Lab Notebook Guidelines A. Watt 13/11/14

Writing a lab notebook is an important skill for a scientist or engineer; the general principles outlined here apply to other environments (e.g. research, clinical, or industrial labs) but there will be variations e.g. some institutions have very strict protocols for record keeping and validation. It is important to keep a good lab book as this maintains your rights to the intellectual property arising from the discoveries you make. It must be written in such a way that a trained individual could read it and reproduce your work completely and accurately. Examples from my lab are available in the class.

Principles

- Use a good pen which will not smear or be erased.
- Put your name, contact details and course at the front.
- Create a numbered table of contents which you update as the course proceeds.
- Number and date every page as you work.
- Do not leave blank spaces and nothing should be erased or torn out of the notebook. Mistakes should be crossed out leaving them legible. This is to preserve the transparency and validity of your work under scrutiny.
- Before writing each experiment write a brief bullet point summary of aims, objectives and hypotheses.
- **Enter methods, data and calculations chronologically** as you perform experiments with enough information that someone else could repeat exactly what you did.
- Record everything you do even if it is written in the lab script.
- Graphs and tables can be stuck in with glue.
- When you have finished, with your initial aims, objectives and hypotheses in mind, write a brief summary of what you have achieved, this will help when it comes to report writing.

Lab Report Guidelines

Different Senior Demonstrators will have different requirements for how they want the report written and the principles they will use for marking. If this is not clear in the lab script ask them. In general a report should be structured as follows.

1. Introduction
   1.1. Aims and Objectives
   1.2. Review of Literature
   1.3. Hypotheses
2. Methods
3. Results and Discussion
   3.1. Experiment 1
   3.2. Experiment 2 etc.
4. Conclusion

It is important that every section is linked to the following and you create a story which exists on its own.