



**Department of Industrial and Production Engineering
National Institute of Textile Engineering and Research
(NITER)
A Constituent Institute of the University of Dhaka**

GUIDE LINE FOR THESIS WRITING

First Edition: June 2024

1 Format Requirements

1.1 Paper Requirement

Paper size must be Standard A4 (210 × 297 millimeters or 8.27 × 11.69 inches).

1.2 Font

All text, page numbers, table numbers, figure numbers, captions, references, and footnotes must be in the same font.

For general text, type size should neither be less than 10-point font nor more than 12-point font. Headings can be larger.

Be consistent throughout text with regards to font and font size. Font and font size may be varied for symbols or emphasis when appropriate (e.g., for scientific or mathematic terms).

1.3 Spacing

Spacing of all text within the thesis, including references, should be either 1.5 or double-spaced. **Be consistent with regards to spacing.**

Long quotations, headings, and captions may be single-spaced. Multi-lined and subdivision headings, figure and table captions, footnotes, and endnotes are normally single-spaced.

1.4 Page Margins

Left: 1.5 inch; Right: 1.0 inch; Top: 1.0 inch; Bottom: 1.0 inch.

Avoid ending pages with one-line paragraphs or with only the first line of text from a paragraph continuing on the following page. Paragraphs ending pages of text must contain at least two lines of text or be moved to the top of the following page.

All tables and figures, including their captions, must conform to margin requirements.

1.5 Page Numbers

All pages containing text or figures/tables are numbered. Except for the title page and the cover page, page numbers must be placed on each page of the thesis.

Preliminary pages (e.g., abstract, acknowledgements, table of contents, etc.) are numbered consecutively in lowercase Roman numerals (i, ii, iii, etc.). Text and all reference pages, including appendices, are numbered consecutively in Arabic numerals (1, 2, 3, etc.) beginning with “1” on the first page of text.

Page numbers should be centered, ½ inch from the bottom of the page (in the footer). Page numbers must be in the same font and font size as your text.

Title pages are technically the first numbered pages (Roman numeral “i”). However, the numeral “i” does not appear on the title page. The first page following the title page is numbered “ii.”

2 Content Requirements

The thesis should be arranged as follows:

1. Title Page
2. Board of Examiners/ Approval Page (Optional for B.Sc.)
3. Declaration Page
4. Preface, Dedication, Acknowledgement Pages (Optional)
5. Abstract
6. Table of Contents
7. List of Tables, List of Figures (Optional, but strongly recommended)
8. List of Abbreviations (Optional)
9. Main Text including Figures, Tables, Equations.
10. References
11. Appendix (Optional)

2.1 Title Page

This section is required.

The title page must include the full, official title of your thesis, your full name, the full title of the degree awarded, the Month and Year of the submission, the Department and University name.

The degree title for all doctoral candidates is “Doctor of Philosophy.” The degree title for all master’s students is “Master of Science.” The degree title for all undergraduate students is “Bachelor of Science”

Title pages are not numbered but are technically counted as page “i” of the preliminary pages.

Information is centered between the left and right margins (not the edges of the document).

See the title page example for spacing, capitalization, and punctuation formatting.

2.2 Board of Examiners/ Approval Page

This section is optional.

If present, this section must appear after the title page.

The heading “BOARD OF EXAMINERS” (bold faced in capital letters, Font size 2 points higher than the font size of the main text) is centered between the left and right margins, without punctuation or underlining, two inches from the top of the page.

The content is single-spaced and begins three single-space lines below the heading at the left margin.

If present, this page is not numbered but are technically counted as page “ii” of the preliminary pages.

See the Board of Examiners page for an example of texts and format.

2.3 Declaration

This section is required.

The declaration must appear after the Title Page and Board of Examiners/ Approval Page, if exists.

The heading “DECLARATION” (bold faced in capital letters, Font size 2 points higher than the font size of the main text) is centered between the left and right margins, without punctuation or underlining, two inches from the top of the page. The content begins three single-space lines below the heading and begins at the left margin.

Vertical spacing of the text must be the same as in the rest of your thesis (e.g., 1.5 or double-spaced).

Page numbers should be in lower case Roman numerals and are centered, ½ inch from the bottom of the page (in the footer).

Do not include the declaration page in the table of contents.

2.4 Acknowledgements

This section is optional.

Acknowledgements include brief statements of appreciation or recognition.

Do not include the acknowledgments page in the table of contents.

The heading “ACKNOWLEDGMENTS” (bold faced in capital letters, Font size 2 points higher than the font size of the main text) is centered between the left and right margins, without punctuation or underlining, two inches from the top of the page, with the text beginning three single-space lines below.

Vertical spacing of the text must be the same as in the rest of your thesis (e.g., 1.5 or double-spaced).

Page numbers should be in lower case Roman numerals and are centered, ½ inch from the bottom of the page (in the footer).

2.5 Abstract

This section is required.

The abstract must not exceed 350 words and must appear immediately before the Table of Contents.

The heading “ABSTRACT” (bold faced in capital letters, Font size 2 points higher than the font size of the main text) is centered between the left and right margins, without punctuation or underlining, two inches from the top of the page. The first paragraph begins three single-space lines below the heading, is single-spaced, and begins at the left margin.

The abstract should contain a statement of the thesis problem, a brief description of the research and a summary of your findings.

Mathematical formulas, diagrams, and other illustrative materials should not be used in your abstract.

Page numbers should be in lower case Roman numerals and are centered, ½ inch from the bottom of the page (in the footer).

2.6 Table of Contents

This section is required.

Each chapter should be numbered. In addition, each section and sub-section should be numbered.

The heading “TABLE OF CONTENTS” (bold faced in capital letters, Font size 2 points higher than the font size of the main text) is centered between the right and left margins, without punctuation or underlining, two inches from the top of the page.

The list begins at the left margin three single-space lines below the heading.

All material following the heading “TABLE OF CONTENTS” is listed. No preceding material is listed.

Headings of parts, sections, chapters, and their principal subdivisions are listed in the table of contents and must be worded exactly as they appear in the body of your thesis. When listing the heading/sub-headings, list the same levels of headings and subheadings consistently for each chapter.

Dotted leaders are required between headings and page numbers.

If your table of contents continues beyond one page, allow a one-inch top margin on successive pages.

Page numbers should be in lower case Roman numerals and are centered, ½ inch from the bottom of the page (in the footer).

2.7 List of Tables

This section is optional, but strongly recommended

The heading “LIST OF TABLES” (bold faced in capital letters, Font size 2 points higher than the font size of the main text) is centered between the left and right margins, without punctuation or underlining, two inches from the top of the page. The list begins at the left margin three single-space lines below the heading.

Dotted leaders are required between captions and page numbers.

This section contains exactly the same numbers and captions appearing below the figures in the text and appendices.

If your list of tables continues beyond one page, allow a one inch top margin on successive pages.

Page numbers should be in lower case Roman numerals and are centered, ½ inch from the bottom of the page (in the footer).

2.8 List of Figures

This section is optional, but strongly recommended.

The heading “LIST OF FIGURES” (bold faced in capital letters, Font size 2 points higher than the font size of the main text) is centered between the right and left margins, without punctuation or underlining, two inches from the top of the page. The list begins at the left margin three single-space lines below the heading.

Dotted leaders are required between captions and page numbers.

This section contains exactly the same numbers and captions appearing below the figures in the text and appendices.

If your list of figures continues beyond one page, allow a one-inch top margin on successive pages.

Page numbers should be in lower case Roman numerals and are centered, ½ inch from the bottom of the page (in the footer).

2.9 Lists of Symbols, Abbreviations, Nomenclature, or Glossary

This section is optional.

The heading (bold faced in capital letters, Font size 2 points higher than the font size of the main text) is centered between the right and left margins, without punctuation or underlining, two inches from the top of the page. The list begins at the left margin three single-space lines below the heading.

Lists of symbols, lists of abbreviations, nomenclature, or glossary may be appropriate for some theses. If needed, these appear after lists of tables and figures. One and a half or double-spacing, is used between entries and single-spacing within entries. Be consistent with regards to spacing.

Page numbers should be in lower case Roman numerals and are centered, ½ inch from the bottom of the page (in the footer).

2.10 Body Content

This section is required.

The body of the thesis is the substance of your thesis, the comprehensive statement of your research.

The body of your thesis follows the preliminary sections. A standard, and consistent, organizational scheme must be adopted and used throughout your thesis.

Sections should be numbered consecutively throughout your thesis.

Page numbers should be in Arabic numerals and are centered, ½ inch from the bottom of the page (in the footer).

2.11 References

This section is required. This section must be before any Appendix.

The list of references contains sources utilized during the course of your research.

The heading “REFERENCES” (bold faced in capital letters, Font size 2 points higher than the font size of the main text) is centered between the right and left margins, without punctuation or underlining, two inches from the top of the page. The list begins at the left margin three single-space lines below the heading.

Reference entries must not be divided between pages. In order to avoid dividing reference entries, you should either extend the bottom margin to accommodate the entire entry or shift the entire entry to the top of the next page and leave the bottom of the previous page blank.

Page numbers should be in Arabic numerals and are centered, ½ inch from the bottom of the page (in the footer).

Reference entry should be single-spaced with first line hanging at ¼ inch. Use a blank line between references.

Reference list can be either sorted as per alphabetical order or in ascending order as a numbered list.

Each reference must be cited properly in the text. The reference can be cited as “(Author Last Name, Year)” or “Author Last Name (Year)” or simply as number in square bracket “[1]”. Whichever style is followed; the references should be consistent throughout the document.

For citation and reference use any standard Reference Style. An example reference style is attached in this document.

If the list is numbered, the numbering should be as per the order of citation in the text. Otherwise, references can be sorted in alphabetical order without any number. If numbered, each reference number should be enclosed in square brackets (such as [1], [2], [3], ...).

There are some tools for referencing: Endnote, Zotero and Mendeley.

2.12 Appendices

This section is optional. If exists, must appear after the Reference section.

The heading “APPENDIX” (bold faced in capital letters, Font size is 2 points higher than the font size of the main text) is centered between the right and left margins, without punctuation or underlining, two inches from the top of the page.

Appendices are used for supplementary illustrative material, original data, computer

programs, and other material not necessarily appropriate for inclusion within the text of your thesis.

The heading “APPENDIX” (in capital letters) should be listed in the table of contents as a major heading.

Appendix tables and figures are numbered and are uniquely captioned. Appendix tables and figures are subject to the same rules covering tables and figures in your text.

Page numbers should be in Arabic numerals and are centered, ½ inch from the bottom of the page (in the footer).

3 Example References

3.1 Examples of Citations

Name-Year Style

Ebehard and Voges (1984) discussed the detection of single sideband by sensors.

Single sideband can be detected by sensors (Ebehard and Voges, 1984).

Cryogenic cooling significantly affects the cutting temperature in turning steel (Dhar et. al., 2000).

Borgnakke (1984) presented the flame propagation and heat-transfer effects in spark-ignition engines.

Numbered Style

Borgnakk presented the flame propagation and heat-transfer effects in spark-ignition engines [1].

Ebehard and Voges discussed the detection of single sideband by sensors [6].

Single sideband can be detected by sensors [6].

Cryogenic cooling significantly affects the cutting temperature in turning steel [4].

3.2 Example of References

Name-Year Style

Books:

Borgnakke, C., “Flame Propagation and Heat-Transfer Effects in Spark-Ignition Engines,” in J. C. Hilliard and G.S. Springer (eds.). *Fuel Economy in Road Vehicles Powered by Spark Ignition Engines*, chap. 5, pp. 183-224, Plenum Press, New York, 1984.

Farrelly, D., *The book of bamboo*. Thames and Hudson Ltd., London, 1966.

Journals:

Benson, R. S., Garg, R. D., and Woolatt, D., "A Numerical Solution of Unsteady Flow Problems," *Int. J. Mech. Sci.*, vol. 6, pp. 117-144, 1964.

Dhar, N. R., Paul, S., and Chattopadhyay, A. B., "Role of Cryogenic Cooling on Cutting Temperature in Turning Steel," *Trans. Of the ASME, Journal of Manufacturing Science and Engineering*, Vol. 123, pp. 1-9, 2000.

Articles from published conference proceedings:

Nichols, M. A., Siegel, H. J., Dietz, H. G., Quong, R. W., and Nation, W. G., "Minimizing memory requirements for partitionable SIMD/SPMD machines," in *International Conference on Parallel Processing*, Vol. I, Aug. 1990, pp. 84-91, 1990.

Paper presented at conference (unpublished)

Ebehard, D., and Voges, E., "Digital single sideband detection for interferometric sensors," presented at 2nd Int. Conf. Optical Fiber Sensors, Stuttgart, F. R. G., 1984.

Reports:

GOB National Housing Policy 1993. Government of Bangladesh, Ministry of Housing and Public Works, Dhaka, 1993.

Reber, E. E., Mitchell, R. L., and Carter, C. J., "Oxygen absorption in the earth's atmosphere," *Aerospace Crop.*, Los Angeles, CA, Tech. Rep. TR-0200 (4230-46)-3, Nov. 1968.

Thesis:

Rahman, M. A., *The Structure of Turbulent Mixing Layers*, M. Sc. Engg. Thesis, Department of Mechanical Engineering, Bangladesh University of Engineering and Technology, 1998.

Website:

Google Android, <https://developer.android.com/index.html> [Last accessed on 11 Jan. 2017].

Numbered Style**Books:**

[1] Borgnakke, C., "Flame Propagation and Heat-Transfer Effects in Spark-Ignition Engines," in J. C. Hilliard and G.S. Springer (eds.). *Fuel Economy in Road Vehicles Powered by Spark Ignition Engines*, chap. 5, pp. 183-224, Plenum Press, New York, 1984.

[2] Farrelly, D., *The book of bamboo*. Thames and Hudson Ltd., London, 1966.

Journals:

[3] Benson, R. S., Garg, R. D., and Woolatt, D., "A Numerical Solution of Unsteady Flow Problems," *Int. J. Mech. Sci.*, vol. 6, pp. 117-144, 1964.

- [4] Dhar, N. R., Paul, S., and Chattopadhyay, A. B., "Role of Cryogenic Cooling on Cutting Temperature in Turning Steel," Trans. Of the ASME, *Journal of Manufacturing Science and Engineering*, Vol. 123, pp. 1-9, 2000.

Articles from published conference proceedings:

- [5] Nichols, M. A., Siegel, H. J., Dietz, H. G., Quong, R. W., and Nation, W. G., "Minimizing memory requirements for partitionable SIMD/SPMD machines," in *International Conference on Parallel Processing*, Vol. I, Aug. 1990, pp. 84-91, 1990.

Paper presented at conference (unpublished)

- [6] Ebehard, D., and Voges, E., "Digital single sideband detection for interferometric sensors," presented at 2nd Int. Conf. Optical Fiber Sensors, Stuttgart, F. R. G., 1984.

Reports:

- [7] Reber, E. E., Mitchell, R. L., and Carter, C. J., "Oxygen absorption in the earth's atmosphere," Aerospace Corp., Los Angeles, CA, Tech. Rep. TR-0200 (4230-46)-3, Nov. 1968.
- [8] *GOB National Housing Policy 1993*. Government of Bangladesh, Ministry of Housing and Public Works, Dhaka, 1993.

Thesis:

- [9] Rahman, M. A., *The Structure of Turbulent Mixing Layers*, M. Sc. Engg. Thesis, Department of Mechanical Engineering, Bangladesh University of Engineering and Technology, 1998.

Website:

- [10] Google Android, <https://developer.android.com/index.html> [Last accessed on 11 Jan. 2017].
-

Sample Documents

1. Cover Page
 2. Title Page
 3. Board of Examiners/ Approval Page
 4. Declaration Page
-

**TITLE OF THE THESIS/PROJECT IS CENTERED 14 POINT BOLD,
UPPERCASE**

by

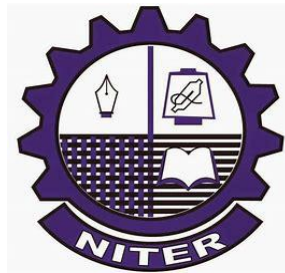
Author's Name 14 Point Capitalize Each Word

S. M. GOLAM KIBRIA

SHUBHABRATA DAS

SHAHADAT HOSSEN

**BACHELOR OF SCIENCE
IN
INDUSTRIAL AND PRODUCTION ENGINEERING**



**DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING
NATIONAL INSTITUTE OF TEXTILE ENGINEERING AND RESEARCH (NITER)
A CONSTITUENT INSTITUTE OF THE UNIVERSITY OF DHAKA**

DHAKA-1350, BANGLADESH

NOVEMBER, 2024

Title of the Thesis/Project is Centered 14 Point Bold, Each Word is Capitalized, except Preposition, Conjunction, Articles

by

Author's Name 12 Point Capitalize Each Word

SUBMITTED BY

S. M. GOLAM KIBRIA

Roll. No. 2012334015

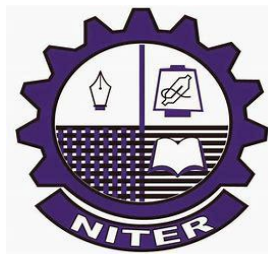
SHUBHABRATA DAS

Roll. No. 2012334032

SHAHADAT HOSEN

Roll. No. 2012334041

This thesis is submitted to the DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING in partial fulfillment of the requirement for the award of the degree of BACHELOR OF SCIENCE in INDUSTRIAL AND PRODUCTION ENGINEERING.



**DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING
NATIONAL INSTITUTE OF TEXTILE ENGINEERING AND RESEARCH (NITER)
A CONSTITUENT INSTITUTE OF THE UNIVERSITY OF DHAKA
DHAKA-1350, BANGLADESH**

Month, Year

BOARD OF EXAMINERS

The thesis/project titled “Thesis/Project Title 12 Point single-spaced” submitted by Student-Name, Student No.: xxxx, has been accepted as satisfactory in partial fulfillment of the requirement for the degree of Bachelor of Science in Industrial and Production Engineering on Date-of-Defense.

RECOMMENDATION OF THE BOARD OF EXAMINERS

The board of examiners hereby recommends to the department of Industrial and Production National Institute of Textile Engineering and Research (NITER), Dhaka-1350, Bangladesh, the acceptance of the thesis “**ENHANCING OEE AS A KEY METRIC OF TPM APPROACH: AN EMPIRICAL STUDY IN BANGLADESH RMG INDUSTRIES**”, submitted by **S. M. Golam Kibria** Roll. No.: **2012334015**, Session: 2012-13, **Shubhabrata Das** Roll. No.: **2012334032**, Session: 2012-13, **Shahadat Hossen** Roll. No.: **2012334041**, Session: 2012-13; in partial fulfilment of the requirement for the award of the degree of Bachelor of Science in Industrial and Production Engineering

<hr/> <p>1. Name of the Supervisor Designation Address</p>	Supervisor Sign
<hr/> <p>2. Name of the External Member Designation Address</p>	External Sign
<hr/> <p>3. Name of the Dept. Head Designation Address</p>	Dept. Head Sign

DECLARATION

I hereby declare that this thesis/project is my own work and to the best of my knowledge it contains no materials previously published or written by another person, or have been accepted for the award of any other degree or diploma at National Institute of Textile Engineering and Research (NITER) or any other educational institution, except where due acknowledgement is made. I also declare that the intellectual content of this thesis is the product of my own work and any contribution made to the research by others, with whom I have worked at NITER or elsewhere, is explicitly acknowledged.

Signature with date

Name

*THIS THESIS IS DEDICATED
TO
OUR BELOVED PARENTS*

ACKNOWLEDGEMENT

We would like to thank Almighty for giving us the strength and patience to go through the thesis. I also would like to take the opportunity to thank the many people behind this thesis effort. Our deepest admiration goes to our thesis supervisor, Abu wadud, Professor, Department of Industrial and Production Engineering, National Institute of Textile Engineering and Research (NITER) for his invaluable support, advice and encouragement in bringing this research work to a successful completion. We appreciate his vast knowledge and skill in many areas, and his assistance in writing of the thesis we would like to express our thanks and acknowledgement to all personnel of

The department of Industrial and Production Engineering at NITER, Dhaka as a whole has offered and guidance in our studies. Finally, thanks are due to those who helped to the authors directly or indirectly during the different stages of the present work.

S. M. Golam Kibria
Shubhabrata Das
Shahadat Hossen

ABSTRACT

Keywords: