

PHYSICS 204 FOUNDATIONS OF PHYSICS 2 SPRING 2008
ASSIGNMENT GUIDELINES

“PRACTICE, THE MASTER OF ALL THINGS.”

— AUGUSTUS OCTAVIUS (63 BC – AD 14)

“PRACTICE IS THE BEST OF ALL INSTRUCTORS.”

— PUBLILIUS SYRUS (CA. 100 BC)

Assignment Format

Homework assignments must conform to the following format. Assignments not conforming to this format will be turned back to the student without being graded. While some of the formatting guidelines may seem trivial to you, they make the task of evaluating them much easier for the grader, whether it be a Teaching Assistant or myself. There are many of you and only one of me.

- Your work **must be neat, must flow logically, and be easy to follow**. It's critical that you learn how to communicate your work to others. More on the specifics of this will be discussed on the next page of this handout.
- **All problems must begin on a new page**. If a problem goes beyond the front of a single page, you may continue the problem on the back of the same page to conserve paper. Note that conceptual questions or definitions may be done on the same page.
- **The questions and problems must be in numeric order**. Therefore, if you skip a problem and return to it later, be sure to arrange the problems in the appropriate order.
- Your **name** must be on the upper right hand corner of *every page* of your assignment.
- Pages of the assignment must be **stapled together** in the upper left corner when turned in.
- The assignments are **due** at the beginning of the advertised class. Assignments will be accepted *up to one week late* for *half credit*. For example, if an assignment is given on a Friday and you are told it's due the following Friday (as will often be the case), it is due *at the beginning of class* on the following Friday. If you turn it in after class is over or slide it under my office door during class, then it will be considered late. Exceptions may be made in extenuating circumstances.

If there are any questions regarding the format of the homework, please ask.

Some problems in a given assignment will only receive a grade based on whether or not it has been completed and some will be evaluated for a grade. You will not know in advance which will happen for a given problem.

If I only check that a problem is complete, you will receive two points for the problem if it's completed and zero points for the problem if it's not. If a problem is evaluated for a grade, it will be worth 5 points.

Problems evaluated for a grade will be graded according to the following rubric:

- 5 points The answer/solution is fabulous. For discussion questions, the answer is concise, contains all of the key points, and is clearly explained and written. For problems, the solution is complete, clear, logically organized, and correct. A description of what comprises a fabulous solution follows.
- 4 points The answer/solution is good. For discussion questions, the answer is missing minor points, but is clearly explained and written. For problems, the solution is correct, but more work, explanation, or discussion needs to be present. Alternatively, you may have a fabulous solution, but your numerical answer is incorrect, has the wrong number of significant figures, and/or the wrong units.
- 3 points The answer/solution is satisfactory. For discussion questions, the answer has the main point, but is incomplete, not concise, and is poorly explained and/or written. If the question requires a graphic or sketch and it's missing, this is the most it will receive, even if the rest is perfect. For problems, you may have managed to get the correct answer (with or without appropriate significant figure and/or units), but the solution is deficient in more than one area (work, explanation, and discussion of results).
- 2 points The answer/solution needs substantial improvement. Some minor points may there, but only because it includes so much information that they could not have been missed (i.e., the BS-ed their way through the question). For problems, the solution is deficient in all areas (work, explanation, and discussion of results).
- 1 point The answer/solution provides evidence that some effort was put forth. Perhaps the student answered a question or solved a problem that wasn't asked or the answer/solution is so messy that it is unreadable or so confusing and verbose that it is incomprehensible.
- 0 points No attempt was made to answer the question. The question was skipped.

A fabulous solution includes a list of given information (including the student interpretation of what is being asked if it seems appropriate), ample work/mathematical manipulation to demonstrate the student's thoughts at each step along the way, a verbal explanation of the overall approach to the problem (plan of attack) and at critical steps along the way, and a brief discussion as to whether and why the numerical solution is reasonable or not. Additionally, there will be a sketch if such a thing is warranted and/or helpful. In short, it should be clear to someone who is not in the class what you've done and why.

While not an exhaustive list, some specific things that constitute a fabulous solution include:

1. a list of given information (including the student interpretation of what is being asked if it seems appropriate),
2. a sketch
3. a brief written plan of attack or list of basic concepts you are applying to the problem ,
4. written explanations at critical points in the problem,
5. accurate and efficient manipulation of the equations in solving for the unknown variables in terms of the known variables (***without numerical quantities substituted for known variables!!!!***),
6. correct substitution of given quantities (*including units*) ***at the end of the problem***,
7. a correct final answer, with appropriate number of significant figures and appropriate units, and
8. a brief discussion as to whether and why the numerical solution is reasonable or not.

Be sure to *always* acknowledge assistance and sources beyond your textbook! This means you must briefly cite your sources *beyond the textbook* beneath the assigned question or problem. Failure to cite such sources will result in no credit for the assigned question or problem. Sources include people as well as texts. Be sure that you *understand* any source you are using. Understanding is the point, after all.