Final Report

This document outlines the general guidelines for writing the final report for students completing the first semester of the two course design project/Honours thesis course series. The students should discuss these general guidelines with their advisor and come up with a specific plan for their individual project. You should aim for a 20 page report.

1) **Title Page:** The title page must include:
    - **a.** The title of the project (note that the convention in English is for all words in the title to be capitalized, except for articles and prepositions).
    - **b.** The names and student numbers of the authors of the report (with course number for each).
    - **c.** The name of the project supervisor.
    - **d.** The name of any company involved in the project if applicable.
2) **Abstract:** The abstract is an executive summary that is maximum one page long. It should outline the overall motivation of the work, what where the goals of the project and what was achieved. This section should be as short as possible while conveying the necessary information.
3) **Acknowledgment section:** If applicable you may acknowledge the contributions of those who contributed to the project but are not on the author list.
4) **Table of contents.**
5) **Lists of tables.**
6) **List of figures.**
7) **List of abbreviations used in the report.**
8) **Introduction/Motivation/Objective Chapter:** In this section you should introduce the overall theme of the project, and state clearly what are the goals you are trying to achieve. This section should also clearly convey why this project is important, what is the potential impact (applications, etc).
9) **Background Chapter(s):** In this chapter you should summarize the theory and background that you had to learn, and that you believe are necessary for the reader to understand in order to understand the rest of the report.
10) **Design and Implementation Chapter(s):** In this section you must describe any design work that was already completed, and outline your detailed design plans for the next semester.
11) **Results and tests:** In this section you can describe the results of any initial tests and experimentation that you have done in order to make design decisions. Furthermore you can describe how you plan to test your design in order to make sure it meets the desired specifications. Also outline the design decisions that are required in order to make sure that the final product can be tested.
12) **Impact on Society and the environment:** One to two page section where explore the environmental and social impact of your project. Your analysis should include your work at McGill as part of this project, however, the main focus should be on the product you are designing, the cost/benefit/risk of manufacturing it, the cost/benefit/risk for consumers using it etc. Particular emphasis should be given to:
    a) **Use of non-renewable recourses (engery, etc)**: Consider all stages of the product from design, manufacturing, distribution, use by consumers, and disposal/recycling.

b) **Environmental benefits:** Benefits to the enviroment, comparisons with more polluting technologies etc.
c) **Safety and risk.**
d) **Benefits to society:** Quality of life, economic benefits, etc.

13) **Report on Teamwork**: In this section outline the individual contribution of each member of the group and assess how well you were able to collaborate as a team. Identify any difficulties and outline a plan to address these difficulties in the remainder of the project (during the second semester).
14) **Conclusion:** In this section you summarize again what was accomplished in this semester, provide a summary of the next steps and share any insight you have learned.
15) **References:** A list of references that where referred to throughout the text. Note that it is important to refer to each of them at least once in the main text. Please use IEEE format: http://www.ieee.org/documents/ieeecitationref.pdf
16) **Appendices:** In many cases it is not necessary to have appendices. You may include appendices for material that do not naturally fit as part of the main report. For example:
    a. Long computer code sections that you feel are necessary to include in the report but would interrupt the flow if included in the main section.
    b. User manuals and other documentation for your designs, computer code, etc.
    c. Any important information that is generally long and detailed and would interrupt the flow of the main sections.