

P51a — Instructions For First Lab Report

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Lent 2022/23

1 Submission

Assignment 1 Submission Deadline: 2 March 2023 12:00 Noon

Submission: submit through moodle, as a single pdf file. Maximum file size 20MB.

The first lab report is intended to summarise your experience over the first three labs. Students are required to prepare their reports individually.

2 Structure

The report should be written according to the following guidelines:

- A summary of lab 1, between 2 and 3 pages long, single column.
- A summary of lab 2, between 2 and 4 pages long, single column.
- A summary of lab 3, between 2 and 3 pages long, single column.
- Graphs and figures, referenced from within the text, are not counted toward page length.
- A printout of your Jupyter notebook, from the first lab.
- Concise answers to the following textbook questions (including code or figures from the experiment as appropriate)
 - Lab2 Exercises 5.7 through 5.11 and Exercises 6.1 through 6.3
 - Lab3 Exercises 7.1 through 7.5 (N.B. Exercise 7.5 as per handout requires no additional coding; please follow the handout.)
- Concise, clear, point-form answers are acceptable.

Minimum font size is 10pt. You will wish to use the template provided for formatting. The list of sections and their titles can be changed - you may use a *scientific-method* (Aim/Apparatus/Method/Results/Discussion/Per-lab Conclusion) for each Lab with a combined Discussion/Conclusion at the end.

Points will be deducted for exceeding the page limit.

3 Contents

The first report is intended to demonstrate that you have mastered the tools and methods taught to date and that you are able to analyse and discuss your results. Therefore, your report should focus on analysing your results. As you are attaching a printout of your notebooks, there is no need to detail each and of your results. Instead, focus on the following aspects:

- Detail any specific difficulties that you have encountered.
- Discuss surprising or unexpected results. Explain what led to these results.
- For Lab 2 and Lab 3 the textbook encourages you to pre-compute an estimate/prediction of the results; please provide these estimates/predictions where possible and use the prediction to guide your interpretation of the differences (between your results and your estimates/predictions.)
- Discuss the relations between Lab 2 and Lab 3, and how lessons learned from Lab 2 affected Lab 3.