



SFU

SIMON FRASER UNIVERSITY  
THINKING OF THE WORLD

# Technical Report Writing

05 December 2011 - Nicholas C. Doyle and Stephanie DeRapp

- Document a technical project
  - Provide background information
  - Describe the problem/project
  - Explain the work done
  - Analyze the results
- Concise, professional, easy to follow
- Not a description of your co-op position
  - The report focuses on the project, not you

## Purpose of a Technical Report

- Consistent use of font and spacing
  - 11 or 12-point font
  - Times New Roman, Arial, Calibri, Cambria
  - NOT Comic Sans!
- Proper Length
  - 1500 words for work term 1 and 2
  - 3000 words for work term 3
- Pictures and Diagrams!

## General Guidelines

- Use standard, formal English
  - Avoid slang and informal/conversational language
  - Write in the third person (not first person)
  - Define technical terms/acronyms on first use
  - Write for the audience
- Take advantage of features in Microsoft Word
  - Automatic generation of Table of Contents
  - Section headers and styles
  - References and bibliography

## General Guidelines

- Letter of Transmittal
- Title Page
- Abstract (if not on title page)
- Table of Contents
- List of Figures/Tables (if applicable)
- Introduction
- Background
- Body (technical analysis)
- Conclusions/Recommendations
- References/Citations

# Report Format

Small summary of the content of the report

- ☐ Name/Student ID number
- ☐ Work term number
- ☐ Name of manager and department
- ☐ Date Submitted
- ☐ Addressed to Mechatronics program director
  - ☐ Dr. Golnaraghi

## Cover Letter

- ☐ Formal business letter
  - ☐ Signed
- ☐ First-person can be used
- ☐ Statement about originality

## Cover Letter

Identifies the topic and author of the report

- ☐ Title of report (clearly identifying subject)
- ☐ Name/student ID number
- ☐ Submission Date

# Title Page



Provides a short, 1-paragraph summary of the report

- ☐ Concise but informative
- ☐ Summarize findings / conclusions / recommendations
- ☐ On title page or separate page before ToC

## Abstract

Identifies the contents and organization of the report

- ☐ Section headings
- ☐ Page numbers
- ☐ Don't list the ToC in the ToC

## Table of Contents

Identifies images/photos/diagrams used in the report

- ☐ Figure number
- ☐ Figure title and page number

List of Figures (Optional)

Identifies tables used in the report

- ❑ Figure number

- ❑ Table title and page number

## List of Tables (Optional)

Introduces the reader to the subject of the report

- ❑ Subject and purpose of the report
- ❑ Scope of the project
- ❑ Outline of the report to follow

## Introduction

Provide background information on the subject

- ☐ Information about the company and the project
- ☐ Brief introduction to the technology used in the report
- ☐ Information the intended audience needs to understand the report

## Background

Present the details (test results, analysis, etc.) necessary to the report

- ❑ Develop the analysis in a clear, logical manner relevant to project scope
- ❑ Include (and reference) all relevant figures, tables, footnote
- ❑ Additional information can go in an appendix, but must be referenced

## Report Body

Briefly summarize the major conclusions of the investigation and a discussion of future work

- ❑ Based on information presented in work
- ❑ Each conclusion in a separate paragraph
- ❑ Recommendations must logically follow from the conclusions and supported by report body

## Conclusions and Recommendations



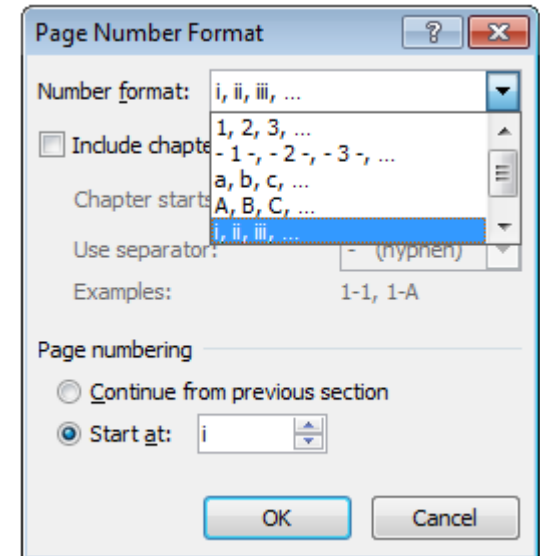
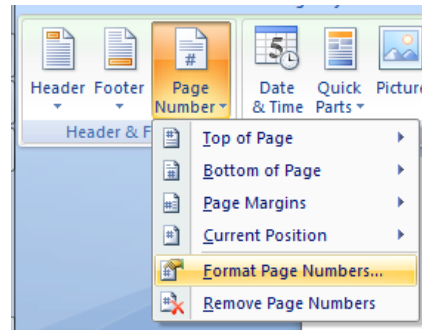
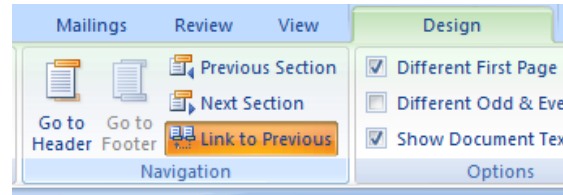
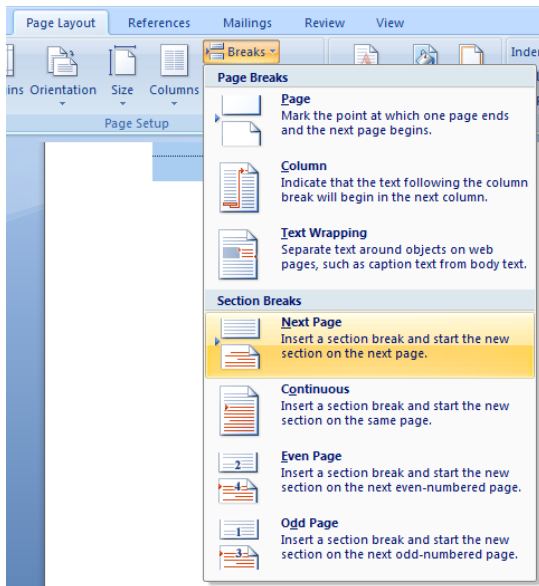
- Make sure to cite any work referenced
  - Including images/diagrams
  - Cite where used (not just listed at the end).
  - University policy on plagiarism is harsh
    - <http://www.sfu.ca/policies/gazette/student.html>
- Provide a list of references at the end
  - Word has automatic functionality
  - APA/MLA are popular formats
  - IEEE Style Guide
    - <http://www.ieee.org/documents/ieeecitationref.pdf>

# References

- Proper page numbering
  - No numbering on cover letter, title page
  - Use Roman numbering (i, ii, etc.) on the abstract/table of contents/etc.
  - Start normal numbering (1, 2, 3) with the introduction.

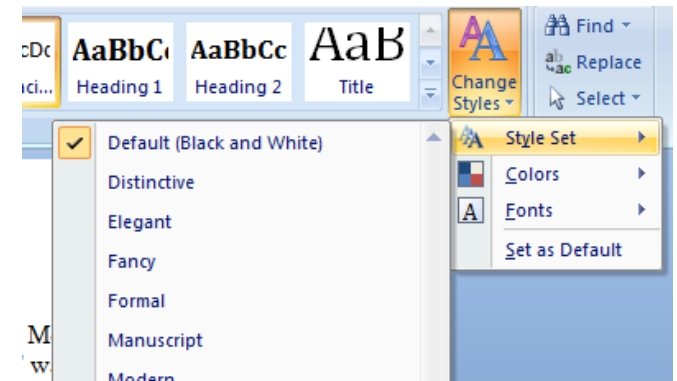
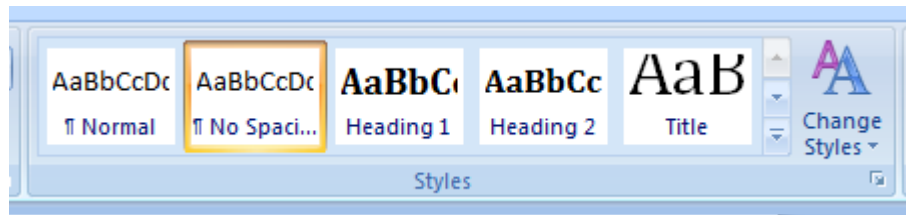
## Page Numbering

- New “section” to change numbering type
  - Remove “link to previous” to restart numbering
  - Header & Footer → Page Number → Format



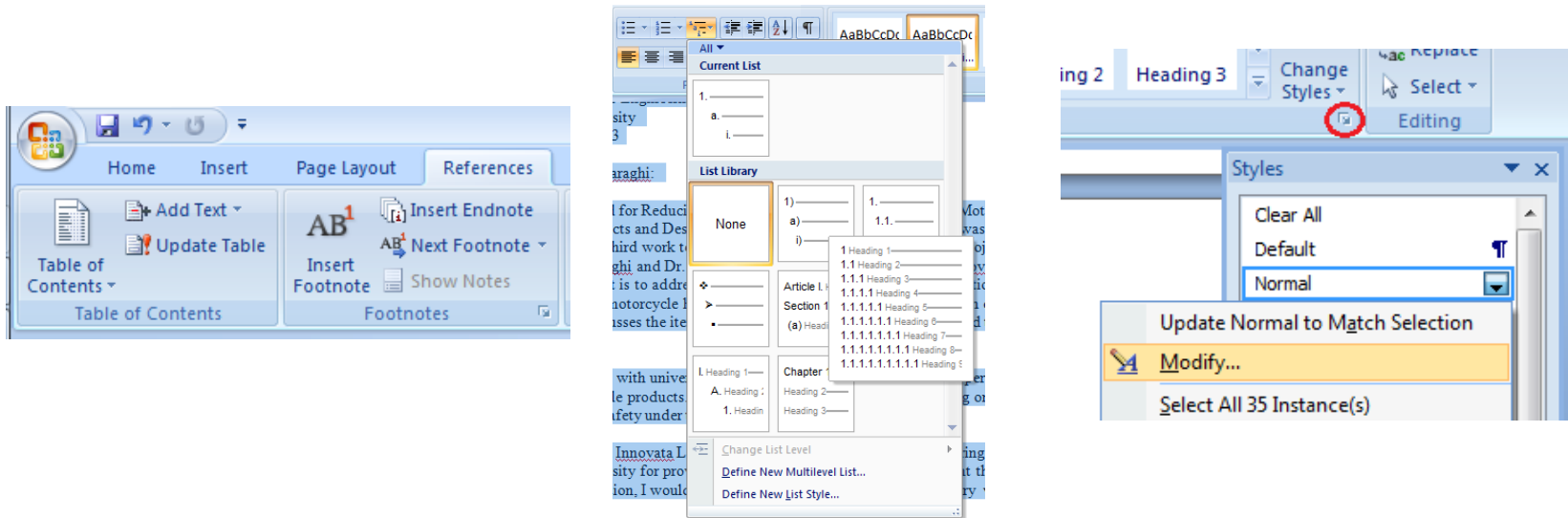
# Page Numbering

- Use styles in MS Word
  - Use Heading 1/Heading 2/etc. for the heading/subheadings
  - Change the style set (Black and White or Manuscript)
  - **DON'T** just change font/bold!



# Table of Contents Creation

- References → Table of Contents
- Consider section numbering
- Styles can be modified (to change fonts, etc.)



# Table of Contents Creation

- All figures need captions
  - Right-click on figure and select “Insert Caption”
  - Type in details
  - Figure is automatically numbered

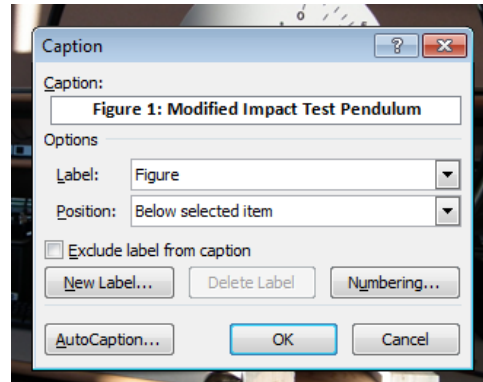
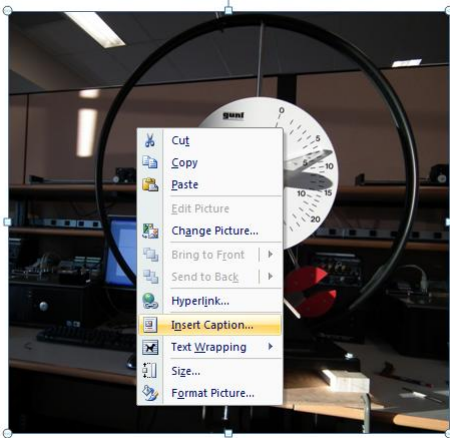
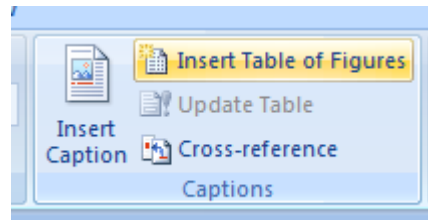


Figure 1: Modified Impact Test Pendulum

# Table of Figures Creation

- References → Captions → Insert Table of Figures



## Table of Figures Creation

- ❑ Abstract (10%)
  - ❑ Appropriate detail and organization, including key conclusion and recommendations
- ❑ Introduction (10%)
  - ❑ Clearly describes the motivation and need for this report
- ❑ Problem and Objectives (10%)
  - ❑ Clearly detail the specific problem to be addressed by this report and list the objectives
- ❑ Analysis (20%)
  - ❑ Detail different options for solving the problem and provide justification for the chosen solution

## Grading Scale



- ❑ Conclusions (10%)
  - ❑ Summarize the important findings and provide appropriate recommendations for future work
- ❑ Format (20%)
  - ❑ Follow standard practices – headings, references, labels, pagination, figures, equations
- ❑ Style (10%)
  - ❑ Handle stylistic issues as appropriate for the audience
- ❑ Correctness (10%)
  - ❑ Grammar, punctuation and spelling

## Grading Scale