

## ECE461 – Engineering Design II

### Project Final Report

The purpose of a final report is to tell your client what work you have completed. It documents your design project and explains the rationale supporting your engineering decisions. The report should be written to make your work, your conclusions, and your recommendations clear to the client. It is not the chronological record of your many steps in the process. Some projects may require additional specific deliverables such as computer code, technical manuals, or prototypes supplied to the client at the project's conclusion.

The client's interests demand a clear presentation of the design problem, including analyses of the needs to be met, the alternatives considered, the bases on which decisions were made, and of course, the decisions that were taken. The results should be summarized in clear, understandable language. One suggestion to clarity in the report is to place highly detailed and other supporting technical material in appendices at the end of the report.

The outline presented in the Table 1 below can be used to tell your manager how you approached your design project and why you made certain decisions. Documenting the reasoning behind your decision is especially important; you or someone else might need to address similar problems in the future.

Table 1 – An Outline of a Typical Engineering Report

<b>Abstract or Executive Summary</b>	Concise summary of the essential points in report: purpose or problem, method, results, conclusions, recommendations.
<b>Introduction and Overview</b>	Background, problem or need, purpose of report, overview, prior work
<b>Design Alternatives</b>	Alternatives considered, their evaluation, and basis for design selected.
<b>Methodology</b>	Engineering design, construction, operation
<b>Results</b>	Results of engineering. Compare with expected results.
<b>Conclusions</b>	Interpret the results; what does it all mean?
<b>Recommendations</b>	Based on engineering so far, where to go next?
<b>Supporting Materials</b>	Technical details, computer code, drawings, CDRoms to support report.

Several suggested steps in preparing the final report are listed below.

- Write down your conclusions and recommendations
- Construct a rough outline of the overall report to support your conclusions and recommendations;
- Review the outline within the team and mentor;
- Construct a topic sentence outline and review it within the team;
- Prepare a rough draft (the writing assignments may be distributed among the team);
- Solicit review of rough draft from mentor;
- Revise and rewrite as many times as needed (use only a single editor of revisions);
- Read the last draft aloud to catch mistakes and poor wording;
- Prepare final version of report.

More specific standards for report writing can be found in the ECE Writing Standards document located at <http://137.112.38.207/Labs/Documents/ECE%20Writing%20Standards%2011-27-00.PDF>