

Formal Lab Report Guidelines

The laboratory report is written to inform the reader. Each section of the report should be headlined and arranged in a logical sequence. The lab report serves to describe what you did during the laboratory session, how you reduced the raw data, and what you concluded as a result. Think of the report as a document communicating these ideas to your reader. The sections in our physics lab reports should be arranged in the order listed below:

Title Page
Introduction
Theory
Experimental Setup and Procedure
Data and Results
Summary
Appendix

Title Page

This page is just like one of our informal lab reports. It should have the official lab title from the manual, a subtitle (only if you wish), the course name, date of the experiment, the principle investigator (PI) and the PI's associates.

Introduction

Try to make this section three to five sentences at the most. Clearly and concisely indicate what you set out to do.

Theory

Give the basic theory behind the lab and present any equations that are relevant to data gathering and data reduction. In this section indicate the specific data you will gather and how you will use that data.

Experimental Setup and Procedure

Here you tell about the equipment used in general terms and offer a rough outline of the procedure. Please do not write a numbered list of steps. Write at the level so that a knowledgeable person could reproduce what you did. What quantities did you measure with what instruments?

Data and Results

Here you introduce the data that should be in a table and, if appropriate, also data graphs. Explain how you went from the data to results and report those results in a second table. (Note: In this first formal lab report on RC circuits.

Conclusion

Don't get writer's writer's block here thinking you need to advance some grand conclusion. In many cases you will simply repeat a statement of your results and perhaps compare the results to some expected value. Sometime you will point to an improved way of doing the experiment to reduce uncertainty.

Bibliography

What sources did you consult in doing the lab and writing your report? At the very least lease the lab manual should be listed here.

Appendix

In this section put things like the original data pages, hand drawings and sample calculations. You reference these items from the text of your report.