Physics FAQ*
*Frequently-Asked Questions

1. **What is the best way to study for physics?** I can’t give a single trick that will work for everyone, but I do have some suggestions. Some are generally good ideas for any subject: come prepared to every class, do the homework, try to spread out the work instead of cramming. Here are some more specific ideas:
   i. Get to know your classmates so you can discuss physics over coffee.
   ii. Try to understand each new idea in more than one way. Try to get the same answer to a homework problem in more than one way.
   iii. Every time you read a new idea, try to imagine how you would apply it. Do you believe what the book is saying? Can you try to find an exception?
   iv. What happens to a formula if you set distance to zero? If you set it to infinity?
   v. Always carry units. I’ll give an example in class of the right and wrong way.

2. **I find I have to read a passage three times before I can make sense of it.** So does everyone. I can read hundreds of pages of a novel in an evening but sometimes spend hours on just a few pages of physics. It’s OK to read the passage three times.

3. **Why don’t you let us use calculators on tests?** No calculators are allowed on tests. Problems will be written so that calculators are unnecessary. Note that the AAMC also does not allow calculators at the MCAT. A calculator may be handy for some of the homework problems, particularly those out of the book.

4. **Where can I find the grading policy?** In the syllabus.

5. **I’ve been working on one homework problem for hours and still don’t have any idea what I’m doing wrong. What should I do?** Move on to another. Most likely, you and your friends will each be stuck in different places. Once you have all tried the problems, get together, and find out how to get un-stuck. Of course, you can also reach me by e-mail, telephone, or during my office hours.

6. **Why is physics harder than other things?** Have you ever tried to write a sonnet or design a VLSI chip? Most things worth doing are hard. I can’t make physics easy, but I can help you succeed.

7. **I’m a straight A and B student in other sciences and in math, but I’m struggling in this class. Why doesn’t the way I study for other subjects work in physics?** You may find that physics requires you not just to learn new things but to learn to think in new ways. This is very hard to do, especially if your strategies have been succeeding for other classes. **MEMORIZATION DOES NOT WORK FOR PHYSICS.** It will not work just to learn algorithms for five different kinds of problem in each chapter. You really need to understand the ideas at a deeper level, or you’ll never know where to apply them. This is true of other subjects in advanced courses, but it’s true of physics even in the introductory course.

8. **What do I need to do to get an A?** A student asked the master what she had to do to achieve enlightenment. The master responded with a koan: “a student asked the master what she had to do to achieve enlightenment. The master responded with a koan....”