THESIS GUIDELINES

COLLEGE OF GRADUATE STUDIES

UNIVERSITI TENAGA NASIONAL

This handbook contains thesis/ dissertation/ project report preparation guidelines to be used with UNITEN's thesis template.

NOVEMBER 2019

PREFACE

The preparation of a thesis is a complex and meticulous process. It involves numerous steps beginning with the submission of a research proposal and ending with the binding of the thesis. With proper planning, typing and printing technologies, the preparation of a thesis can be a very satisfying and rewarding exercise and experience.

This guide is meant to assist and facilitate graduate students of Universiti Tenaga Nasional (UNITEN) in the preparation of their theses. The format of this guide covers the technical specifications, type of paper, format and method of bibliographic citation. The format of this guide has been modified to resemble as close as possible to the format of a thesis in terms of content layout.

It is hoped that this guide will provide a certain measure of uniformity which publishers refer to as “house style”, for all UNITEN thesis.

All the best.

College of Graduate Studies
Universiti Tenaga Nasional
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CHAPTER 1

GENERAL REQUIREMENTS OF THESIS

1.1 Introduction

This guide is intended to assist postgraduate students of Universiti Tenaga Nasional (hereafter, shall be referred to as UNITEN) in the preparation of their thesis in terms of format of the thesis and some selected writing conventions. In this guide, the reference to the term ***"thesis"*** also include to mean ***"dissertation"*** and ***"project report"***. The definition and right-of-use of these terms are explained in Section 1.3. Throughout the document, the term "his" refer to both gender. The students are advised to refer closely to this guide and should seek clarifications with the staff at College of Graduate Studies (COGS) on specific matters relating to the preparation of their thesis.

1.2 Language

The thesis shall be written in English. Spelling convention shall generally follow either the American or British English. There shall be consistency in the use of the language throughout the thesis. The Roman alphabet shall be used unless otherwise required by the discipline.

1.3 Thesis, Dissertation and Project Report: Definition and Right-of-Use

(i) The document output of a full-research program (Structure A) shall be called a Thesis. The right-of-use of the term "Thesis" shall be limited to Structure A program only.

(ii) The document output of a mixed-mode program (Structure B) shall be called a Dissertation. The right-of-use shall be limited to Structure B program only.

(iii) The document output of a coursework program (Structure C) shall be called a Project Report. The right-of-use shall be limited to Structure C program only.

1.4 Submission of Thesis /Dissertation / Project Report

A candidate intending to submit his thesis shall comply with the procedures stated in the ***Supervision and Viva Regulations***.

1.5 Technical Specifications

Printing of thesis shall be done single-sided. Only the original word-processed copy of a thesis or its good and clean photocopies will be accepted. The submitted copy must be free of materials used to correct mistakes.

1.5.1 Type of Paper

Typing shall be done on a word processor on A4 sized (210 mm x 297 mm) white paper (80 g) or of equivalent quality.

1.5.2 Number of Pages

The maximum number of pages (excluding appendices) for a project report/ dissertation/ thesis shall be according to Table 1.1.

Table 1.1 Maximum number of pages for thesis/dissertation/project paper according to the program structure.

Program	Maximum length
PhD[1]	300 pages
Master Structure A[1]	200 pages
Master Structure B[2]	200 pages
Master Structure C	200 pages

[1]Thesis

[2] Dissertation

1.5.3 Page Layout

The text should be presented in a portrait layout. The landscape layout can be used for figures and tables.

1.5.4 Typeface and Font Size

Observe the following guides for the typeface and font size:

- The entire text of the thesis, including headings and page numbers must be produced with the same font or typeface and must be typed using 12-point font size in Times New Roman.
- Cover Page and Footnotes shall respectively be typed in 16-point and 10-point font size in Times New Roman.
- Fonts used in tables, illustrations and drawings shall not be less than 10-points. Use consistent fonts on all figures and tables.
- Bold print shall be used for headings.
- The font shall not be scripted or italicized except for scientific names and terms in a different language.
- The use of excessive italic or bold font for the purpose of emphasis within the text is discouraged.
- Use only the black colour font.
- Underlining of text, titles or headings shall be avoided.

1.5.5 Margins

Text margins from the edges of untrimmed paper shall be according to Table 1.2. All information (text headings, footnotes, and figures), including page numbers, must be within the text area.

Table 1.2 Text margins from the edges of untrimmed paper.

Margins	**Page orientation**	
	Portrait	**Landscape**
Top margin	25 mm	40 mm
Bottom margin	25 mm	25 mm
Left margin	40 mm	25 mm
Right margin	25 mm	25 mm

1.6 Binding

Before making the required number of copies and binding the thesis, ensure that all UNITEN's thesis requirements have been met and necessary signatures have been obtained. Check that all pages are in correct order and the thesis conform to the format.

1.6.1 Thesis Spine

The spine shall contain the student name, name of the degree and the year of the hardcover copies of the thesis submission, typed in 16-point, single spacing, all caps, bold and in golden coloured typeface. Please refer to **Error! Reference source not found.**(a).

1.6.2 Thesis Cover

The final thesis submitted to the university must be permanently bound (hardcover). A Buckram type cover must be used and written with golden ink for the lettering. All contents on cover page shall be in 16-point, single spacing, all caps, bold. Please refer to Appendix A(b). The colour of thesis hardcover shall be according to Table 1.3.

Table 1.3 Colour of the thesis/ dissertation/ project report hardcover according to program structure.

Programme	**Hardcover Colour**
PhD	Black
Master: Structure A	Maroon
Master: Structure B and C	Dark Blue

The cover page of the thesis shall contain:

(i) Full title of thesis (in uppercase). The title shall be typed forming a reverse pyramid paragraph.

(ii) Full name of author (student name in uppercase).

(iii) College in which the author is registered (in uppercase), i.e., COLLEGE OF GRADUATE STUDIES.

(iv) University name (in uppercase), i.e., UNIVERSITI TENAGA NASIONAL.

(v) The year of the final thesis submission (year of submission of hardcover copy of the thesis).

CHAPTER 2

THESIS FORMAT

2.1 Introduction

The following describes what is generally known as the conventional format for a thesis. Every thesis content is composed of three physical divisions:

1) Preliminary pages
2) Text pages or main body, usually divided into chapters and sections
3) End pages

Each content division has several sections, which shall be arranged in the following sequence:

1) Items on preliminary pages:

    Title Page
    Thesis Status Declaration Form
    Declaration
    Abstract
    Acknowledgment
    Dedication (Optional)
    Table of Contents
    List of Tables
    List of Figures
    List of Symbols
    List of Abbreviations
    List of Glossaries (Optional)
    List of Publications

2) Text pages or main body, which is usually divided into chapters and sections.

3) End pages:

References

Appendix or Appendices

Any other relevant materials (optional)

2.2 Cover page

Please refer to Section 1.6.2 for the contents of the page and amend accordingly in UNITEN's thesis template.

2.3 Title Page

The Title Page format is already available in UNITEN's thesis template (see Appendix B). This page shall include the following information:

(i) Full title of thesis (in uppercase).
(ii) Full name of author (in uppercase).
(iii) Statement of award for the thesis (see Appendix C).
(iv) Month and year of final submission (month and year of submission of hardcover copy of the thesis).

2.4 Thesis Status Declaration Form

Thesis status declaration form can be obtained from COGS website https://www.uniten.edu.my/media/3203/cogs-thesis-confidential-and-copyright_1nov2019.pdf. It must be filled in and included in the hardcover copy of the thesis. It consists of the following items:

(i) Declaration of the thesis classification, either CONFIDENTIAL, RESTRICTED or OPEN ACCESS.
(ii) Declaration that the thesis is the property of the university.
(iii) Declaration that UNITEN has the right to make copies for the purpose of research only.

(iv) Declaration that UNITEN has the right to make copies of the thesis for academic exchange.

If the thesis is classified as either CONFIDENTIAL or RESTRICTED, an official letter from the relevant party stating reasons and duration for such classification must be attached.

2.5 Declaration Page

This page contains the signed declaration by the student on the authenticity of the thesis/ dissertation/ project report. The wordings of the declaration shall conform to the required standard format, which is already available in UNITEN's thesis template (see Appendix E).

2.6 Abstract

An abstract is a digest of the entire thesis. It shall not exceed one page in a single paragraph. Do not include equations or references to other literature in the abstract. Abbreviations or acronyms must be preceded by the full term at the first use. The abstract can be written using single or 1.5 line spacing.

2.7 Acknowledgements

Acknowledgements usually contain written expressions of appreciation for guidance and assistance from individuals and institutions. It shall not exceed one page.

2.8 Dedication Page (Optional)

- The dedication must be brief, not more than one paragraph, and must not contain any number, chart or photograph.
- This page is optional.

2.9 Table of Contents

This page serves as a guide to the contents of the thesis. Every heading and subheading within the text of the thesis shall be listed as in the Table of Contents which is limited to 4 subsections only (e.g., 4.3.2.1).

2.10 List of Tables

This list shows the exact titles or captions of all tables in the text and appendices, together with the beginning page number of each table. Please refer to Appendix G.

2.11 List of Figures

The exact title of figures and its corresponding page number shall be listed. Figures shall be numbered consecutively throughout the thesis. Please refer to Appendix H.

2.12 List of Symbols

All symbols used in the thesis shall be listed with their meaning.

2.13 List of Abbreviations

All abbreviations used in the thesis shall be listed with their meaning. Universally recognized scientific abbreviations (e.g., °C, cm, mm, kg, ha) need not be listed.

2.14 List of Glossaries

All glossaries used in the thesis shall be listed with their meaning.

2.15 List of Publications

All publications authored by the candidate related to the research work shall be listed.

2.16 Body of a Thesis

The main text of thesis shall consists of introduction, literature review, methodology, results and discussion, conclusions and future works.

2.16.1 Heading

The following guidelines shall be observed:

(i) Each chapter must start on a new page. Chapter heading must be written using CHAPTER 1 Heading 1 UNITEN style.

(ii) Please use SHIFT+ENTER key two times to create the spacing between the chapter number and the chapter title.

(iii) Major section heading should be written using Heading 2 style.

(iv) The subsection and the subsequent subsections heading should be written using Heading 3 style and Heading 4 style.

(v) The spacing between heading/ sub-heading and the first line of a text shall be 1.5 line spacing, which is the default setting when using Heading 2 style, Heading 3 style and Heading 4 style. Please refer to Appendix I.

2.16.2 Chapter Layout

A chapter may be divided into major sections and sub-sections. Major section and sub-section of a chapter shall be identified by numbers. Major section is numbered first level using Heading 2 style (e.g. 2.1, 2.2) and sub-section is level numbered using Heading 3 (e.g. 2.1.1, 2.1.2) style and Heading 4 style (e.g. 2.1.1.1, 2.1.1.2). This shall be consistent throughout the thesis and is limited to 4 levels.

2.16.3 Numbering the Chapters and Sub-sections

All chapters and their sub-sections must be numbered and followed by a title. The chapters are numbered using Arabic numeric, i.e. Chapter 1, Chapter 2, Chapter 3, and so on. The sub-sections shall not be indented but arranged in a structured manner up to 4 levels. Sub-sections beyond level four shall be labelled using characters.

2.16.4 Paragraphs

All paragraphs in the main text shall be **justified** between margins.

- The number and the title of sub-section shall be aligned with the left margin.
- A paragraph spanning between two pages shall leave at least two lines of text on both of the pages.
- A heading or sub-heading cannot appear alone at the bottom of a page. It must be followed by at least two lines of text of the following paragraph.

2.16.5 Pagination

All pages shall be numbered consecutively throughout the thesis centrally at the bottom margin. All pages of the thesis shall be accounted for:

- Preliminary pages preceding Chapter 1 are numbered consecutively using small Roman numerals (i, ii, iii,…).
- Arabic numerals (1, 2, 3, …) begins on the first page of Chapter 1. The numbering begins here at 1 and continues to the end of the thesis, including References and Appendices.

2.16.6 Tables

All tables are to be listed under List of Tables in the preliminary pages (including tables appearing in the appendices). Tables shall be placed after their first mention in the text.

- Tables are numbered consecutively with Arabic numerals throughout the thesis (including text and appendices). The numbering shall be by chapter (e.g. Table 1.1, 1.2, 1.3, in Chapter 1, and 2.1, 2.2 in Chapter 2 and so on).
- A caption should be placed above the table, and it should be centred. For table caption, please use Caption for Table UNITEN style.
- Table sources and notes shall be placed directly below the caption.
- Tables shall be referred in text as, for example, Table 4.5 (first letter capitalised and not preceded by 'the').
- Table header row must be repeated in the subsequent page(s), if the table is extended to subsequent page(s). Please refer to Appendix J.

2.16.7 Figures

All figures are to be listed under List of Figures in the preliminary pages (including figures appearing in the appendices). Figures shall be placed after their first mention in the text.

- Figures are numbered consecutively with Arabic numerals throughout the thesis (including text and appendices). The numbering shall be by chapter (e.g. Figure 1.1, 1.2, 1.3, in Chapter 1, and 2.1, 2.2 in Chapter 2 and so on).
- A caption should be placed below the figure, and it should be centred. For figure caption, please use Caption for Figure UNITEN style. Please refer to Appendix K.
- Figure sources and notes shall be placed directly below the caption.
- Figures shall conform to standard margin requirements. Figures shall be referred in text as, for example, Figure 4.5 (first letter capitalised and not preceded by 'the').

The following format and quality of figures shall be observed:

- Figures shall be in electronic format. Hand-drawn figures are not acceptable.
- If photographs are used, they must be of high resolution. Both colour (min. 400 dpi, 8 bit per pixel, uncompressed) and grayscale images (min. 220 dpi, 8 bit per pixel) shall be used.
- Graphs shall not use any coloured or shaded background. Only major gridlines can be used when they are absolutely necessary.
- Engineering/ technical drawings shall follow the appropriate standards.
- Large size drawings shall be placed in the appendix.

2.16.8 Equations

All equations, mathematical and/ or chemical, shall not be considered as text. All equations shall be typed on separate lines using an equation editor found in word processing programs. Equations shall be numbered consecutively following chapter number, and placed within bracket at the end of the line, for example:

$$\sum_{k=1}^{K}\left[p[k]\cdot\sum_{t=1}^{T}f_t\left(k,x^{t*}(k),x_t(k)\right)\right] \tag{2.1}$$

Detailed derivation, if suitable, shall be placed in the appendix. Within body of text, an equation is referred to as, for example, Equation 2.1. If there is more than one equation referred, list all of the equations in a single reference, for example, Equations 2.1, 2.3 - 2.5.

2.16.9 Footnotes

Footnotes are not encouraged because they tend to distract the reader from the main argument of the text. If footnotes are necessary, the indicators (the reference numbers in the text) are usually superscript (e.g. [1]). Footnotes are numbered consecutively for each page separately. All footnotes shall be single-spaced, typed in 8-point font and left aligned.

Example:

"… The cloud chamber experiment laid down the foundation for understanding the phenomenon of supersaturation[1] where it was found that condensation was delayed if air saturated with water vapour …"

Footnote 1 will appear at the bottom of the respective page as:

[1] Many believe that the phenomenon was first observed by T.R. Wilson in 1897, long before it was formally published by Westergrad (1905).

2.16.10 Quotations/Citations

A quotation which is inserted in a sentence must not be more than 40-words long and must always be written within inverted commas.

For example,
According to [4], *"Ethical axioms are found and tested not very differently from the axioms of science. Truth is what stands the test of experience."*

Quotations which are more than 40-words in length must be typed separately in a new paragraph and ***italicized.*** The author is responsible for choosing a style of quotation that is appropriate to the field and using that style correctly and consistently.

2.16.11 Header and Footer

The use of header and footer is not allowed.

2.17 References/ Bibliography

Any thesis that makes use of other works, either in direct quotation or by reference, must contain a reference listing of these sources. List only the sources which have been cited in the text. The reference format shall follow any of the samples in Appendix L.

2.18 Appendices

Appendices contain those materials which are very important to help understand materials of the thesis, but are too detailed to be accommodated in the body of the main text. Appendices include original data, summary, preliminary tests, tables that contain data of lesser importance, very lengthy quotations, supporting decisions, forms and documents, computer printouts, detailed engineering drawings and other pertinent documents. Appendix materials shall be grouped by type, e.g. Appendix A: Questionnaire, Appendix B: Original Data, Appendix C: Results Tables.

- Tables and figures in the appendices shall be numbered consecutively following the appendix number (e.g. Table A.1, A.2, Figure A.1, A.2 in Appendix A, and Table B.1, B.2, Figure B.1, B.2 in Appendix B and so on).
- Table and figure should be respectively captioned using Caption for Table UNITEN style and Caption for Figure UNITEN style, and listed in the List of Tables and List of Figures, respectively.

CHAPTER 3

WRITING CONVENTIONS

3.1 Units of Measure

The use of Systéme International d'Unités (SI) units, approved by the International General Conference on Weights and Measures (CGPM), is mandatory as primary units of measure. Other units may be given in parentheses after the SI unit, if the original measure is in different system of units. An exception is when English units are used as identifiers in trade, such as "3½ in disk drive". SI units are constructed from seven base units for independent physical quantities (A, cd, K, kg, m, mol, and s), and two supplementary units for plane angle (rad) and solid angle (sr), as listed in Table 3.1.

Table 3.1 Base and supplementary units in SI system.

Unit type	Quantity	Unit name	Unit symbol
Base units	Amount of substance	mole	mol
	Electric current	Ampere	A
	Length	Meter	M
	Luminous intensity	Candela	cd
	Thermodynamic temperature	Kelvin	K

Use internationally recognized units of measures such as:

1 litre (1 L)

5 kilograms (5 kg)

12 grams (12 g)

500 US Dollars (USD500)

Other common derived units, approved by CGPM, are given in Table 3.2. Degree (°) can still be used for angles.

Table 3.2 Derived SI units approved by the International General Conference on Weights and Measures (CGPM).

Quantity	Unit name	Unit symbol	Formula
Absorbed dose	Gray	Gy	J/kg
Activity (of a radionuclide)	Becquerel	Bq	1/s
Celsius temperature	Degree Celsius	°C	K
Dose equivalent	Sievert	Sv	J/kg
Electric capacitance	Farad	F	C/V
Electric conductance	Siemens	S	A/V
Electric resistance	Ohm	Ω	V/A
Electric potential, potential difference, electromotive force	Volt	V	W/A
Energy, work, quantity of heat	Joule	J	N•m
Force	Newton	N	$kg•m/s^2$
Frequency (of a periodic phenomenon)	Hertz	Hz	1/s
Illuminance	Lux	lx	lm/m^2
Inductance	Henry	H	Wb/A
Luminous flux	Lumen	lm	cd•sr
Magnetic flux	Weber	Wb	V•s
Magnetic flux density	Tesla	T	Wb/m^2
Power, radiant flux	Watt	W	J/s

Quantity	Unit name	Unit symbol	Formula
Pressure, stress	Pascal	Pa	N/m^2
Quantity of electric, electric charge	Coulomb	C	A•s

Precise use of uppercase and lowercase letters is essential. There shall be a space between numerals and SI units (e.g. 201 Nm, 79 MW, *instead of* 206m, 79MW). However, use 20°16′32″SW *instead of* 20° 16′ 32″ SW (no spaces between units and direction). Do not use bold face or italicise or use period after SI units (e.g. 302 mm/ 200 J, *instead of* 302 mm./ 302 **mm**/ 302 ***mm***/ 79 **J.**/ 79 *J* etc.).

3.2 Numbers

All integers less than ten shall be spelt out unless they are attached to units of measure (e.g. 5 kg, 10 mL). Use numerals for numbers 10 or more than 10. If a sentence begins with a number, write the number in words, e.g. "Three hundred and eighty-five farmers were sampled from the study area".

Use numerals for a series of figures, for example:

(i) In the room there were 4 chairs, 12 boxes, 13 books, 10 files, 9 umbrellas and 8 pairs of shoes.

(ii) The number of taxi permits issued during the past five years was 8, 53, 27, 38, 52 and 90.

The symbol % may be used in place of the word percent, e.g. 27.3% and typed without a space. If the candidate prefers to write 27.3 percent in full, then consistency shall be maintained throughout.

Use 0.50 (decimal point) *instead of* 0,50 (comma, used in French text); 9000 *instead of* 9,000 *but if more than* 10,000: 10,000 *instead of* 10000.

Use × 20 (multiplication symbol, with space after and before required) *instead of* ×20 (space missing)/ X20 (letter X, space missing)/ x 20 (letter x). Use 4 + 5 > 7 (spaces between operators and numbers or variables are required) instead of 4+5>7 (spaces missing) but in the case of number magnitudes the symbol positive '+'/negative '-' there must be no space between the symbol and number (example –8 / +8 instead of – 8 / + 8).

Use letters in roman numerals where intended: Part I, Part II instead of Part 1, Part 11. Also use World War II instead of World War 2; 'Henry VIII' instead of 'Henry 8', following conventional practice.

3.3 Policy on Direct Quotations

Direct quotations must be minimized.

3.4 Use of Editorial Service

Some candidates employ professional editors to "polish" their thesis presentation. This shall be done before the thesis is sent for examination. The College does not insist that all theses to be sent to professional editors (who charge a fee for their services). However, candidates shall know that the College accepts only theses that are reasonably free of errors. The supervisor(s) cannot be held responsible for errors in the thesis and the candidate cannot expect supervisor(s) to be the editor(s). The supervisor may recommend the candidate to engage a professional editorial service to "polish" the thesis presentation.

APPENDIX A: SAMPLE OF COVER PAGE

(a) Thesis Spine

(b) Thesis Cover

APPENDIX B: SAMPLE OF TITLE PAGE

NEW DIMENSION IN MULTIVARIATE PATTERN RECOGNITION FOR THE APPLICATION IN INDUSTRIAL PROCESS TECHNOLOGY

MOHD ZULI BIN JAAFAR

A Thesis Submitted to the College of Graduate Studies, Universiti Tenaga Nasional in Fulfilment of the Requirements for the Degree of

Doctor of Philosophy (Engineering)

AUGUST 2017

APPENDIX C: SAMPLES OF STATEMENT OF AWARD

1. Master's Project Report (By Course Work : Structure C)

A Project Report Submitted to the College of Graduate Studies, Universiti Tenaga Nasional in Partial Fulfillment of the Requirements for the Degree of

Master of (insert the discipline)

2. Master's Dissertation (Mixed Mode : Structure B)

A Dissertation Submitted to the College of Graduate Studies, Universiti Tenaga Nasional in Partial Fulfillment of the Requirements for the Degree of

Master of (insert the discipline)

3. Master's Thesis (By Research : Structure A)

A Thesis Submitted to the College of Graduate Studies, Universiti Tenaga Nasional in Fulfillment of the Requirements for the Degree of

Master of (insert the discipline)

4. Doctor of Philosophy Thesis (By Research : Structure A)

A Thesis Submitted to the College of Graduate Studies, Universiti Tenaga Nasional in Fulfillment of the Requirements for the Degree of

Doctor of Philosophy (insert the discipline)

APPENDIX D: SAMPLE OF THESIS STATUS DECLARATION FORM

UNIVERSITI TENAGA NASIONAL,
JALAN IKRAM-UNITEN, 43000 KAJANG, SELANGOR

THESIS DECLARATION AND COPYRIGHT

Author's Full Name: _____

Student ID. : _____

Title of Thesis / Dissertation / Project Report [use BLOCK LETTERS or typed]:

_____

_____

Academic Session: _____

I hereby declare that the work in this thesis:

☐	**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**	can be published as online open access (full text).

I acknowledge that Universiti Tenaga Nasional reserves the rights as follows:

1. The thesis is the property of Universiti Tenaga Nasional.
2. The Library of Universiti Tenaga Nasional has the right to make copies of the thesis for the purpose of research or teaching and learning only.
3. The Library has the right to make copies of the thesis for academic exchange.

.....	.....
Signature of Student	**Signature of Supervisor**
.....	_____
Student Name	**Supervisor Name**
.....	_____
Date	**Date**

NOTES:
(i) This form must be included in the hardbound copy of the thesis.
(ii) If the thesis is classified as either CONFIDENTIAL or RESTRICTED, an official letter from the relevant party stating reasons and duration for such classification must be attached with COGS 20 form.

APPENDIX E: SAMPLE OF DECLARATION PAGE

DECLARATION

I hereby declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently submitted for any other degree at Universiti Tenaga Nasional or at any other institutions. This thesis may be made available within the university library and may be photocopies and loaned to other libraries for the purpose of consultation.

_____SIGN_____

MOHD ZULI BIN JAAFAR

Date :

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APPENDIX F: SAMPLE OF TABLE OF CONTENTS

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APPENDIX I: SAMPLE OF CHAPTER 1 AND HEADING

CHAPTER 1

INTRODUCTION

1.1 UNITEN Thesis Template2

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document.

To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar.

1.2 MZJ Formatting Method

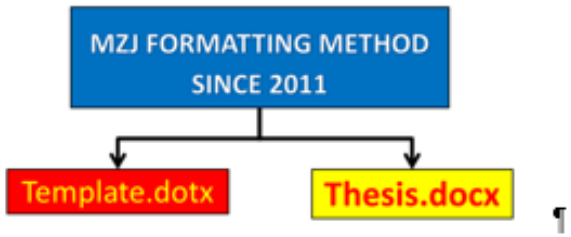


Figure 1.1: MZJ Ideas on formatting

1.2.1 Developer Tab

To create a new thesis based on this template, just double click the file. A new document

APPENDIX J: SAMPLES OF TABLE

Table 1.1 Number of postgraduate students according to region in 2014.

Country	Numbers
Middle East	100
Europe*	34
South East Asia	250
Australasia	5
North and South America	3

*Excluding Russia and Ukraine

Figure J.1 Sample of table caption and number that appears in Chapter 1.

Table 2.1 Adsorption characteristics of MOF-5.

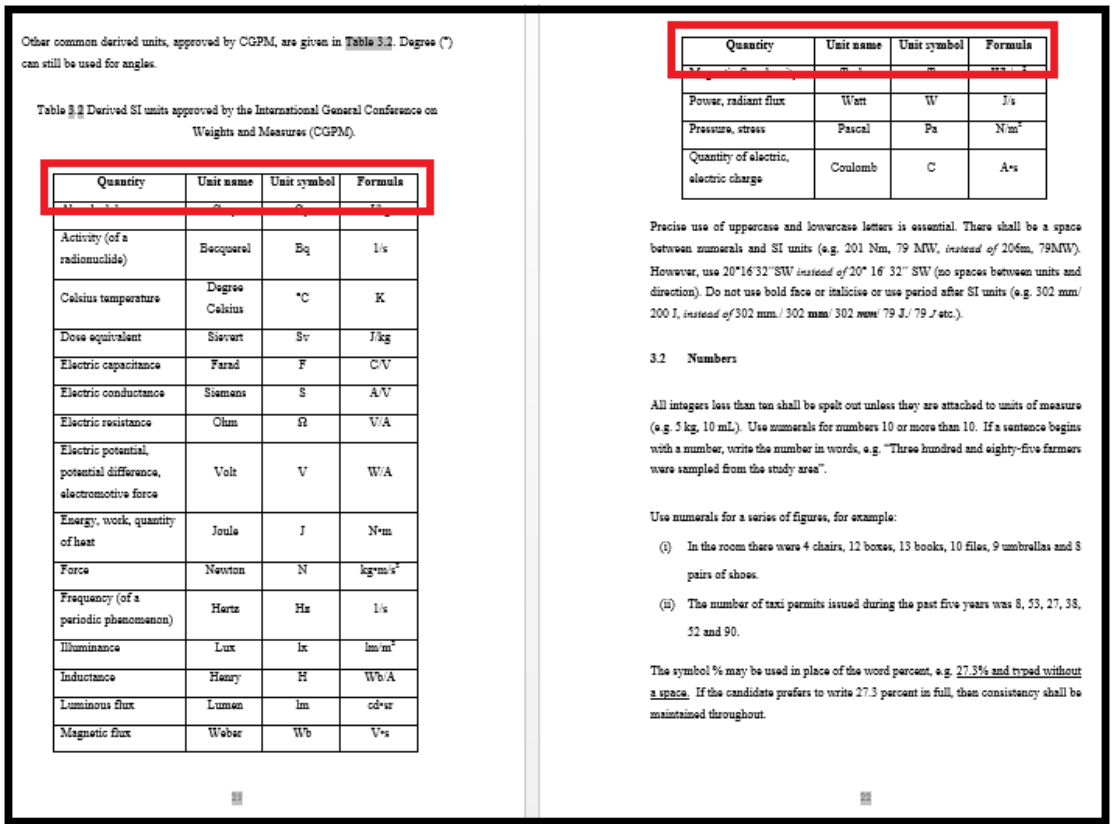
Sample Name	Surface Area[1] (m^2/g)	Pore Volume[2] (mL/g)	Pore size distribution[3] (nm)
MOF-5 (1)	1500	0.8	1.5
MOF-5 (2)	1560	1.1	1.3
MOF-5 (3)	1700	1.3	1.2
MOF-5 (4)	1600	0.7	0.9
MOF-5 (5)	2700	1.5	0.8

[1]By BET method

[2]By Langmuir method

[3]By H-K method

Figure J.2 Sample of table caption and number that appears in Chapter 2.



Other common derived units, approved by CGPM, are given in Table 3.2. Degree (°) can still be used for angles.

Table 3.2 Derived SI units approved by the International General Conference on Weights and Measures (CGPM).

Quantity	Unit name	Unit symbol	Formula
Activity (of a radionuclide)	Becquerel	Bq	1/s
Celsius temperature	Degree Celsius	°C	K
Dose equivalent	Sievert	Sv	J/kg
Electric capacitance	Farad	F	C/V
Electric conductance	Siemens	S	A/V
Electric resistance	Ohm	Ω	V/A
Electric potential, potential difference, electromotive force	Volt	V	W/A
Energy, work, quantity of heat	Joule	J	N•m
Force	Newton	N	kg•m/s^2
Frequency (of a periodic phenomenon)	Hertz	Hz	1/s
Illuminance	Lux	lx	lm/m^2
Inductance	Henry	H	Wb/A
Luminous flux	Lumen	lm	cd•sr
Magnetic flux	Weber	Wb	V•s

Quantity	Unit name	Unit symbol	Formula
Power, radiant flux	Watt	W	J/s
Pressure, stress	Pascal	Pa	N/m^2
Quantity of electric, electric charge	Coulomb	C	A•s

Precise use of uppercase and lowercase letters is essential. There shall be a space between numerals and SI units (e.g. 201 Nm, 79 MW, *instead of* 206m, 79MW). However, use 20°16'32"SW *instead of* 20° 16' 32" SW (no spaces between units and direction). Do not use bold face or italicise or use period after SI units (e.g. 302 mm/ 200 J, *instead of* 302 mm./ 302 **mm**/ 302 *mm*/ 79 J./ 79 *J* etc.).

3.2 Numbers

All integers less than ten shall be spelt out unless they are attached to units of measure (e.g. 5 kg, 10 mL). Use numerals for numbers 10 or more than 10. If a sentence begins with a number, write the number in words, e.g. "Three hundred and eighty-five farmers were sampled from the study area".

Use numerals for a series of figures, for example:

(i) In the room there were 4 chairs, 12 boxes, 13 books, 10 files, 9 umbrellas and 8 pairs of shoes.

(ii) The number of taxi permits issued during the past five years was 8, 53, 27, 38, 52 and 90.

The symbol % may be used in place of the word percent, e.g. 27.3% and typed without a space. If the candidate prefers to write 27.3 percent in full, then consistency shall be maintained throughout.

Figure J.3 Sample of table header that is repeated in the subsequent page, when the table is extended to subsequent page.

APPENDIX K: SAMPLES OF FIGURE

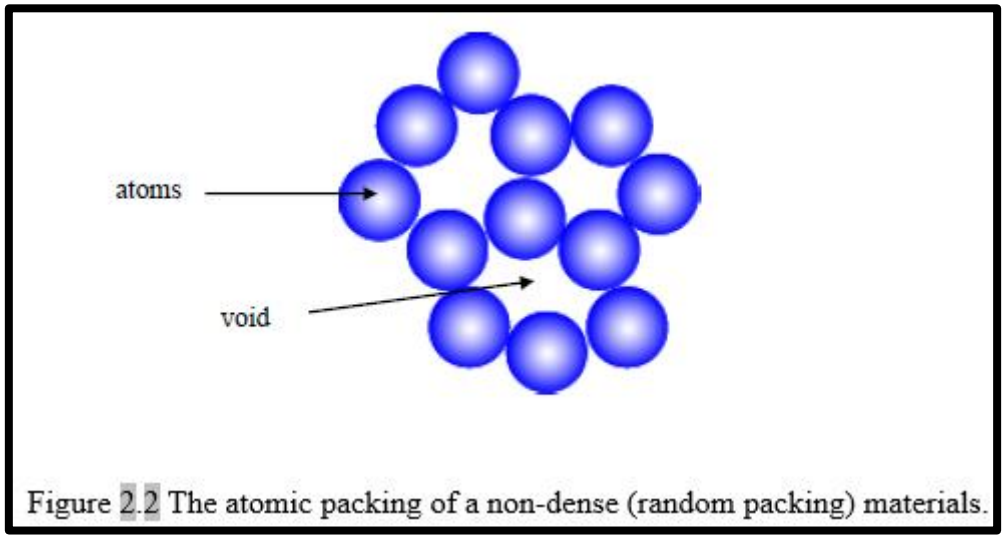


Figure 2.2 The atomic packing of a non-dense (random packing) materials.

Figure K.1 Sample of figure caption and number that appears in Chapter 2.

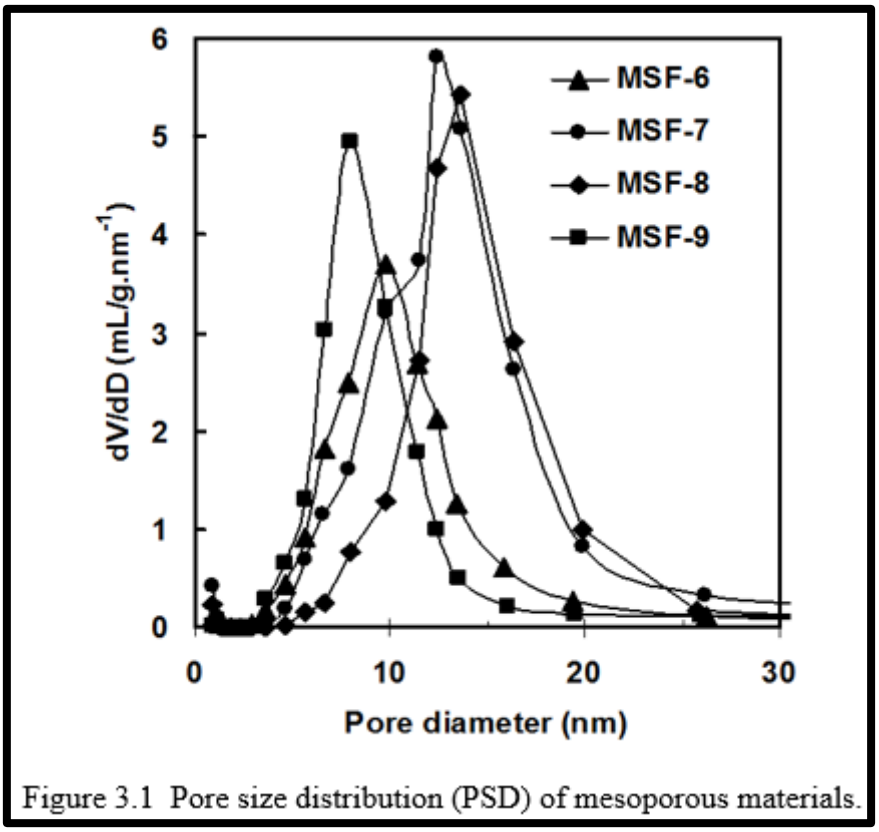


Figure 3.1 Pore size distribution (PSD) of mesoporous materials.

Figure K.2 Sample of figure caption and number that appears in Chapter 3.

APPENDIX L: SAMPLES OF COMMONLY USED REFERENCE FORMAT

American Psychological Association (APA)

(from the 3rd edition of the Publication Manual of the American Psychological Association, 1983; often used in the social sciences and education.)

Brown, M.W. (1982). This is the title of a book (2nd ed.). City: Publisher.

Chin, Y. (1988). This is the title of a part of a book. In A.R. Finley, S.R. Taft, & M.N. Piper (Eds.), This is the book title. (pp. 25-37). City: Publisher.

Clark, B. W. (1988). *This is the title of a paper appearing in a published proceedings.* In A.B. Cook (Ed.), Proceedings of the 100th Annual Meeting of the Society of Experimental Results (pp. 49-78). City: Publisher.

Fourney, T.T. & Heller, R. N. (January, 1991). *This is the title of an unpublished Paper presented at a meeting.* Paper presented at the 103rd annual meeting of the Society of Experimental Results, City of Meeting, ST.

Goff, A. M. (1987). *This is the title of a journal articles.* Journal of Experimental Results, 1 (3), 1-22.

Green, M. (1988, January). *This is the title of a magazine articles.* Magazine of Today, pp. 6-12.

Johnson, R.S. (1989, October 1). *This is the title of a newspaper article.* The Daily News, pp. 1, 6-8.

Jones, M. J., & Smith, A. R. (1990). *This is the title of a report.* (Report No. 90-1428). City: Publisher.

Miller, G. M. (1988). *This is the title of a master's thesis.* Unpublished master's Thesis, Any State University, City, ST.

Simmons, M.T. (1987). *This is the title of a doctoral dissertation (Doctoral dissertation,* Any State University, 1986). Dissertation Abstracts International, 47, 1202.

IEEE

Basic format for books:

[1] J. K. Author, "Title of chapter in the book," in *Title of His Published Book, x*th ed. City of Publisher, Country if not USA: Abbrev. of Publisher, year, ch. *x,* sec. *x,* pp. *xxx–xxx.*

Examples:

[2] G. O. Young, "Synthetic structure of industrial plastics," in *Plastics,* 2nd ed., vol. 3, J. Peters, Ed. New York: McGraw-Hill, 1964, pp. 15–64.

[3] W.-K. Chen, *Linear Networks and Systems*. Belmont, CA: Wadsworth, 1993, pp. 123–135.

Basic format for periodicals:

[4] J. K. Author, "Name of paper," *Abbrev. Title of Periodical,* vol. *x,* no. *x,* pp. *xxx-xxx,* Abbrev. Month, year.

Examples:

[5] J. U. Duncombe, "Infrared navigation—Part I: An assessment of feasibility," *IEEE Trans. Electron Devices,* vol. ED-11, no. 1, pp. 34–39, Jan. 1959.

[6] E. P. Wigner, "Theory of traveling-wave optical laser," *Phys. Rev*., vol. 134, pp. A635–A646, Dec. 1965.

[7] E. H. Miller, "A note on reflector arrays," *IEEE Trans. Antennas Propagat.*, to be published.

Basic format for reports:

[8] J. K. Author, "Title of report," Abbrev. Name of Co., City of Co., Abbrev. State, Rep. *xxx,* year.

Examples:

[9] E. E. Reber, R. L. Michell, and C. J. Carter, "Oxygen absorption in the earth's atmosphere," Aerospace Corp., Los Angeles, CA, Tech. Rep. TR-0200 (4230-46)-3, Nov. 1988.

[10] J. H. Davis and J. R. Cogdell, "Calibration program for the 16-foot antenna," Elect. Eng. Res. Lab., Univ. Texas, Austin, Tech. Memo. NGL-006-69-3, Nov. 15, 1987.

Basic format for handbooks:

[11] *Name of Manual/Handbook, x* ed., Abbrev. Name of Co., City of Co., Abbrev. State, year, pp. *xxx-xxx.*

Examples:

[12] *Transmission Systems for Communications*, 3rd ed., Western Electric Co., Winston-Salem, NC, 1985, pp. 44–60.

[13] *Motorola Semiconductor Data Manual*, Motorola Semiconductor Products Inc., Phoenix, AZ, 1989.

Basic format for books (when available online):

[14] Author. (year, month day). *Title.* (edition) [Type of medium]. *volume (issue).* Available: site/path/file

Example:

[15] J. Jones. (1991, May 10). *Networks.* (2nd ed.) [Online]. Available: http://www.atm.com

Basic format for journals (when available online):

[16] Author. (year, month). Title. *Journal.* [Type of medium]. *volume (issue)*, pages. Available: site/path/file

Example:

[17] R. J. Vidmar. (1992, Aug.). On the use of atmospheric plasmas as electromagnetic reflectors. *IEEE Trans. Plasma Sci.* [Online]. *21(3),* pp. 876–880. Available: http://www.halcyon.com/pub/journals/21ps03-vidmar

Basic format for papers presented at conferences (when available online):

[18] Author. (year, month). Title. Presented at Conference title. [Type of Medium]. Available: site/path/file

Example:

[19] PROCESS Corp., MA. Intranets: Internet technologies deployed behind the firewall for corporate productivity. Presented at INET96 Annual Meeting. [Online]. Available: http://home.process.com/Intranets/wp2.htp

Basic format for reports and handbooks (when available online):

[20] Author. (year, month). Title. Company. City, State or Country. [Type of Medium]. Available: site/path/file

Example:

[21] S. L. Talleen. (1996, Apr.). The Intranet Architecture: Managing information in the new paradigm. Amdahl Corp., CA. [Online]. Available: http://www.amdahl.com/doc/products/bsg/intra/infra/html

Basic format for computer programs and electronic documents (when available online):

ISO recommends that capitalization follow the accepted practice for the language or script in which the information is given.

Example:

[22] A. Harriman. (1993, June). Compendium of genealogical software. *Humanist.* [Online]. Available e-mail: HUMANIST@NYVM.ORG Message: get GENEALOGY REPORT

Basic format for patents (when available online):

[23] Name of the invention, by inventor's name. (year, month day). *Patent Number* [Type of medium]. Available: site/path/file

Example:

[24] Musical toothbrush with adjustable neck and mirror, by L.M.R. Brooks. (1992, May 19). *Patent D 326 189*

[25] [Online]. Available: NEXIS Library: LEXPAT File: DESIGN

Basic format for conference proceedings (published):

[26] J. K. Author, "Title of paper," in *Abbreviated Name of Conf.*, City of Conf., Abbrev. State (if given), year, pp. *xxxxxx.*

Example:

[27] D. B. Payne and J. R. Stern, "Wavelength-switched pas- sively coupled single-mode optical network," in *Proc. IOOC-ECOC,* 1985, pp. 585–590.

Example for papers presented at conferences (unpublished):

[28] D. Ebehard and E. Voges, "Digital single sideband detection for interferometric sensors," presented at the 2nd Int. Conf. Optical Fiber Sensors, Stuttgart, Germany, Jan. 2-5, 1984.

Basic format for patents:

[29] J. K. Author, "Title of patent," U.S. Patent *x xxx xxx,* Abbrev. Month, day, year.

Example:

[30] G. Brandli and M. Dick, "Alternating current fed power supply," U.S. Patent 4 084 217, Nov. 4, 1978.

Basic format for theses (M.S.) and dissertations (Ph.D.):

[31] J. K. Author, "Title of thesis," M.S. thesis, Abbrev. Dept., Abbrev. Univ., City of Univ., Abbrev. State, year.

[32] J. K. Author, "Title of dissertation," Ph.D. dissertation, Abbrev. Dept., Abbrev. Univ., City of Univ., Abbrev. State, year.

Examples:

[33] J. O. Williams, "Narrow-band analyzer," Ph.D. dissertation, Dept. Elect. Eng., Harvard Univ., Cambridge, MA, 1993.

[34] N. Kawasaki, "Parametric study of thermal and chemical nonequilibrium nozzle flow," M.S. thesis, Dept. Electron. Eng., Osaka Univ., Osaka, Japan, 1993.

Basic format for the most common types of unpublished references:

[35] J. K. Author, private communication, Abbrev. Month, year.

[36] J. K. Author, "Title of paper," unpublished.

[37] J. K. Author, "Title of paper," to be published.

Examples:

[38] A. Harrison, private communication, May 1995.

[39] B. Smith, “An approach to graphs of linear forms,” unpublished.

[40] A. Brahms, “Representation error for real numbers in binary computer arithmetic,” IEEE Computer Group Repository, Paper R-67-85.

Basic format for standards:

[41] *Title of Standard*, Standard number, date.

Examples:

[42] IEEE Criteria for Class IE Electric Systems, IEEE Standard 308, 1969.

[43] Letter Symbols for Quantities, ANSI Standard Y10.5-1968.

APPENDIX M: LIST OF STANDARD ABBREVIATIONS

Abbreviation	Meaning
app.	appendix
art./arts.	article(s)
b.	born
bk./bks.	book(s)
c.	copyright
ca.	(*circa*): about, approximately
cf.	compare
chap./chaps.	chapter(s)
col./cols.	column(s)
comp./comps.	compiler(s);compiled by
dept./depts.	department(s)
d.	died
div./divs.	division(s)
e.g.	(*exempli gratia)*: for example
ed./eds.	edition(s); editor, edited by
et al.	(*et alia)*: and others
et seq.	(*et sequers*): and the following
etc.	(*et cetera*): and so forth
fig./figs.	figure(s)
ibid.	*(ibidem)*: in the same place
id.	*(idem)*: the same
i.e.	(*id est*); that is
infra.	below

Abbreviation	Meaning
l.v.	*(locus variis)*: various places (of publication)
ms./mss.	manuscript(s)
n/nn	footnote(s)
n.d.	no date
no./nos.	number(s)
n.s.	new series
o.s.	old series
p./ps.	page(s)
par./pars.	paragraph(s)
passim	here and there
pt./pts.	part(s)
q.v.	*(quod vide)*: which see (refer to)
sc.	scene
sec./secs.	section(s)
sic.	so, thus
supp./supps.	supplement(s)
s.l.	*(sinoloco)*: place of publication not mentioned
s.n.	*(sine nomine)*: details of publication not mentioned in the referred material
s.v.	*(sub-verbo, sub-voce)*: under the word or heading
trans.	translator; translated by
v./vv.	verse(s)

Abbreviation	Meaning
viz.	*(videlicet)*: namely
vol./vols.	volume(s)
vs.	(versus): against