Support for Writing Laboratory Reports

This guide is designed for undergraduate science, technology and engineering students.

Introduction

In the Science, Technology and Engineering fields, laboratory reports are used when communicating about 'an investigation' or 'research'. Becoming competent in producing laboratory (or experimental) reports as an undergraduate student will assist you to develop the skills required to write more extended and increasingly original research reports that are usually required from 3rd year onwards.

Purpose

In your report you should aim to provide a factual and accurate account of an investigation:

- what you did
- what you found
- what your results mean

Structure

Most schools provide a structure or 'template' for you to follow and there will be some variation from school to school. Some may even have the introduction and methods already completed. You then read these sections, carry out the investigation and record your results and interpretations. Other schools may require you to plan and write your report from the beginning. You will also need to read further relevant information for your discussion.

This guide gives a basic format for laboratory reports. Each school should have its own publication that details the requirements and this is usually made available to undergraduate students in the early stages of a course. If you are unaware of these publications you need to check if these were part of a set of publications for a prerequisite subject you did not do. This advice also applies to Masters students who may not have completed their undergraduate degree at this university.

A few important points about scientific writing style

- You should write in complete, grammatically correct sentences.
- If most of your sentences are long (4 or more 'clauses' or parts) you will confuse the reader. Consider making two sentences (with 3 or less parts in each) only using long sentences to include a qualification or an example.
- Be concise. If you can use one word instead of a phrase with two or more words, then choose the one word (get around = avoid).
- Be objective. Limit your use of personal pronouns (I, you, we), emotionally loaded words (wonderful, useless, lovely) and casual or ambiguous expressions ('the reaction carried on for 10 minutes').
- Use technical terms correctly. Learn what they mean, how to use them and how to spell them. Your lecturer may be able to recommend a good specialist dictionary.
- Do not use contractions (isn't, doesn't, it's), While these are common in speech, in formal writing the full form (is not, does not, it is) is expected.