

EXPERIMENTAL LABORATORY REPORT GUIDELINES

Each report should contain the following sections, in the order given.

TITLE PAGE

The Title page must include the name and number of the course, the name of the experiment, the name(s) of those conducting the experiment, and the date of the report.

ABSTRACT

The abstract is a very important part of a report. It is a summary (one page or less) of the entire report, including the Introduction, Apparatus, Procedure, Results, and Discussion. The abstract should be written on a separate page.

In writing the abstract, address two questions: (1) what work was done in the lab and (2) what were the MAJOR conclusions. This section is frequently the only part of the report that someone will read. Often, readers who are short on time will use the abstract to select which reports are to be read in more depth and which are to be ignored.

INTRODUCTION

The introduction provides the reader with some background information indicating why the experiment was carried out. In this section try to answer why this study is important and what (if any) impact this experiment could have in our society. Basically, you are explaining what the motivation for the project is and why the project is worthy of investigation.

APPARATUS

This is a description of the experimental apparatus used, with appropriate illustrations, indicating where measurements were taken. Since the apparatus still exists, it should be described in the present tense.

PROCEDURE

This section describes exactly how the experiment was carried out, so that the results can be interpreted properly. Do not include all possible details; just provide general descriptions of the things that were done. The illustrations of the Apparatus section may be referred to in this section. Since this section describes what was done, it should be written in the past tense.

RESULTS

This section presents the measured and calculated data in an organized format, such as tables and graphs, with enough text that the reader can understand what is being presented. Do not include your rough data tables, graphs, or sketches made during the testing process. These should go in the Appendix.

DISCUSSION

This section discusses the meaning of the results, including a discussion of the accuracy of the measurements and the calculations. If possible, there should be comparisons with similar results of other investigators and/or comparison with theoretical calculations. A physical interpretation should accompany all graphs and/or tables. Any results that seem wrong should be mentioned. Also include a brief discussion of the practical importance of the experiment and suggestions for improvements of the experiments.

APPENDIX

Anything else helpful to someone who wants to do further work in this area should go in this section. Original data sheets and sample calculations go here. Note that simply including a spreadsheet in a report is not enough; use sample calculations to show how the spreadsheet values were obtained. Include model numbers, serial number, calibration dates for all instrumentation.