A Solid Study Strategy

The grade in your mastery-based course will be very strongly based on your performance on the weekly quizzes that occur throughout the year. These quizzes are cumulative, which means that once new material is covered in class you are responsible for it on quizzes all year long.

To be prepared for the weekly cumulative quizzes, you should establish a weekly study regimen encompassing each of the tasks listed below. You should spread out your review work so that you spend time with the material at least two or three separate days each week. Most students find that an hour spent two to three times per week is adequate for solid performance in the course.

These are the documents you must pay attention to and use in your weekly studies:

- Chapter Objectives Lists
- Scientists List
- Conversion Factors and Constants
- Weekly Review Guides

1. Study the Objectives List for each new chapter carefully. Make it your policy that you will be able to do everything on the list (that is, for the objectives that have been covered so far in class) before quiz day each week.
2. Look over Objectives Lists from previous chapters regularly. Identify any item that you cannot do or cannot remember how to do and follow up on it.
3. Develop, maintain, and practice flash cards for each major category of information that you need to know. I recommend these four separate stacks of flash cards: 1) technical terms, laws, and equations; 2) scientists and experiments; 3) special lists to memorize (as indicated by the Objectives Lists); and 4) conversion factors, prefixes, and constants. Also, on cards for equations, indicate the units of measure for the variables involved and make saying those units part of your flash card practice routine.
4. Read every chapter in this text at least once, and preferably twice. Ideally, every time your instructor covers new material you should read the sections in this book corresponding to that material within 24 hours.
5. Go through the exercises described in the Weekly Review Guide every week. Work each of the four review computations. The Review Guide prompts you to rehearse your flash cards, review older topics, and so on. Take the Weekly Review Guide seriously and do what it says.
6. Raise questions in class as often as you can. Asking questions and interacting with the instructor and the rest of the class is an effective way to help your brain engage, focus, and remember.
7. Go back and read the chapters in this book again when you are a month or two down the road. You will be amazed at how much easier it is to remember things when you have reread a chapter. (Besides, reading is more fun than rehearsing flash cards.)
8. When you are working on exercises involving computations, check your answers against the answer key. Every time you get an incorrect answer, dig in and stay with the problem until you identify your mistake and obtain the correct answer. If you can't figure out a problem after 10 or 15 minutes, raise the question in class.
9. Every time you lose significant points on a quiz, follow up and fill in the gaps in your learning. If you didn't understand something, raise the question with your instructor. If you forgot something, rehearse it more thoroughly until you have it down. If you failed to commit something to memory or didn't have it in your flash cards, then add it to the cards and commit it to memory. If you were not proficient enough at one or more of the computations, look up some similar problems from the exercises or from previous quizzes and practice them thoroughly. Always follow up before the next quiz. Remember, the quizzes are cumulative and the same questions come up again and again.

If you study for the course according to this study plan, you cannot help but be successful in the course and you will find that very satisfying. You will not only know a lot about physics, but you will have the satisfaction that comes from doing a job well. (By the way, you should apply this same strategy to your other classes. It works there, too!)