

Writing A Lab Report

1 Introduction

The lab report is a concise description of the experiment you have done and the results. There is no bonus for excessive length. In fact you will probably be penalized for an overly wordy unorganized report. Neatness and readability are important. Your TA has to be able to read your report.

Before doing your first experiment or writing your first lab report you should study the section “Error Analysis.”

2 Technical Aspects Of Your Lab Reports

Please observe the following requirements.

1. A lab report should have a cover page with the following information on it.
 - Name of the experiment.
 - Student’s name.
 - Partner’s name.
 - Section.
 - Date experiment performed.
 - Date lab report due.
2. Each page of the report should be on smooth-edged $8\frac{1}{2} \times 11$ in paper. This includes text, data sheets, diagrams, graphs, etc. Use only one side of the paper. Please do not use paper that has been torn out of a spiral notebook. Lab pages should be numbered.
3. All figures, diagrams, tables, equations, etc. should be clearly labeled and numbered. Graph axes should be labeled and units given. Data should have units given.
4. Reports should be in blue or black ink or as computer print out.
5. One partner should hand in the original data sheet, written in ink, as part of the report. If feasible, each partner should generate their own data sheet. If the experiment used DataStudio each partner can include a computer print-out of the data.
6. The pages of each report should be held together by one or more staples. Please do not use other forms of attachment. There will probably be a stapler in the lab.

3 Lab Report Format

Below is a suggested outline or format for your lab report. Some of the material needed will be given in the lab write-up, but you should use your own words.

1. Objective. What are you trying to accomplish, observe, or verify by doing this experiment?

2. Description. What does the apparatus look like and what happens? A diagram might be illuminating.
3. Theory. The guiding principles or mathematics pertinent to the experiment.
4. Procedure. In conducting the experiment, what actions do you take?
5. Data And Calculations. You should include your original data sheets, but feel free to generate new tables that contain the original data sheets and new calculations.
6. Error Analysis. How you arrive at the uncertainties you give to the numbers presented.
7. Conclusion(s). These can be of different forms. If your results can be displayed as a number or numbers, or they consistent (within the uncertainties) with known values? Or if you are basically observing a phenomena, are you seeing what you expect to see?