

### Write-up Guidelines for Lab Experiments

The essential components of the lab report are:

**Title Page** (on page 1): Should include title of the report, author's names, class number, date and the University of Iowa logo. To assure that all members are satisfied and have participated in composing the report, the names and signatures of each group member should also appear on the title page of each group lab report.

**Table of Contents** (on page 2)

**Executive Summary** (on page 3): Provide a one-paragraph summary of your report. This section should stand alone and must not include equations, references, tables, or figures. The executive summary should (1) state which test was performed; (2) briefly summarize the results of the test; (3) state the practical implications of this test.

**Objectives:** Should include the objectives for performing the lab experiment.

**Experimental Procedures:** Summary of procedures which were performed and the theoretical basis of the procedure. Include schematics, descriptions, or pictures of the experimental apparatus and equipment as well as a discussion of the precision of instruments used in the procedures. Do not bother re-typing procedures handed out in the lab, but rather include them in the appendix and refer to them in your report.

**Results and Discussion:** Present the results of the experiments using appropriate figures and tables in professional format. Discuss the results and their significance. If unusual data exists which does not support the expected results of the procedure, *do not fabricate data*. Rather, briefly but thoughtfully explain why the expected results were not obtained; considering such factors as measurement error, proficiency with procedures, weaknesses in the methodology of the procedure, or possible malfunctioning of the instrument. Also discuss possible solutions to problems encountered during procedures and future needs for improving results.

**Conclusion:** Summarize the report and state what was accomplished in the performance of these lab procedures.

**Appendices:** Hard copy of the lab procedure, sample calculations of how the data was reduced, and organized (typed/Excel) tables of raw data from all team members.

Do not put reports in plastic folders, etc. A single staple in the upper left-hand corner will suffice.

#### **Grading Policy:**

Lab reports will be **due one week later at the TA's office**. Reports turned in late will receive an automatic 10% point reduction. Reports more than one week late will not be accepted and will receive no credit. The technical content, writing quality, and appearance of your report will form the basis of its evaluation.

All reports will be prepared using word processing software and printed on a laser printer. There is no minimum number of pages required for the report. Be as brief and concise as possible while effectively communicating the results of your work. Report grades are not given by the pound.

#### **A note on technical writing:**

If you require additional guidance for writing technical reports, formats for writing short technical reports can be found in a variety of guides to technical writing available in the Engineering Library. For additional assistance with technical writing, you may consult the Hanson Technical Communication center. More information about this facility is available at <http://www.engineering.uiowa.edu/~ctc/>.