

## **Homework & Exercises Requirements & Tips - Fall 2007**

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In order to develop and maintain good problem solving skills, it is essential to approach problems logically, systematically and neatly. The way you write your solutions can train the way your mind thinks. Below are some requirements and some tips for writing homework solutions, which will be due approximately weekly.

### **Requirements:**

1. Use lined paper or engineering paper. Paper torn with frayed edges from spiral notebooks will not be accepted.
2. Write on one side of the paper only.
3. Number all pages of the assignment and number the problems.
4. Put your name, date and class number at the top of the first page
5. Staple all pages before submission (no dog-eared, taped, paper-clipped, or papers held together with a clothespin will be accepted).
6. Homework must be submitted during class on the date due; late homework will be accepted but with a penalty of 10% (multiplicative) deducted per day (24-hour period following the end of class) late.
7. In almost all cases, within reason, your solutions must have the following:
  - a. a diagram and the identification of an appropriate coordinate system
  - b. symbolic identification of the given and unknown quantities
  - c. clear identification of the definition, concept(s), and/or law(s) used to solve the problem
  - d. neat and logical algebraic solution of the problem
  - e. numerical solution of the problem, where appropriate
8. Working in groups is a valuable way to learn physics, but the work you submit for grading must be your own.
9. Use of a solution manual or on-line solutions from the publisher or from other institutions or other web sites is strictly forbidden.

### **Tips**

1. Store your homework solutions in a 3-ring binder. You will want to refer to them as you study.
2. Use one page per problem. This allows you to easily amend your work and to not get stuck with the need to squeeze lots of material into a small space.
3. Allow for margins at the top, bottom and sides of the page. This allows the grader to make comments without writing over your work, or for you to make notes on later.
4. Don't wait until the night before the assignment is due to start working on an assignment. Begin working on it as soon as possible.
5. Evaluate your answers. Think about what a formula means and evaluate it in special limits such as a particular variable going to infinity or zero. Try to re-derive expressions using different approaches.
6. See me if you have questions.

*Thanks to Dr. Weidman for sharing these ideas and allowing me to use his basic ideas on this topic (which I have modified somewhat).*