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**GUIDELINES FOR PREPARATION OF  
BACHELOR OF TECHNOLOGY  
THESIS/DISSERTATION**



Manipur Technical University

Imphal

October, 2019

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# **1. Introduction**

This document acts as the guideline for preparation of the *B.Tech VIII Semester* thesis/dissertation. The guidelines given here are to safeguard ethical standards and maintain a homogeneity on report making. The students have to strictly adhere to the rules given here in preparation of their theses so that their theses will be accepted by the University as partial fulfilment for the award of B. Tech degree.

## **2. Thesis structure**

The thesis should be written only in English (preferably in UK English) except if there are quotations or scripts from other foreign languages.

It has to be organised in the following structure. Any deviation from the given format will not be accepted.

1. **Front cover/Title page**
2. **One blank page**
3. **Dedication (Optional)**
4. **Inside title page**
5. **Bona fide Certificate signed by the Supervisor(s)**
6. **Declaration of academic integrity signed by the candidate**
7. **Acknowledgements**
8. **Abstract**
9. **Table of contents**
10. **List of figures**
11. **List of tables**
12. **List of symbols and acronyms (optional)**
13. **Chapters**
14. **References**
15. **List of papers published (if any)**

## **3. Details on the above structure**

### **3.1 Front Cover/Title page**

The title of the thesis should be concise, capitalised, in 22 font size Times New Roman (TNR, henceforth) only, centred and positioned at the top.

It is followed by the phrase, in 18 size TNR (italicized, centred) without the quotes:

*“A thesis submitted in partial fulfilment of the requirement for the award of the degree of”*

This is followed in next paragraph by the programme name in 18 size TNR (bold-faced, centred). Then, the name of the student and his/her registration number in 14 size TNR (bold-faced, centred) are kept at the middle of the title page.

A 1.5 inch × 1.5 inch logo of the University along with the name of the department, University and the month & year of submission in “MONTH, YYYY” format, each in separate lines are to be properly inserted centred at the bottom of the page with font size 16, bold-faced and capitalised.

This page is to be printed on the leather or rexine and soft bound. The colour of the cover page material may be suitably selected by the concerned department. But it has to be uniform for all the students of each department.

A sample cover page is given in **Annexure 1**

### **3.2 Dedication**

This is an optional page where a small dedication message can be given.

### **3.3 Inside title page**

This page is the same as the cover page but printed on a normal 75 gram per square metre (GSM) A4 paper.

### **3.4 Bona fide certificate**

A certificated issued by the Supervisor(s) of the student is to be included, a sample of which is given in **Appendix 2**. Title is in size 16, bold-faced TNR, all capitals. The text, however, is in size 12 TNR.

### **3.5 Declaration**

**Appendix 3** is the sample of declaration that should be given by the student. The title of the page DECLARATION is written in all capitals, size 16, bold-faced TNR; while the text is written in size 12 TNR.

### **3.6 Acknowledgements**

This page will act as the place for the student to express his/her acknowledgements regarding the project. The page will have the word ACKNOWLEDGEMENT as the title of it centred and bold-faced, size 16 TNR. Grants and project fund will have to be acknowledged properly here. The page ends with the signature and name of the student on the right side and “Date” and “Place” on the left.

### **3.7 Abstract**

This gives a brief summary of the project highlighting important points of it. The method employed and significant results are to be highlighted here. At most five keywords that are essentially important in the study should be listed out.

It should start with the title ABSTRACT in size 16, bold-faced TNR. The text thereafter, should be in the next paragraph, in size 12 TNR, double-spaced, and centre justified. It may be multi-paragraphed.

### **3.8 Table of contents (TOC)**

This page has the title TABLE OF CONTENTS written in all capitals, size 16, bold-faced TNR, centred at the top of the page. It contains the list of all the items from 5 to 16 given in Section 2 (excluding 9 itself). Optional items may be excluded if the thesis does not contain such items. The name of each item is written in bold-face, all capitals, size 14 TNR on the left side of the page and the corresponding page number of the page where the item is located in the thesis, is given on the right side of each item. Sections are written in sentence case.

A sample is given in **Appendix 4** for easy reference.

### **3.9 List of figures (LOF)**

Similar to TOC, list of figures contains captions of all the figures numbered chronologically in accordance with their appearances in each chapter. In the text of the thesis, the figures are captioned in size 10, bold-faced TNR, centre justified, just below the illustration. As far as possible, this caption should be as informative as possible but at the same time, should be concise. The figure within a chapter should be so positioned as to make it appropriate for a reader to look at it as and when it is referenced in the text. The same goes for the positioning of tables as well. A sample is given in **Appendix 5**.

### **3.10 List of tables (LOT)**

See LOF above. However, in the text, the caption of the table, even though having the same formatting as above, should be at the top of the table. Sample is in [Appendix 6](#).

### **3.11 List of symbols, and acronyms (optional)**

This is an optional item. But, if included, it should contain the expanded form of the abbreviations, meaning of symbols used in the thesis etc.

The title of the page should be SYMBOLES AND ACRONYMS in size 16, bold-faced TNR. The symbols and acronyms should be in size 14 TNR. Sample is in [Appendix 7](#).

### **3.12 Chapters**

A well-documented thesis should contain a number of chapters. It starts with an introductory write-up about the overall problem at hand that is going to be reported in the thesis. This chapter should give an overall outline, aim and scope of the current research/project and the rationale about conducting the research. Then comes a chapter on the literature survey discussing about the various researches and studies that have been conducted in the relevant field. A brief discussion about the various methods and algorithms, including their strengths and limitations, can be presented in this chapter. The third chapter can be on the current methodology/algorithm developed to tackle the problem at hand. This is then followed by a detailed discussion on results that are obtained using the described methodology. Any limitations of the method should be highlighted here. The thesis, ultimately, concludes by summarizing the important points of the thesis. Future scope of the study can be included in this chapter.

The chapters are numbered in Arabic numerals with the title of the chapter written in all capitals, bold-faced, size 16 TNR centre justified. Sections and sub-sections (if any) are typed in sentence case, size 16, bold-faced TNR and size 14, bold-faced TNR respectively. They are numbered in decimals e.g., 1 (Section) and 1.1(Sub-section) respectively. The title of sub-section is indented 1 inch from the left edge of the page. There are no space before and after any paragraph.

If there is any equation in the thesis, it should be aligned at the centre of the page with an equation number (at the rightmost end of the line containing the equation) with three dots just before the equation number. A sample is given in **Appendix 8**.

### 3.13 References

The thesis of this University will follow the American Psychological Association (APA) referencing style (<http://owll.massey.ac.nz/referencing/apa-style.php>). Students are advised to visit the given webpage and accordingly check their references for correctness.

All the references in the thesis are to be listed alphabetically ordered and properly numbered. Each reference will be single-spaced but in between two successive references, there should be gap of 1 line.

The way for citing a reference inside the text can be the following:

- a. **One author:** Singh (2019) suggested that...
- b. **Two authors:** Singh and Singh (2019) suggested that...
- c. **Three or more authors:** Singh et al. (2019) suggested that...
- d. **If there are two or more publications by the same author(s) in the same year:** Singh (2019a), Singh (2019b)...

The references are given in size 12 TNR.

References from different sources are to be given in exactly the same form as shown here:

#### Journals

1. Smith, J. D. (2009). Māori voices: Approaches to bilingual research. *Journal of Academic Methodologies*, 38(3), 17–28.
2. Smith, J. D., & Khan, V. (2009). Māori voices: Approaches to bilingual research. *Journal of Academic Methodologies*, 38(3), 17–28. <https://doi.org/10.1000/182>
3. Smith, J. D., Khan, V., & Zhang, H. (2009). Māori voices: Approaches to bilingual research. *Journal of Academic Methodologies*, 38(3), 17–28. <https://doi.org/10.1000/182>

#### Books

1. Smith, J. D. (2009). Research ethics in New Zealand: A student guide. Wellington, New Zealand: Rata Press.
2. Ministry of Education. (2009). Research ethics in New Zealand: A student guide. <https://doi.org/10.1000/182>
3. Smith, J. D., & Khan, V. (2009). Trends in discourse analysis. In G. Schwartz & U. N. Owen (Eds.), Readings in qualitative research design (pp. 15–59). <https://doi.org/10.1000/182> (Chapter from an edited book)

## **Reports**

1. Smith, J. D., & Khan, V. (2009). National employment predictions and recommendations (Report No. 122). <https://doi.org/10.1000/182>

## **Thesis**

1. Bowker, N. I. (2003). What it means to be online for people with disabilities (Unpublished doctoral dissertation). Massey University, Palmerston North, New Zealand.

## **Conference proceedings**

1. Bowker, N., & Tuffin, K. (2002). Users with disabilities' social and economic development through online access. In M. Boumedine (Ed.), Proceedings of the IASTED International Conference on Information and Knowledge Sharing (pp. 122–127). Anaheim, CA: ACTA Press.

# **4. General guidelines**

The following are mostly about typesetting and other related stuffs. The thesis should be prepared using a popular word processing software. However, the softcopy that should be submitted to the Library of the University should be conveniently converted into Portable Document Format (PDF) Version 1.5 (at least). All the illustrations should be converted to an image with compression standard of Joint Photographic Experts Group (JPEG) with at least 600 dpi resolution.

## **4.1 Report size**

It should be the duty of the supervisor as well as the student to check that the number of pages are not too large. Commonly, a total of about 100 pages is considered appropriate for a B. Tech thesis.

## **4.2 Paper size and quality**

White A4 (210 mm wide × 297 mm long) of at least 75 gram per square meter (GSM) should be the paper used to print the thesis. It should be printed on only one side of the page. Colour illustrations may be printed on glossy papers.

## **4.3 Margins**

Top edge : 1 inch (25 mm)

Left side : 1 ½ inch (38 mm)

Bottom edge : 1 inch (25 mm)

Right side : 1 inch (25 mm)

## **4.4 Font**

Typeface: Times New Roman (TNR)

Size: 16 point, all capital, bold-faced for title of the chapter, 16 point, sentence case, bold-faced for heading; 14 point, bold for subheading; 12 point, sentence case, normal for body text. Captions for tables and figures are sized 10, bold-faced.

## **4.5 Line spacing**

The line spacing in the main text should be 1.5.

## **4.6 Pagination**

The page numbers for the preliminaries/prefacing materials e.g., Inside title page, dedication, certificate, declaration, acknowledgements, abstract, table of contents, etc. of the thesis shall be in small Roman numerals and should be centred at the bottom of the pages.

The body of the thesis starting from Chapter 1 should be paginated in Arabic numerals and should be centred at the bottom of the pages. The pagination should start with the first page

of Chapter 1 and should continue throughout rest of the thesis. The page number is not printed on the blank pages.

# **THIS IS THE TITLE OF THE THESIS**

*A thesis submitted in partial fulfilment of the requirement for  
the award of the degree of*

**Bachelor of Technology**

By

**Student Name**

**201900100001**



**DEPARTMENT OF AUTOMOBILE ENGINEERING**

**MANIPUR TECHNICAL UNIVERSITY**

**OCTOBER, 2019**

## BONA FIDE CERTIFICATE

This is to certify that the project titled TITLE OF THE THESIS is a bona fide record of the work done by Name of the Student (Reg. Number) during the academic year YYYY-YYYY. The contents of this report, in full or in parts, have not been submitted to any other Institution or University for the award of any degree or diploma.

<Signature of the Supervisor>

<Signature of Head>

Name of Supervisor,

Name of Head,

Dept. of Automobile Engineering

Head, Dept. of Automobile Engineering

<Seal of the HOD may be stamped here>

## **DECLARATION**

I declare that this thesis entitled TITLE OF THE THESIS submitted in partial fulfilment of the degree of Bachelor of Technology in Automobile Engineering is a record of original work carried out by me under the supervision of NAME OF SUPERVISOR, and has not formed the basis for the award of any other degree or diploma, in this or any other Institution or University. In keeping with the ethical practice in reporting scientific information, due acknowledgements have been made wherever the findings of others have been cited.

<Signature of student>

Name of student

Date:

Reg. number

Place:

Dept. of Automobile Engineering

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## SYMBOLS AND ACRONYMS

$\omega$  Angular frequency

IISc Indian Institute of Science

# CHAPTER 1

## INTRODUCTION

### 1. Introduction

Write some text here. Singh (2010) opined that ...

#### 1.1 Subsection

The subsection follows from here...

An empirical equation of the form can be obtained through various experiments on the given sample:

$$(x + a)^n = \sum_{k=0}^n \binom{n}{k} x^k a^{n-k} \quad \dots(1.10)$$