112,130

Additional chapters are available on www.pcpepso.com.

Extra problem

Ch. 2: Two vectors of magnitudes a and b make an angle θ with each other when placed tail to tail. Prove, by taking components along two perpendicular axes (without rotating them), that the magnitude of their sum is

$$r = \sqrt{a^2 + b^2 + 2ab\cos\theta}.$$