### **Cover Page**

(2" from top)

#### TITLE OF THE EXPERIMENT

(3/4" Blank)

by

John Smith (substitute your name here. **USE boldface font**) (List the rest of the team members. USE normal font)

(2" blank)

(Enter course number and title here)
LABORATORY REPORT

(Footer)

Computer Science, Washington State University Vancouver Date

### Sections of the Lab Report (all are required)

- **Objective** the objective is the reason you are doing the experiment. Before you write the objective you need to know why you are doing the experiment.
  - o The objective should be stated clearly and concisely in your own words.
- **Apparatus** this section contains a list of the equipment that you used to perform the experiment. When possible, draw a diagram to illustrate the apparatus.
  - o Give the make and model number of the equipment where possible.
- Method this section includes a description of what you did. This should not be a verbatim copy of the
  instructions in the lab manual. Do not report any results in this section. Summarize major steps taken to
  conduct the experiment. Include the main details (i.e. applied voltages, run times, increments of applied
  voltages, etc.).
  - You can assume that the person who will be reading your report is familiar with the equipment and has reviewed the lab handout.
- **Data** this section is where measurements taken during the experiment are reported. Data should be reported in a clear and organized way.
  - o Include tables with numbers (such as Table 1). You can then refer to these tables in the analysis section by their numbers.
  - Introduce code in the appendix and highlight any notable areas. Only include that main modules that you have authored and their respective header files.
- Results and Analysis calculations based on the data are presented in this section. The lab analysis is a
  very important part of your report and brings purpose to performing the experiment. It is a good place to
  spend a little extra time.
  - o Report all of your calculations
  - o Verify that all questions in the lab are answered, each is worth 5 points.
  - o Provide the formulas used to compute your results
  - Present the calculated data and highlight the final results (for example by putting a box around them, or by listing all results in a separate table, etc.)
  - If applicable, be sure to identify any possible sources of error and provide a discussion of whether or not you feel the errors are reasonable
  - o If applicable, discuss how well the theory has been illustrated. Identify any relationships you observed. Discuss how well the theoretical results match the experimental results.
- **Conclusion** in this section, you present a summary of your results and discuss your conclusions. This section should be concise and to the point.
  - o Be sure to go back and read your objective before writing your conclusion.
  - o Concisely state your final results (e.g. Transfer functions, gain values, time constants, etc.).
  - State any relationships you found (e.g. The time constant determines the speed of the system response and affects the time required to reach steady state).
  - Tie your conclusions to the objectives of the experiment. Was the objective for the experiment met?

## Before you submit

- Imagine that you are being paid to submit this report, Some labs are simple but still worthy of a report because it's been requested. Take the time to make sure the content matches the task and represents a document that you are proud of.
- Run spell and grammar check.
  - o I grade report format as well as readability
- Verify that your code is attached to the lab in an appendix in a fixed width font.
  - o Look at the code appendix to verify that it's readable
- Verify that your report must be limited to a maximum of five pages. (not including the title page and code appendix)
- Post your lab report in a single PDF file on blackboard.
- I may request a submittal of your code. In that case prepare an archive with the following steps.
  - Make clean
  - o Delete 'gcc' directory
  - Create the archive from the parent directory so that if I extract files I get your same project directory created.

# **Grading**

Objective	10%
Apparatus	5%
Method	20%
Data	10%
Analysis and Results	30%
Conclusion	10%
Professional Presentation	15%