

## **MSE Technical Report Guidelines**

### **Purpose**

Work term reports are intended to help students to develop their communication and technical writing skills. Consequently, the report will be assessed based on the topic selection, technical analysis, format, grammar, writing style, and conclusions.

### **Requirements Schedule for MSE Surrey Students**

1<sup>st</sup> Work Term – Technical Report I (~1500 words)

2<sup>nd</sup> Work Term – Technical Report II (~1500 words) and Oral Presentation (10 min PowerPoint)

3<sup>rd</sup> Work Term – Technical Report III (~3000 words)

### **Submissions and Due Dates**

Technical Reports or Confidential grading forms are submitted via Canvas

Fall Semester: **December 10<sup>th</sup>**

Spring Semester: **April 10<sup>th</sup>**

Summer Semester: **August 10<sup>th</sup>**

If your report is not satisfactory, you will be given written feedback, and you will be required to revise your report based on this feedback. If you fail to submit a satisfactorily revised report, your work term credit will be revoked.

### **Evaluation**

Your report will be marked by a Mechatronic Systems Engineering Faculty member and will be evaluated on the following:

- Abstract
- Introduction
- Problem & Objectives
- Analysis
- Conclusions
- Format
- Style
- Correctness

### **Confidentiality**

Your work report should not contain proprietary or highly confidential company information. Be sure to check with your supervisor as to what information can or cannot be included. Confidential work reports are discouraged but if your report is deemed confidential by your co-op supervisor, he/she should contact your Co-op Coordinator to request the form so that the report can be marked in-house. If the nature of your Co-op employment does not give you suitable material for a written technical report, please contact your Co-op Coordinator.

## Selecting a Suitable Topic

Your report must identify a technical task or project that you have completed during the term and describe the problems to be addressed. Most importantly, your report must have **analytic content**. Your report must analyze a particular problem by providing several alternative options, and then selecting the most appropriate for implementation. Your analysis should be based on either qualitative or quantitative data. Reports without an analytical component are unacceptable. These include descriptions of equipment, processes, software codes, mathematical models, or user guides/manuals.

## Suggested Format

Letter of Submittal\*

Title Page\*

Abstract\*

Table of Contents\*

List of Figures\*

List of Tables\*

Glossary (optional)\*

Introduction/Background/Organization

Body/Technical Details

Conclusion/Recommendations/Acknowledgements

References\*

Technical Appendices (optional)\*

## NOTES:

- Items marked with a \* do not count towards your page limit
- Minor deviations to the suggested format are acceptable. Regardless of the format being used, be consistent.

## Letter of Submittal

You are required to define the contributions of your work to the project and to the team (Figure 1). This will enable the reader to evaluate your problem solving abilities, technical skills, team and independent work skills, and your organizational abilities.

**NOTE: Your Letter of Submittal must be signed. See page 4 for a sample letter of submittal.**

## Abstract

The abstract is a brief summary of the report and should be different from the introduction of the report. The abstract is used to highlight the purpose, the main points covered, conclusions, and recommendations of your report. The abstract should be less than 300 words.

## Introduction/Background/Organization

The introduction should provide the motivation for this report. It should also provide sufficient background for the reader for them to understand the need for this work and follow the technical development. Particular focus should be placed on the significance of the work within the company's "big picture". The introduction should be approximately one page in the MSE Report I&II and two pages in the MSE Report III. The introduction should conclude with a clear statement of problem and the objectives for the report.

## Body/Technical Details

The body of the report is where you present your engineering analysis, including the approach used to solve the problem, different alternatives considered and the reasons (including calculations, if appropriate) for selecting the chosen solution. Figures and tables should be embedded in the text and count towards the total page limits.

## Conclusions/Recommendations/Acknowledgements

The conclusions should state the major inferences based on the body of the report. The recommendations are suggested courses of action based on the findings and conclusions of the report. The conclusions and recommendations are not a summary of your report. The conclusions and recommendations should be short (half a page to one page). It is expected that you have two or more recommendations in your report.

## References

Acknowledge the materials used from all sources in preparing your report, including the figures and data. Even if the figures and data have been modified, you must still cite the source. Failure to do so is considered a plagiarism. Follow proper referencing format, such as MLA, APA or IEEE format but use the same format throughout the entire report. References are a critical component of thorough engineering analysis and communication. References must be used in you report. References must be cited where they occur in the text.

### For example:

Co-op work reports are an important element of the work term experience and provide students an opportunity to demonstrate their written communication skills. At Simon Fraser University 35% of all co-op students get hired back by a co-op employer after graduation [1]. Therefore co-op work reports are an important means for employers to evaluate a student's future potential in their company.

### References:

- 1) Worker, HR (2010) "Imaginary statistics of Simon Fraser University co-op students" *Journal of Imaginary Statistics* 12(1), 1840-1852.

## General Comments

- The body of the report should be five pages (~1500 words) for MSE Technical Report I & II and ten pages (~3000 words) for MSE Technical Report III
- Use formal English (avoid slang)
- First person should only be used in the preface. The remainder of the report should be written in third person
- All pages before the body are numbered
- Always cite the figures and tables **before** they appear in the report body
- Number all figures/tables and provide a title/caption
- All figures and tables should print legibly (minimum 300 dpi)
- Use size 12-point serif font
- Body text should be single spaced
- Define all acronyms and jargons
- The margins of the report should be no greater than 1" top, bottom, and sides of each page

[Company address]  
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1 October 2009

*Director of Department*, Director  
*Department*  
 Simon Fraser University  
 Burnaby, BC, V5A 1S6

Dear Professor *Director*:

This report, “Minimizing the Risk and Effects of Pesticides used in Commercial Facilities” was prepared as a requirement for my third work term. This report is written for the Field Operations group at Central Engineering Consulting in response to the problems associated the use of pesticides in commercial buildings. The purpose of this report is to discuss some feasible solutions to overcome the current deficiencies when pesticides are being used.

Central Engineering Consulting provides clients with detailed analysis on various pests monitoring methods ranging from laboratory trials to monitoring buildings using state-of the art data collection equipment.

I was a member of the Field Operations group at Central Engineering Consulting, under the supervision of Ms. Ann Lee. The Field Operations group is responsible for continuous monitoring, servicing, maintaining, and upgrading of the equipment used in data collection of field experiments.

I would like to thank Central Engineering Consulting for providing me with the resources, and equipment that were used for this project. Furthermore, I would like to thank John Doe, a lab technician at Central Engineering Consulting, for providing me with background information, resources and valuable advice on pesticide effects. Finally, I would like to acknowledge and thank Ms. Michelle Smith for proofreading my report and providing recommendations on the overall presentation.

I hereby confirm that I have received no further help other than what is mentioned above in writing this report. I also confirm this report has not been previously submitted for academic credits at this or any other institution.

Sincerely,

(Signature)  
 Student Name  
 ID 00000000

**Figure 1: Example Letter of Submittal**