

DEPARTMENT OF STATISTICS & OPERATIONS RESEARCH



PROJECT GUIDELINES

These guidelines are being forwarded to students mainly to encourage them to adopt a coherent discipline and philosophy when submitting project work for assessment as part of their coursework. They are largely inspired by guidelines for dissertation preparation and presentation. Some parts of these guidelines may therefore not apply in full to specific projects. The printing section is included to expose students to the need for conformity and clarity of presentation.

GENERAL FORM OF A PROJECT

A project offers the opportunity for students to appropriate themselves of relevant mathematical and statistical theories, assembling them into a focused tool of a modeling or mathematically investigative nature in contexts relevant to Probability, Statistics and Operations Research. The written report must set out clearly the aims, context, content and outcome of their work.

CONTENTS

As an approximate guide, a project is expected to follow general lines of development:

- 1) Introduction
 - a) Preliminary discussion of the general problem being considered
 - b) Background and context of problem
 - c) Methodology used
- 2) Methodology
 - a) Identification and design of model or Identification of the relevant theories
 - b) Estimation of model or Development of relevant theory
 - c) Description and development of relevant algorithms if applicable
 - d) Software implementation if applicable
 - e) Data capture
 - f) Data Analysis
- 3) Description of Findings
 - a) Presentation of results and tables
 - b) Interpretation of results
- 4) Conclusions and Implications
 - a) Presentation of major results and findings in summary form
 - b) Underlining of limitations
 - c) Revisiting of original problem
 - d) Implications for future research

CONSTRUCTION AND FORMAT

PAPER

1. The text and, whenever possible, all the material for the paper including illustrations, should be produced on A4 sized paper (297 x 210mm), white and unpatterned.
2. Use the same paper throughout the project, including all tables, figures, and appendices (except for photos and maps).

MARGINS

1. The binding on the binding edge of the page – the back or inside margin on the left-hand edge of the recto should be not less than 40mm, to allow for binding, reading, reproduction and scanning. The other margins – the head or top margin, the tail or bottom margin, the foreedge or outside margin – should be not less than 20mm.
2. The running head or running title with the pagination should be within the recommended margins. The same holds good for the footnote.
3. Every chapter should begin on a new page with a dropdown to about a third of the page, that is a top margin of about 100mm. (*see sample*)

TYPEFACE/PRINTING

1. The font design should be as clear as possible, fancy and compressed fonts are not to be used.
2. The font size 12pt is generally preferred throughout. Smaller fonts may be used in footnotes and in captions to illustrations, but care should be taken that they are not so small as to render than illegible.
3. Print must be letter quality: clear, crisp, clean and dark. Any printer (laser, inkjet) that meets the print quality may be used.
4. Printing should be on only one side of the paper - double sided printing is not acceptable.

LINE AND PARAGRAPH SPACING

1. Line spacing should be enough to allow readers ease of horizontal scanning. One-and-a-half line spacing (18pt high) is recommended. Single-spacing (12pt high) is to be used in footnotes.
2. Numbered or bulleted paragraphs should be flushed left with additional line space between paragraphs.

PAGE NUMBERS

1. Page numbers must be placed at the bottom of the page aligned with the right side margin.
2. All pages are to be numbered consecutively from Chapter 1 through Appendices, including figures, tables, and photographs.
3. The introductory pages such as the Table of Contents or Table of Figures should be numbered at bottom center in small roman numerals (ii, iii, iv, etc.). The title page should not be numbered. It is assumed to be the page i.

FOOTNOTES/ENDNOTES

Footnotes should be placed within the recommended margins (*see sample page*) (e.g., Borg, 2000), and should be clearly separated from the main text by about 15mm. Both footnotes and endnotes should be single-spaced and in a smaller character size (*usually 2pt smaller*) than the main text. There must be overall consistency.

TABLES, FIGURES, ILLUSTRATIONS, AND PHOTOGRAPHS

1. Charts, graphs, diagrams, maps, figures, musical scores, photographs and other pictorial components must be clear, clean and pertinent to the subject matter of the project. All such items should be firmly fixed or securely enclosed in the project.
2. Colour or black/white xerox illustrations are acceptable, as well as colour used in charts, figures, etc.
3. Materials that will not fit within the margins such as large, folded maps, questionnaires that due to copyright laws cannot be shrunk, video tapes, etc, might need the following provisions:
 - ⇒ Copier reduction of the size of the item until it fits- as long as it is still readable.
 - ⇒ Page folded out- always so it opens to the right.
 - ⇒ In the case of really large items like diskettes, CD or videotapes, material be placed in a packet at the back of the project.
4. Tables, figures, etc. should be placed in the text immediately following discussion of the topic portrayed (i.e., on the same page if space is available, or on the following page.) If there are several tables or figures that interrelate to one another, they may be placed at the end of a chapter, end of the manuscript, or in an appendix. If this is the case, a List of Figures and List of Tables should be provided immediately following the Table of Contents.
5. Figures and Tables must be numbered. The table/figure caption can be on the same page, or on a page either preceding or facing the table/figure.

REFERENCES

1. The reference list, including all publications referred to, should appear at the end of the project.
2. References should be listed in conformity with standard bibliographical rules adhered to in scientific publications. Students should consult standard style manuals like *A Manual for Writers of Term Papers, Theses, and Dissertations*, by K. Turabian (LB2369 .T8 1987), the *Chicago Manual of Style* (Z253 .U69 1993). A good guide on how to cite electronic resources, e.g. Internet sites, consult *Electronic Styles is Handbook for Citing Electronic Information*, second edition, by Xia Li and Nancy B. Crane (PN171.F56 L5 1996).

TABLE OF CONTENTS

Contents

Abstract	ii
Acknowledgements	iii
Table of Contents	iv
Lists of Tables / Figures / Illustrations	v
Chapter 1	
Introduction	1
Chapter 2	
Literature Review	6
Chapter 3	
Methodology	20
Chapter 4	
Description of Findings	40
Chapter 5	
Conclusions & Implications	50
Appendices	60
References	70

LIST OF FIGURES / TABLES

Figures

Figure 1

Title of Figure13

Figure 2

Title of Figure51

Figure 3

Title of Figure54

Tables

Table 1

Title of Table52

Table 2

Title of Table60

Table 3

Title of Table70

