



**UTeM**

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

# **GUIDELINES**

## **FOR THE PREPARATION OF THESIS, DISSERTATION & REPORT FOR GRADUATE PROGRAMMES**

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2013  
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Published by:  
Centre for Graduate Studies  
Universiti Teknikal Malaysia Melaka  
2013



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# GUIDELINES FOR THE PREPARATION OF THESIS, DISSERTATION & REPORT FOR GRADUATE PROGRAMMES

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA

CENTRE FOR GRADUATE STUDIES  
UNIVERSITI TEKNIKAL MALAYSIA MELAKA  
2013

PERPUSTAKAAN Universiti Teknikal Malaysia Melaka	
No. Aksesan 87516125	No. Panggilan LB 2369 455 2013 a
Tarikh 11 SEP 2023	no/301023

اونيورسيتي تيكنيكل مليسيا ملاك  
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

Published by Centre of Graduate Studies  
Universiti Teknikal Malaysia Melaka, Hang Tuah Jaya,  
76100 Durian Tunggal, Melaka, Malaysia.  
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Printed and bound in Melaka, Malaysia.

## PREFACE

A thesis is a document submitted in support of candidature for an academic degree or professional qualification presenting the author's research and findings. A thesis is evidence of the student's knowledge, skills and competence in their area of specialisation. A thesis indicates the student's achievement as a postgraduate student and marks the student's entry into the world of academia.

Preparation of thesis, dissertation and report of master project is a complex and meticulous process. It involves numerous steps beginning with the submission of a research proposal and ending with the binding of the thesis and dissertation. Whilst originality is very much expected in a thesis, the thesis is still bound by certain format, conventions and rules, which must be observed.

This book is a reference and guide prepared by the Centre for Graduate Studies (PPS) to help postgraduate students of Universiti Teknikal Malaysia Melaka (UTeM) in the preparation of their thesis, dissertation and report of master project. It is intended to assist students in ensuring that they conform to the formats which fulfill the requirements of the university. The book contains both general and specific guidelines in preparing for the final submission of the thesis, including instruction prior to submission, the languages required for abstracts, instructions on matters relating to format, length, footnotes, tables and appendices, bibliography/references, citation and referencing styles, copyright and publication. Thus, it is the responsibility of each candidate to ensure that his or her thesis conforms to the Guidelines. The academic supervisors can advise students in the preparation of the thesis, dissertation and report according to the Guidelines in this book. This Guideline is also available at the PPS website ([www.utem.edu.my/pps](http://www.utem.edu.my/pps)).

All theses, dissertations and reports of master project should be divided into appropriate sections or chapters. Candidates should bear in mind that thesis examiners deplore overlong or verbose thesis, therefore it is the responsibility of the candidate to provide a well-organized and well-written thesis. The order of thesis sections given is intended to serve as a guide. Many of these sections are self-explanatory.

Finally, PPS wishes the best of luck to all candidates during the thesis, dissertation and report of master project preparation. It is our sincere hope that all theses, dissertations or reports of master project will be of good quality prepared within the bound of acceptable ethical standard.

## TABLE OF CONTENTS

	PAGE
<b>PREFACE</b>	i
<b>TABLE OF CONTENTS</b>	ii
<b>APPENDICES</b>	iv
<b>1 Introduction</b>	<b>1</b>
<b>2 Submission of Thesis for Evaluation/Examination</b>	<b>1</b>
<b>3 Arrangement of Contents</b>	<b>2</b>
3.1 Pre-title page (Front Cover)	2
3.2 Title Page	2
3.3 Copyright (optional)	3
3.4 Declaration Page	3
3.5 Approval	3
3.6 Dedication (optional)	3
3.7 Abstract and <i>Abstrak</i>	3
3.8 Acknowledgements	3
3.9 Table of Contents	3
3.10 List of Tables, Figures (Illustrations, Plates/Photographs)	4
3.11 List of Abbreviations, Symbols, Specialized Nomenclature	4
3.12 List of publications (if any)	4
3.13 Main text of the thesis	5
3.13.1 Chapter Layout	5
<b>4 Format of Thesis</b>	<b>7</b>
4.1 Language	7
4.2 Typing	7
4.2.1 Font	7
4.2.2 Space and Format	7
4.2.3 Symbol	8
4.2.4 Typing Quality	8
4.3 Margin	8
4.4 Pagination	8
4.5 Notes and Footnotes	8
4.6 Tables and Figures	9
4.7 Colour	9
<b>5 Literature Citation and Referencing</b>	<b>9</b>
5.1 Citation in Text	9
5.1.1 Author's name cited in text	9
5.1.2 Author's name not cited directly in the text	10
5.1.3 No author	10

5.1.4 Corporate authors	10
5.1.5 No date	10
5.1.6 Secondary referencing	10
5.1.7 Websites	11
5.2 Referencing	11
5.2.1 Reference from books	11
5.2.2 Chapters of edited books	11
5.2.3 Books which have been translated	12
5.2.4 E-books	12
5.2.5 Reference from journals and newspapers	12
5.2.6 Reference from conference proceedings	12
5.2.7 Standards	13
5.2.8 Patent	13
5.2.9 Multiple works from the same author in the same year	13
5.2.10 Anonymous (authorless) reference	13
5.2.11 Publications on International bodies/agencies	13
5.2.12 Websites	14
<b>6 Appendices</b>	<b>14</b>
<b>7 Binding</b>	<b>14</b>
<b>8 CD Submission</b>	<b>15</b>



## APPENDICES

<a href="#"><u>APPENDIX A</u></a>	List of Degree
<a href="#"><u>APPENDIX B1</u></a>	Pre-Title Page
<a href="#"><u>APPENDIX B2</u></a>	Sample of Pre-Title Page
<a href="#"><u>APPENDIX C1</u></a>	Format of Thesis Title Page
<a href="#"><u>APPENDIX C2</u></a>	Sample of Thesis Title Page
<a href="#"><u>APPENDIX D</u></a>	Sample of Declaration
<a href="#"><u>APPENDIX E1</u></a>	Sample of Approval for Thesis
<a href="#"><u>APPENDIX E2</u></a>	Sample of Approval for Dissertation/Report
<a href="#"><u>APPENDIX F</u></a>	Sample of Dedication
<a href="#"><u>APPENDIX G1</u></a>	Sample of Abstract in English for a thesis written in English
<a href="#"><u>APPENDIX G2</u></a>	Sample of Abstract in Bahasa Malaysia for a thesis written in English
<a href="#"><u>APPENDIX H</u></a>	Sample of Acknowledgement
<a href="#"><u>APPENDIX I</u></a>	Sample of Table of Contents
<a href="#"><u>APPENDIX J1</u></a>	Sample of List of Tables
<a href="#"><u>APPENDIX J2</u></a>	Sample of List of Figures
<a href="#"><u>APPENDIX J3</u></a>	Sample of Table in Text
<a href="#"><u>APPENDIX J4</u></a>	Sample of Figure or Illustration in Text
<a href="#"><u>APPENDIX K</u></a>	Sample of List of Symbols
<a href="#"><u>APPENDIX L</u></a>	Sample of Space and Format
<a href="#"><u>APPENDIX M</u></a>	Sample of References
<a href="#"><u>APPENDIX N</u></a>	Sample of List of Appendices
<a href="#"><u>APPENDIX O</u></a>	Front (Hard) Cover of Thesis
<a href="#"><u>APPENDIX P1</u></a>	Thesis Spine
<a href="#"><u>APPENDIX P2</u></a>	Sample of Thesis Spine



# GUIDELINES FOR THE PREPARATION OF THESIS, DISSERTATION AND REPORT FOR GRADUATE PROGRAMMES

## 1. INTRODUCTION

This Guideline is prepared and designed to assist graduate students of **Universiti Teknikal Malaysia Melaka (UTeM)** in the preparation of their thesis, dissertation and report of master project. It deals only with the submission and the physical format and writing conventions of the thesis, dissertation and report of master project. It is the responsibility of each student to ensure that his/her work conforms to the guidelines set out below. Further clarification of the guidelines can be obtained from the Centre for Graduate Studies (PPS). In this Guideline, the word 'thesis' applies to the various types of work involved namely Doctor of Philosophy (PhD), Engineering Doctorate (DEng) and Master of Science (MSc) thesis; dissertation and report of master project (for Master by Taught Course).

## 2. SUBMISSION OF THESIS FOR EVALUATION / EXAMINATION

The title of the thesis must have prior approval for submission from the supervisor(s) and the respective faculties. The following procedures must be followed when submitting a thesis for evaluation / examination:

- 2.1 For Doctor of Philosophy (PhD), Engineering Doctorate (DEng) and Master of Science (MSc) thesis, candidates should notify PPS in writing at **least three (3) months** before they intend to submit their research work. Notification forms for thesis submission are available from PPS. For dissertation and report of master project (for Master by Taught Course), candidates should refer to the respective faculties.
- 2.2 Candidates must submit **one (1) draft** copy of the thesis to his/her supervisor before submitting the final copies, to ensure that the proper format has been followed before the copies are sent for examination. **The draft copy should be accompanied with a TURNITIN report.**
- 2.3 Upon approval by the respective faculties, **five (5) copies** of the thesis must be submitted to PPS for further action. The thesis must be bound in soft cover (white, 70 gm A4 paper) with comb binding. For dissertation and report of Master programme by mixed mode, candidates should notify faculty in writing at least **one (1) month** before they intend to submit their research work, candidates should refer to the faculty guidelines.
- 2.4 The title should be a short and concise description of the main content of the thesis and should not exceed 15 words. Redundancies such as "An investigation of ...", "A preliminary study of ...", "On the ...", "Theory of ...", "Some of ..." and "Toward a ..." must be avoided. Thesis title should not contain formulas, symbols or subscripts,

Greek letters, or other non-alphabetical symbol such as bracket; rather word substitutes are used.

2.5 Length of thesis is given as follows :

- i. Doctoral - between 35 000 and 60 000 words
- ii. Master by Research and Dissertation – between 20 000 and 35 000 words
- iii. Master Project – between 15 000 and 25 000 words

The total number of words only accounts for the main text and does not include footnotes, exhibits, figures, tables, graphs, appendices, bibliographies and references.

### 3. ARRANGEMENT OF CONTENTS

All theses should be divided into appropriate sections or chapters. Candidates should bear in mind that thesis examiners deplore overlong or verbose thesis; the onus is on the candidate to provide a well - organized and well written thesis. The following arrangement of list of thesis sections is supposed to serve as a guideline. Many of these sections are self-explanatory. Further information on some of the sections is provided following the list.

#### 3.1 Pre-title page (Front cover)

Title of a thesis should be as concise as possible giving an accurate description of the work. The pre-title page must contain the following:

- 3.1.1 Logo of UTeM
- 3.1.2 Name of Faculty
- 3.1.3 Title of thesis
- 3.1.4 Full name of candidate
- 3.1.5 The degree submitted for (refer to **Appendix A**)
- 3.1.6 The year thesis is submitted for Senate approval.

Format and sample of the pre-title page is shown in **Appendix B1** and **Appendix B2**. Do not number this page. This format should be followed closely.

#### 3.2 Title Page

The title page should consist of the following:

- 3.2.1 Title of thesis
- 3.2.2 Full name of candidate
- 3.2.3 Thesis submitted in fulfillment of the requirements for the Degree of (Doctor of Philosophy / Master of Science/ Master of Business Administration)
- 3.2.4 Name of Faculty
- 3.2.5 UNIVERSITI TEKNIKAL MALAYSIA MELAKA must be written in uppercase (capital letters)
- 3.2.6 The year thesis is submitted for Senate approval.

Refer to **Appendix C1 & Appendix C2** for the title page format and sample. Do not number this page.

### 3.3 Copyright (optional)

Under International Law the use of copyright material requires the permission of either the author or the publisher. It is the responsibility of the candidate to address this issue and to cover any expenses incurred. No pagination on this page.

### 3.4 Declaration Page

This page should contain declaration by the student on the originality of the thesis. The declaration should be signed. An example is provided in **Appendix D**. This page should not be numbered.

### 3.5 Approval

This page should contain approval from the Supervisor. The approval for the respective degree must be signed. An example is provided in **Appendix E1** for thesis (PhD, Engineering Doctorate and Master by Research) and **Appendix E2** for dissertation/report (Master by Mixed Mode and Taught Course). This page should not be numbered.

### 3.6 Dedication (optional)

The dedication must be brief, not more than one paragraph, and must not contain any number, chart or photograph. Refer to the example in **Appendix F**.

### 3.7 Abstract and Abstrak

Abstracts in both English and Bahasa Malaysia are mandatory. The abstract in Bahasa Malaysia must be in *Italic* for a thesis written in English, and vice versa. Abstract is a summary of the entire thesis written in one paragraph. It should briefly outline the research problem addressed by the thesis, research objectives, research methodology, the findings and the significance of the work in the context of the field of study. The abstract should not exceed one (1) typewritten **single-spaced** page. Example can be seen in **Appendix G1** (English) and **Appendix G2** (Bahasa Malaysia). Number this page 'i'. Paginations of the text section follow after this page.

### 3.8 Acknowledgements

Most theses will include a brief statement of thanks and appreciations in recognition of special assistance (including financial) and guidance given by individuals, institutions or government bodies. An example can be seen in **Appendix H**.

### 3.9 Table of Contents

The titles of sections, chapters and their principal subdivisions along with the page numbers on which they appear should be listed in the Table of Contents. Titles should be worded exactly as they appear in

the text of the thesis. Thesis with many subsections should use a hierarchical numbering system for headings and sub-headings (i.e., 2.1, 2.2, 2.3, etc). Such numbering system combined with the judicious use of upper and lower case, indentations and italics should indicate clear relationships between the sections of the thesis.

All chapters and their sub-sections must be labeled and numbered. The chapters are numbered using Arabic numeric, i.e. Chapter 1, Chapter 2, Chapter 3 and so on. The sub-sections are given as follows

Chapter

- 2 Title of the chapter
  - 2.1 First level (Title of the sub-section)
    - 2.1.1 Second level (Title of the sub-sub-section)
      - 2.1.1.1 Third level (Title of the sub-sub-sub-section)

If the length of a title of a chapter or any level is more than one line, the same line spacing as in the text should be used. Sub-sections beyond third level should be labeled using characters. Refer to the example in **Appendix I**.

### **3.10 List of Tables, Figures (Illustrations, Plates/Photographs)**

These lists consist of the exact titles (including numbering) of all tables, figures and plates that appear in the thesis. All tables, figures and plates should be single spaced and numbered consecutively throughout the text. See examples in **Appendix J1** and **Appendix J2**. The caption for tables is placed above the table itself using Times New Roman, font size 12. An example is shown in **Appendix J3**. In contrast, the caption for figures is placed below the figure itself using Times New Roman, font size 12. An example is depicted in **Appendix J4**.

Number the tables and figures by chapter, e.g. Table 1.1 and Table 1.2 to indicate they belong to Chapter 1. Whereas, Table 2.1 and Table 2.2 belong to Chapter 2 and so on. In addition, Figure 1.1 and Figure 1.2 to indicate they belong to Chapter 1. Whereas, Figure 2.1 and Figure 2.2 belong to Chapter 2 and so on.

### **3.11 List of Abbreviations, Symbols, Specialized Nomenclature**

This list is optional, depending on the subject matter or technicality of the thesis. All scientific symbols and nomenclature should follow the standard SI- system. See example in **Appendix K**.

### **3.12 List of publications (if any)**

List in chronological order the publications of work from this study, with most recent work first and the rest follow in descending order. Include name of the author, year of publication, title of article, name of journal/ book, volume and issue number as well as page number.

### 3.13 Main text of the thesis

The main body of the thesis is usually arranged into consecutively numbered chapters or sections. The internal organization of the thesis is the responsibility of the candidate in consultation with his/her thesis supervisor(s) in accordance to the format given in section Table of Content. The organization will partly depend on the field of study, but the onus is on the student to provide a systematic and well-organized thesis. As a whole, the font of the main text should be the Times New Roman, font size 12 with double-spacing.

#### 3.13.1 Chapter Layout

The thesis often includes the following chapters:

##### Chapter 1 Introduction

This chapter introduces the subject matter and problem(s) being studied, and indicates its importance and validity. Introduction is the first part of a thesis and allows the readers to get the general idea of what your thesis is about. It also acquaints the readers with the thesis topic, explaining the basic points of the research and pointing the direction of your research. Introduction sets out the hypotheses to be tested (if applicable) and research objectives to be attained. It is important to remember that the research objectives stated in the thesis should match the findings of the study. Failing to do so could result in a recommendation by the examiners to conduct additional studies so that the stated objectives are met.

##### Chapter 2 Literature Review

This section encompasses a critical and comprehensive review of the literature related to the topic of thesis. It is meant to act as a base for the experimental and analytical sections of the thesis. Literature selected must be up to date, and be analysed and synthesised logically. It is not simply a summary of works of different authors. It is a critical, analytical summary and synthesis of the current knowledge of a topic. Thus, it should compare and relate different theories, findings, etc rather than just summarise them individually. In addition, it should have a particular focus or theme to organise the review. It does not have to be an exhaustive account of everything published on the topic, but it should discuss all the significant academic literature important to that focus. The review should give the gist of each book or pertinent findings of a journal article, explain how it relates to the topic and show why it is not sufficient to answer the research questions. Textbook materials on basic principles or theories should be kept to a minimum.

##### Chapter 3 Materials and Methods/Methodology

This section varies from thesis to thesis depending on the discipline of study, and may be absent in theoretical theses. It contains a description and justification of the materials, theoretical approaches,

experimental designs and methods (including statistical analysis) used to achieve the stated objectives of the study undertaken. In engineering this may include, but is not limited to, a description of the methodology, theoretical development, fundamental philosophical foundation, experimental design and standard procedure description. The materials and methods used in the study should be described in detail and concisely such that a reader would be able to replicate the experiment solely with the information contained in this section.

#### **Chapter 4 Results/Findings**

The section presents a complete account of the results obtained in the study in the form of text, figures or tables so that the key information is highlighted. The same set of results or data should not be presented in more than one format (e.g. either as a table or figure, but not both). This may be presented as a single chapter, divided separately into appropriate section or in two or more chapters to include the analysis and presentation of data. When results are placed in one chapter, sub-headings may be used to demarcate the different aspects of the study. The results should be interpreted, but extensive reference to other relevant work should not be included.

#### **Chapter 5 Discussion**

This section bridges the data presented or described in the preceding section, and contains the analyses or interpretations of the results obtained, and the conclusions drawn. Students should discuss these results in relation to the hypotheses (if applicable) or objectives set out in the Introduction, and how they fit into the existing or current body of knowledge. The significance and implications of the main findings should be made clear.

#### **Chapter 6 Summary, Conclusion and Recommendations for Future Studies**

This chapter contains a brief summary of the entire work, including methods, results and major conclusions /recommendations arising from the work. This chapter is important since it illustrates the significance of the study and stresses the findings upon which a conclusion or conclusions are drawn in line with the objectives set, acknowledges the limitations, and suggests further research which may be carried out on the topic. The summary can be written in a single section or in separately numbered sections. Suggestions for future work are often included together with contributions of research.

It is acceptable for individual chapter to be self-contained, including their own introduction, methods, results and discussions, as is often the case where individual chapter being submitted for publication. However, in such thesis a broader introduction to the whole thesis should be included to tie the chapters or sections together and to provide the framework for the whole thesis.

## 4. FORMAT OF THESIS

### 4.1 Language

The thesis must be written in either English or Bahasa Malaysia. The language of the thesis should be as direct and simple, as the subject matter will allow. Language use should be consistent throughout the thesis, especially in terms of spelling (American or British).

### 4.2 Typing

A thesis should be typed in word format MS Office Word or text processor.

#### 4.2.1 Font

Candidates should use the Times New Roman with font size 12 in preparing their thesis. Other fonts are not acceptable. Chapters and their sub-sections must be given titles. The title of each chapter should be typed using capital letters and centered. A new chapter must start on a new page. The titles should be typed using bold letters and should not be underlined. Write the titles of the sub-sections in "sentence case", that is the same capitalization that candidate would have used in normal sentence (capitalize only the first word).

#### 4.2.2 Space and Format

The thesis should only be typed on one side of the page. The text should be double-spaced throughout, including explanatory footnotes, equations, long quotations, appendices, headings and subheadings. However, legends, captions or keys to tables, figures or plates should be single-spaced. The following guidelines should also be observed.

- 4.2.2.1 The spacing between the lower top margin and the chapter number should be one (1) line spacing
- 4.2.2.2 The spacing between the chapter number and the title, and between the title and the first line of a text should be one (1) line spacing
- 4.2.2.3 The spacing between the last line of a text with the title of a subsection should be one (1) line spacing
- 4.2.2.4 No spacing between the title of a sub-section and the first line of a text
- 4.2.2.5 No spacing between paragraphs
- 4.2.2.6 The number and the title of sub-section should be aligned with the left margin
- 4.2.2.7 The first line of a paragraph should be indented by 1 tab (1.22 cm) from the left margin
- 4.2.2.8 A new paragraph should not begin on the last line of a page
- 4.2.2.9 The spacing between the last line of a text and a table, or a figure or an illustration should be one (1) line spacing

4.2.2.10 The spacing after a full stop (.) should be one (1) character spacing

4.2.2.11 The spacing after a comma (,) should be one (1) character spacing

(An example is provided in **Appendix L**)

#### 4.2.3 Symbol

For symbols that are not available on the computer keyboard, such as copyright symbol, trademark symbol, paragraph marks and Unicode characters, use appropriate function in the MS Office Word to generate them. Use an equation editor to insert common mathematical equations or other formulas.

#### 4.2.4 Typing Quality

All copies must be of good legible quality. Hard copies of the thesis submitted for examination or binding must be printed using a laser printer or similar quality machines. Candidates are required to carefully **proof read** and correct any typographical errors before submitting the thesis.

#### 4.3 Margin

Left margin should be 3 cm (30 mm) wide for binding purposes. The other three sides that are top, bottom and right margin should be 2.5 cm (25 mm) wide.

#### 4.4 Pagination

Pages should be numbered consecutively throughout the thesis, including pages of figures, tables and appendices. It is advisable that all tables and figures are placed on separate pages and not together with the text. Pagination begins with the first page of Chapter 1 (i.e., Introduction) using Arabic numeric (1, 2, 3, etc.) but the numbers should not be printed. Similarly, the first page of all chapters should be counted but the numbers should not be printed. Preliminary pages preceding Chapter 1 must carry page numbers in small Roman numerals (i, ii, iii, etc.). The title page should not be numbered.

Page numbers should be centered at the bottom of the page of the thesis and should be at least 1 cm (10 mm) from the margin of the page. Page numbers should appear by themselves and they are not to be enclosed in parenthesis, hyphens, etc. Each appendix should be identified separately in alphabetical order. The pages of the appendices should also be typed according to the above pagination system. Page numbers should be retained at the centre and bottom of the page (at portrait layout) even though landscape table and figures are attached.

#### 4.5 Notes and Footnotes

In the case where notes and footnotes are used with font size 10 and should be kept to minimum.



#### 4.6 Tables and figures

Source of the tables and figures should be stated in full if it was adopted from copyrighted permission. It should be written at the end of the caption.

#### 4.7 Colour

Colour can help enormously to present data clearly. However, design the colourful diagrams to preserve as much information as possible in a black and white printout.

### 5. LITERATURE CITATION AND REFERENCING

Any thesis which makes use of other works, either in direct quotation or by reference, must contain a bibliography listing of these sources. Only works directly cited or quoted in the text should be included in the bibliography. UTeM follows the **Harvard System** for literature citation and referencing. References are made by giving the author's last name together with the year of publication.

#### 5.1 Citation in Text

##### 5.1.1 Author's name cited in text

In the text, the year of publication appears within parenthesis after the author's surname if the latter forms part of a sentence. For example:

Chong (1986) states that...  
اونيور سیتی تي... مينسيا ملاك

In any particular sentence, if several publications are cited, the references should be cited in chronological order. For example:

Jones (2006) and Smith (2008) have both shown...

However, if several publications of the same year are cited the references should be cited in **alphabetical order** and with single author taking precedence over joint authors. For example:

Azis and Harrison (1987) claim that...

Where there are more than two authors:

Yamakura et al. (1990) found that...

If several papers by the same author(s) and from the same year are cited, the letters a, b, c, etc. should be put after the year of publication. For example:

Chazdon and Ibrahim (1988b).

### 5.1.2 Author's name not cited directly in the text

Reference to a work or piece of research without mentioning the author in the text then both the author's name and publication year are placed at the relevant point in the sentence or at the end of the sentence in brackets. For example:

Making reference to published work appears to be characteristic of writing for a professional audience (Cormack, 1994).

### 5.1.3 No author

Reference from authorless articles should be cited as: (Anonymous, 1998). For example:

Marketing strategy assists our customers in optimizing and executing their go-to-market strategy (Anonymous, 1999).

### 5.1.4 Corporate authors

Reference from official publications of an organization or international bodies/agencies with no personal author should be written as: (SIRIM, 1984). For example:

More recently SIRIM (1984) has issued guidelines...

### 5.1.5 No date

Every effort should be made to establish the year of publication if you intend to use one reference as supporting evidence in an academic submission. However, in case of the year of publication is not available, the abbreviation n.d. is used to denote this:

Directly:

Smith (n.d.) has written and demonstrated...

Indirectly:

Earlier research (Smith, n.d.) demonstrate that...

### 5.1.6 Secondary referencing

You may come across a summary of another author's work in the source you are reading, which you would like to make reference to in your document. This is called secondary referencing. For example:

Direct reference:

Recently, research carried out in Melaka area by Ariffin (2001 cited in Abdullah, 2007) found that...

Ariffin (2001) as cited in Abdullah (2007) suggests that...

Indirect reference:  
(Ariffin, 2001 cited in Abdullah, 2007)

### 5.1.7 Websites

When citing material found on a website, you should identify the authorship of the website, either by author's surname or organization's name. URL or website address should not be written in the text. For example:

Recent research on Super Alloy (Bowman, 2009) has shown...

## 5.2 Referencing

At the end of the thesis, all the references cited are listed in **alphabetical order** and **should not be indented**. There is no necessity to number or bullet the references. The bibliography should be double-spaced as with the rest of the text Times New Roman using font size 12. (An example is provided in **Appendix M**).

The following bibliographic style must be followed:

### 5.2.1 Reference from books

Author's surname, Initials., Year. *Title of book*, Edition., (only include this if not the first edition) Place of publication: (this must be a town or city, not a country) Publisher.

Example for one author:

Conn, E.I.E. 1987. *Outlines of Biochemistry*, 5<sup>th</sup> ed., New York: John Wiley & Sons.

Example for two or more authors:

Kalpakjian, S., and Schmid, S.R., 2001. *Manufacturing Engineering and Technology*, 4<sup>th</sup> ed., New Jersey: Prentice-Hall.

### 5.2.2 Chapters of edited books

Chapter author(s) surname(s), Initials. Year of chapter followed by In: Book editor(s) initials and surnames with edition. After the last name. Year of book. Title of book. Place of publication: Publisher.

Example:

Horking, A.D. 1988. Moulds and Yeasts Associated with Foods of Reduced Water Activity: Ecological Interactions. In *Food Preservation by Moisture Control* (Seow, C.C., 2<sup>nd</sup> ed.), pp. 57-72. London: Elsevier Applied Science Publication.

### 5.2.3 Books which have been translated

Author, Year. *Title of book*. Translated from (language). Place of publication: Publisher.

Example:

Yahya, R., 2005. *Hidraulik dan Pneumatik*. Translated from English. Johor, Malaysia: UTM Press.

### 5.2.4 E-books

The required elements for e-books accessed from the University Library or other sources:

Author, Initials., Year. *Title of book*. [e-book] Place of publication: Publisher. Followed by "Available through:" include e-book source/database, web address or URL [Accessed date].

Example:

Fishman, R., 2005. *Ceramic Processing*. [e-book] Chester: Castle Press. Available through: Universiti Teknikal Malaysia Melaka Library <<http://library.utem.edu.my>> [Accessed on 14 September 2010].

### 5.2.5 Reference from journals and newspapers

Author, Initials., Year. Title of article. *Full title of journal*, Volume number (Issue / Part number), Page numbers

Example for article:

Kalotas, T.M., and Lee, A.R., 1990. A Simple Device to Illustrate Angular Momentum Conservation and Instability. *American Journal of Physics*, 58 (6), pp.80 - 81.

Example for newspaper:

Kipper, D., 2008. Japan's New Dawn. *The Times*, 3 Sep, pp.10.

### 5.2.6 Reference from conference proceedings

Author, Initials., Year. Full title of conference paper. In: followed by editor or name of organization, *Full title of conference*. Location, Date, Place of publication.

Example:

Hassan, M.D., and Norshimah, H., 1996. Designing of Primers for Cloning of Papaya Ringspot Virus Coat Protein Gene. In: Hasanah, M.G., Khatijah, M.Y., and Marziah, M., *Proceedings of the 8th National Biotechnology Seminar*, Selangor, Malaysia, 24 – 27 May 1996. UKM Publisher.

### 5.2.7 Standards

Corporate author, Year. *Identifying letters and numbers and full title of the standards.* Place of publication: Publisher.

Example:

International Standards Office, 1998. *ISO 690 – 2 Information and documentation: Bibliographical references.* Geneva: ISO.

### 5.2.8 Patent

Inventor name, Initials., Assignee., Year. Title. Place. Patent number (status, if an application).

Example:

Leonard, Y., Super Sports Limited., 2008. Tin Can Manufacture and Method of Sealing. Canada. Pat. 12, 789, 675.

### 5.2.9 Multiple works from the same author in the same year

For example:

Reed, R.C., 2006a. *The Superalloys – Fundamentals and Applications.* Cambridge: Cambridge University Press.

Reed, R.C., 2006b. *Fusion Welding of Superalloys,* London: Macmillan.

### 5.2.10 Anonymous (authorless) reference

Depending on the type of document, replace the authorship with Anonymous.

For example:

Anonymous, 1996. External Trade in Sago Flour and Sago Starch, 1985-1995. *Agricultural Statistics, Sarawak.* Planning Division, Department of Agriculture, Sarawak, Malaysia.

### 5.2.11 Publications of international bodies/agencies

Depending on the type of source, replace the author's name with the organization name.

For example:

WHO, 1984. Environmental Health Criteria 39: Paraquat and Diquat. World Health Organization, Geneva.

## 5.2.12 Websites

Authorship or Source, Year. *Title of web document or web page.* [type of medium] (date of update if available) Available at: include website address or URL [Accessed date].

Example:

Bowman. R., 2009. *Superalloys: A Primer and History.* [online]  
Available at:  
<http://www.tms.org/Meetings/Specialty/superalloys2000/SuperalloysHistory.html> [Accessed on 8 November 2010].

## 6. APPENDICES

This section is optional and will depend on the individual thesis contents. It contains supplementary illustrative material, original data, and quotations too long for inclusion and not immediately essential to an understanding of the subject.

The appendices should be labeled alphabetically such as Appendix A, Appendix B, and so on depending on type and quantity to be included. Specific titles can also be given. Example can be seen in **Appendix N**.

## 7. BINDING

- اونيورسيتي تيكنيكل مليسيا ملاك
- 7.1 Based on the acceptance by the respective Faculty, **one (1) copy** of thesis should be bound in hard cover for Senate Standing Committee for Post Graduate Studies (JKTSPS) recommendation for degree conferment before approval by the Senate. For report of Master Project, **four (4) copies** of report should be bound in hard cover and approved by the respective Faculty.
  - 7.2 Following approval by the Senate, the candidate must submit **four (4) copies** of the approved work to PPS with hard-cover binding. The candidate is also required to submit a soft-copy of his/her work in word format MS Office Word.
  - 7.3 The front thesis cover shall be printed in accordance to the colour code of the degree being awarded together with the embedded UTeM logo. A Buckram type cover must be used and written with golden ink for the lettering with font size 18 points. The colour of the cover and their code should be as follows:

Thesis	Colour	Colour code
Masters	Black	585
Doctorate	Maroon	567

Please use the specified colour code when ordering for binding at the vendor. The title of the thesis, name of candidate and the degree and year for which the thesis is submitted should be printed on the **Front Cover** using **Capital Letter Arial** following the style shown in **Appendix O**. The student's name, degree and year shall also be printed on the **Spine** of the bound thesis. An example is given in **Appendix P1** and **Appendix P2**.

- 7.4 A white and good quality (80 grams) paper of A4 size (210 x 297 mm) should be used for all submitted final copies of the thesis. Photographic illustration should be printed on good quality high-resolution paper with single sided printing.

#### 8. CD SUBMISSION

The candidate is required to submit a soft copy of his/her work in MS Office word format. The CD that consists of the soft copy of the thesis must be labeled according to the following:

- a. Full name of the candidate
- b. Faculty
- c. Title of the thesis
- d. Year of submission
- e. Degree

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

## APPENDIX A

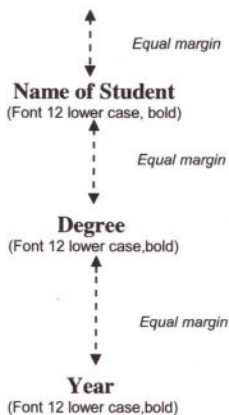
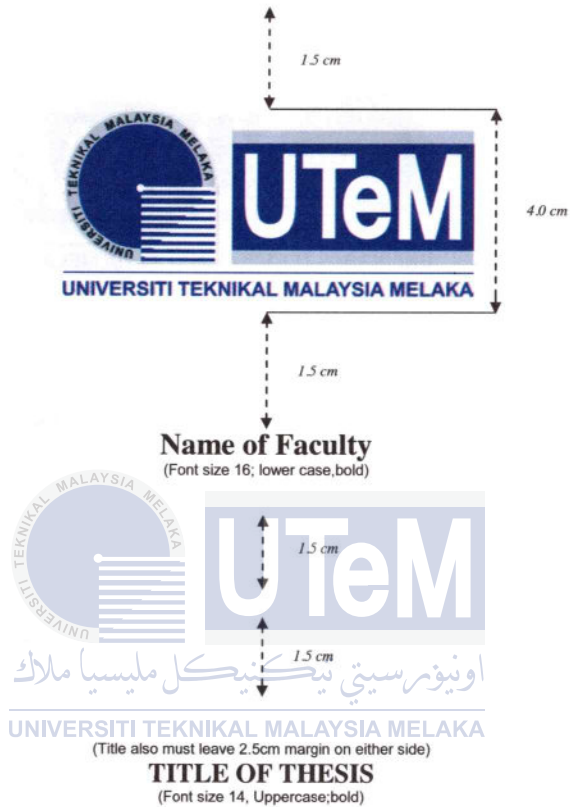
## LIST OF DEGREE

FACULTY / FAKULTI	NO.	BAHASA MALAYSIA	NO.	ENGLISH	ABBREVIATION / SINGKATAN
Faculty of Electrical Engineering / Fakulti Kejuruteraan Elektrik	1	Doktor Falsafah	1	Doctor of Philosophy	PhD
	2	Doktor Kejuruteraan	2	Engineering Doctorate	DEng
	3	Sarjana Sains Dalam Kejuruteraan Elektrik	3	Master of Science in Electrical Engineering	MSc. in Electrical Engineering
	4	Sarjana Sains Dalam Kejuruteraan Mekanik	4	Master of Science in Mechatronic Engineering	MSc. in Mechatronic Engineering
	5	Sarjana Kejuruteraan Elektrik (Elektronik Kuasa Dan Pemacu)	5	Master of Electrical Engineering (Power Electronics and Drives)	-
	6	Sarjana Kejuruteraan Elektrik (Kuasa Industri)	6	Master of Electrical Engineering (Industrial Power)	-
	7	Sarjana Kejuruteraan Elektrik (Kawal dan Robotik)	7	Master of Electrical Engineering (Control and Robotics)	-
Faculty of Electronic and Computer Engineering / Fakulti Kejuruteraan Elektronik dan Kejuruteraan Komputer	1	Doktor Falsafah	1	Doctor of Philosophy	PhD
	2	Doktor Kejuruteraan	2	Engineering Doctorate	DEng
	3	Sarjana Sains Dalam Kejuruteraan Elektronik	3	Master of Science in Electronic Engineering	MSc. in Electronic Engineering
	4	Sarjana Kejuruteraan Elektronik (Kejuruteraan Komputer)	4	Master of Electronic Engineering (Computer Engineering)	-
	5	Sarjana Kejuruteraan Elektronik (Sistem Elektronik)	5	Master of Electronic Engineering (Electronic System)	-
	6	Sarjana Kejuruteraan Elektronik (Sistem Telekomunikasi)	6	Master of Electronic Engineering (Telecommunication System)	-
Faculty of Mechanical Engineering / Fakulti Kejuruteraan Mekanikal	1	Doktor Falsafah	1	Doctor of Philosophy	PhD
	2	Doktor Kejuruteraan	2	Engineering Doctorate	DEng
	3	Sarjana Sains Dalam Kejuruteraan Mekanikal	3	Master of Science in Mechanical Engineering	MSc. in Mechanical Engineering
	4	Sarjana Kejuruteraan Mekanikal (Mekanik Gunaan)	4	Master of Mechanical Engineering (Applied Mechanics)	-
	5	Sarjana Kejuruteraan Mekanikal (Tenaga)	5	Master of Mechanical Engineering (Energy)	-
	6	Sarjana Kejuruteraan Mekanikal (Automotif)	6	Master of Mechanical Engineering (Automotive)	-
	7	Sarjana Kejuruteraan Mekanikal (Mekanik Struktur)	7	Master of Mechanical Engineering (Structure Mechanics)	-
	8	Sarjana Kejuruteraan Mekanikal (Kejuruteraan Tenaga)	8	Master of Mechanical Engineering (Energy Engineering)	-
	9	Sarjana Kejuruteraan Mekanikal (Automotif)	9	Master of Mechanical Engineering (Automotive)	-
	10	Sarjana Kejuruteraan Mekanikal (Rekabentuk Produk)	10	Master of Mechanical Engineering (Product Design)	-
Faculty of Manufacturing Engineering / Fakulti Kejuruteraan Pembuatan	1	Doktor Falsafah	1	Doctor of Philosophy	PhD
	2	Doktor Kejuruteraan	2	Engineering Doctorate	DEng
	3	Sarjana Sains Dalam Kejuruteraan Pembuatan	3	Master of Science in Manufacturing Engineering	MSc. in Manufacturing Engineering
	4	Sarjana Kejuruteraan Pembuatan (Kejuruteraan Sistem Pembuatan)	4	Master of Manufacturing Engineering (Manufacturing System Engineering)	-
	5	Sarjana Kejuruteraan Pembuatan (Kejuruteraan Sistem Kualiti)	5	Master of Manufacturing Engineering (Quality System Engineering)	-
	6	Sarjana Kejuruteraan Pembuatan (Kejuruteraan Industri)	6	Master of Manufacturing Engineering (Industrial Engineering)	-
	7	Sarjana Kejuruteraan Pembuatan (Kejuruteraan Kepresisian)	7	Master of Manufacturing Engineering (Precision Engineering)	-
Faculty of Information and Communication Technology / Fakulti Teknologi Maklumat dan Komunikasi	1	Doktor Falsafah	1	Doctor of Philosophy	PhD
	2	Sarjana Sains Dalam Teknologi Maklumat Dan Komunikasi	2	Master of Science in Information and Communication Technology	MSc. in Information and Communication Technology
	3	Sarjana Sains Komputer (Teknologi Rangkaian Internet)	3	Master of Computer Science (Internetworking Technology)	MCS. (Internetworking Technology)
	4	Sarjana Sains Komputer (Teknologi Pangkalan Data)	4	Master of Computer Science (Database Technology)	MCS. (Database Technology)
	5	Sarjana Sains Komputer (Kejuruteraan Perisian Dan Keperluan)	5	Master of Computer Science (Software Engineering and Intelligence)	MCS. (Software Engineering and Intelligence)
	6	Sarjana Sains Komputer (Sains Keselamatan)	6	Master of Computer Science (Security Science)	MCS. (Security Science)
	7	Ijazah Sarjana Sains Komputer (Pengkomputeran Multimedia)	7	Master of Computer Science (Multimedia Computing)	MCS. (Multimedia Computing)
Faculty of Technology Management and Technopreneurship / Fakulti Pengurusan Teknologi dan Teknosahawanan	1	Doktor Falsafah	1	Doctor of Philosophy	PhD
	2	Sarjana Sains Dalam Pengurusan Teknologi	2	Master of Science in Technology Management	MSc. in Technology Management
	3	Sarjana Sains Dalam Keusahawanan	3	Master of Science in Entrepreneurship	MSc. in Entrepreneurship
	4	Sarjana Pentadbiran Perniagaan (Pengurusan Operasi Teraju)	4	Master of Business Administration (Advanced Operation Management)	MBA (Advanced Operation Management)
	5	Sarjana Pentadbiran Perniagaan (Pengurusan Teknologi Dan Inovasi)	5	Master of Business Administration (Technology and Innovation Management)	MBA (Technology and Innovation Management)
Institute of Technology Management and Entrepreneurship / Institut Pengurusan Teknologi dan Keusahawanan	1	Doktor Falsafah	1	Doctor of Philosophy	-
	2	Sarjana Sains Komunikasi Teknikal	2	Master of Science in Technical Communication	-
	3	Sarjana Sains Kaunseling Industri	3	Master of Science in Industrial Counseling	-
	4	Sarjana Sains Pembangunan Sumber Manusia	4	Master of Science in Human Resource Development	-



## APPENDIX B1

Pre-Title Page (Font Type : Times New Roman)





**Faculty of Manufacturing Engineering**



**MAGNETIC CHARACTERISTICS OF STRONTIUM  
FERRITE ADDED WITH ZIRCONIA**

**Masayu binti Dollah**

**Master of Science in Manufacturing Engineering**

## APPENDIX C1

Format of Thesis Title Page (Font Type: Times New Roman)

### TITLE OF THESIS

(Front size 12, Bold,Uppercase)

### NAME OF STUDENT

(Front size 12, Bold,Uppercase)



### Name of Faculty

(Front size 12, Bold)

### UNIVERSITI TEKNIKAL MALAYSIA MELAKA

(Front size 12, Bold,Uppercase)

### YEAR

(Font size 12, Bold,Uppercase)

**APPENDIX C2 (SAMPLE OF THESIS TITLE PAGE)**

**MAGNETIC CHARACTERISTICS OF STRONTIUM FERRITE  
ADDED WITH ZIRCONIA**

**MASAYU BINTI DOLLAH**



**Faculty of Manufacturing Engineering**

**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

## APPENDIX D

### Sample of Declaration

2.5 cm

2 double line spacing

### DECLARATION

2 double line spacing

I declare that this thesis entitled "Thermal analysis using Galerkin Finite Element Method on Printed Circuit Board" is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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Signature

Name



2.5 cm

اونيوورسيٲى ٲيكنيكل مليا ملاك  
Date

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2.5 cm

## APPENDIX E1

Sample of Approval for Thesis

### APPROVAL

I hereby declare that I have read this thesis and in my opinion this thesis is sufficient in terms of scope and quality for the award of Master of Science in Electronic Engineering / Doctor of Philosophy / Engineering Doctorate.



Signature

Supervisor Name

Date



اونيورسيتي تيكنيكل مليسيا ملاك

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

## APPENDIX E2

Sample of Approval for Dissertation/Report

### APPROVAL

I hereby declare that I have read this dissertation/report and in my opinion this dissertation/report is sufficient in terms of scope and quality as a partial fulfillment of Master of Electrical Engineering (Power Electronics and Drives).

	Signature	.....
	Supervisor Name	.....
	Date	.....

اويؤرسي تيكنيكل مليسيا ملاك

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

**APPENDIX F**

Sample of Dedication

2.5 cm

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**DEDICATION**

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To my beloved mother and father



اونيورسيتي تيكنيكل مليسيا ملاك

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

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## APPENDIX G1

### Sample of Abstract in English for a thesis written in English

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#### ABSTRACT

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Process variation is unavoidable and affects quality in manufacturing, and addressing it has become more challenging due to more stringent demands on manufacturing processes. It is becoming necessary to very rapidly identify sources of unnatural variation for diagnostic and intervention purposes. As such, it is crucial that process variability patterns be recognised in a timely manner, as waiting for process deterioration to develop fully could be too late for preventive purposes or may even be catastrophic. The purpose of this study was to develop a scheme for enabling on-line recognition of such patterns on Shewhart charts even as they are developing. Extensive simulations were performed and a scheme that can address the requirements is proposed. Evaluation was based on recognition accuracy, average run length, type I error, type II error, and a new measure, average recognition attempts. It was found that a scheme developed using a minimal set of statistical features for input representation, compact structure of artificial neural network pattern recognisers, synergy of specialised and generalised recognisers, and joint monitoring by runs rules and CUSUM resulted in the best scheme among the alternative designs developed. This scheme showed significant improvement in overall performance and, among others, timely and accurate on-line recognition, ignoring unnecessary recognition of stable processes and capability to recover from false alarms. The findings suggest that the recognition of developing control chart patterns should be addressed from an interlinking monitoring and recognition perspective and by implementing a "recognise only when necessary" philosophy. The framework used to develop the scheme is general enough for further investigation by either evaluating other designs of its components or by extending its application to other problems.

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## APPENDIX G2

Sample of Abstract in Bahasa Malaysia for a thesis written in English

### ABSTRAK

Variasi proses sentiasa wujud dalam operasi pembuatan, dan menanganinya menjadi semakin mencabar akibat keperluan proses pembuatan yang semakin rumit. Adalah penting untuk mengenalpasti secepat mungkin sumber variasi yang tidak tabii untuk tujuan diagnosis dan pembaikan. Oleh itu, corak variasi proses perlu di kenalpasti tepat pada masanya. Menunggu kematangan corak variasi akan melewatkan tindakan pencegahan dan ianya berpotensi mengakibatkan bencana. Tujuan penyelidikan ini adalah untuk membangunkan skema yang berupaya menangani keperluan telah dicadangkan. Keberkesanan skema telah dinilai berdasarkan kepada ketepatan mengecam, berdasarkan masa-nyata, corak variasi proses di atas carta kawalan Shewhart walaupun corak tersebut sedang membentuk. Kajian simulasi yang meluas telah dilakukan dan satu skema yang berupaya menangani keperluan telah dicadangkan. Keberkesanan skema telah dinilai berdasarkan kepada ketepatan pengecaman, purata panjang larian, ralat jenis I, ralat jenis II, dan purata percubaan mengecam. Skema yang dibangunkan dengan menggunakan set sifat statistical minimum bagi perwakilan masukan, struktur pengecam corak rangkaian neural tiruan yang padat, sinergi di antara pengecam khusus dan umum, dan pemantauan bersama oleh runs rules dan CUSUM telah menghasilkan skema yang terbaik di antara reka bentuk alternatif yang dikaji. Skema ini menunjukkan pembaikan yang signifikan kepada prestasi keseluruhan, dan antara lain, berkeupayaan mengecam dengan tepat secara masa-nyata, mengabaikan pengecaman yang tidak diperlukan bagi proses yang stabil, dan berkebolehan untuk pulih daripada kesilapan isyarat. Penemuan kajian ini menunjukkan bahawa masalah pengecaman corak variasi yang sedang berkembang sepatutnya ditangani dari perspektif pemantauan dan pengecaman yang bersepadu, dan melaksanakan falsafah "mengecam hanya bila perlu". Rangka skema di atas adalah bersifat umum dan boleh digunakan untuk kajian lanjut samada bagi menguji berbagai jenis rekabentuk komponennya atau meluaskan penggunaannya kepada masalah lain.

## APPENDIX H

### Sample of Acknowledgement

2.5 cm

### ACKNOWLEDGEMENTS

First and foremost, I would like to take this opportunity to express my sincere acknowledgement to my supervisor Associate Professor Dr. Azizah Binti Shaaban from the Faculty of Manufacturing Engineering Universiti Teknikal Malaysia Melaka (UTeM) for her essential supervision, support and encouragement towards the completion of this thesis.

I would also like to express my greatest gratitude to Engr. Imran Bin Mohd. Ibrahim from Faculty of Electronics and Computer Engineering, co-supervisor of this project for his advice and suggestions in evaluation of microwave absorption measurement. Special thanks to UTeM short term grant funding for the financial support throughout this project.

Particularly, I would also like to express my deepest gratitude to Mr. Azhar and Mr. Hairul Hisham, the technicians from material laboratory Faculty of Manufacturing Engineering, Mr. Imran and Mr. Ismail lecturer and technician from chemistry lab Faculty of Mechanical Engineering, Mr. Zainol, Mr. Aeini and Mr. Safuan, lecture and technicians from microwave laboratory Faculty of Electronics and Computer Engineering, for their assistance and efforts in all the lab and analysis works.

Special thanks to all my peers, my late mother, beloved father and siblings for their moral support in completing this degree. Lastly, thank you to everyone who had been to the crucial parts of realization of this project.

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# APPENDIX I

Sample of Table of Contents  
(Main heading and subheading are numbered)

## TABLE OF CONTENTS

	PAGE
<b>DECLARATION</b>	
<b>DEDICATION</b>	
<b>ABSTRACT</b>	i
<b>ABSTRAK</b>	ii
<b>ACKNOWLEDGEMENTS</b>	iii
<b>TABLE OF CONTENTS</b>	iv
<b>LIST OF TABLES</b>	v
<b>LIST OF FIGURES</b>	vi
<b>LIST OF APPENDICES</b>	vii
<b>LIST OF ABBREVIATIONS</b>	viii
<b>LIST OF PUBLICATIONS</b>	ix
<b>CHAPTER</b>	
<b>1. INTRODUCTION</b>	<b>1</b>
1.1 Sub-heading 1	1
1.2 Sub-heading	2
<b>2. LITERATURE REVIEW</b>	<b>6</b>
2.1 Sub-heading 1	6
2.1.1 Sub-subheading 1	6
2.1.2 Sub-subheading 2	8
2.2 Sub-heading 2	12
2.3 Sub-heading 3	15
2.3.1 Sub-subheading 1	21
2.3.2 Sub-subheading 2	25
2.3.3 Sub-subheading 3	31
2.4 Sub-heading 4	33
<b>3. MATERIALS AND METHODS/METHODOLOGY</b>	<b>38</b>
3.1 Sub-heading 1 (e.g Materials)	38
3.2 Sub-heading 2 (Method 1)	42
3.3 Sub-heading 3 (Method 2)	45
3.4 Sub-heading 4 (Method 3)	47
3.4.1 Sub-heading 1	48
3.4.2 Sub-heading 2	50
3.4.3 Sub-heading 3	52
3.5 Sub-heading 5 (Method 4)	55
3.6 Sub-heading 5 (Method 5)	58
3.6.1 Sub-subheading 1	58
3.6.2 Sub-subheading 2	63
<b>4. RESULT AND DISCUSSION</b>	<b>66</b>
4.1 Sub-heading 1	66
4.1.1 Sub-subheading 1	69
4.1.2 Sub-subheading 2	72
4.2 Sub-heading 2	75
4.2.1 Sub-subheading 1	76
4.2.2 Sub-subheading 2	81
4.2.3 Sub-subheading 3	88

4.3	Sub-heading 3	94
4.4	Sub-heading 4	105
4.4.1	Sub-subheading 1	108
4.4.2	Sub-subheading 2	110
5.	<b>CONCLUSION AND RECOMMENDATIONS FOR FUTURE RESEARCH</b>	<b>111</b>
	<b>REFERENCES</b>	<b>115</b>
	<b>APPENDICES</b>	<b>124</b>



## APPENDIX J1

### Sample of List of Tables

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### LIST OF TABLES

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TABLE	TITLE	PAGE
2.1	The role of statistical quality engineering tools and methodologies	16
2.2	Basic ANN models used for control chart pattern recognition	47
2.3	General design strategies/structures for CCPR	49
3.1	The overall research plan	70
3.2	Parameters for simulating individual process variation data	75
3.3	Description of performance measures	92
4.1	Targeted recogniser outputs	103
4.2	Design matrix and results for the preliminary feature screening	108
4.3	Regression analysis for the results of preliminary feature screening	111
4.4	ANOVA for the results of preliminary feature screening	111
4.5	Tentative significant main effects and two-factor interactions	113
4.6	Estimated effects and regression coefficients for the recogniser's performance (reduced model)	116
4.7	ANOVA for the recogniser's performance (reduced model)	117

## APPENDIX J2

### Sample of List of Figures

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### LIST OF FIGURES

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**FIGURE**

**TITLE**

**PAGE**

1.1	Trends leading to the problem	2
1.2	Design and development phases of the proposed scheme	7
1.3	Summary of the research contributions	10
1.4	Organisation of the thesis	11
2.1	Chance and assignable causes of process variation (Montgomery, 1996a)	14
2.2	Classification of statistical quality engineering tools	15
2.3	Continuous variability reduction using SPC chart (Revelle and Harrington, 1992)	19
2.4	Classification of research areas in SPC	20
2.5	Advances in process variation monitoring and recognition using SPC charting	25
2.6	Nelson's runs rules (Nelson, 1984)	26
2.7	Typical fully developed patterns on Shewhart control chart (Cheng, 1989)	28

3 cm

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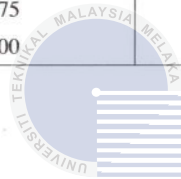
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### APPENDIX J3

Sample of Table in Text

Table 2.1 : Comparison of Experimental and Computer Simulation Results

Distance Ratio	Experiment (Mean value)	Computer Simulation (Mean Value)
0.125	0.25	0.137
0.250	0.46	0.560
0.375	0.63	0.738
0.500	0.75	0.861
0.625	0.83	0.939
0.750	0.88	0.981
0.875	0.93	0.997
1.000	1.00	1.000



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APPENDIX J4

Sample of Figure or Illustration in Text

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Example of Graph

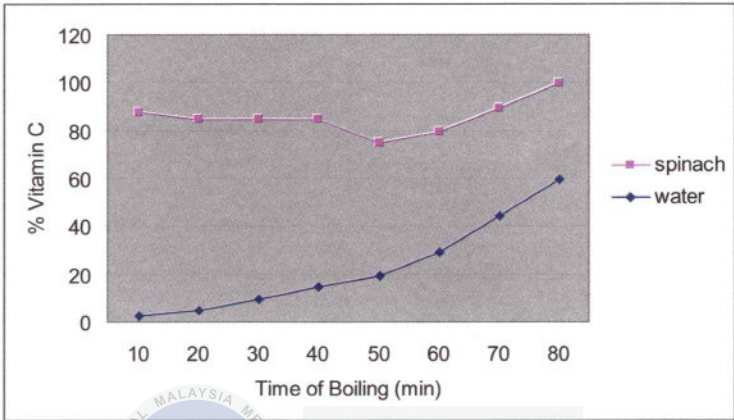


Figure 2.1 : Effect of Boiling on Leaching of Vitamin C from Spinach

Example of Pie Chart

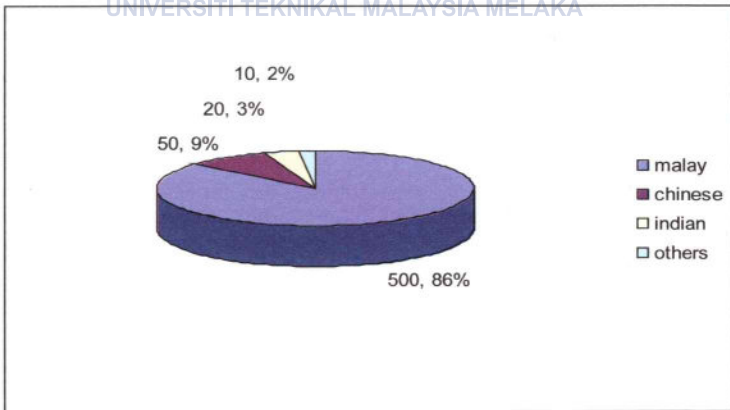


Figure 2.2 : Number of Population in Jasin by Races

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## APPENDIX K

### Sample of List of Symbols

#### LIST OF SYMBOLS

2 double line spacing

2 double line spacing

D, d	-	Diameter
F	-	Force
g	-	Gravity = 9.81 m/s
I	-	Moment of inersia
l	-	Length
m	-	Mass
N	-	Rotaional velocity
P	-	Pressure
Q	-	Volumetric flow-rate
r	-	Radius
T	-	Torque
Re	-	Reynold number
V	-	Velocity
w	-	Angular velocity
x	-	Displacement
z	-	Height
q	-	Angle
r	-	Density



اونيورسيتي تيكنيكل ميسيا ملاك

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2.5 cm

3 cm

2.5 cm

2.5 cm

## APPENDIX L

### Sample of Space and Format

2.5 cm

1 line spacing

## CHAPTER 1

1 line spacing

## INTRODUCTION

1 line spacing

### 1.0 Background

Kenaf is a warm annual crop. It is a member of hibiscus family and related to cotton and jute. Kenaf is originally a native in Africa. For the last 200 years, India has produced and used kenaf. In the United States, kenaf was introduced as material for the war effort during World War II. Then in 1950s, the US researchers have found that kenaf was an excellent cellulose fiber source for pulping of paper products (Webber et. al., 2002).

Kenaf plant is growing to more than 3 meters tall within 4-5 months. The stems are 2.5cm – 3.5cm diameter and consisting of two parts; an outer fibrous bark and an inner woody core (Zhang, 2003). Raw kenaf fiber obtained from the outer fibrous bark is abundant of lignocelluloses fibers. The core is the spongy tissue inner the bark of the plant.

1 line spacing

### 1.1 Statement of the Purpose

The purpose of the research is to investigate the effect of fiber treatment on the mechanical properties such as tensile, flexural and impact properties and water absorption of kenaf/polyester composite.

2.5 cm

3.0 cm

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2.5 cm

## 1.2 Problem Statement

Composite materials offer many exceptional properties that are difficult or impossible to match with traditional materials such as steel, aluminum and wood. Previously, composites made of glass and carbon fibers replaced many metal applications by supplying the benefits of low cost and high strength properties. Synthetic fiber composite is very well known for its strength and rigidity. For an example, the bicycle frame made from glass-carbon composites are offer high strength and lightweight.



اُونِيُوَرَسِيْتِي تِيكْنِيكَل مَلِيْسِيَا مَلَاك

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

3.0 cm

2.5 cm

2.5 cm

## APPENDIX M

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## APPENDIX M

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## APPENDIX N

### Sample of List of Appendices

2.5 cm

2 double line spacing

### LIST OF APPENDICES

2 double line spacing

APPENDIX	TITLE	PAGE
A	Examples of possible assignable causes of unnatural control chart patterns	253
B	Models for generating the control chart patterns (data streams)	254
C1	Mathematical expressions for the statistical features	256
C2	Minimum and maximum feature values	259
C3	Analysis of results for experiments to revise the parameter setting	260

3 cm

2.5 cm

2.5 cm

2.5 cm

**APPENDIX O**  
Front (Hard) Cover of Thesis

1.5 cm



4.0 cm

UTeM'S LOGO  
(14 point-coloured font)

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9.0 cm

1.5 cm

**TITLE OF THE THESIS**  
(Uppercase, centred, bold, 18 point coloured font)

3.0 cm



2.5 cm

**NAME OF STUDENT**  
(Uppercase, centred, bold, 18 point coloured font)

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

x

**NAME OF DEGREE**  
(Uppercase, centred, bold, 18 point coloured font)

x

**YEAR**  
(Uppercase, centred, bold, 18 point coloured font)

1.5 cm

2.5 cm



**APPENDIX P1**  
Thesis Spine

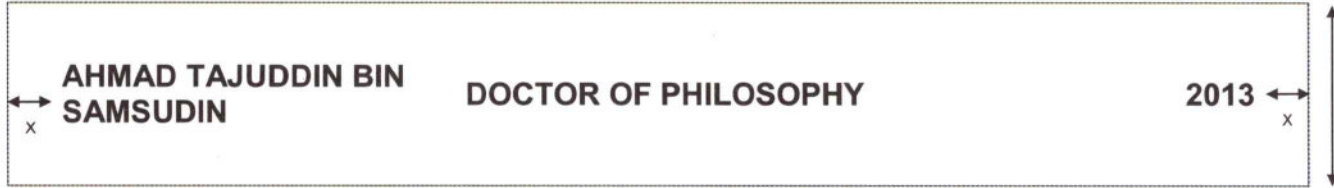


<b>NAME OF STUDENT</b> (Bold, 18 point gold coloured font)	<b>NAME OF DEGREE</b> (Bold, 18 point gold coloured font)	<b>YEAR</b>
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Width < 2.5 cm

APPENDIX P2  
Sample of Thesis Spine





**UTeM**

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