



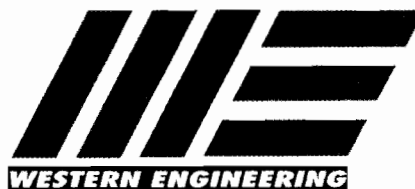
**The University of Western Ontario  
Faculty of Engineering**

**Master of Engineering Program (M.Eng.)**

**Guide for Preparation of E.S. 500  
Final Reports**

**Dated: August 2006**

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# GUIDE FOR PREPARATION OF E.S. 500 PROJECT REPORTS

## Criteria for Acceptance of Reports

The criteria for acceptance are listed in detail in this guide, but, in general, the requirements may be summarized as follows:

- (a) that the text and accompanying illustrative material be clear and error free;
- (b) that the layout of each page be set within standard margins; and
- (c) that high quality paper be used.

### 1. Paper

For Original Typescript -The original copy must be produced on 8 ½ x 11 inch good quality (20 lb) bond paper.

#### 1.1.1. Non-Textual Material

Non-Textual material to be included with the original must be duplicated on 20 lb (75g/m<sup>2</sup>) paper.

### 2. Typescript

#### General

Text must be on one side of the paper only. No smaller than 12 point must be used, but a small point size, not less than 9, is acceptable for footnotes, graphs, formulas, and appendices. Use either one and one-half or double space for all textual material; footnotes and long quotations may be single-spaced. The entire report must be in the same type style and care should be taken to ensure evenness of impression and blackness. This applies to appendices as well as to the main body. If necessary, tables may be typed and then reduced to 8 ½ x 11 inch sized paper.

#### Units

The International Systems of Units (S.I.) shall be used unless there is good reason not to do so. Permission to use other than S.I. must be obtained from your faculty advisor.

### 3. Margins

- (a) It is imperative that the specified margins be observed on all copy.
- (b) Leave a 1½ inch (38 mm) margin from the left-hand edge of the paper to allow for binding. Leave 1 inch (25 mm) margins from top, bottom, and right edges.

- (c) These margins also apply to all illustrative material: diagrams, maps, photographs, charts, tables, computer print-outs, etc.

#### 4. Footnotes

On occasion it is useful to use a footnote<sup>1</sup> in addition to references. Such a note must be identified at the appropriate place in the text with a super-script Arabic numeral and included with the same number at the bottom of the page.

#### 5. Illustrative Material

##### a. General

- (a) All illustrative material must be produced by either offset or photocopier on 8 ½ x 11 inch (210 x 297mm) 20 lb (75g/m<sup>2</sup>) bond paper. Each figure, table, etc. must be numbered and captioned. Either Roman or Arabic numerals may be used for tables and figures but use Arabic numbers if the figures (or tables) exceeds twenty (20).
- (b) Figure number and caption must appear beneath the figure. Table numbers and caption must appear above the table.
- (c) All illustrative material must be listed (see Appendix 2).
- (d) All terms, abbreviations and symbols used in illustrations must correspond to those used in the text.

##### b. Diagrams, Maps, Graphs and Tables

- (a) Diagrams, maps, graphs and tables for reproduction, either by photocopier or offset must be drawn with black ink. If you have a map or other illustration to be reproduced from a book please take the book to the person who is doing the reproduction.
- (b) Do not use colours on graphs, diagrams, etc. which are going to be reproduced. Lines on a graph should be identified by labels or symbols rather than colour.

##### c. Photographs

A good photograph will have good contrast. Dry-mounting tissue provides the neatest and most permanent method of affixing photographs. Stick glue and spray adhesives are also acceptable. Rubber cement, liquid glue, staples, scotch tape, etc. **are not acceptable.**

##### d. Computer Print-outs

Computer print-outs including plots, must be dark enough to reproduce well. There must be the standard margin on each side. Pages wider than 8 ½ x 11 (210 x 297 mm) must be photo-reduced but the material must be still readable. Before having a program or results printed out, specify that the print-out is for reproduction.

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<sup>1</sup> Footnotes should be used sparingly.

**e. Reductions**

To provide clear reductions, the following suggestions for masters are offered:

- (a) make lines thick enough so they will take a reduction
- (b) spaces between lines must be wide enough not to blur together on reduction, and
- (c) all lettering should be open style so that it will not block on reductions and must be large enough to be legible after reduction.

**f. Over-Size Pages**

If charts, graphs, maps, and tables larger than the standard page size have to be used in your report, they should be carefully folded into the manuscript. The fold should extend to about 1/8 (3mm) of the full width of the page.

**6. Titling Your Report**

It is essential that the title be a meaningful description of the content of your work. Avoid oblique references and be sure to use work substitutes for formulae, symbols, superscripts, Greek letters and so on. A sample title page has been included as Appendix 5.

**7. Attestation**

A signed attestation is required to certify that the report represents the candidate's own work (see Appendix 6).

**8. Abstract**

The abstract is expected to give a succinct account of the report so that a reader can decide whether or not to read the complete work. An abstract should fit on one page although a longer abstract is acceptable if clarify requires such length. Although headings are not used an abstract should contain:

- (a) statement of the problem
- (b) procedure or methods
- (c) results
- (d) conclusions

**References are not cited in an abstract**

## 9. Numbering Pages

**General** - Each page in a report must be assigned a number. Be sure to number the pages on which illustrative material appears as well as pages on which textual material appears.

### Preliminary Section

The accepted order within the preliminary section is:

- Title Page
- Abstract
- Attestation
- Acknowledgements
- Table of Contents
- List of Tables
- List of Figures
- Nomenclature

For the preliminary section small Roman numerals are used. The numbers begin with the Abstract as ii (the Title Page counts as page I, but the number does not appear). The numerals are placed in the center of the pages, ½ in (13mm) from the bottom.

### Remainder

For the remainder of the report – including the text, illustrations, appendices, references and vita – use Arabic numbers beginning with 1 and running consecutively to the end of the report. The numbers are placed in the upper right-hand corner about ½ in (13mm) from each page. On pages carrying a major heading – such as the first page of a chapter or the references – the page number should be at the center bottom of the page.

## 10. Use of Headings

### General

It is usually easier to read a report if headings and sub-headings are used judiciously. When using headings, a generally accepted order of priority must be used. One such order is

- BLOCK LETTERS UNDERLINED
- BLOCK LETTERS NOT UNDERLINED
- Lower Case Letters Underlined
- Lower Case Letters Not Underlined

## **Suggested Section Headings**

The following suggestions are for guidance and will be suitable for the majority of reports. However, in a particular report some variation may seem appropriate. In this case the matter should be discussed with the faculty advisor.

**(i) Introduction**

The introduction should provide the background for the project and clearly state the objectives, the method of attack, and the scope.

**(ii) Historical Review**

This is a review of the relevant work in the field of study. It should be comparative in nature and critical where appropriate.

**(iii) Theory**

Theoretical developments that are new or are essential to the understanding of the main body of the report should be presented. One must exercise judgment about the amount of detail to be presented here. In instances where the theory is not the main thrust of the report, it is often appropriate to present a skeletal outline of theory emphasizing the important features with references to a detailed account in an appendix.

**(iv) Experimental Apparatus and Procedures**

Descriptions of experimental apparatus and procedures may appear in one section but this is not a general rule; it may be more appropriate for a particular report to separate them into two sections. Remember that another person with your knowledge and experience should be able to duplicate your experiments from the description given. This requires a clear, concise description of experimental procedures and a detailed description of special apparatus that has been designed and fabricated for the experiments. Note that it may be appropriate to relegate part of the details of such designs to an appendix.

**(v) Results and Discussions**

These may be presented together in one section or separately in two sections depending on the nature of the project. Experimental results should be presented in graphical and/or tabular form. The form chosen depends on the nature of the results. In some instances, it may be necessary to support a graphical display with tabulated data in an appendix. Prepare graphs and tables carefully and be sure that the units of quantities are specific. Each table and/or graph must include a clear description of the results and their meaning.

The discussion is very important and should be a thoughtful interpretation of the results as they relate to the objective of the project.

**(vi) Conclusions and Recommendations**

This section should be concise and should emphasize the significant conclusions reached. Conclusions must be based on the evidence presented and must be related to the stated objective of the project. This is no place to introduce new ideas. The recommendations for future work must be carefully stated and should follow logically from the discussion and conclusions of the work done for the project.

**11. Appendices**

It is usually desirable to keep the main body of the report as concise as possible, and to place in appendices, supplementary material that the author feels is important for the completeness of the report. However, one must not overdo it; the main body should be sufficiently complete that the reader can understand the report without reference to the appendix. Examples of information that might be relegated to appendices are:

- (a) detailed theoretical developments that are not the main thrust of the project
- (b) tabulated data used for drawing graphs in the main body
- (c) list of instrumentation, specifications, calibrations, etc.
- (d) listing of computer programs used, and
- (e) design calculations

**12. References**

Include the list of references immediately following the appendices.

- (a) List the references in the order in which they appear in the text and in the form below:

**(i) For a periodical:**

BINGHAM, C.M.D. GODFREY, AND J.W. TUCKEY. Modern techniques of power spectrum estimation. IEEE Trans. AU-15: 56-66, 2001

**(ii) For a book:**

JENKINS, G.M. AND D.G. WATTS. Spectral Analysis and Its Applications, San Francisco: Holden-Day, 2001, pp. 345-347.

- (b) Refer to the reference in the text by inserting the number of the reference in brackets immediately following the comment related to the reference e.g. "In applying the identification computations were done...." (5).

**13. Direct Quotes and/or Copies**

When it is found useful to quote directly from other sources, the reference must be clearly stated, and the material quoted enclosed in quotation marks or italicized. In some cases you may wish to reproduce figures from other sources; in such cases credit must be given to the source and one must be aware of possible violation of copyright regulations.

**14. Vita**

A vita page must be included. See sample page in Appendix 3.

**15. Acknowledgements**

Acknowledgements must be written in the third person and be kept to a concise recognition of relevant contributions.

**16. Binding**

Submit one bound copy to your supervisor and one unbound copy to the Graduate Affairs Assistant of your department.

## APPENDIX 1

### SAMPLE TABLE OF CONTENTS

#### TABLE OF CONTENTS

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## APPENDIX 2

### SAMPLE LIST OF FIGURES

#### LIST OF FIGURES

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APPENDIX 3  
**SAMPLE TITLE PAGE**

**AIR POLLUTON DUE TO TRANSPORTATION**

by

**Robert A. Student**

Submitted in partial fulfillment of the  
requirements for the degree of  
Master of Engineering

Faculty of Engineering  
Department of Mechanical & Materials Engineering  
The University of Western Ontario  
London, Ontario, Canada  
September, 2003

Faculty Advisor: John L. Sullivan

APPENDIX 4

**SAMPLE ATTESTATION PAGE**

**ATTESTATION**

**I herby attest that I am the sole author of this report.**

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**Signature**