

HSA THESIS WRITING MANUAL

for

Post Graduate Degrees

(Version 1.0)



Health Services Academy, Islamabad

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Table of Contents

CHAPTER 1	1
ORGANISATION OF THE THESIS	1
1.1 Definition of a Thesis	1
1.2 Organization of the Thesis	1
1.3 Title Page	2
1.3.1 Thesis Title.....	3
1.3.2 Statement of Award for the Thesis.....	3
1.4 Approval of Examination	3
1.5 Author’s Declaration.....	3
1.6 Plagiarism Undertaking.....	3
1.7 Dedication Page (optional).....	4
1.8 Acknowledgement (optional).....	4
1.9 Abstract.....	4
1.10 Table of Contents Page (s).....	4
1.11 List of Tables	4
1.12 List of Figures	5
1.13 List of Symbols/Abbreviations/Notations/Terminology	5
1.14 List of Appendices	5
1.15 Text	5
1.15.1 Citation in the Text.....	6
1.15.2 Quotations in the Text.....	6
1.15.3 Tables in the Text.....	6
1.15.4 Figures in the Text	7
1.16 References.....	7
1.17 Appendix.....	8
CHAPTER 2	9
SIZE AND FORMAT	9
2.1 Paper and Size	9
2.2 Margin.....	9
2.3 Pagination	9
2.4 Numbering the Chapters and Sub-sections.....	10
2.5 Typing	11
2.6 Spacing and Format.....	11
2.7 Computer Printed Copy.....	12
2.8 Lettering and Drawing	12
2.9 Maximum Limits.....	12
2.10 Binding.....	12
2.10.1 Cover Colour and Writing.....	13
2.10.2 Front Cover	13

2.10.3 Spine	13
CHAPTER 3	14
REFERENCE STYLE	14
3.1 Introduction.....	14
3.2 Author and Year System.....	14
3.2.1 Citing in the Text.....	14
3.2.2 List of References	16
3.2.3 Writing Style for Authors' Names in the List of References	16
3.2.4 Writing Style for Various Types of Publication Materials in the List of References.....	17
3.3 Number System.....	22
3.3.1 Citing in the Text.....	22
3.3.2 Writing Style for Various Types of Publication Materials in the List of References.....	23
3.4 Reference from Internet	26
CHAPTER 4	27
NOTES AND FOOTNOTES	27
4.1 General Guidelines.....	27
4.2 Reference Style	27
CHAPTER 5	29
ELECTRONIC THESES AND DISSERTATIONS (ETD).....	29
5.1 Introduction.....	29
5.2 Definition of Electronic Theses and Dissertations (ETD)	29
5.4 Contents of ETD	30
5.4.1 Pre-access File.....	30
5.4.2 Full Text File	30
5.5 Preparation Guideline.....	30

CHAPTER 1

ORGANISATION OF 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 post 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 PhD and MS/MPhil theses.

1.2 Organization 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.

Table 1.1:Arrangement of parts in a thesis

Section	SUBJECT	STATUS	EXAMPLE (APPENDIX)	REMARKS
1.3	Title page	compulsory	A	without page number but counted as (i). Do not use BOLD letters.
1.4	Certificate of Approval for Examination	compulsory	B	page number using Roman numeric (ii)
1.5	Author's Declaration	compulsory	C	page number using Roman numeric (ii)
1.6	Plagiarism Undertaking	compulsory	D	page number using Roman numeric (ii)
1.7	Dedication	optional	E	page number using Roman numeric (if any)
1.8	Acknowledge-ments	optional	F	page number using Roman numeric (if any)

1.9	Abstract (English)	compulsory	G	page number using Roman numeric
1.10	Table of Contents	compulsory	H	page number using Roman numeric
1.11	List of Tables	compulsory	J	page number using Roman numeric
1.12	List of Figures	compulsory	K	page number using Roman numeric
1.13	List of Symbols/ Abbreviations / Notation/ Terminology	compulsory	L	page number using Roman numeric
1.14	List of Appendices	compulsory (if any)	M	page number using Roman numeric (if any)
1.15	Text	compulsory	N,P,Q,R,S	page number using Arabic numeric starting with page 1
1.16	References	compulsory	-	page number using Arabic numeric continue from the text
1.17	Appendices	optional	-	page number using Arabic numeric continue from the text

1.3 Title Page

Title page must contain information listed in the following order:

Title of the thesis;

Student's full name (as per registration in HSA) ;

Statement of award for the thesis (see Appendix A);

Name of Department/Faculty/Campus/Centre where the student registered;

Name of the University/Institute; and

Month and Year of submission (Month and Year of submission of hard bound copy of the thesis).

See example in Appendix A.

1.31 Thesis Title

The title should be a short and snappy description of the main topic of the thesis. Not more than 16 words. Redundancies such as ““On the ...”, “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.

1.32 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 A.

1.4 Approval of Examination

This page should contain declaration by the Principal Supervisor regarding approval of thesis for examination. The page should be signed by the Principal Supervisor. See example in Appendix B.

1.5 Author’s Declaration

This page should contain declaration by the student on originality of the thesis stating that it is his/her own work and has not been submitted previously by him/her for taking any degree. The declaration should be signed by the student. See example in Appendix C.

1.6 Plagiarism Undertaking

This page should contain declaration by the student on plagiarism. The undertaking should be signed by the student. See example in Appendix D.

1.7 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 E.

1.8 Acknowledgement (optional)

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

1.9 Abstract

Abstracts must be written in English. The abstract should be brief, written in one paragraph/page and not exceed 500 words. An abstract is different from synopsis or summary of a thesis. It should state 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 G (English).

1.10 Table of Contents Page(s)

The Table of Contents page (s) 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 H.

1.11 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 J.

1.12 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 K.

1.13 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 L.

1.14 List of Appendices

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

1.15 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. See example of numbering a chapter and sub headings in a chapter in Appendix N.

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 of chapters. See example of page continuation in Appendix p.

The text should contain:

- (i) an introduction, background, and problem statement of 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
- (v) the conclusions and significance of the findings.

1.151 Citation in the Text

Citation means formally recognizing 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.

1.152 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 Q.

1.153 Tables in the Text

All tables must be numbered using English numeric. A caption should be positioned at the top of the table. If the caption is written in a single line, it should be centered. If the caption is written more than one line, it should align to the left and justified. Preferably, long tables should be reduced to fit on a single page unless the oversized materials are absolutely necessary for clarity and understanding. 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 R.

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.

1.154 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 English numeric. A caption should be located at the bottom of the figure. If the caption is written in a single line, it should be centered. If the caption is written in more than one line, it should be aligned to the left and justified. 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 been 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.

It is advisable to scan all illustration materials using a scanner and printing them using a high quality colour printer. See example in Appendix S.

1.16 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.

1.17 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 at least 3.5 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, at least 1.00 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 English numeric (1, 2, 3, etc.).
- (ii) The first page should be the title page. This page should be counted “i” but page number should not be printed.
- (iii) The first page of the text (Chapter 1) should be counted “1”.

2.4 Numbering the Chapters and Sections

All chapters and their sub-sections must be labelled and numbered. The chapters are numbered using English 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, single line spacing as in the text should be used. Sub-sections beyond level four should be labelled using characters. Examples are shown in Appendices P and Q.

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 MS 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 in the text. The text must be printed on one side only.

The title of a chapter should be typed using capital letters and centered. 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 P and Q.

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 at least two (2) line spacing;
- (iii) The spacing between the last line of a text with the title of a sub-section should be at least two (2) 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 at least one (1) line spacing;
- (vi) The number and the title of sub-section should be aligned with the left margin;
- (vii) The alignment of text in entire thesis should be justified.
- (viii) The spacing between the last line of a text and a table, or a figure or an illustration should be two (2) line spacing;
- (ix) The spacing after a full stop should be one (1) character spacing.
- (x) The spacing after a full stop (.) and a comma (,) should be one (1).

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 dissertation/thesis are as follows:

MS/MPhil Dissertation/Thesis	:	200 pages (OR 10,000-30,000 words)
Doctorate Thesis	:	300 pages (OR 40,000-80,000 words)

These limits include tables, figures and other illustrations in the text but do not include references and 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 should be as follows:

Thesis		Cover Colour (Thesis)	Lettering
(i) PhD Programs			
a	Faculty of Public Health	Green	Golden
(ii) MS/MPhil Programs			
a	Faculty of Public Health	Blue(#26437c)	Golden

2.10.2 Front Cover

The front cover should be written with the title of the thesis, the STUDENT'S NAME and Health Services Academy, Islamabad with "CAMPUS" name using capital letters. An example is shown in Appendix T.

2.10.3 Spine

On the spine should be written the student's name, the degree (MS/MPhil/PhD), the year in which the thesis is approved (the year in which final bound thesis submitted) and HSA Campus as in Appendix U.

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 (APA System) or numerically (Number System) as per the requirement of respective Faculty. The style selected must be used consistently throughout the thesis.

3.2 Author and Year System

This system is also known as APA 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 year 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 behavioral link between the off springs 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 three authors for a cited reference, all three names should be written first time. Subsequently, use *et al.* after the name of the first author, if same reference is cited in text more than once.

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

“Soderstrom et al (1989) successfully used neural networks to adaptively control *Penicillin acylase* fermentation.”

- (e) 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).”

- (f) 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.
- (g) “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).”
- (h) “Luh et al. (1980b) presented an example of an acceleration control of robot arm/manipulator.”
- (i) 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 material 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 Management Science 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) Book

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

Example:

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

(ii) Article in a book

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

Example:

Hussein, S. B., Jamaluddin, H., Mailah, M. and Zalzal, 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) Journal articlesPrint format

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

Example:

Billings, S. A. (1980). *Identification of Nonlinear Systems: A survey*.
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 awarded. University, Place published.

Example:

Adnan bin Hassan (2002). *On-line Recognition of Developing Control Chart Patterns*. Ph.D. Thesis. Health Services Academy, Islamabad.

(vi) Standards

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

Example:

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

(vii) Patent Printformat

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.

Electronic format

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 <ftp://ep.espacenet.com/>

(ix) Brochure

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]. Lawrence, KS: Macmillan

(x) Unpublished materials

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

(xii) Newspaper articlePrint formatNo 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.

(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 V.

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 Holland¹ and was extensively explored by Goldberg².”

- (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 problems¹ 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) Book

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

Example:

[1] Theusen, G. J. and Fabrycky, W. J. *Management Science/Economy*
6th. ed. Englewood Cliffs, N. J.: Prentice-Hall. 1984

(ii) Article in a book

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

Example:

[2] Hussein, S. B., Jamaluddin, H., Mailah, M. and Zalzal, 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) Journal articles

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

Example:

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

(iv) Conference articles

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

Example:

[4] 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:

[5] Adnan bin Hassan. *On-line Recognition of Developing Control Chart Patterns*. Ph.D. Thesis. Health Services Academy Islamabad; 2002

(vi) Standards

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

Example:

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

(vii) Patent

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

Example:

[7] Lindgren, E. A. *Screen Room Air Inlet and Wave Guards*. Patent 2,925,457. 1960.

(viii) Commercial catalogue

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

Example:

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

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

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 mostly 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.

Style for writing reference as footnotes:

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

Example:

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

All postgraduate students are to submit a copy of Thesis in digital form beside the normal bound hardcopy after approval. Students are required to submit Four (4) bound hardcopies and One (1) CD containing digital thesis.

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

5.2 Definition of Electronic Theses and Dissertations (ETD)

Electronic Theses and Dissertations or ETD 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 Statutory bodies.

5.4 Contents of ETD

An ETD must consist of two (2) files, namely pre-access file and full text file. Both files should be in word as well as in PDF format. Scanned copy of plagiarism report duly signed by the Principal Supervisor should also be added in the CD (PDF).

5.4.1 Pre-accessFile

Pre-access file is a file that contains information about the 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 examiners and relevant statutory bodies. 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 examiners/statutory bodies;
- 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. 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><registration.no><d><yy><f><c>.pdf`

Code description

`<name>` is the student's first name (without surname or father's name)

`<registration.no>` is the student's registration number allotted by the BU

`<d>` is the name of degree for which thesis was submitted

`<yy>` is the year in which thesis approved

`<f>` is the file type

p – pre-access file

t – full text file

`<c>` is the campus of BU

Example 1

Muhammad Adnan Hassan, is a MSph student at Health Services Academy, Lahore Campus. His thesis is approved in the year 2017. His registration number is 25875. Therefore:

<name> = Muhammad Adnan Hassan

<registration.no> = 25875

<d> = MSph

<yy> = 2017

<f> = t

<c>=HSA

The files should be named as follows:

muhammadadnanhassan25875msph2017 HSA.pdf (pre-access file)

muhammadadnanhassan25875msph2017 HSA.pdf (full texts file)

Example 2

Samina Khalid, is a PhD(ph) student at Health Services Academy, Islamabad Campus. Her thesis is approved in the year 2019. His registration number is 10158. Therefore:

<name> = Samina Khalid

<registration.no> = 10158

<d> = PhD(ph)

<yy> = 2019

<f> = t

<c>=HSA

The files should be named as follows:

saminakhalid10158phd(ce)2019 HSA.pdf (pre-access file)

saminakhalid10158phd(ce)2019 HSA.pdf (full texts file)

APPENDIX A
Example of a title page

ON-LINE RECOGNITION OF DEVELOPING CONTROL CHART PATTERNS
USING ARTIFICIAL NEURAL NETWORKS



MUHAMMAD ADYAN HASSAN
0023/HSA/MSPH-2020

A thesis submitted in fulfilment of the
requirements for the award of the degree of
Doctor of Philosophy (Public Health)

Health Services Academy, Islamabad

AUGUST 2020

2.5 cm

2.5 cm

3.5 cm

2.5 cm

APPENDIX B
Sample of a Certificate of Approval for Examination

Approval for Examination

Scholar's Name: _____ Registration No.

 Programme _____ of _____ Study:

 Thesis _____ Title:

It is to certify that the above scholar's thesis has been completed to my satisfaction and, to my belief, its standard is appropriate for submission for examination. I have also conducted plagiarism test of this thesis using HEC prescribed software and found similarity index _____% that is within the permissible limit set by the HEC for the PhD degree thesis. I have also found the thesis in a format recognized by the BU for the PhD thesis.

Principal _____ **Supervisor's** _____ **Signature:** _____

Date: _____
Name: _____

APPENDIX C
Sample of Author's Declaration

Author's Declaration

I, _____ hereby state that my PhD thesis titled
“ _____
_____ ”

is my own work and has not been submitted previously by me for taking any degree from this university

_____ (Name _____ of
University) _____

or anywhere else in the country/world.

At any time if my statement is found to be incorrect even after my graduation, the University has the right to withdraw/cancel my PhD degree.

Name of scholar: _____

Date: _____

APPENDIX D
Sample of Plagiarism Undertaking

Plagiarism Undertaking

I, solemnly declare that research work presented in the thesis titled

“

_____”

is solely my research work with no significant contribution from any other person. Small contribution / help wherever taken has been duly acknowledged and that complete thesis has been written by me.

I understand the zero tolerance policy of the HEC and Health Services Academy towards plagiarism. Therefore I as an Author of the above titled thesis declare that no portion of my thesis has been plagiarized and any material used as reference is properly referred / cited.

I undertake that if I am found guilty of any formal plagiarism in the above titled thesis even after award of PhD degree, the university reserves the right to withdraw / revoke my PhD degree and that HEC and the University has the right to publish my name on the HEC / University website on which names of scholars are placed who submitted plagiarized thesis.

Scholar / Author's Sign: _____

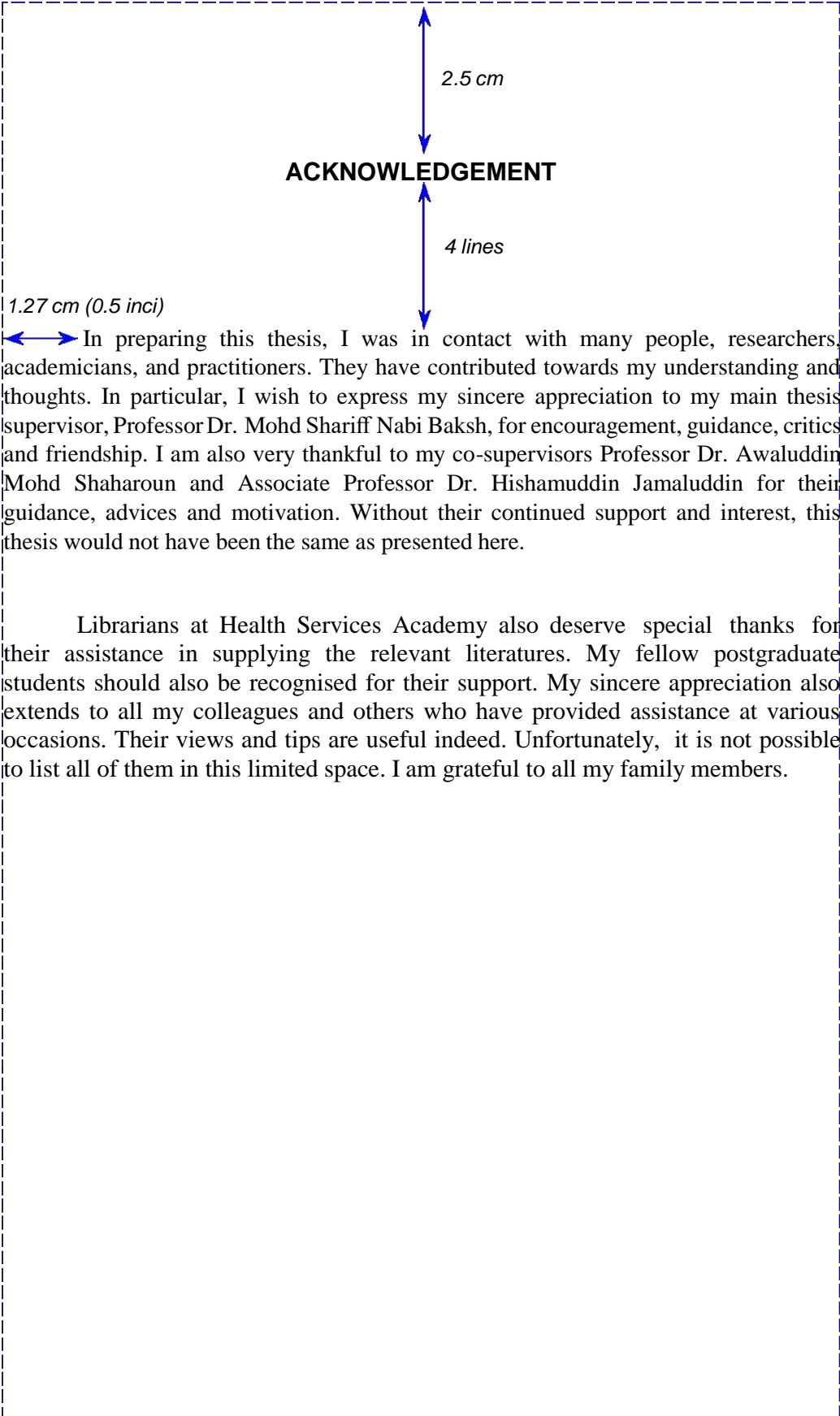
Name of the Scholar: _____

APPENDIX E
Sample of a dedication page

To my beloved mother and father

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APPENDIX F
Example of acknowledgement page



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.

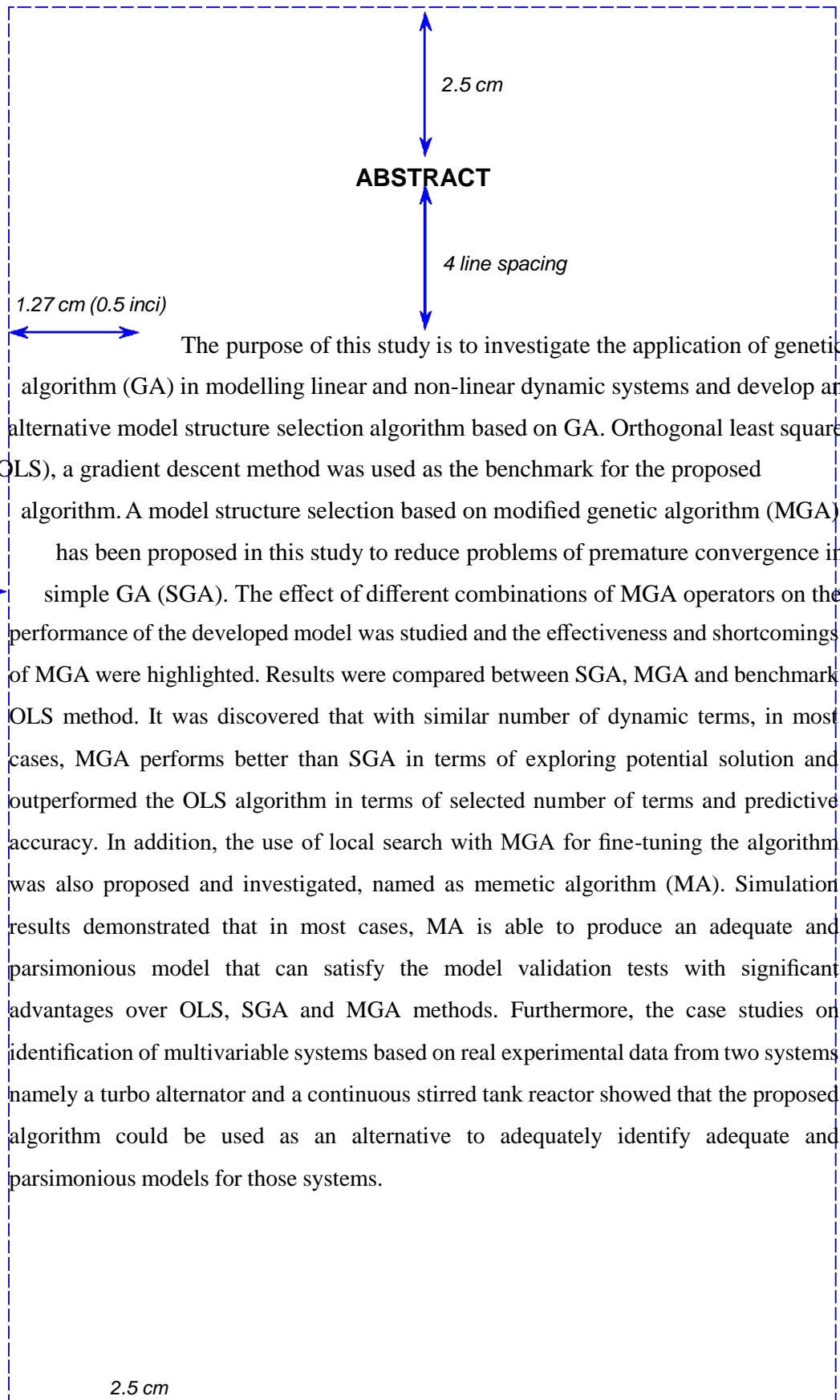
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Librarians at Health Services Academy also deserve special thanks for their assistance in supplying the relevant literatures. My fellow postgraduate students should also be recognised for their support. My sincere appreciation also extends to all my 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.

2.5 cm

APPENDIX G

Example of an abstract in English



APPENDIX H

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
	TABLE OF CONTENTS	vii
	LIST OF TABLES	xii
	LIST OF FIGURES	xiv
	LIST OF ABBREVIATIONS	xix
	LIST OF SYMBOLS	xxi
1	ORGANISATION OF THE THESIS	1
	1.1 Definition of a Thesis	1
	1.2 Organisation of the Thesis	1
	1.3 Thesis Status Declaration	1
	1.4 Declaration	3
	1.4.1 Supervisor's Declaration	4
2	NOTES AND FOOTNOTES	6
	2.1 General guideline	6
	2.2 Consistency	11
	REFERENCES	125
	Appendices A - Y	136 -162

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APPENDIX J
Example of a List of Tables

LIST OF TABLES

4 line spacing

TABLE NO.	TITLE	PAGE
2.1	The role of statistical quality Management Sciences 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)	116

APPENDIX K
Example of a List of Figures

FIGURE NO.	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 Management Sciences 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

APPENDIX L
Example of a List of Symbols

LIST OF SYMBOLS

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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APPENDIX M
Example of a List of Appendices

The diagram shows a list of appendices within a dashed blue border. At the top center, the text "LIST OF APPENDICES" is centered. Above it, a vertical double-headed arrow indicates a distance of 2.5 cm. Below it, another vertical double-headed arrow indicates a distance of 4 line spacing. The list itself is organized into three columns: "APPENDIX", "TITLE", and "PAGE". The "APPENDIX" column contains entries A, B, C1, C2, and C3. The "TITLE" column contains descriptive text for each entry. The "PAGE" column contains the corresponding page numbers: 253, 254, 256, 259, and 260. A horizontal double-headed arrow of 3.5 cm is shown to the left of the "APPENDIX" column. A horizontal double-headed arrow of 2.5 cm is shown to the right of the "PAGE" column. A horizontal double-headed arrow of 1.5 cm is shown between two vertical dashed lines that separate the "TITLE" and "PAGE" columns. A vertical double-headed arrow of 2.5 cm is shown at the top left of the dashed border. A vertical double-headed arrow of 2.5 cm is shown at the bottom left of the dashed border.

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

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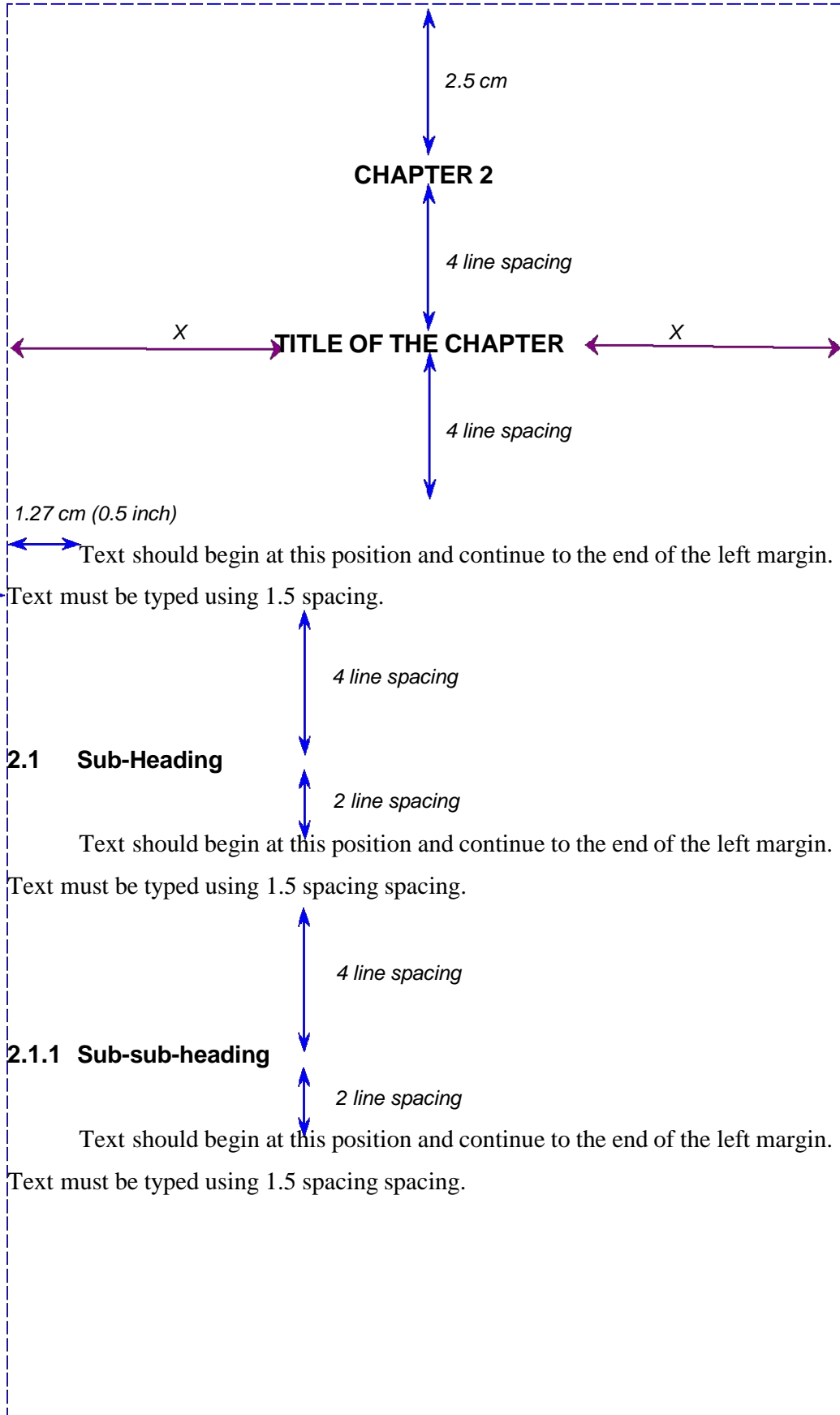
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APPENDIX N

Sample of numbering a chapter and heading in the chapter



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CHAPTER 2

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TITLE OF THE CHAPTER

X

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

Text must be typed using 1.5 spacing.

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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.

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APPENDIX P

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 Subsubsub Heading

2 line spacing

Text should begin here .

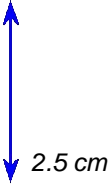
First Bullet

Text should begin here

Second Bullet

Text should begin here

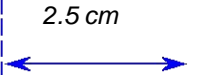
and ends here.



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APPENDIX Q

Sample of a quotation in the text


After deliberating on doctoral education in Australia in the 1990s, one observer in 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)



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APPENDIX R

Sample of a table in the text

Table 4.3 :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 S

Sample of an illustration or a figure

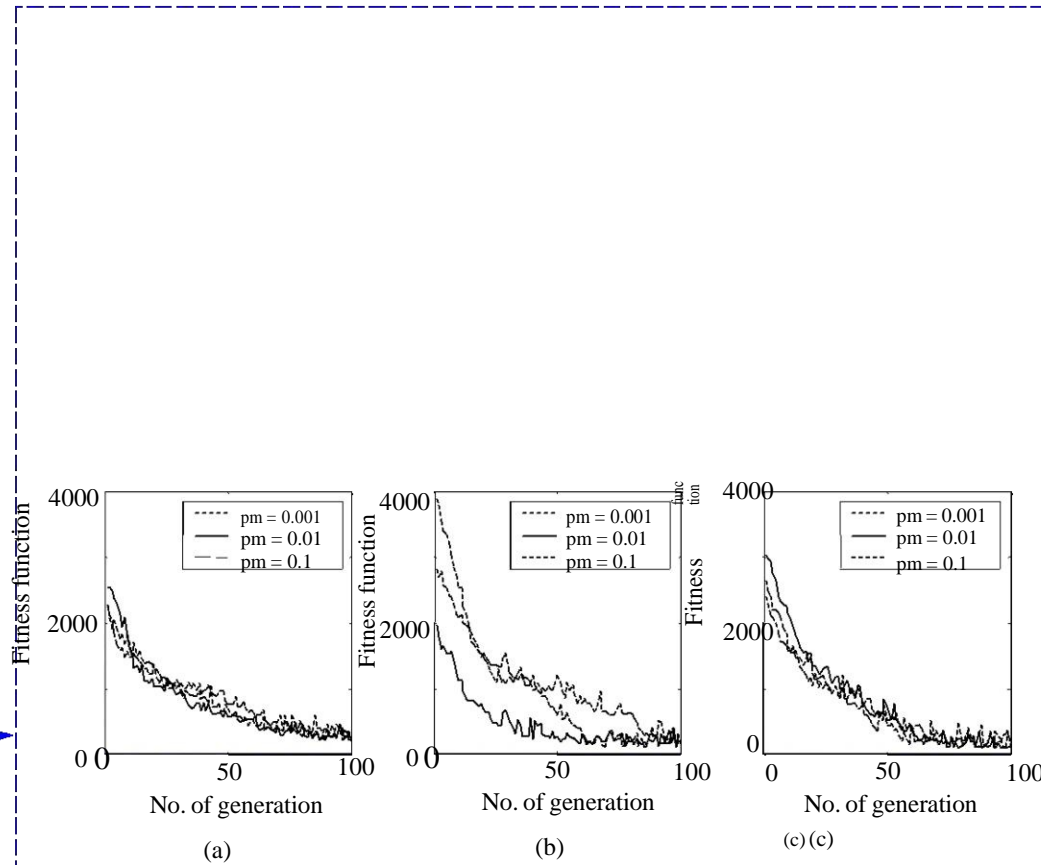
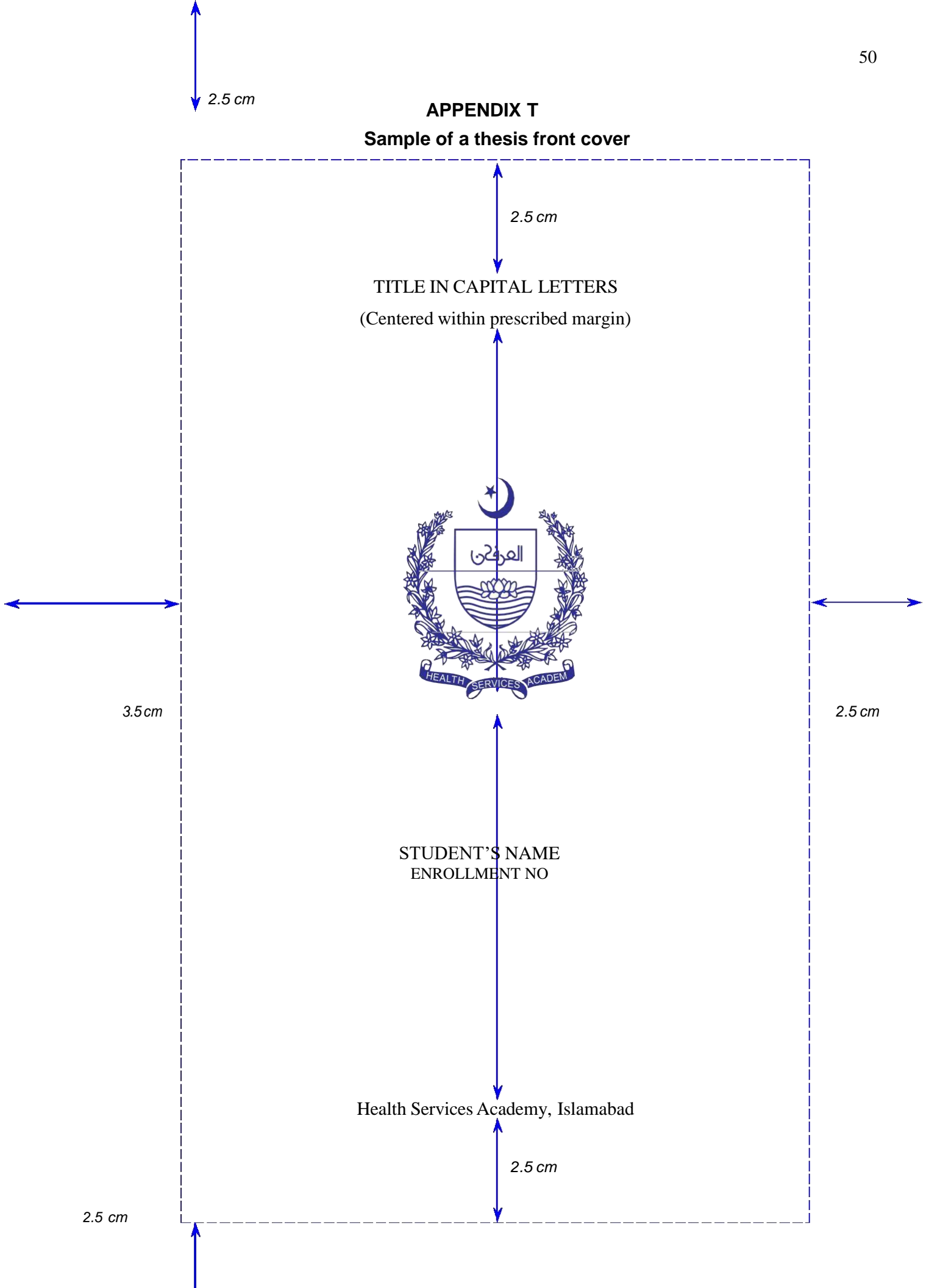


Figure 4.3 Simulation results for model 1 on effect of varied crossover and mutation a) $pc = 0.05$, varied pm , b) $pc = 0.6$, varied pm c) $pc = 0.95$, varied pm

APPENDIX T
Sample of a thesis front cover



2.5 cm

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TITLE IN CAPITAL LETTERS
(Centered within prescribed margin)



STUDENT'S NAME
ENROLLMENT NO

Health Services Academy, Islamabad

2.5 cm

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2.5 cm

2.5 cm

APPENDIX U

Sample of a thesis spine (must be English)

MUHAMMAD ADNAN HASSN	MS(PH)	2020	HSA
----------------------	--------	------	-----

MUHAMMAD ADNAN HASSN	PhD(PH)	2020	HSA
----------------------	---------	------	-----

APPENDIX V**Sample of a reference list using Vancouver style**

1. O'Campo P, Dunn JR, editors. Rethinking social epidemiology: towards a science of change. Dordrecht: Springer; 2012. 348 p.
2. Schiraldi GR. Post-traumatic stress disorder sourcebook: a guide to healing, recovery, and growth [Internet]. New York: McGraw-Hill; 2000 [cited 2019 Nov 6]. 446 p. Available from: <http://books.mcgraw-hill.com/getbook.php?isbn=0071393722&template=#toc> doi: 10.1036/0737302658
3. Halpen-Felsher BL, Morrell HE. Preventing and reducing tobacco use. In: Berlan ED, Bravender T, editors. Adolescent medicine today: a guide to caring for the adolescent patient [Internet]. Singapore: World Scientific Publishing Co.; 2012 [cited 2019 Nov 3]. Chapter 18. Available from: https://doi.org/10.1142/9789814324496_0018
4. Stockhausen L, Turale S. An explorative study of Australian nursing scholars and contemporary scholarship. J Nurs Scholarsh [Internet]. 2011 Mar [cited 2019 Feb 19];43(1):89-96. Available from: <http://search.proquest.com/docview/858241255?accountid=12528>

Note: Arranged alphabetically according to author's name.

APPENDIX W

Sample of a reference list using number system

1. Theusen, G. J. and Fabrycky, W. J. *Management Sciences/Economy* 6th edition. Englewood Cliffs, N. J.: Prentice-Hall. 1984.
2. Billings, S. A. Identification of Nonlinear Systems: A Survey. *Proc. Instn Electr. Engrs, Part D*, 1980, 127(6): 272-284.
3. 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, 1966. Dearborn, Michigan: IEEE, 1966. 360-365.
4. British Standards Institution. *Tongued and Grooved Software Flooring*. London, BS 1297. 1987
5. Lindgren, E. A. *Screen Room Air Inlet and Wave Guard*. U.S. Patent 2,925,457. 1960.
6. Howick Partitioning Ltd. *Howick: Partitioning in Business*. Redhill (U.K.): Trade brochure. 1984.
7. 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, 1966. Dearborn, Michigan: IEEE. 1966. 360-365.

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