

Strategies for Physics Exams

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General Information

- You are responsible for your own learning in this course. I can only serve as your guide to the material. It is up to you to read the textbook, do the homework problems, and ask questions in class or in office hours.
- In physics, you must understand *concepts* and be able to solve *problems*. Both are important. If you don't grasp concepts, you can't solve problems. If you can't solve problems, you can't actually "do" physics.

Studying for an Exam

- Review concepts discussed in class and on reading quizzes.
- Review examples in the textbook, which illustrate many key concepts.
- Learn how to solve problems worked in class.
- Learn how to solve problems in homework assignments.
- Know how to characterize problems:
 - What are the known vs. desired quantities? How are they physically related? What physical principles are relevant to the problem? These help you select the right equation(s) to get the desired answer.
- Some problems require rearranging or combining fundamental equations in order to get a solution. You should know how to do this.

Taking an Exam (Maximizing Credit)

- Manage your time during the exam. Don't spent too much time on a problem worth only a few points.
- Attempt all questions. Read carefully to make sure you don't miss any!
- Be sure your answer is the quantity requested and is in the requested units.
- Show your work! If you just put down an answer, and it's wrong, you get zero credit, but if you show how you got your answer clearly enough to follow, you may get partial credit. How you approach and solve a problem can be as important as, or even more important than, the actual answer.
 - Show your reasoning in a clear, sequential fashion.
 - Draw diagrams with clear labels.
 - Write equations with algebraic variables before inserting numbers, so it's clear what your approach is.
- If you get stuck on a multi-part problem, show *in detail* how you would solve subsequent parts of the problem, giving the appropriate algebraic formulae to make use of the result from the previous part.