



THESIS/ DISSERTATION PREPARATION MANUAL

**THE GRADUATES AND INTERNATIONAL OFFICE
KING MONGKUT'S UNIVERSITY OF TECHNOLOGY THONBURI**

CONTENTS

	PAGE
Thesis Preparation Manual	ii
King Mongkut’s University of Technology Thonburi	
CHAPTER	
1. COMPONENTS OF THESIS	1
1.1 Pre – text	1
1.2 Text	1
1.3 Bibliography	2
1.4 Appendices	2
1.5 Curriculum Vitae	3
2. PRINTING AND FILING THE THESIS	5
2.1 Printing	5
2.2 Reviewing of the thesis	6
2.3 Submitting	6
3. CITATIONS AND BIBLIOGRAPHY WRITING	7
3.1 Citations	7
3.2 Bibliography’s format	7
3.3 Bibliography (Number System)	9
3.4 Bibliography (Name-Year System)	10
APPENDIX	13
Example of seam	15
Example of front cover	16
Example of inside cover and approval page	17
Example of abstract	18
Example of acknowledgement	19
Example of table of content	20
Example of list of table	21
Example of list of figures	22
Example of list of symbols	23
Example of list of technical vocaburary and abbreviations	24
Example of printing	25
Example of table and figure presentation	26
Example of curriculum vitae	27
King Mongkut’s University of Technology Thonburi	28
Thesis/Dissertation/Project Copyright Transfer Agreement	

Thesis Preparation Manual
King Mongkut's University of Technology Thonburi

Objectives

1. To make thesis preparation conform to international standards of writing and publishing academic work
2. You are required to at least follow the standards set forth in this manual. If you wish to achieve higher-standards, please consult books and manual available in the library such as:

Michaleson, H.B., 1982, **How to Write and Publish Engineering Papers and Reports**, ISI, Philadelphia.

Seyler, D.U., 1999, **Doing Research; The Complete Research Paper Guide**, 2nd ed., Mc.Graw-Hill, Boston.

Wilkinson, A.M., 1991, **The Scientist's Handbook for Writing Papers and Dissertation**, Prentice-Hall, Englewood Cliffs, N.J.

Guidelines

1. The “final manuscript” means the revised manuscript, which must be free of errors, scratches, or effacement of any kind. The paper used for printing the final manuscript must be A4 paper, weight not less than 80 grams.
2. The unit used in the thesis must be SI Unit. In case you need to use other types of units, mention them in the parentheses.
3. You must use the photographs or scan the colored photographs to be used in all the required copies of the thesis.
4. Normally, you must rewrite graphs or tables taken from books or journals. However, when it is necessary, the graphs or tables may be photocopied but their sources must be cited.
5. The type of font used for the text and references must be the same throughout the thesis.

CHAPTER 1 COMPONENTS OF THESIS

A thesis is composed of the following parts

- Pre-text
- Text
- Bibliography
- Appendices
- Curriculum Vitae

1.1 Pre-text

The pre-text is the first part of the thesis, and is composed of

1.1.1 Front cover

The front cover is a hard cover and is attached to the final manuscript which is approved by the thesis committee. The front cover has the following details.

- Color: all KMUTT's theses must have the same color of the front cover: dark orange.
- Font type on the front cover: must be of the size 16-24
- The seam of the thesis must contain the thesis title, the degree abbreviation, and the year when the thesis committee approves the thesis. If the title is long, the size of the front used can be reduced proportionally, see examples on pages 13-14.

1.1.2 Inside cover and approval page

Inside cover and approval page are composed of:

- The title of the thesis.
- Name of author, using the title such as Mr., Miss., etc. Mention the author's highest education and major at the end of the author's name.
- The advisor's name should begin with the academic title Prof., Assoc. Prof., Asst. Prof., or Lect.
- Graduate school will ask for international standard Book Number or ISBN from the National Library upon receiving your transcript before your thesis defense.
- Other details can be found on page 15.

1.1.3 Abstract

The abstract summarizes the content of your thesis. The abstract is composed of objective, hypotheses (if any), methodology and results (but no interpretations or criticism).

The length of abstract should not exceed 1 page. At the end of abstract, you should provide 3-8 **keywords** (separated by /) of your thesis, this is your make your thesis searchable, see example on page 16.

1.1.4 Acknowledgements

Acknowledgements or the message to thank your sponsor and-or anyone who helped and cooperated in doing your research should not exceed 2 paragraphs, see example on page 17.

1.1.5 Table of contents

The table of contents shows all of the important components of your thesis, see example on page 18-19.

1.1.6 List of table

The list of table shows where all the tables are in your thesis (including the tables in the appendices), see example on page 20.

1.1.7 List of figures

The list of figures shows where all the figures are in your thesis (including the tables in the appendices), see example on page 22.

1.1.8 List of symbols

The list of symbols illustrates the symbols used in the thesis, classified into the following order:

- English symbols, organized in alphabetical order. If you use both capital letters and non-capital letters, put them in the following order A a B b C c, etc.
- Greek symbols, put in the follows order α , β , γ ... If you use both English and Greek symbols, put the Greek symbols after English ones.
- Ordering symbols which contain superscripts and/or subscripts by putting the symbols containing subscripts before symbols containing superscripts. Also, the symbols containing superscript or subscript which are number will be put before the symbols containing those which are alphabets. For example:
 - In case where a lot of symbols containing superscript and subscript are used, you can write them in another clearer format. For example, can be rewritten as follows:

Symbol C = heat

Symbol P = pressure

Symbol V = volume

See example on page 23.

1.1.9 List of technical vocabulary and abbreviations

This list explains the meaning of technical vocabulary and gives the full word for abbreviations in the thesis. see example on page 24.

1.2 Text

The text of the thesis is composed of the following parts:

- Introduction
- Theoretical issue/Related work
- Methodology/Research Methods
- Results
- Discussion/Conclusion/Suggestion

1.3 Bibliography

The thesis must have a bibliography (or list of references). Each reference must consist of the author's name, the name of the article from journal, proceeding or the name of the book or other type of published material, publication place, publisher and date of publication. See details on page 9-11.

1.4 Appendices

Appendices are additional parts which help the readers to understand the thesis better, but which are not appropriate to be included in the text of the thesis since this will make the thesis too long. For example, tables describing the detailed results of the experiment, long equation- proving or solving, drawing of the created tools, or details of computer programs. The components in the appendices are valuable for readers who look for more details or want to conduct further research.

1.5 Curriculum Vitae

You should include your own curriculum vitae (CV) in the thesis. The length of the CV should not exceed 1 page. The CV should have the following information:

- First name and last name with title
- Date of birth (use Christian era).
- Education (Starting from secondary school, give details on majors, institution, year, up to the degree associated with the thesis).
- Funding, Scholarships or grants received during your studies in King Mongkut's University of Technology Thonburi (if any).
- Employment history: Mention the position and organization/company you work with (if any).
- Published work: Give the details of your research papers published in international refereed journals or proceeding, See example on page 27.

CHAPTER 2 PRINTING AND FILING THE THESIS

The printing and filing of the thesis must follow the following details:

2.1 Printing

2.1.1 Paper used for printing

Use white paper, A4 size (210 x 297 mm), weight 80 grams, with not lines. Print on one side only.

2.1.2 Margins

You must follow the margins illustrated on page 25.

2.1.3 Printing

Font

The text must be printed by laser printing with dark black characters. You must use Times New Roman font, 12 characters per inch for body text, and 13-15 (bold) for headings.

Spacing

Use single space for text, and double space for heading, see example on page 25.

2.1.4 Graphs or pictures

Sizes of graphs or pictures used in the thesis should not exceed 130 mm x 180 mm (5" x 7"). Photocopies of cited pictures can be used. But the pictures illustrating the research findings must be scanned pictures. Write “**Figure ...**”, indicating the order of the picture according to the Chapter number, and write illustration under the picture, see example on page 26.

2.1.5 Tables

All tables must be numbered according to the chapter number, see example on page 26.

2.1.6 Page numbering

Roman numeral (i, ii, iii, ...) are used for numbering the pre-text part of the thesis, and should be put on top of page, at the right corner. For the text and afterwards, use Arabic numbers (1, 2, 3,...) on top of page, at the right corner.

2.1.7 Ordering of the thesis components

The components of the thesis should be put in the following order before binding

- Front cover, inside cover and approval page
- Pre-text: Abstract, Acknowledgements, Contents, List of tables (in the text and in the appendices), List of figures (in the text and in the appendices), List of symbols, List of technical vocabulary and abbreviations

- Text: all chapter of the thesis, bibliography, appendices, author's CV, and the back cover

2.2 Reviewing of the thesis

You must file a copy of your thesis to the faculty prior to your defense. Then, the faculty will review the correctness of the thesis and inform the chair of your thesis committee. The chair of your thesis committee will inform you on your defense date for further corrections.

2.3 Submitting the thesis

The university will submit the thesis to the following:

- The National Research Council of Thailand : 1 copy
- Relevant national database center: 1 copy
- National Library: 2 copies (original and one copy)
- KMUTT Library: 1 copy + Electronic thesis
- Department: 1 copy
- All the committee members

Students who pass the defense must submit the revised copy of the thesis of the advisor to look over, and submit it to the chair of the department, who will then submit it to the faculty committee within 30 days after the defense.

In case where the revision of the thesis is not significant, but is time-consuming, the thesis committee may allow the student to submit the thesis later than 30 days but no later than 60 days. Otherwise, the student might need to have the defense again.

Graduate School will issue the letter confirming the graduation and the transcript for the student after the faculty approves the result of the defense, and the student pays for the thesis binding.

CHAPTER 3 CITATIONS AND BIBLIOGRAPHY WRITING

You must follow the following details in writing citations and bibliography or references.

3.1 Citations

You can use one of the two types of citation systems: number system, and name-year system.

3.1.1 Number system

Put a number of the cited document in brackets, such as [1], [2] at the end of cited name or content in the text. In case where several document are cited for the same content, you can separate each number by , in the same bracket: [1, 2, 3]. In this system, once you assign a number to a document, you must consistently use that number for that document throughout the thesis. In case where you mention more than 3 authors' name, write only the last name of the first author followed by "et al.". For example:

Sugiura et al. [6] proposed that...

3.1.2 Name-year system

3.1.2.1 Mention the name (s) of author(s) and publication year at the end of the cited content in the text. If you cite more than one document, separate them with (;). Use Christian era for the publication dates.

3.1.2.2 In case where there are more than 3 authors, write only the last name of the first author followed by a comma and "et al.". For example:

Price-Williams, et al. (1999) found that

3.1.2.3 In case where you quote from a document, mention the page number from which you quote at the end of publication year, in parentheses. For example:

Deuzen-Smith (1988, p. 29) argued that counselors must be involved with clients and "deeply interested in piecing the puzzle of life together"

3.1.2.4 If the quoting is long, putting it in a following paragraph, which has a different pagination from normal text, and the spacing is less than in normal text. For example:

Barlett (1932, p. 201) explained the cyclic process of perception thus:

“ Suppose I am making a stroke in a quick game, such as tennis or cricket. How I make the stroke depends on the relating of certain new experiences, most of them visual, to other immediately preceding visual experience, and to my posture, or balance of posture, at the moment”.

3.2 Bibliography's format

Bibliography (or references) has the following format.

3.2.1 Books

Name of author or editor, publication year, **name of book**, edition, publisher, publication place, page.

Author or editor's name

- Start by last name, follow by first name and middle name (abbreviations). For example: Smiths, J.E.
- If the name is editor's name, put the abbreviation (Ed.) after the name. If there are more than one editor, use (Eds.)

In case where there are three or more authors, write all the names of the authors, Separate by , any by , and between the next-to-last and the last name separate by “and”

Publication year

- Mention the year when the document was published. In case where there are more than one document by the same author, use the letters a, b, c after publication year. For example: 1986a, 1986b

Edition

- You do not have to mention if it is the first edition
- From the second edition and after, you have to mention by using 2nd ed. or 3rd ed., for example.

Page

- If your source of citation is from one page, use p. followed by the page number. But if the citation is from several continuous pages, use pp. followed by the first cited page, - , and the last cited page.

3.2.2 Article in a journal

Name of author, publication year, “name of article”, **name of journal**, Vol., No., pp.

3.2.3 Article in a proceeding

Name of author, publication year, “name of article”, **name of conference**, other detail of conference such as date, place, pp.

3.2.4 Article in a book

Name of author, publication year, “name of article”, In **name of book**, name of editor or compiler, edition, publish, publication place, pp.

3.2.5 Article in newspaper

Name of author, publication year, “name of article”, **name of newspaper**, date, pp.

3.2.6 Thesis

Name of author, publication year, **name of thesis**, degree, major, faculty, university

3.2.7 Patent

Name of patent’s owner, year of patent, **name of invented equipment**, country, patent number

3.2.8 Electronic documents

3.2.8.1 Full-text from on-line database such as Science Direct, ABI/Inform, IEEE Xplorer

Name of author, publication year, “name of article”, **name of electronic journal**, year, vol., pp., Available: name of publisher/database [date of search].

3.2.8.2 Abstract from on-line database, such as Applied Science and Technology Plus, and Science Direct

Name of author, publication year, [Abstract of “name of article”, **name of electronic journal**, Vol., No., pp.] Available: name of publisher/database [date of search].

3.2.8.3 Full-text from E-journals such as Journal of Applied Physics

Name of author, publication year, “name of article”, **name of E-journal**. Vol., No., pp., Available: name of publisher [date of search]

3.2.8.4 Information from World Wide Web

Name of author, publication year, **name of Web Page** [Online], Available: URL [date of search].

3.3 Bibliography (Number System)

Put the references in the order of the number cited in the thesis. Type the number of each reference at the left margin, as shown in the following example:

1. Merin, U. and Daufin, G., 1989, "Separation Process Using Inorganic Membrane in the food industry", **International Conference on Inorganic Membranes**, 6 July 1989, Paris, pp. 272-278
2. Nooijen, W.F.J.M. and Muilwijk, B., 1994, "Paint/Water Separation by Ceramic Microfiltration", **Filtration and Separation**, Vol. 31, No. 3, pp. 227-229
3. Lahiere, R.J. and Goodboy, K.P., 1993, "Ceramic Membrane Treatment of Petrochemical Wastewater", **Environmental Progress**, Vol. 12, No. 2, pp. 86-96
4. Terpstra, R.A., Bonekamp, B.C. and Veringa, H.J., 1988, "Preparation Characterization and some Properties of Tubular Alpha Alumina Ceramic Membranes for Microfiltration and as a Support for Ultrafiltration and Gas Separation Membranes", **Desalination**, Vol. 70, No. 1-3 pp. 39-404
5. Auriol, A. and Gillot, J., 1988, **Porous Material and Tubular Filter Made of Said Material**, US. Patent, No. 4,724,078
6. Sugiura, I., Nomura, H., Shinohara, N. and Tsubaki, J., 1993, "Effect of Preparation Condition on Properties of Green and Sintered Body in Alumina", **Journal of the Ceramic Society of Japan.**, Vol. 101, No. 8, pp. 911-915.
7. Yeh, T.s. and Sacks, M.D., 1988, "Effect of Particle Size Distribution on the Sintering of Alumina", **Journal of the American Ceramic Society**, Vol. 71, No. 12, ppC484-487.
8. Dewhinst, C., 1986a, "Hot Air Over the Himalayas", **World Geographic**, Vol. 1, No.4, pp. 44-45
9. Dewhinst, C., 1986b, "Cold Water Around the Antartic", **World Geographic** Vol. 1, No.5, pp. 32-39.
10. Chicheepsakul, S., Monprapussorn, T. and Huang, T., 2000, "Buckling of Marine Elastica Pipes Transporting Fluid : Heavy Imperfection Column Behavior", **The 1st International Conference on Structural Stability and Dynamics**, December 7-9, Taipei, Taiwan, pp. 249-254.
11. Waechter, E.H., 1987, "How Families Cope : Accessing and Intervening", In **The Child and Family Facing Life-threatening Illness**, Krulik, T. (Ed.), Lippincott, Philadelphia, pp. 239-242.

12. Peterson, S., 1999, “Growth of *Penicillium Rogueforti*”, **Postharvest Biology and Technology** [Electronic], Vol. 17, No. 3, pp. 47-54, Available : Elsevier / Science Direct [2001, October 5].
13. Ponticel, P., 2001, [Abstract of “Fuel – cell Material Developed by Altair”, **Automotive Engineering International**, Vol. 109, No. 9, pp. 82-83],[Electronic], Available : UMI/ Applied Science and Technology Plus [2001, October 5].
14. Diorio, N.J., 2001, “Filled Liquid Crystal Depolarizers”, **Journal of Applied Physics** [Electronic], Vol. 90, No. 8., pp. 3675-4296, Available : American Institute of Physics [2001, October 5].
15. Wu, K., n.d., **What is Nano** [Online], Available : <http://www.nano.org.uk/nano.htm> [2001, October 5].

3.4 Bibliography (Name-Year System)

Put all the references in alphabetical order. Start typing at the left margin. See the following examples :

Benoit, F. and Ceustermans, N., 1993, **Hydroponic Culture of Kitchen Herbs**, European Vegetable R & D Centre, Sint Katelijne Waver, pp. 240 – 243.

Douglas, J.S., 1975, **Hydroponics : The Bengal System with Notes on other Methods of Soilless Cultivation**, 5th ed., Oxford University Press, Oxford, pp. 32 – 47.

Evans, C., 1972, **The Quantitative Analysis of Plant Growth**, University of California Press, Berkeley at Los Angeles, pp. 143 – 150 .

Hewitt, E.S., 1975, **Plant Mineral Nutrition**, English Universities Press, London, pp. 95 – 122.

Jensen, H.M., 1997, “Hydroponics”, **HortScience**, Vol. 33, No. 6, pp. 1018 – 1021.

Mass, E.V., 1969. “Calcium Uptake by Excised Maize Roots and Interactions with Alkali Cations”, **Plant Physiology**, Vol. 44, No. 7, pp. 985 – 989.

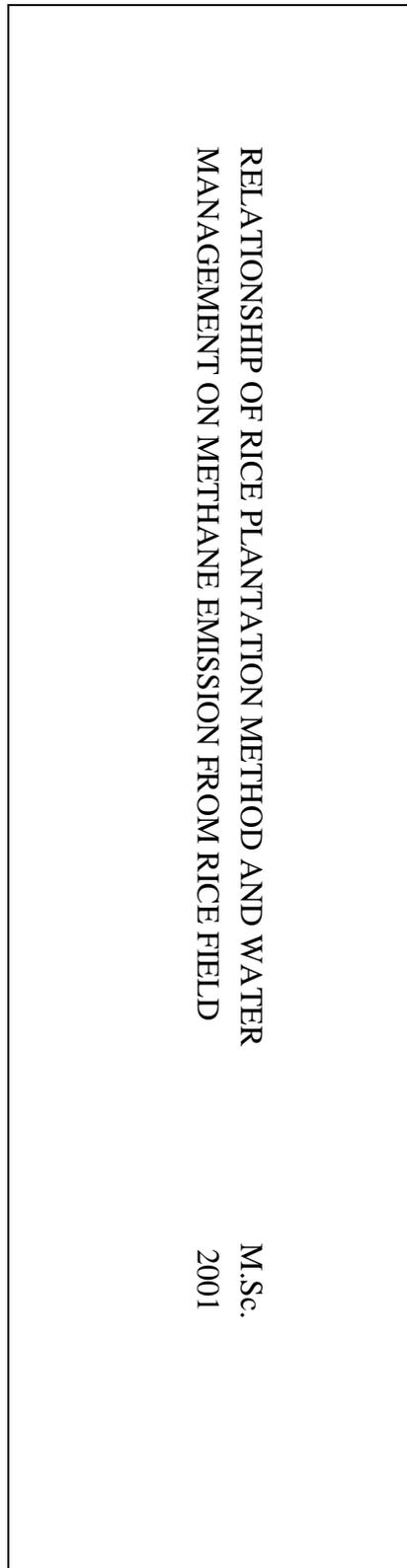
Meier, S., 1994, **Soilless Culture Management : Advanced Series in Agricultural Science 24**, Jerusalem College of Technology, Jerusalem, pp. 118 – 122.

Poovaiah, B.W., 1985, “Role of Calcium and Calmodulin in Plant Growth and Development”, **HortScience**, Vol. 97, No. 5, pp. 679 – 682.

Resh, M.H., 1981, **Hydroponic Food Production : A Definitive Guidebook of Soilless Food Growing Methods**, Woodbridge Press, Santa Barbara, pp. 330 – 335.

APPENDIX

Example of seam



front cover

back cover

Example of front cover



RELATIONSHIP OF RICE PLANTATION METHOD AND WATER
MANAGEMENT ON METHANE EMISSION FROM RICE FIELD

MISS SUCHEEWAN YOYRUROB

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF SCIENCE
(ENVIRONMENTAL TECHNOLOGY)
SCHOOL OF ENERGY AND MATERIALS
KING MONKUT'S UNIVERSITY OF TECHNOLOGY THONBURI
2001

Example of inside cover and approval page

Relationship of Rice Plantation Method and Water Management on
Methane Emission from Rice Field

Miss Sucheewan Yoyrurob B.Sc. (Environmental Science)

A Thesis Submitted in Partial Fulfillment of the Requirements for
the Degree of Master of Science (Environmental Technology)
School of Energy and Materials
King Mongkut's University of Technology Thonburi
2001

Thesis Committee

..... (Assoc. Prof. Sirintornthep Towprayoon, Ph.D.)	Chairman
..... (Lect. Narumon Withers Harvey, Ph.D.)	Co-Chairman
..... (Asst. Prof. Pawinee Chaiprasert, Ph.D.)	Member
..... (Lect. Orapin Kerdchoechuen, Ph.D.)	Member
..... (Asst. Prof. Bandit Anurak, Ph.D.)	Member

Example of abstract

Thesis Title	Preparation and Evaluation of Black Chrome Selective Surfaces on Low Carbon Steel and Aluminium Substrate
Thesis Credits	12
Candidate	Miss Nandh Thavarungkul
Thesis Advisors	Dr. Krissanapong Kirtikara Lect. Supapan Visitserngtrakul
Program	Master of Science
Field of Study	Energy Technology
Department	Energy Technology
Faculty	School of Energy and Materials
Academic Year	1984

Abstract

Preparation and evaluation of properties of black chrome selective surfaces on low carbon steel and aluminum substrates are described in the thesis. Gradient search techniques were employed to determine optimum electroplating condition for black chrome preparation from the Harshaw Bath. Black chrome surfaces on steel obtained under optimum conditions had the highest value of solar absorptance, α_s , (350-850nm) of 0.974 ± 0.003 and the infrared emittance, ϵ_i , less than 0.2 after surfaces on aluminum under optimum conditions were 0.975 ± 0.001 and less than 0.2, respectively. All surfaces exhibited high thermal and mechanical stabilities. The SPSS program was used to determine the relative significance of electroplating parameters on α_s of the surfaces on steel. It was found that the current density, the plating time and Chromonyx addition agent concentration, in that order, strongly correlate with the high α_s values. Observation of the surfaces by a scanning electron microscope revealed different surface appearances at all stages of preparation. No conclusion can be drawn at this point regarding the relation between the microscopic surfaces optimum properties.

Keywords: Aluminium Surface/ Black Chrome (Selective Surface)/ Electroplating/ Lowcarbon Steel Surface/ Selective Surface

Example of acknowledgements

ACKNOWLEDGEMENTS

The Graduates and International Office would like to thank Asst. Prof. Dr. Tuangrak Nantawisarakul, chairman of the committee of thesis preparation manual; and all members, Lect. Aim-on Srininta, Asst. Prof. Nuantip Tantisawetrat, Assoc. Prof. Dr. Dudsadee Uttapap, Assoc. Prof. Dr. Chai Jaturapitakkul, Assoc. Prof. Dr. Wichian Chutimaskul, Asst. Prof. Dr. Pichai Namprakai, Asst. Prof. Dr. Paiboon Kiattikomol, Lect. Wichai Kritprayoch, Lect. Michael Paripol Tangtrongchit as well as Assoc. Prof. Banterng Suwantragul and Dr. Nongyao Premkamoneutr for their helpful guidance and valuable advice to the preparation of this manual.

Also, the Graduates and International Office would like to thank Dr. Bandit Thipakorn and Lect. Nuttanart Muansuwan for their generous assistance with respect to the translation of this manual.

Any usefulness obtained from this manual results from all people mentioned above. The Graduates and International Office highly appreciate them for their kindness.

Example of table of contents

CONTENTS		PAGE
ABSTRACT		i
ACKNOWLEDGEMENTS		ii
CONTENTS		iii
LIST OF TABLES		iv
LIST OF FIGURES		v
LIST OF SYMBOLS		vi
LIST OF TECHNICAL VOCABULARY AND ABBREVIATION		vii
 CHAPTER		
1. INTRODUCTION		1
1.1		1
1.2		2
2. THEORETICAL ISSUE/RELATED WORK		8
2.1		8
2.1.1		9
2.1.2		12
2.1.3		14
2.2		15
2.3		19
2.3.1		21
2.3.2		23
3. METHODOLOGY/ RESEARCH METHODS		25
3.1		28
3.1.1		29
3.1.2		32
3.2		34
4. RESULTS		45
4.1		47
4.2		52
5. DISCUSSION/ CONCLUSION/ SUGGESTION		55
5.1		57
5.2		58
REFERENCES		66

CONTENTS (Cont.)

	PAGE
APPENDIX	69
A.	69
B.	73
C.	74
 CURRICULUM VITAE	 81

Remarks: Please specify the important items in each chapter.

Example of list of tables

LIST OF TABLES

TABLE	PAGE
1.1	3
1.2	4
2.1	7
2.2	10
2.3	12
2.4	14
3.1	19
3.2	22
3.3	23
4.1	24
4.2	25
4.3	27
4.4	28
4.5	31
4.6	32
4.7	33
4.8	34
4.9	35
4.10	37
4.11	40
4.12	40
4.13	41
4.14	41
4.15	43
4.16	46
4.17	48
4.18	49
4.19	55
4.20	59
4.21	59
4.22	61
4.23	66
4.24	69
4.25	70
4.26	75
4.27	76
4.28	77
4.29	78
4.30	79

LIST OF TABLES (Cont.)

TABLE	PAGE
4.31	59
4.32	59

Example of list of figures

LIST OF FIGURES

FIGURE	PAGE
1.1	3
1.2	5
2.1	6
2.2	7
2.3	8
2.4	11
3.1	13
3.2	14
3.3	23
4.1	44

Example of list of symbols

LIST OF SYMBOLS

SYMBOL		UNIT
A_{bi}	surface of heat exchanger without considering the surface area of fin	m^2
A_{bo}	base surface of heat exchanger	m^2
A_f	fin surface area	m^2
A_p	corrected fin profile area	m^2
C_c	heat capacity rate of cold fluid	$W.K^{-1}$
C_h	heat capacity rate of hot fluid	$W.K^{-1}$
C_{pc1}	constant pressure specific heat of dry air	$J.kg^{-1}.K^{-1}$
C_{pc2}	constant pressure specific heat of saturated water vapor	$J.kg^{-1}.K^{-1}$
h_{ca}	heat transfer coefficient of cold heat exchange	$W.m^{-2}.K^{-1}$
h_{ha}	heat transfer coefficient of hot heat exchange	$W.m^{-2}.K^{-1}$
I	electric current	amps
LA	length to area ratio of the TE element	m^{-1}
L_{bc}	thickness of base cold heat exchanger	m
L_{bh}	thickness of base hot heat exchanger	m
L_c	correctd fin length	m
M	number of fins	
n	number density of the TE element	elements. m^{-2}
P	electric power applied to TE modules	W
p	pressure	$N.m^{-2}$
q_c	heat transfer rate at cold side	W
q_h	heat transfer rate at hot side	W

Example of list technical
vocabulary and abbreviations**LIST OF TECHNICAL VOCABULARY AND ABBREVIATIONS**

d	=	day
g	=	gram
h	=	hour
m	=	metre
cm	=	centimeter
ha	=	hectare
kg	=	kilogram
mg	=	milligram
m ²	=	square metre
cm ³	=	cubic centimeter
g/m ²	=	gram per square metre
g/m ² /d	=	gram per square metre per day
g/m ² /crop	=	gram per square metre per crop
kg/ha/d	=	kilogram per hectare per day
mg/m ² /h	=	milligram per square metre per hour
ppm	=	part per million

Example of printing

CHAPTER 2 LITERATURE REVIEW (Font size 15 bold)

Text (Font size 12)

2.1 Head Topic (Font size 14 bold)

2.1.1 Sub Topic (Font size 13 bold)

2.1.2 Sub Topic (Font size 13 bold)

2.1.3 Sub Topic (Font size 13 bold)

2.2 Head Topic (Font size 14 bold)

Font (Times New Roman)

Example of table and figure presentation

Table 2.2 Programme structure after adjusting according to the standard criteria of the Ministry of University Affairs curriculum, B.E. 2542.

MUA Criteria	Original Programme	Adjusted Programme
<u>Plan A(2)</u>		
Course work ≥ 12	28	28
Thesis ≥ 12	12	12
Total Credits ≥ 36	40	40
<u>Plan B</u>		
Course work	34	34
Independent Study	6	6
Total Credits ≥ 36	40	40

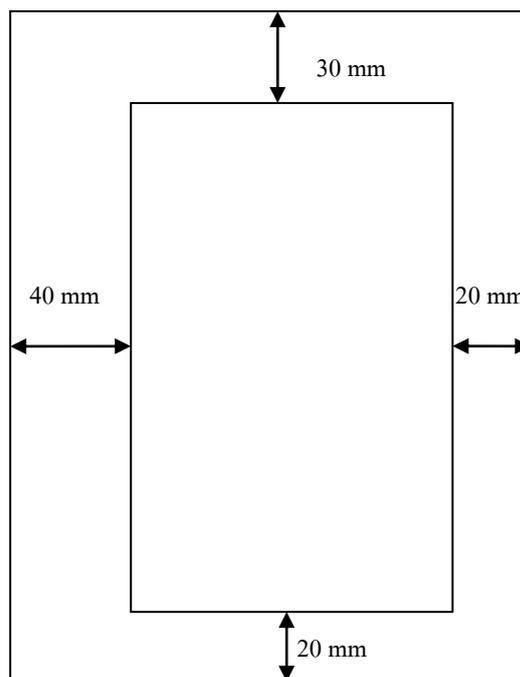


Figure 2.4 Illustration of printing

Example of curriculum vitae

CURRICULUM VITAE

NAME	Mr. Jatupon Tangpagasit
DATE OF BIRTH	16 January 1972
EDUCATIONAL RECORD	
HIGH SCHOOL	High School Graduation Saint Dominic School, 1990
BACHELOR'S DEGREE	Bachelor of Engineering (Civil Engineering) King Mongkut's University of Technology Thonburi, 1994
MASTER'S DEGREE	Master of Engineering (Civil Engineering) King Mongkut's University of Technology Thonburi, 1999
SCHOLARSHIP/ RESEARCCH GRANT	Research Grant for Graduate Student The Ministry of University Affairs, 2000
EMPLOYMENT RECORD	Civil Engineer Sittipongruammitr Co. Ltd., 1995-1996
PUBLICATION	Kiattikomol, K., Jaturapitakkul, C. and Tangpagasit, J., 2000, "Effect of Insoluble Residue on Properties of Portland Cement", Cement and Concrete Research , Vol. 30, Issue 8, pp.1209-1214.

King Mongkut's University of Technology Thonburi

Agreement on Intellectual Property Rights Transfer for Postgraduate Students

Date.....

Name.....Middle Name.....

Surname/FamilyName.....

Student Number.....who is a student of King Mongkut's University of
Technology Thonburi (KMUTT) in Graduate Diploma Master's Degree
 Doctoral Degree Program.....Field of Study.....

Faculty/School.....

Home Address.....

Postal Code.....Country.....

I, as 'Transferer', hereby transfer the ownership of my thesis copyright to King
Mongkut's University of Technology Thonburi who has appointed (Dean's name)
..... Dean of Faculty of to be
'Transferee' of copyright ownership under the 'Agreement' as follows.

1. I am the author of the thesis/ dissertation/project entitled

.....
under the supervision of

who is my supervision, and/or.....

who is/are my co-supervisor(s), in accordance with the Thai Copyright Act B.E. 2537.

The thesis is a part of the curriculum of KMUTT.

2. I hereby transfer the copyright ownership of all my works in the thesis to
KMUTT throughout the copyright protection period in accordance with the Thai
Copyright Act B.E. 2537, effective on the approval date of thesis proposal consented by
KMUTT.

3. To have the thesis distributed in any form of media, I shall in each and every
case stipulate the thesis as the work of KMUTT.

4. For my own distribution of thesis or the reproduction, adjustment, or
distribution of thesis by the third party in accordance with the Thai Copyright Act B.E.
2537 with remuneration in return, I am subject to obtain a prior written permission from
KMUTT.

5. To use any information from my thesis to make an invention or create any
intellectual property works within ten (10) years from the date of signing this
Agreement, I am subject to obtain prior written permission from KMUTT, and KMUTT
is entitled to have intellectual property rights on such inventions or intellectual property
works, including entitling to take royalty from licensing together with the distribution of
any benefit deriving partly or wholly from the works in the future, conforming with the

Regulation of King Mongkut's Institute of Technology Thonburi Re the Administration of Benefits deriving from Intellectual Property B.E. 2538.

6. If the benefits arise from my thesis or my intellectual property works owned by KMUTT, I shall be entitled to gain the benefits according to the allocation rate stated in the Regulation of King Mongkut's Institute of Technology Thonburi the Administration of Benefits deriving from Intellectual Property B.E. 2538.

Signature Transferor
(.....)
Student

Signature Transferee
(.....)
Dean

Signature Witness
(.....)

Signature Witness
(.....)