School of Graduate Studies
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UNIVERSITI TEKNOLOGI MALAYSIA

UTM THESIS MANUAL

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School of
Graduate Studies
UNIVERSITI TEKNOLOGI MALAYSIA

THESIS MANUAL

CHAPTER 1

ORGANISATION OT THE THESIS

1.1   Definition of a Thesis

Thesis in this manual refers to a documented report of the process followed and the results of original research conducted by a student in fulfilment of the requirements for a graduate degree. The thesis should be presented in a manner that will reflect credit on the student, the faculty, and the University. The term *thesis* used throughout this manual refers to doctoral and master's theses and dissertations as well as bachelor degree project report.

1.2   Organisation of the Thesis

A thesis is made up of three main parts namely preliminary pages, text and references. These are arranged as in Table 1.1.

1.3 Thesis Status Declaration

Thesis status declaration is done using the Thesis Status Declaration form issued by Perpustakaan Sultanah Zanariah (PSZ), i.e. PSZ 19:16 (Pind. 1/07) form (see Appendix A). If the box CONFIDENTIAL or RESTRICTED is marked [✓], a letter from the party classifying the information as confidential or restricted must be attached. The letter should clearly indicate

    (i)   the reasons for classification

    (ii)   the duration for classification

A typical duration for confidential or restricted classification is three (3) years. A thesis can be classified as confidential or restricted up to a maximum period of five (5) years. Examples can be seen in Appendices A and B.

If the status declaration form is not submitted or the form is incompletely filled, the University will assume the thesis is unrestricted and therefore the library will make the copies of the thesis available for distribution as published academic exchange materials.

Table 1.1: Arrangement of parts in a thesis

Section	SUBJECT	STATUS	EXAMPLE (APPENDIX)	NOTES
	Blank paper	-	-	-
1.3	Declaration of the Status of Thesis	compulsory	A	without page number
1.3	Letter regarding status classification of thesis	compulsory	B	needed if classified as confidential/restricted
1.4.1	Supervisor's declaration	compulsory	C1	without page number
1.4.2	Declaration on cooperation	compulsory	C2	without page number
	Certification of examination			
1.5	Title page	compulsory	D	without page number but counted as (i)

Section	SUBJECT	STATUS	EXAMPLE (APPENDIX)	NOTES
1.7	Declaration of originality and exclusiveness	compulsory	F	page number using Roman numeric (ii)
1.8	Dedication	optional	G	page number using Roman numeric (if any)
1.9	Acknowledge-ments	optional	H	page number using Roman numeric (if any)
1.10	Abstract (English)	compulsory	I, J	page number using Roman numeric
	Abstrak (Bahasa Melayu)			
1.11	Table of Contents	compulsory	K	page number using Roman numeric
1.12	List of Tables	compulsory	L	page number using Roman numeric
1.13	List of Figures	compulsory	M	page number using Roman numeric
1.14	List of Symbols/Abbre-viations/Notation/ Terminology	compulsory	N	page number using Roman numeric
1.15	List of Appendices	compulsory (if any)	O	page number using Roman numeric (if any)
1.16	Text	compulsory	-	page number using Arabic numeric starting with page 1
1.17	References	compulsory	-	page number using Arabic numeric continue from the text
1.18	Appendices	optional	-	page number using Arabic numeric continue from the text

1.4   Declaration

1.4.1   Supervisor's Declaration

A thesis to be submitted for the purpose of examination must obtain prior declaration by the supervisor on the standard and quality of the thesis. See example in Appendix C1.

1.4.2   Declaration on Cooperation with Outside Agencies and Certification of Examination

Section A

Any cooperation with other outside agencies in carrying out the research project that lead to the submission of the thesis must be declared.

Section B

Students must obtain certification of examination from the School of Graduate Studies.

Please see example in Appendix C2.

1.5   Title Page

Title page must contain information listed in the following order:

- Title of the thesis;
- Student's full name as in identity card or passport for international student;
- Statement of award for the thesis (see Appendix E);
- Name of Faculty/Institute/Centre where the student registered;
- Name of the University; and
- Month and Year of submission (Month and Year of submission of hard bound copy of the thesis).

See example in Appendix D.

1.5.1 Thesis Title

The title should be a short and snappy description of the main topic of the thesis. Not more than 15 words. Redundancies such as "An investigation of …", "A preliminary study of …", "Analysis of …", "On the …", "Theory of …", "Some ,,,", and "Toward a …" must be avoided. Thesis title should not contain formulas, symbols or subscripts, Greek letters, or other non-alphabetical symbols; rather word substitutes are used.

1.6 Statement of Award for the Thesis

This statement should be written on the Title Page. It should state the purpose and the award for which the thesis is submitted. Examples of statements for various purposes and awards are listed in Appendix E.

1.7 Declaration Page

This page should contain declaration by the student on originality of the thesis. The declaration should be signed. See example in Appendix F.

1.8 Dedication Page (optional)

The dedication must be brief, not more than one paragraph, and must not contain any number, chart or photograph. See example in Appendix G.

1.9   Acknowledgement (optional)

The student may acknowledge the assistance of various individuals or organisations in successfully producing the thesis. This should be written in one page. Example can be seen in Appendix H.

1.10   Abstracts

Abstracts must be bilingual. For a thesis written in bahasa Melayu, the abstract must first be written in bahasa Melayu and followed by the English translation. If the thesis is written in English, the abstract must be written in English and followed by the translation in bahasa Melayu. The abstract should be brief, written in one paragraph and not exceed 300 words. An abstract is different from synopsis or summary of a thesis. It should states the field of study, problem definition, methodology adopted, research process, results obtained and conclusion of the research. The abstract can be written using single or one and a half spacing. Examples can be seen in Appendix I (bahasa Melayu) and Appendix J (English).

1.11   Table of Contents Page

The Table of Contents page must start on a new page. It should list all sections, chapters and sub-headings. The titles must be written using the same words as those written in the text. See example in Appendix K.

1.12   List of Tables

This page should list all the tables found in the thesis. The page number of the table must also be included. The table numbers should be arranged according to the chapters. See example in Appendix L.

1.13   List of Figures

Diagrams, photographs, drawings, graphs, charts and maps are included as figures. The list should be written similar as the List of Tables. See example in Appendix M.

1.14   List of Symbols/Abbreviations/Notations/Terminology

All symbols or abbreviations or notations or terminology found in the text should be listed on this page. They are listed in the following order:

Roman letters	-	alphabetical order
Greek letters	-	alphabetical order
Superscripts	-	alphabetical order
Subscripts	-	alphabetical order

See example in Appendix N.

1.15   List of Appendices

All appendices should be listed on this page. See example in Appendix O.

1.16 Text

A thesis must be divided into chapters. A title must be given and it should reflect its content. A new chapter must begin on a new page. A chapter must be divided into sections. These sections must be given appropriate titles and numbered.

Texts must be written in paragraphs. Long paragraphs should be avoided. Each paragraph must describe an issue or subject. There must be continuity between paragraphs.

The text should contain:

(i)   an introduction and background on the study or research;

(ii)   a detailed description of the study or research which include theories, models, and materials and methods used;

(iii)   the data collection and analysis techniques.

(iv)   the main results and discussions; and

(iv)   the conclusions and significance of the findings.

1.16.1 Citation in the Text

Citation is a means of formally recognising within the text, the resources from which the information or idea were obtained. The purpose is to acknowledge the work of others, to demonstrate the body of knowledge in which the work is based on and to lead others for further information. Citation in the texts must be written according to any one of the styles described in Chapter 3.

1.16.2 Quotations in the Text

A quotation must be written in a separate paragraph. If the quotation is in a different language, it must be written in *italic*. Example of writing a quotation is shown in Appendix P.

1.16.3 Tables in the Text

All tables must be numbered using Arabic numeric. A caption should be positioned at the top of the table. If the caption is written in a single line, it should be centred. If the caption is written more than one line, it should be align to the left. Tables must be numbered with respect to the chapter. For example, Table 4.3 is the third table that appears in chapter 4. See example in Appendix Q

A table should be positioned after it is being cited for the first time in the text. All tables in the chapter can also be grouped together and positioned at an appropriate location. All tables must be listed in the List of Tables page.

1.16.4 Figures in the Text

Illustrations such as maps, charts, graphs, drawings, diagrams, and photographs are referred as *figures*. All figures must be clear and of high quality. Figures must be numbered using Arabic numeric. A caption should be located at the bottom of the figure. If the caption is written in a single line, it should be centred. If the caption is written in more than one line, it should be align to the left. Figures are numbered with respect to the chapter. For example, Figure 4.3 is the third figure that appears in chapter 4.

A figure should be positioned after it has being cited for the first time in the text. All figures in the chapter can also be grouped together and positioned at an appropriate location. All figures must be listed in the List of Figures page.

Illustrations in the form of CD's, slides, and others should be placed in specially made pockets glued to the inner side of the back cover. Oversized illustrations in the form of plans, maps, charts, graphs, and others should be reduced to fit a single page unless the oversized materials are absolutely necessary for clarity and understanding. For illustrations other than above, please refer to the following guidelines;

(i)   Photographs

Photographs should be digitally embedded in the text unless absolutely impossible.

(ii)   Newspaper Cuttings or Similar Materials

Copies of newspaper cuttings or similar materials should be of high quality.

(iii)   Maps and Aerial Photographs

Maps and aerial photographs to be included in the thesis should have a written approval by *Ketua Pengarah Pemetaan Negara*. Application can be made using PPN 14 form available at the Sultanah Zanariah Library. See example in Appendix S.

It is advisable to scan all illustration materials using a scanner and printing them using a high quality colour printer.

1.17   References

References are detailed description of items from which information were obtained in preparing the thesis. All references must be listed at the end of the text. They should be arranged using one of the methods discussed in Chapter 3.

1.18   Appendix

Appendices are supplementary materials to the text. These include tables, charts, computer program listings, and others. The following should be noted:

(a)   Appendix is not a must in a thesis. If necessary, data used for analysis, example of questionnaires, maps, photographs and other materials which are lengthy to be included in the text or materials that are not required implicitly to clarify matters discussed can be accompanied as appendix.

(b)   Appendix can be named as Appendix A, Appendix B, and so on, depends on types and quantity to be included. Specific titles can also be given.

CHAPTER 2

SIZE AND FORMAT

2.1 Paper and Size

White simile 80 gram high quality A4 size papers (210 × 297 mm) should be used.

2.2 Margin

All pages should be set with the same margin. The left margin should be 4 cm (for binding purposes) and 2.5 cm for the top, right and bottom margins.

2.3 Pagination

Each page of a thesis must be counted and numbered. Pages should be numbered consecutively as shown in Table 1.1. The page numbers should be printed at the top right hand corner, 1.25 cm from the top edge and 2.5 cm from the right edge. Numbering should be as follows:

(i)   Preliminary pages of a thesis, starting from the title page should be numbered using small letter Roman numeric (i, ii, iii, etc.); the texts should be numbered using Arabic numeric (1, 2, 3, etc.).

(ii)   The first page should be the title page. This page should be counted "i" but should not be printed.

(iii)   The first page of the text should be counted "1" but the number should not be printed. Similarly, the first page of all chapters should be counted but the numbers should not be printed.

(iv)   If a thesis is made up of a number of parts, separating pages can be inserted but these pages should not be counted and numbered.

2.4   Numbering the Chapters and Sub-sections

All chapters and their sub-sections must be labelled and numbered. The chapters are numbered using Arabic numeric, i.e. Chapter 1, Chapter 2, Chapter 3, and so on. The sub-sections should not be indented but arranged in a structured manner not more than four levels as follows:

2   First level (Title of the chapter)

2.1   Second level (Title of the sub-section)

2.1.1   Third level (Title of the sub-sub-section)

2.1.1.1 Fourth 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, same line spacing as in the text should be used. Sub-sections beyond level four should be labelled using characters. Examples are shown in Appendices T and U.

If a thesis is divided into parts, separation sheets should be used to separate them. The separation sheets should be printed with capital letters, i.e. PART 1, PART 2, PART 3, and so on.

2.5   Typing

A thesis should be typed using word or text processor. Font type and size that are commonly used for printed academic materials should be used. The same font type should be used throughout the thesis. The character size should **not be less** than 0.2 cm for capital letters and 0.15 cm for small letters. If *Microsoft Word* is used, font type *Times New Roman* with font size 12 or bigger should be used. One and a half line spacing should be used. The text must be printed on one side only.

The title of a chapter should be typed using capital letters and centred. A new chapter must start on a new page. Chapters and their sub-sections must be given titles. The titles should be typed using bold letters and should not be underlined. See examples in Appendices T and U.

2.6   Spacing and Format

The following guidelines should be observed:
(i)   The spacing between the top margin and the chapter number should be 2.5 cm;
(ii)   The spacing between the chapter number and the title, and between the title and the first line of a text should be four (4) line spacing;
(iii)   The spacing between the last line of a text with the title of a sub-section should be four (4) line spacing;
(iv)   The spacing between the title of a sub-section and the first line of a text should be two (2) line spacing;
(v)   The spacing between paragraphs should be two (2) line spacing;
(vi)   The number and the title of sub-section should be aligned with the left margin;
(vii)   The first line of a paragraph should be indented by 1.27 cm (0.5 inch) from the left margin;
(viii) A new paragraph should not begin on the last line of a page;

(ix)   The spacing between the last line of a text and a table, or a figure or an illustration should be two (2) line spacing;

(x)   The spacing after a full stop should be two (2) character spacing.

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

See examples in Appendices T and U.

2.7   Computer Printed Copy

A thesis should be typed using word or text processors for fast and easy editing. Hardcopy should be produced using a laser printer or similar quality machines.

2.8   Lettering and Drawing

Lettering and drawing must be clear and should be reproducible satisfactorily without loss of any information.

2.9   Maximum Limits

The maximum number of pages for a project report/dissertation/thesis are as follows:

Bachelor Degree Project Report   :   100 pages

Master's Report/Dissertation/Thesis :   200 pages

Doctorate Thesis   :   300 pages

These limits include tables, figures and other illustrations in the text but do not include appendices.

2.10   Binding

A thesis must be bound properly. A thesis should be temporarily bound for the purpose of examination. A thesis for final submission must be permanently bound with hard cover.

2.10.1 Cover Colour and Writing

A thesis submitted to the University must be permanently bound. A Buckram type cover must be used and written with golden ink for the lettering. The minimum size of the letters should be 18 point. The cover colours and their codes should be as follows:

Thesis	Colour	Colour code
(i) DOCTORATE	Maroon	567
(ii) MASTER'S	Dark brown	537
(iii) BACHELOR DEGREE REPORT:		
a. Faculty of Built Environment	Purple	551
b. Faculty of Civil Eng.	Green	557
c. Faculty of Geoinformation Science And Engineering	Light blue	548
d. Faculty of Electrical Engineering	Yellow	520
e. Faculty of Chemical and Natural Resource Engineering	Black	585
f. Faculty of Mechanical Engineering	Red	530
g. Faculty of Education	Sky blue	562
h. Faculty of Management and Human Resource Development	New blue	550
i. Faculty of Science	Light green	531
j. Faculty of Computer Science and Information System	Red	532

Please use colour code when ordering binding at the vendor.

2.10.2 Front Cover

The front cover should be written with the title of the thesis, the student's name and Universiti Teknologi Malaysia using capital letters. An example is shown in Appendix V.

2.10.3 Spine

On the spine should be written the student's name, the degree in bahasa Melayu, the year the thesis is approved (the year final bound thesis submitted) and UTM as in Appendix W.

CHAPTER 3

REFERENCE STYLE

3.1   Introduction

The details of the references cited in the text, published or unpublished should be located in the List of References. The list should be placed at the end of the thesis, a listing of sources actually cited, compiled either alphabetically (Harvard System) or numerically (Number System). The style selected must be used consistently throughout the thesis.

3.2   Author and Year System

This system is also known as Harvard System.

3.2.1   Citing in the Text

The references cited in the text should be indicated using the name of the author and the date of publication. Examples are as follow:

(a) If the name of an author is written as part of a sentence, the year published should be written in parentheses.

"Works by Yao (1993) have shown that in order to maintain the behavioural link between the offsprings and their parents, the use of crossover operator should be avoided."

(b) If the name of an author is not written as part of a sentence, both the name and year published should be written in parentheses.

"ANN offers useful properties and capabilities such as non-linearity, input and output mapping, adaptability and fault tolerance among others (Haykin, 1999)."

(c) If there are two authors for a cited reference, both names should be written.

"In designing the model for non-linear system, the parsimonious principle (Soderstrom and Stoica, 1989) is critical because a non-linear model involves an excessive number of parameters."

"Syu and Chang (1999) successfully used neural networks to adaptively control *Penicillin acylase* fermentation."

(d) If there are more than three authors for a cited reference, use *et al.* after the name of the first author.

"The algorithm can be calculated by applying Gram-Schmidt procedures as described by Korenberg *et al*. (1988)."

(e) If more than one reference materials by the same author in a same year are cited, use small letter alphabets (a, b, c, and so on) to distinguish them.

"Some of the basic principles widely used by many researchers are Lagrange-Euler (LE) equations (Uicker, 1965; Bejczy and Paul,1981), Newton-Euler (NE) equations (Luh *et al*., 1980a) and d'Alembert (G-D) equations (Lee *et al*., 1983)."

"Luh *et al.* (1980b) presented an example of an acceleration control of robot arm/manipulator."

(f)   Cross referencing in not allowed in a thesis. Only primary sources should be used.

3.2.2   List of References

All references cited should be listed in the List of References at the end of the last chapter. List the references alphabetically. If more than one published materials by the same author are cited, these materials should be listed chronologically. For example, an article by Scholfield published in 1964 should be listed before the one published in 1967.

3.2.3   Writing Style for Authors' Names in the List of References

Generally authors' names are listed using surname followed by their initials. The followings are examples of writing style according to the name of the author:

(i)   Single and multiple authors

Example (single author) :

Veres, S. M. (1990). *Structure Selection of Stochastic Dynamic Systems*. New York: Gordon and Breach Science Publishers.

Example (two or more authors):

Soderstrom, T., and Stoica, P. (1989). *System Identification*. United Kingdom: Prentice Hall International Ltd.

Luh, J. Y. S., Walker, M. W., and Paul, R. P. (1980b). Resolved-Acceleration Control of Mechanical Manipulators. *IEEE Trans. Automatic Control*. 25(3): 468-474.

(ii)   Editor

Example:

Martin, A. M. (Ed.) (1991). *Peat as an Agent in Biological Degradation of Waste*. London: Elsevier

Lees, R. H. and Thomas T. R. (Eds.) (1974). *Chemical Nomenclature Usage*. Chichester: Ellis Horwood.

(iii)   Corporate author/editor

Example:

Engineers Joint Council (1969). *Thesaurus of Engineering and Scientific Terms*. New York: Engineers Joint Council.

3.2.4   Writing Style for Various Types of Publication Materials in the List of References

Frequently, different types of publication materials are cited in a thesis. The style of writing details on cited publication in the List of References should be as follows:

(i)   <u>Book</u>

Author (Year). *Title*. (Edition). Placed published: Publisher.

<u>Example:</u>

Theusen, G. J. and Fabrycky, W. J. (1984). *Engineering Economy*. (6th ed.) Englewood Cliffs, N. J.: Prentice Hall.

(ii)   <u>Article in a book</u>

Author of the article (Year). *Title of the article*. In author or editor of the book. *Title of the book*. (page). Place published: Publisher.

<u>Example:</u>

Hussein, S. B., Jamaluddin, H., Mailah, M. and Zalzala, A. M. S. (2000). An Evolutionary Neural Network Controller for Intelligent Active Force Control. In Parmee, I. C. (Ed.) *Evolutionary Design and Manufacturing* (pp. 351 –362). London: Springer-Verlag.

(iii) <u>Journal articles</u>

<u>Print format</u>

Author (Year). Title of the article. *Title of the Journal*. Volume (Issue no.), page.

<u>Example:</u>

Billings. S. A. (1980). Identification of Nonlinear Systems: A survey. *Proc. IEE*, *Part D.* 127(6), 272-284.

Electronic format

Author (Year). Title of the article. *Title of the Journal*. Volume (Issue no.), page. Publisher

Example:

Borman, W. C. (1993). Role of Early Supervisory Experience in Supervisor Performance. *Journal of Applied Psychology*, 78, 443 – 449. American Psychology Association.

(iv)   Conference articles

Author (Year). Title of the article. *Name of the conference*. Date of the conference. Place, page.

Example:

Sheta, A. F. and De Jong, K. (1996). Parameter Estimation of Nonlinear Systems in Noisy Environments Using Genetic Algorithms. *Proceedings of the 1996 IEEE International Symposium on Intelligent Control*. 15-18 September. Dearborn, Michigan: IEEE, 360 - 365.

(v)   Thesis

Author (Year). *Title of the thesis*. Thesis award. Place published.

Example:

Adnan bin Hassan (2002). *On-line Recognition of Developing Control Chart Patterns*. Doctor Philosophy, Universiti Teknologi Malaysia, Skudai.

(vi)   Legislations

Name of the country (year). *Title of the legislation*. Legislation number.

Example:

Malaysia (1983). *Perintah Monumen Lama dan Tapak Tanah Bersejarah*. P.U.(A)41 1983.

(vii)   <u>Standards</u>

Name of the institution (Year). *Standard number*. Place published: Publisher

Example:

British Standards Institution (1990). *B.S. 764*. London: British Standards Institution.

(viii) <u>Patent</u>
<u>Print format</u>
Author (Year). *Patent number*. Place published: Official source.

Example:

Smith, I. M. (1988). *U.S. Patent No. 123, 445*. Washington DC: U.S. Patent and Trademark Office.

<u>Electronic format</u>
Author (Year). *Patent number*. Retrieved on date, year, from URL address of the patent database.

Example:

Ulrich, K. (2001). *European Patent No. EP1162184*. Retrieved on March 7, 2002, from fttp://ep.espacenet.com/

(ix)   <u>Brochure</u>

Name of organization (Year). *Title* [Brochure]. Place published: Publisher.

Example:

Research and Training Center (1993). *Guidelines for Reporting and Writing About People with Disabilities.* [Brochure]. Lawrance, KS: Macmillan

(x)   Measured drawings

Author (Year). *Title*. [Measured drawing]. Name of organization: Place published.

Example:

Salim Man (1989). *Pengisi Sekam ke Dalam Kontena Penyimpan: Pandangan Isometrik.* [Lukisan Teknik]. Universiti Teknologi Malaysia: Skudai.

(xi)   Unpublished materials

Author (Year). *Title*. Unpublished note, Name of organization.

(xii)   Newspaper article

Print format

No author

Title of article. (Year, date). *Name of newspaper*, page.

Example:

Gearing up to meet new challenges. (2000, February 22). *The Star*. p. 2.

Author

Author. (Year, date). Title of article. *Name of newspaper*, page.

Example:

Izatun Shari (2000, April 18). K-economy: draft out in October. *New Straits Times.* p. 2-4.

Electronic format

Author. (Year, date). Title of article. *Name of newspaper*, Retrieved date, year, from URL address of the newspaper.

Example:

Rosmawati Mion (2006, June 17). Sindiket judi haram tumpas. *Utusan Malaysia.* Retrieved June 19, 2006, from http://www.utusan.com.my

(xii)   Magazine

Author. (Year). Title of article. *Name of magazine*, Volume/Issue no., page

Example:

Smith, B. L. (1994). Biofeedback. *Science,* 62, 673 – 675.

(xiii)   CD-ROM

Author. (Year). Title of article. [CD-ROM]. *Title of Journal,*, Volume, page. Publisher.

Example:

Ivry, R. B. (1995). Perception and production of temporal intervals across a range of durations. [CD-ROM]. *Journal of Experimental Psychology*, 21, 3-18. American Psychological Association.

Example of a List of References using author and year system is shown in Appendix X.

3.3   Number System

3.3.1   Citing in the Text

All references cited in the text must be assigned numbers using Arabic numeric. The first cited reference should be assigned with number 1. Subsequent cited references should be given consecutive numbers. One of the methods below can be used when citing:

(i)   If the name of an author is written as part of a sentence, the reference number should be inserted in parenthesis or square brackets or superscript after the author's name, for example:

"Genetic algorithm was introduced by Holland (1) and was extensively explored by Goldberg (2)."

OR

"Genetic algorithm was introduced by Holland [1] and was extensively explored by Goldberg [2]."

OR

"Genetic algorithm was introduced by Holland[1] and was extensively explored by Goldberg[2]."

(ii)   If the name of an author is not part of a sentence, the reference number should be inserted in parenthesis or square brackets or superscript at the appropriate location; for example:

"Recently, evolutionary programming has been applied to various optimization problems (1) and it offers many advantages such as having global search characteristics."

OR

"Recently, evolutionary programming has been applied to various optimization problems [1] and it offers many advantages such as having global search characteristics."

OR

"Recently, evolutionary programming has been applied to various optimization problems[1] and it offers many advantages such as having global search characteristics."

3.3.2 Writing Style for Various Types of Publication Materials in the List of References

In the list of references, the numbers assigned to the source of references cited in the text are listed in incremental order. The style of writing details on cited publication in the List of References are as follows:

(i)   <u>Book</u>

Author. *Title of the book*. Edition (if not the first). Place published: Publisher. Year

Example:
Theusen, G. J. and Fabrycky, W. J.   *Engineering Economy*. 6th. ed. Englewood Cliffs, N. J.: Prentice-Hall. 1984

(ii)   <u>Article in a book</u>

Author. Title of the article. In: Author of the book. *Title of the book.* Place published: Publisher. page; Year.

Example:

Hussein, S. B., Jamaluddin, H., Mailah, M. and Zalzala, A. M. S. An Evolutionary Neural Network Controller for Intelligent Active Force Control. In: Parmee, I. C. ed. *Evolutionary Design and Manufacturing*. London: Springer-Verlag. 351-362; 2000

(iii) <u>Journal articles</u>

Author. Title of the article. *Title of the Journal*. Year. Volume (number): page.

Example:

Billings. S. A. Identification of Nonlinear Systems: A Survey. *Proc. IEE Part D*, 1980. 127(6): 272-284.

(iv) <u>Conference articles</u>

Author. Title of the article. *Name of the conference*. Date of the conference. Place published: Publisher. Year. page.

Example:

Sheta, A. F. and De Jong, K. Parameter Estimation of Nonlinear Systems in Noisy Environments Using Genetic Algorithms. *Proceedings of the 1996 IEEE International Symposium on Intelligent Control*. September 15-18, 1996. Dearborn, Michigan: IEEE. 1996. 360-365.

(v) Thesis

Author. *Title of the thesis*. Thesis award. Name of Institution; Year

Example:

Adnan bin Hassan. *On-line Recognition of Developing Control Chart Patterns*. Ph.D. Thesis. Universiti Teknologi Malaysia; 2002

(vi)   <u>Standards</u>

Name of the Institution. *Title of the standard*. Place published, Standard number. Year

Example:

British Standards Institution. *Tongued And Grooved Software Flooring*. London, BS 1297. 1987

(vii)   <u>Patent</u>

Owner's name. *Title of the patent*. Patent number. Year.

Example:

Lindgren, E. A. *Screen Room Air Inlet and Wave Guard*. U.S. Patent 2, 925, 457. 1960.

(viii)   <u>Commercial catalogue</u>

Name of distributor. *Title*. Place published: Note. Year

Example:

Howick Partitioning Ltd. *Howick: Partitioning in Business*. Redhill (U.K.): Trade brochure. 1984.

(ix)   <u>Measured drawings</u>

Name. *Title*. Place published: Note. Year

Example:

Zairul Azidin Badri. *Rumah Kutai Haji Sahak, Kampung Tanjung, Kampung Gajah, Perak*. UTM: Lukisan Terukur. 1980.

Salim Man. *Pengisi Sekam ke Dalam Kontena Penyimpan: Pandangan Isometrik.* UTM: Lukisan Teknik. 1989.

Example of a List of References using Number System is in Appendix Y.

3.4   Reference from Internet

Although internet provides a large source of references, the information from internet are not permanent and are up-dated periodically. Thus these are unreliable sources of reference. Internet should only be used to retrieve primary sources of reference.

CHAPTER 4

NOTES AND FOOTNOTES

4.1   General Guidelines

Notes are supplementary information provided in a writing. Notes such as footnotes, final notes, and others. are not allowed for theses in the field of Science and Technology. However, limited use of footnotes is allowed for theses in the field of Humanities and Social Sciences. Footnotes are used to elaborate or provide additional information regarding matters discussed in that page. Footnotes are recorded using Arabic numeric and numbered consecutively. Raised superscript numerals in the text refer to explanatory notes and documented sources appearing either at the bottom of the page as footnotes or at the end of the thesis as endnotes in a notes section. The advantage of using notes is that explanatory type of information can be presented along with source citations on the same page or place.

4.2   Reference Style

Footnotes for references are written differently in the aspect of author's name and the use of punctuation. The author's name should be written in full. Comma or quotation mark should be used to separate author's name, title of the article and publication details. The font size used should be two (2) points smaller than the text.

<u>Style for writing reference as footnotes:</u>

numeral   Author, "Title of article." publication details, year, page.

<u>Example:</u>

10   Mary Duncan Carter, Wallace John Bonk, and Rose Mary Magrill, "Building
        Library Collections." Fourth edition. (Metuchen, N. J.: Scarecrow Press, 1974), pp.
        61 - 66.

CHAPTER 5

ELECTRONIC THESES AND DISSERTATIONS (ETD)

5.1   Introduction

Senate meeting No.01/2002/03 dated 12 Jun 2002 has decided that all graduate students are to submit a copy of Thesis, Dissertation and Master's Project Report in digital form beside the normal bound hardcopy after approval. Students are required to submit three (3) bound hardcopies and two (2) CD containing digital thesis.

The main purpose of implementing digital thesis is to enable theses submitted to UTM be accessible through the Internet. This is in-line with development in digital technology and globalisation. With this implementation, UTM hopes to be projected as a leading university in research and graduate studies.

This guideline has been approved by Examination Board of Graduate Studies (Senate Sub-Committee) No. 14/2002/2003 on the 7th November 2002.

5.2   Definition of Electronic Theses and Dissertations (ETD)

Electronic Theses and Dissertations or ETD are documents that record results of research or scholarship of graduate students. These documents are prepared in the form

that can be accessed globally through the Internet. An ETD is the same as the original paper document that has been approved by the panel of examiners and Senate.

5.3 Preparation Process

A thesis that has been examined and approved by Examination Board of Graduate Studies (Senate Sub-Committee) (JKTS(PS)) and Senate should be converted into digital form and submitted to the School of Graduate Studies (SPS). SPS will then forward both ETD and bound thesis to the Library for archive and access. Flow chart of the preparation process is shown in Figure 5.1.
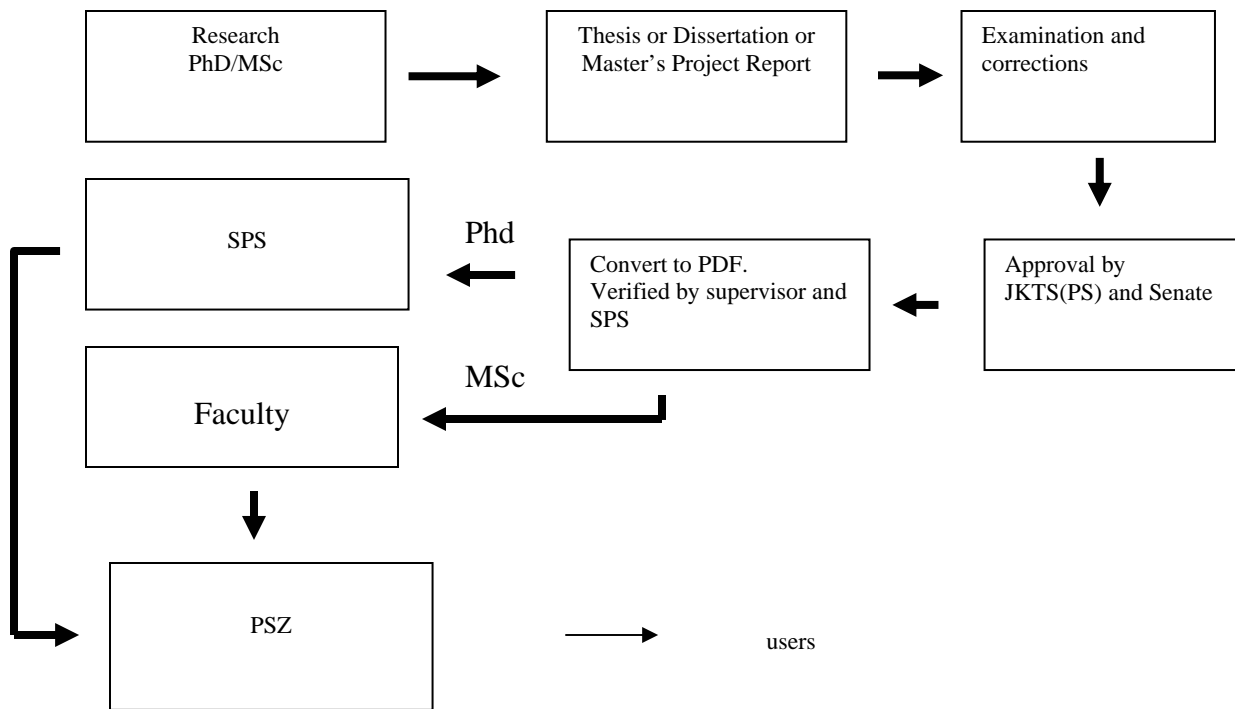

Figure 5.1: Preparation process of ETD

5.4   Contents of ETD

An ETD must consist of two (2) files, namely pre-access file and full text file.

5.4.1 Pre-access File

Pre-access file is a file that contains information about the author, the panel of examiners and a brief content of the thesis. By reading this file, a reader will be able to assess the relevance of the document to the reader's research interest. If a reader wishes to access the whole thesis, the reader should contact the librarian for the full text file. The pre-access file should include all the preliminary pages and the first ten pages of the introduction as arranged in the bound thesis.

5.4.2   Full Text File

A full text file consists of all contents of the thesis that has been approved by the Senate.   This includes all preliminary pages, main contents of the thesis and all appendices as submitted to the panel of examiners and approved. Writing style as the original bound hardcopy must be retained as presented in Chapters 1 to 4. All these pages must be saved into one (1) file only.

5.5   Preparation Guideline

The following guidelines must be observed:

i.   The electronic version must be the same as the final bound thesis as approved by the Senate;

ii.   Convert the thesis into PDF format. Use the latest version of Adobe Acrobat PDFMaker. **Do not set Document Security**;

iii.   All pages which contain signatures of student and supervisor must be scanned;

iv.   If the status of a thesis is CONFIDENTIAL or RESTRICTRED, electronic version is still required but must be properly indicated in the Thesis Status Declaration form;

v.   Two files must be generated. The first file is for the purpose of pre-access that will be made accessible to the public. The second file is the full text file. The files should be named as follows:

      \<name>\<matrixno>\<p>\<tt>\<ss>\<c>.pdf

Code description
\<name> is the student's first name (without surname or father's name)

\<matrixno> is the student's matrix card number

\<p> is the university where the thesis was submitted
    d – UTM
    l – other than UTM

\<tt> is the year approved

\<ss> is the thesis status
    su – confidential

th – restricted

tt – open access

<c> is the file type

p – pre-access file

t – full texts file

Example 1:

Wan Ahmad Nazri bin Wan Abdullah, is a master's student at FKM, UTM. His thesis is approved in the year 2002. His matrix card number is MM100123. The thesis is declared restricted.

Therefore:

<name> = wan ahmadnazri

<matrixno> = mm100123

<p> = d

<tt> = 02

<ss> = th

The files should be named as follows:

wanahmadnazrimm100123d02thp.pdf   (pre-access file)

wanahmadnazrimm100123d02tht.pdf   (full texts file)

Example 2:

Wong Ah Seng, is a UTM staff who studied for his Ph.D. overseas. The thesis is approved in the year 2002 and declared open access. He is a staff of Faculty of Education and his staff number is 1234

Therefore:

<name> = wongahseng

<matrixno> is derived given as defined in Table 5.1 yields

<matrixno> = pp31234

<p> = l

$<tt> = 02$

$<ss> = tt$

Table 5.1   Defining matrix card number for UTM's staff studying outside UTM

Course Category	Faculty code	Type pf Study	Staff Number
m – master p - doctorate l- Advance Diploma	a – FKA b – FAB c – FSKSM d – PPD e – FKE f – UTM – KTU g – FKSG h– FPPSM i - BATC k – FKKKSA m – FKM n – UTM- ALM p – FP r - IBS s – FS z– UTM- (ATMA)	1 – course work 2 – course work and research 3 - research	

The files should be named as follows:

wongahsengpp31234l02ttp.pdf   (pre-access file)

wongahsengpp31234l02ttt.pdf   (full texts file)

Further detail on the method of naming files is discussed in section 5.6.

vi.   If the status of a thesis is CONFIDENTIAL or RESTRICTED, the pre-access file must contain only information that can be distributed. A full text file is still required but it is only for archive**.**

vii. ETD must be submitted using high quality CD. Proper conversion according to this guidelines must be verified by the student and witnessed by the supervisor before submitted to SPS.

viii. Two (2) CD with three (3) copies of bound thesis must be submitted to SPS together with ETD verification form. Example of ETD verification form is shown in Appendix Z.

5.6   Method of Naming ETD Files

Some examples on naming ETD files for theses submitted to UTM are as follows:

Example1

Student's name	Matrix card number					University (code)	Year (2 digit)	Status (Kod)	Access type (Kod)
Ahmad Bin Abdullah	Course category	Faculty code	Year regis-ter	Type of study	serial numb-er	UTM (d)	2002 (02)	Confidential (su) Restricted (th) Unrestricted (tt)	Pre-acess (p) Full texts (t)
ahmad	**m**	**c**	**99**	**1**	**023**	**d**	**02**	**th**	**p**

The files for thesis submitted to UTM should be named as follows

1. ahmadmc991023d02thp.pdf   (Pre-access file)
2. ahmadmc991023d02tht.pdf   (Full text file)

Example 2

Student's name	Matrix card number					University (Code)	Year (2 digit)	Status (Kod)	Access type (Kod)
Meor Abdul Aziz bin Meor Ahmad	Course category	Facul-ty code	Year regis-ter	Type of study	serial numb-er	UTM (d)	2002 (02)	Confidential (su) Restricted (th) Unrestricted (tt)	Pre-acess (p) Full texts (t)
meorabdulaziz	**p**	**m**	**98**	**3**	**023**	**d**	**02**	**tt**	**p**

The files for thesis submitted to UTM should be named as follows

1. meorabdulazizpm983023d02ttp.pdf   (Pre-access file)
2. meorabdulazizpm983023d02ttt.pdf   (Full text file)

Example of naming ETD files for thesis by a UTM staff submitted to other university should be as follows:.

Student's name	Matrix card number					University (Code)	Year (2 digit)	Status (Kod)	Access type (Kod)
Norfaezah Binti Ishak (Norfaezah)	Course category	Faculty code	Type of study	staff num-ber	Other university (l)	2001 (01)	Confidential (su) Restricted (th) Unrestricted (tt)	Pre-access (p) Full texts (t)	
norfaezah	**p**	**e**	**3**	**7171**	**l**	**01**	**su**	**p**	

All UTM staffs studying in other universities are still required to submit ETD to the library and the file names for the above example should be follows:

1. norfaezahpe37171l01sup.pdf   (Pre-access file)

2. norfaezahpe37171l01sup.pdf   (Full text file)

Code Description

Course category

M - Master

P - PhD

L - Advance Diploma

Faculty

A – Faculty of Civil Eng.

B – Faculty of Built Environment

C – Faculty of Computer Science and Information System

D – Program Pengajian Diploma

E – Faculty of Electrical Engineering

F – UTM – Kolej Tentera Udara Diraja Malaysia

G – Faculty of Geoinformation Science And Engineering

H – Faculty of Management and Human Resource Development

I - BATC

K – Faculty of Chemical and Natural Resource Engineering

L – UTM-Tentera Laut Diraja Malaysia

M – Faculty of Mechanical Engineering

N – UTM- Akademik Laut Malaysia

P – Faculty of Education

R - IBS

S – Faculty of Science

Z – UTM- Akademi Tentera Malaysia (ATMA)

Type of Study

1 – course work

2 – course work and research

3 – research

UNIVERSITI TEKNOLOGI MALAYSIA PSZ 19:16 (Pind. 1/07)

DECLARATION OF THESIS / UNDERGRADUATE PROJECT PAPER AND COPYRIGHT

Author's full name : _____

Date of birth : _____

Title : _____

_____

_____

Academic Session: _____

I declare that this thesis is classified as :

☐ **CONFIDENTIAL** (Contains confidential information under the Official Secret Act 1972)*

☐ **RESTRICTED** (Contains restricted information as specified by the organization where research was done)*

☐ **OPEN ACCESS** I agree that my thesis to be published as online open access (full text)

I acknowledged that Universiti Teknologi Malaysia reserves the right as follows:

1. The thesis is the property of Universiti Teknologi Malaysia.
2. The Library of Universiti Teknologi Malaysia has the right to make copies for the purpose of research only.
3. The Library has the right to make copies of the thesis for academic exchange.

Certified by :

_____   _____
SIGNATURE   **SIGNATURE OF SUPERVISOR**

_____   _____
(NEW IC NO. /PASSPORT NO.)   **NAME OF SUPERVISOR**

Date :   Date :

NOTES : * If the thesis is CONFIDENTAL or RESTRICTED, please attach with the letter from the organization with period and reasons for confidentiality or restriction.

Example of a thesis status declaration letter

Librarian

Perpustakaan Sultanah Zanariah

UTM, Skudai

Johor

Sir,

CLASSIFICATION OF THESIS AS RESTRICTED

- TITLE AND NAME OF AUTHOR'S

Please be informed that the above mentioned thesis entitled *" TITLE"* be classified as RESTRICTED for a period of three (3) years from the date of this letter. The reasons for this classification are

    (i)

    (ii)

    (iii)

Thank you.

Sincerely yours,

NAME, ADDRESS, TELEPHONE NUMBER OF SUPERVISOR

Note: This letter should be written by the supervisor, addressed to PSZ and a copy attached to the thesis.

Sample of supervisor's declaration

"I/We* hereby declare that I/we* have read this thesis and in my/our*

opinion this thesis is sufficient in terms of scope and quality for the

award of the degree of Master of .... (*specialisation*)

or Doctor of Philosophy (*specialisation*)

or Doctor of Engineering (*specialisation*) "

Signature   :   ....

Name of Supervisor I   :   ....

Date   :   ....

Signature   :   ....

Name of Supervisor II   :   ....

Date   :   ....

Signature   :   ....

Name of Supervisor III   :   ....

Date   :   ....

* *Delete as necessary*

Contoh pengesahan Sekolah Pengajian Siswazah/Fakulti/Agensi Kerjasama

BAHAGIAN A – Pengesahan Kerjasama*

Adalah disahkan bahawa projek penyelidikan tesis ini telah dilaksanakan melalui

kerjasama antara _____ dengan _____

Disahkan oleh:

Tandatangan : .... Tarikh : ....

Nama : ....

Jawatan : ....
(Cop rasmi)

* Jika penyediaan tesis/projek melibatkan kerjasama.

BAHAGIAN B – Untuk Kegunaan Pejabat Sekolah Pengajian Siswazah

Tesis ini telah diperiksa dan diakui oleh:

Nama dan Alamat Pemeriksa Luar : ....
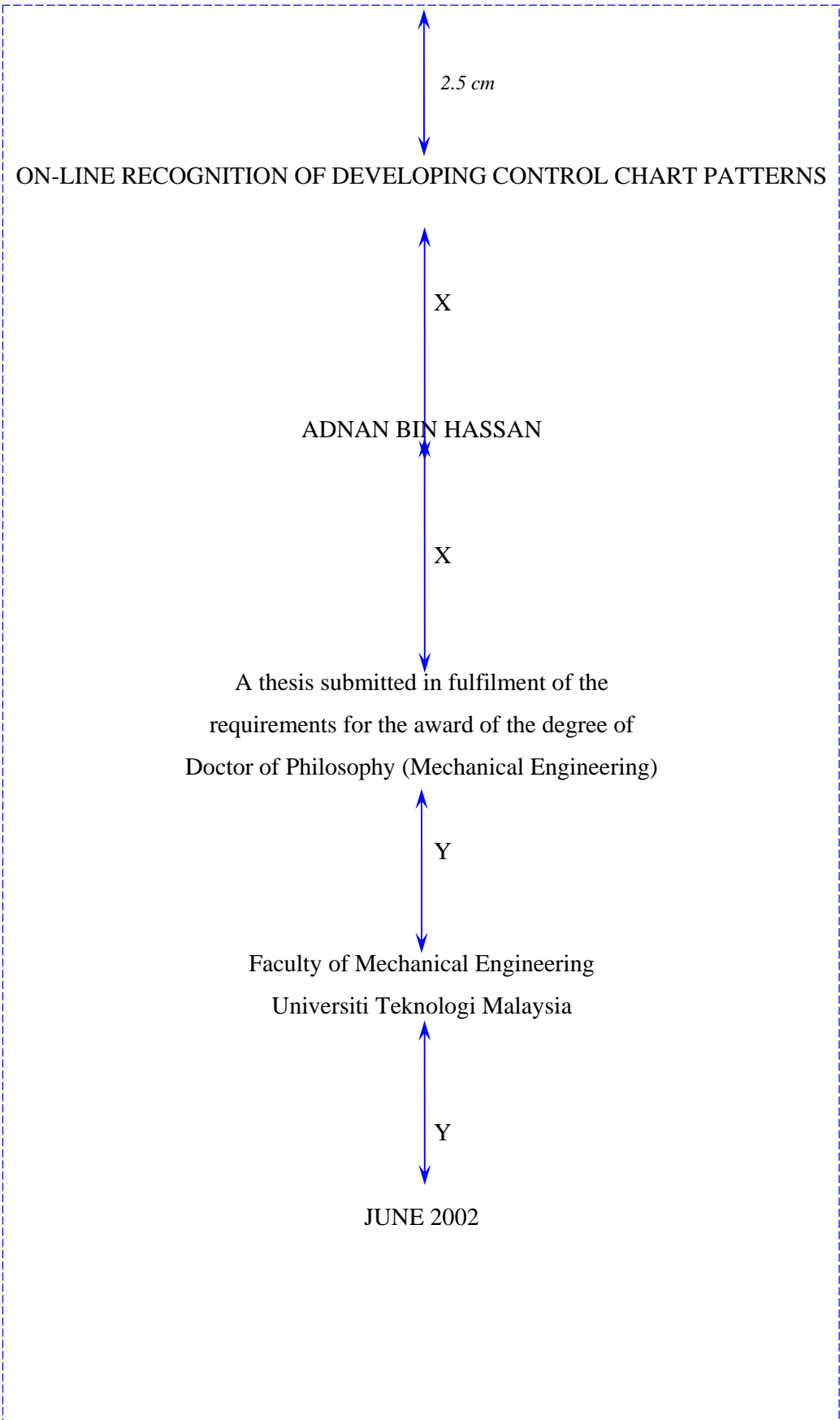
....

....

....

Nama dan Alamat Pemeriksa Dalam : ....

....

....

....

Nama Penyelia Lain (jika ada) : ....

....

....

....

Disahkan oleh Timbalan Pendaftar di SPS:

Tandatangan : .... Tarikh : ....

Nama : ....

Example of a title page

2.5 cm

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ON-LINE RECOGNITION OF DEVELOPING CONTROL CHART PATTERNS

X

ADNAN BIN HASSAN

X

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2.5 cm

A thesis submitted in fulfilment of the

requirements for the award of the degree of

Doctor of Philosophy (Mechanical Engineering)

Y

Faculty of Mechanical Engineering

Universiti Teknologi Malaysia

Y

JUNE 2002

2.5 cm

Sample of statement of awards for theses

1.   **Bachelor Degree Project Report**

A report submitted in partial fulfilment of the

requirements for the award of the degree of

Bachelor of ....

2.   **Master's Project Report (By course work)**

A project report submitted in partial fulfilment of the

requirements for the award of the degree of

Master of .... (*specialisation*)

3.   **Master's Dissertation (By course work and research)**

A dissertation submitted in partial fulfilment of the

requirements for the award of the degree of

Master of .... (*specialisation*)

4.   **Master's Thesis (By research)**

A thesis submitted in fulfilment of the

requirements for the award of the degree of

Master of .... (*specialisation*) .

5.   **Doctor of Philosophy Thesis**

A thesis submitted in fulfilment of the

requirements for the award of the degree of

Doctor of Philosophy (*specialisation*)

6.   **Engineering Doctorate Thesis**

A dissertation submitted in partial fulfilment of the

requirements for the award of the degree of

Doctor of Engineering (*specialisation*)

Sample of a declaration page

I declare that this thesis entitled " *title of the thesis* " 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.

Signature   :   ....

Name   :   ....

Date   :   ....

Sample of a dedication page

To my beloved mother and father

Example of acknowledgement page

2.5 cm

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ACKNOWLEDGEMENT

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In preparing this thesis, I was in contact with many people, researchers, academicians, and practitioners. They have contributed towards my understanding and thoughts. In particular, I wish to express my sincere appreciation to my main thesis supervisor, Professor Dr. Mohd Shariff Nabi Baksh, for encouragement, guidance, critics and friendship. I am also very thankful to my co-supervisors Professor Dr. Awaluddin Mohd Shaharoun and Associate Professor Dr. Hishamuddin Jamaluddin for their guidance, advices and motivation. Without their continued support and interest, this thesis would not have been the same as presented here.

I am also indebted to Universiti Teknologi Malaysia (UTM) for funding my Ph.D. study. Librarians at UTM, Cardiff University of Wales and the National University of Singapore also deserve special thanks for their assistance in supplying the relevant literatures.

My fellow postgraduate students should also be recognised for their support. My sincere appreciation also extends to all my colleagues and others who have provided assistance at various occasions. Their views and tips are useful indeed. Unfortunately, it is not possible to list all of them in this limited space. I am grateful to all my family members.

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Example of an abstract in Bahasa Melayu

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ABSTRAK

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Kajian ini dilakukan bertujuan mengkaji penggunaan algoritma genetik (GA) dalam pemodelan sistem dinamik linear dan tak linear dan membangunkan kaedah alternatif bagi pemilihan struktur model menggunakan GA. Algorithma kuasa dua terkecil ortogon (OLS), satu kaedah penurunan kecerunan digunakan sebagai bandingan bagi kaedah yang dicadangkan. Pemilihan struktur model mengunakan kaedah algoritma genetik yang diubahsuai (MGA) dicadangkan dalam kajian ini bagi mengurangkan masalah konvergens pramatang dalam algoritma genetik mudah (SGA). Kesan penggunaan gabungan operator MGA yang berbeza ke atas prestasi model yang terbentuk dikaji dan keberkesanan serta kekurangan MGA diutarakan. Kajian simulasi dilakukan untuk membanding SGA, MGA dan OLS. Dengan meggunakan bilangan parameter dinamik yang setara kajian ini mendapati, dalam kebanyakan kes, prestasi MGA adalah lebih baik daripada SGA dalam mencari penyelesaian yang berpotensi dan lebih berkebolehan daripada OLS dalam menentukan bilangan sebutan yang dipilih dan ketepatan ramalan. Di samping itu, penggunaan carian tempatan dalam MGA untuk menambah baik algorithma tersebut dicadang dan dikaji, dinamai sebagai algoritma memetic (MA). Hasil simulasi menunjukkan, dalam kebanyakan kes, MA berkeupayaan menghasilkan model yang bersesuaian dan parsimoni dan memenuhi ujian pengsahihan model di samping memperolehi beberapa kelebihan dibandingkan dengan kaedah OLS, SGA dan MGA. Tambahan pula, kajian kes untuk sistem berbilang pembolehubah menggunakan data eksperimental sebenar daripada dua sistem iaitu sistem pengulang-alik turbo dan reaktor teraduk berterusan menunjukkan algoritma ini boleh digunakan sebagai alternatif untuk memperolehi model termudah yang memadai bagi sistem tersebut.

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Example of an abstract in English

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ABSTRACT

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The purpose of this study is to investigate the application of genetic algorithm (GA) in modelling linear and non-linear dynamic systems and develop an alternative model structure selection algorithm based on GA. Orthogonal least square (OLS), a gradient descent method was used as the benchmark for the proposed algorithm. A model structure selection based on modified genetic algorithm (MGA) has been proposed in this study to reduce problems of premature convergence in simple GA (SGA). The effect of different combinations of MGA operators on the performance of the developed model was studied and the effectiveness and shortcomings of MGA were highlighted. Results were compared between SGA, MGA and benchmark OLS method. It was discovered that with similar number of dynamic terms, in most cases, MGA performs better than SGA in terms of exploring potential solution and outperformed the OLS algorithm in terms of selected number of terms and predictive accuracy. In addition, the use of local search with MGA for fine-tuning the algorithm was also proposed and investigated, named as memetic algorithm (MA). Simulation results demonstrated that in most cases, MA is able to produce an adequate and parsimonious model that can satisfy the model validation tests with significant advantages over OLS, SGA and MGA methods. Furthermore, the case studies on identification of multivariable systems based on real experimental data from two systems namely a turbo alternator and a continuous stirred tank reactor showed that the proposed algorithm could be used as an alternative to adequately identify adequate and parsimonious models for those systems.

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Sample of a Table of Contents page

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TABLE OF CONTENTS

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CHAPTER	TITLE	PAGE
	DECLARATION	ii
	DEDICATION	iii
	ACKNOWLEDGEMENTS	iv
	ABSTRACT	v
	ABSTRAK	vi
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Example of a List of Tables

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2.5 cm

LIST OF TABLES

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Example of a List of Figures

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LIST OF FIGURES

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2.5 cm

Example of a List of Symbols

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2.5 cm

LIST OF SYMBOLS

4 baris

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
θ	-	Angle
ρ		Density

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2.5 cm

2.5 cm

Example of a List of Appendices

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LIST OF APPENDICES

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2.5 cm

2.5 cm

2.5 cm

Sample of a quotation in a text

After deliberating on doctoral education in Australia in the 1990s, one observer I Australia writes:

The lack of any significant formal course work within our Ph.D. and master degrees by research has continued for three decades. The focus of our Ph.D. research type degrees continues to be the research project, and this is almost the only medium by which education is accomplished.

(Stranks, 1984:171)

2.5 cm

Sample of a table in the text

Table 4.3 : Comparison of exprimental 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

4 cm

2.5 cm

2.5 cm

Sample of an illustration or a figure

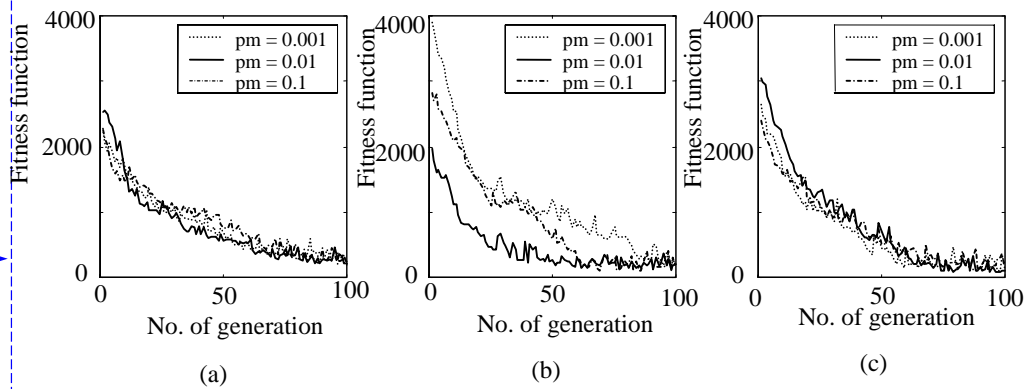(a)   (b)   (c)

Figure 4.3   Simulation results for model 1 on effect of varied crossover and mutation a) $p_c = 0.05$, varied p_m, b) $p_c = 0.6$, varied p_m c) $p_c = 0.95$, varied p_m

Application form for permission to print aerial photograph/Malaysian siries
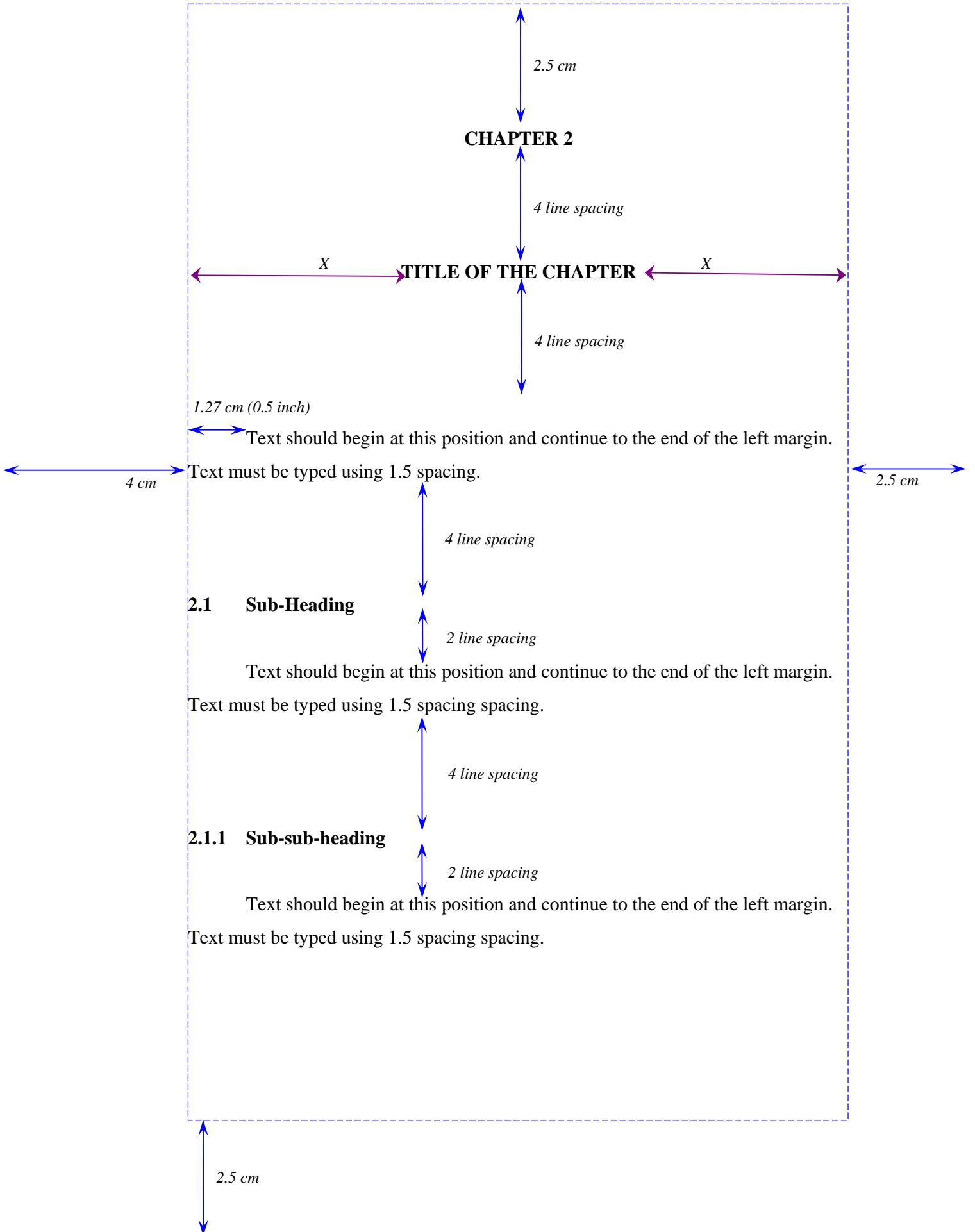
map

Borang PPN 114

PENGARAH PEMETAAN NEGARA MALAYSIA
Jalan Gurney, 50578 Kuala Lumpur
SEMENANJUNG MALAYSIA

PERMOHONAN KEBENARAN MENCETAK
*GAMBAR FOTO UDARA/PETA-PETA MALAYSIA
APPLICATION FOR PERMISSION TO REPRODUCE
*AIR PHOTO/MAPS OF MALAYSIA

(Diisi dalam dua salinan)
To be completed in duplicate

1. Pemohon: (nama & alamat) *Applicant: (name & address)* ——————————————— ——————————————— ——————————————— ——————————————— No. Kad Pengenalan: *Identity Card No.:* ———————————————	Rujukan Pemohon: *Applicant's reference:* ——————————————— Tarikh: *Date:* ———————————————
2. Tajuk Penerbitan & Pengarang: *Title of Publication & Author:* —————————————————————————— —————————————————————————— —————————————————————————— ——————————————————————————	
3. Tujuan Penerbitan: *Purpose of Publication:* —————————————————————————— —————————————————————————— —————————————————————————— —————————————————————————— —————————————————————————— —————————————————————————— —————————————————————————— —————————————————————————— ——————————————————————————	
4. Banyak naskah yang akan dicetak: *Number of copies to be print:* ——————————————— ——————————————— ——————————————— ———————————————	Harga senaskah (jika dijual): *Price per copy (if for sale):* ——————————————— ——————————————— ——————————————— ———————————————
5. Foto Udara/Peta-peta & Ukuran: (sila sertakan salinan foto sebenar yang akan dicetak *Air photo/maps & size: (please enclose photo of actual map to be printed)* —————————————————————————— —————————————————————————— —————————————————————————— —————————————————————————— —————————————————————————— —————————————————————————— —————————————————————————— —————————————————————————— —————————————————————————— ——————————————————————————	

Sample of numbering a chapter and sub-heading in the chapter

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2.5 cm

CHAPTER 2

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X **TITLE OF THE CHAPTER** *X*

4 line spacing

1.27 cm (0.5 inch)

Text should begin at this position and continue to the end of the left margin.

4 cm   Text must be typed using 1.5 spacing.   *2.5 cm*

4 line spacing

2.1   Sub-Heading

2 line spacing

Text should begin at this position and continue to the end of the left margin.

Text must be typed using 1.5 spacing spacing.

4 line spacing

2.1.1   Sub-sub-heading

2 line spacing

Text should begin at this position and continue to the end of the left margin.

Text must be typed using 1.5 spacing spacing.

2.5 cm

Sample of a page continuation

Texts from previous page continue here.

4 line spacing

2.5   Sub Heading

2 line spacing

Text should begin here.

and ends here.

4 line spacing

2.5.1   Sub-sub-Heading

2 line spacing

2.5.1.1 Sub-sub-sub Heading
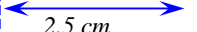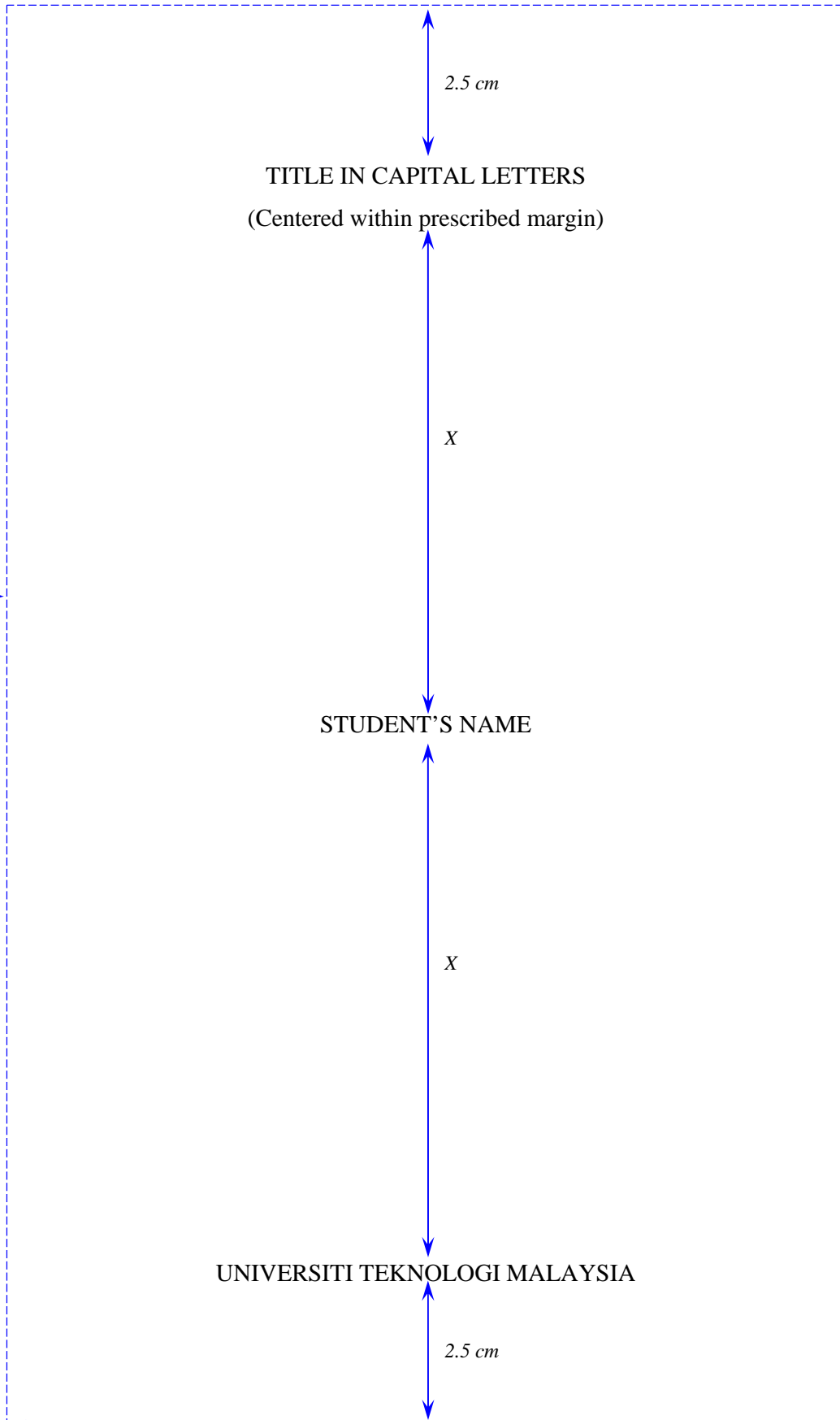
2 line spacing

Text should begin here .....

and ends here.

2.5 cm

2.5 cm

4 cm

2.5 cm

2.5 cm

APPENDIX V

Sample of a thesis front cover

2.5 cm

2.5 cm

TITLE IN CAPITAL LETTERS

(Centered within prescribed margin)

X

4 cm

2.5 cm

STUDENT'S NAME

X

UNIVERSITI TEKNOLOGI MALAYSIA

2.5 cm

2.5 cm

Sample of a thesis spine (must be in Bahasa Melayu)

X cm

BAKRI BIN HASSAN   SARJANA KEJURUTERAAN (ELEKTRIK)   2002   UTM

X cm

width ≤ 2.5 cm

OR

Y cm

ADNAN BIN HASSAN

DOKTOR FALSAFAH

2002

UTM

Y cm

width > 2.5 cm

Sample of a reference list using author and year system

Ahmad Zaki Abu Bakar (1989). *Pemprosesan Teks Bahasa Melayu Untuk Pemahaman Komputer*. Universiti Teknologi Malaysia: Tesis Doktor Falsafah.

American Chemical Society ed. (1978). *Handbook for Authors of American Chemical Society Publications.* Washington, D. C.: American Chemical Society.

Billings. S. A. (1980). Identification of Nonlinear Systems: A survey. *Proc. Instn Electr. Engrs*, *Part D.* 127(6): 272-284.

Engineers Joint Council (1969). *Thesaurus of Engineering and Scientific Terms*. New York: Engineers Joint Council.

Martin, A. M. ed. (1991). *Peat as an Agent in Biological Degradation of Waste*. London: Elsevier. 314–362.

Puget, J. F. and Albert, P. (1994a). *SOLVER: Constraints – Objects Descriptions*. Technical Report. ILOG S. A.

Puget, J. F. and Albert, P. (1994b). *A C++ Implementation of CLP*. Technical Report. ILOG S. A.

Sheta, A. F. and De Jong, K.(1996). Parameter Estimation of Nonlinear Systems in Noisy Environments Using Genetic Algorithms. *Proceedings of the 1966 IEEE International Symposium on Intelligent Control*. September 15-18. Dearborn, Michigan: IEEE, 360-365.

Sukiman Sarmani (1987). Pencemaran Radioaktif. Dlm. Ahmad Badri Mohamad. *Perspektif Persekitaran*. Petaling Jaya: Fajar Bakti. 71-87.

Theusen, G. J. and Fabrycky, W. J. (1984). *Engineering Economy*. 6th edition. Englewood Cliffs, N. J.: Prentice-Hall.

Veres, S. M. (1990). *Structure Selection of Stochastic Dynamic Systems*. New York: Gordon and Breach Science Publishers.

Note: Arranged alphabetically according to author's name.

Sample of a reference list using number system

1. Theusen, G. J. and Fabrycky, W. J. *Engineering Economy*. 6th edition. Englewood Cliffs, N. J.: Prentice-Hall. 1984.

2. Sukiman Sarmani. Pencemaran Radioaktif. Dlm.: Ahmad Badri Mohamad. *Perspektif Persekitaran*. Petaling Jaya: Fajar Bakti. 71–87; 1987

3. Billings. S. A. Identification of Nonlinear Systems: A Survey. *Proc. Instn Electr. Engrs*, *Part D*, 1980, 127(6): 272-284.

4. Sheta, A. F. and De Jong, K. Parameter Estimation of Nonlinear Systems in Noisy Environments Using Genetic Algorithms. *Proceedings of the 1966 IEEE International Symposium on Intelligent Control*. September 15-18, 1996. Dearborn, Michigan: IEEE, 1996. 360-365.

5. Ahmad Zaki Abu Bakar. *Pemprosesan Teks Bahasa Melayu Untuk Pemahaman Komputer*. Tesis Doktor Falsafah. Universiti Teknologi Malaysia; 1989

6. British Standards Institution. *Tongued and Grooved Software Flooring*. London, BS 1297. 1987

7. Lindgren, E. A. *Screen Room Air Inlet and Wave Guard*. U.S. Patent 2, 925, 457. 1960.

8. Howick Partitioning Ltd. *Howick: Partitioning in Business*. Redhill (U.K.): Trade brochure. 1984.

9. Sheta, A. F. and De Jong, K. Parameter Estimation of Nonlinear Systems in Noisy Environments Using Genetic Algorithms. *Proceedings of the 1966 IEEE International Symposium on Intelligent Control*. September 15-18. Dearborn, Michigan: IEEE. 1996. 360-365.

Note: Arranged in the order in which the references were cited in the thesis

APPENDIX Z
Sample of an ethesis declaration/validation form

School of Graduate Studies

Universiti Teknologi Malaysia

VALIDATION OF E-THESIS PREPARATION

Title of the thesis : _____

                _____

                _____

Degree: _____

Faculty: _____

Year: _____

I _____

                              (CAPITAL LETTER)

declare and verify that the copy of e-thesis submitted is in accordance to the Electronic Thesis and Dissertation's Manual, School of Graduate Studies, UTM

_____   _____

(Signature of the student)   (Signature of supervisor as a witness)

Permanent address:

_____   **Name of Supervisor**:_____

_____

_____   **Faculty**:_____

Note: This form must be submitted to SPS together with the CD.