

Checklist for Lab Reports

Your **Abstract** should:

- Summarize the question you were seeking to answer
- Briefly describe the method used to answer the question
- Present your quantitative results with uncertainties
- Mention what your results imply

Your **Introduction** should:

- Describe what question your experiment is supposed to answer
- Explain why answering this question interesting and/or important
- Briefly summarize the experimental method used

Your **Theory section** should:

- Start with the basic defining equations
- Show all algebraic steps that aren't obvious
- Describe any assumptions or approximations made
- Display each equation on separate lines with an equation number

Your **Procedure section** should:

- List and/or describe the equipment
- Include a sketch or schematic diagram of the setup
- Describe all measurements, roughly in order
- Describe anything done to reduce experimental uncertainty
- Discuss any modifications to procedure in the handout

Your **Analysis section** should:

- Briefly describe the data
- Include unlinearized graphs of the raw data
- Include linearized graphs of data, if appropriate
- Refer to the graphs in the text
- Explain how you calculated the slope and intercept of any linear graphs
- Show the calculation of any quantities derived from slope or intercept
- Show calculations of all uncertainties
- Discuss consistency with any theoretical predictions
- Discuss the results and their implications

Your **Conclusions** should:

- Review the basic question addressed
- Report quantitative results with uncertainties
- Summarize the implications of your results

Your **graphs** should have:

- Axes scaled so that the data is shown in as much detail as possible
- Descriptive labels on the axes, including units
- Data points that are clearly plotted, including uncertainty bars
- An appropriate title and a figure number if it is in a report

Your **writing** should:

- Use correct spelling, punctuation, and grammar
- Use complete sentences, especially when including equations
- Be clear, vivid, and concise
- Be typeset so that the report is legible and easy to read

Collaboration in the writing of the lab report is not acceptable. Reports that have identical or near identical sections will be considered copies and will receive grades of zero.