

# ECE4703 Laboratory Report Guidelines

In each ECE4703 lab assignment, you will write code to realize one or more real-time DSP functions, run tests, and collect data to verify that you have realized the functions correctly. The lab report is where you will concisely present the results of your work. All laboratory reports in ECE4703 should follow the following format:

1. One **Cover Page** including the course number, the date, a title, and the report authors.
2. A concise **Introduction**. Please be brief and just tell the reader what your report is about. This will also serve as a useful reminder if you ever refer back to your work in the future. Do not just copy and paste the problem description from the assignment (that is plagiarism). Use your own words.
3. **Methods**. This section should include information about how you developed and tested your solution to the problem. Any tradeoffs that were considered should be discussed here. Any special techniques that were critical to the solution should be discussed here. This shouldn't be written as a chronological diary of your work but, rather, as a logical justification of how you designed your code and tested it.
4. **Results**. This is where you present your results as well as answers to any specific questions in the assignment. You are encouraged to try out more than the minimum asked in the lab assignment. Always explain the precise conditions of each test, discuss what the results mean, and provide at least some intuition as to why they make sense. Results without explanation have little value. Use the appropriate technique to most effectively communicate your results: sometimes tables are the best way but it may also be appropriate to include plots generated in Matlab and/or screenshots from the oscilloscope.
5. **Conclusions**. Briefly discuss any lessons learned and insight gained. Are there any potentially interesting followup tasks that build on the lab that you can think of? If you were allowed different constraints in the laboratory could you have designed a better, faster, or cheaper system? If so, how?
6. **References**. You should document the reference sources you used. That way, if you ever need to find the information again, you'll know where to go. Web references are ok but are less preferable to printed references, e.g. textbook or published papers.

Do not put full code listings in your report. It is ok to put code snippets in your report to illustrate important details of your methods or solution.

Please strive for conciseness in your writing. This will be a useful skill throughout your professional career. Your grade is not based on the length of the report; a concise, clearly written report with the key results is much better than a long, wordy, confusing report.

Your report should be of professional quality and, in addition to being a pleasure to read, should look nice. All figures must be numbered, have a descriptive caption, and referenced in the text. All tables must be numbered, have a descriptive caption, and referenced in the text. Good visualizations are important. Sloppy diagrams, plots with missing axis labels, plots with axis dimensions that don't make sense, and plots that fail to show the important features of the results will receive little or no credit. And finally, don't plagiarize.