A Message from The Lab Grader Summer 2011

Breakdown of points:

Labs with Pre- and/or Post-Questions

*Following Instructions	10
Data and Graphs	20
Calculations	20
Results Table	25
Conclusion	25

Neatness counts! Your work should be clear, organized in a logical manner, and neatly written.
*Following Instructions means 1. Be neat and organized, 2. All lab papers are assembled in the correct order, **EVERY LAB'S DATA MUST BE INITIALED AND DATED BY A LAB INSTRUCTOR OR ASSISTANT.** This is to happen when you take the data, not the next day or the next week. Failure to have these initials will result in a 0% on the lab. Late labs will not be accepted. Because of this, one lab grade will be dropped. **You can only do the assigned labs during the dates posted on your course schedule.**

The calculations section needs to be neatly organized so that your work makes sense and flows in a logical manner. The work you show must be accurate and mathematically sound. Your final answers must include the correct units, but you need not include units in all your steps.
Please note the difference between "percent difference" and "percent error".

- •Percent Error is used when you are comparing an experimental value with a theoretical value.
- •Percent Difference is used when you are comparing two experimental values.

$$\text{Percent Error} = \frac{\left|\text{Theoretical Value} - \text{Experiment al Value}\right|}{\text{Theoretical Value}} \times 100\,\%$$

$$\text{Percent Difference} = \frac{\left|\text{Exp. Value 1} - \text{Exp. Value 2}\right|}{\text{Exp. Value 1} + \text{Exp. Value 2}} \times 200\%$$

A "high" percent error/difference (usually more than 10%) often means one of three things: 1. You wrote something down wrong in your data or calculations, 2. You made mathematical errors in your calculations, or 3. You did the experiment incorrectly. NONE of these is to be written in your conclusion as "justification" for your error. **You should take your data and do your calculations early enough in the week so that you have time to ask for assistance in either finding your mistake(s) or, if need be, you can re-do the experiment.**

The table of results should include the results of appropriate calculations (including units), percent error/difference (including the % symbol), and perhaps an accepted value or two. You will often have to decide for yourself, based on what the lab entailed, the criteria that will be in your table. This is tied directly to your objective/purpose.

Your conclusion must be written in complete sentences with proper spelling, punctuation, and grammar. You needn't write a book, but one sentence not enough. Be sure to address the topics or questions stated in the Lab Report Instructions.

Lab Instructors:	College Physics I	Amanda Truong	ahall@stlcc.edu
	College Physics II	Charles Burkhardt	cburkhardt@stlcc.edu
	Engineering Physics I	Fred Baugh	jbaugh5@stlcc.edu
	Engineering Physics II	Bob Collins	rcollins@stlcc.edu

Lab Assistants: Tony Alcozer (Lab Technician)
Mark Pattys (Florissant Valley Instructor)
Craig Lincoln (Meramec Physics Instructor during the Fall/Spring)
Matt Zahra (Math SI Leader, Physics Group Tutor)