

GUJARAT TECHNOLOGICAL UNIVERSITY

Guidelines for the Preparation of M.E. Dissertation Thesis – 2018



GUJARAT TECHNOLOGICAL UNIVERSITY

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1. Introduction

- 1.1. The guidelines described in this document have been established so that thesis can be prepared in a form suitable for library cataloging. The document takes its place in the library as a product of original thinking and research, and it is, therefore, designed to appear in a form comparable to published work.
- 1.2. This document covers the general rules of quality, format and appearance. Students should consult their Project Guide for specific content requirements.
- 1.3. It is the student's responsibility to read and follow the requirements presented here. The final copies will not be accepted if they do not fulfill the criteria described below.

2. Originality

M.E. Thesis shall

- 2.1. Consist of the student's own account of his/her investigations;
- 2.2. Be either a record of original work or of an ordered and critical exposition of existing knowledge and shall provide evidence that the field has been surveyed thoroughly;
- 2.3. Be an integrated whole and present a coherent argument;
- 2.4. Give a critical assessment of the relevant literature, describe the method of research and its findings and include a discussion on those findings; and
- 2.5. Include a full bibliography and references.
- 2.6. Check originality of thesis with help of Turnitin anti-plagiarism which is provided to institute by GTU.

3. Components

A thesis should contain the following parts in the order shown:

3.1 Fly page (1 Blank Pages)

3.2 Title page (please see sample, Annexure I), containing:

- 3.2.1 the thesis title;
- 3.2.2 the full name of the Candidate, enrollment no. and Guide name;
- 3.2.3 the degree for which the thesis is submitted;
- 3.2.4 the name of the University, i.e. Gujarat Technological University
- 3.2.5 the month and year of submission

3.3 Declaration Page.

3.4 Thesis Certificate page (please see sample, Annexure II);

3.5 Originality Report Certificate

3.6 Thesis Approval Form

3.7 Abstract

3.8 Acknowledgments

3.9 Table of contents (please see sample, Annexure IV)

3.10 List of Symbols

3.11 List of Figures and Tables

3.12 List of Appendices

3.13 Abstract must be written on a separate page which should provide a concise summary of the thesis in maximum 300 words.

3.14 The thesis body (Chapters)

3.15 A thorough reference list

3.16 List of Publications

3.17 Appendices (List of abbreviation, etc.) and other addendum, if any.

4. Language, Style and Format

4.1. Language

Thesis should be written in English.

4.2. Final Version

The final version of the thesis must be free from spelling, grammatical and other errors when submitted.

4.3. Scripts and Page Format

Paper and print quality are vitally important for successful microfilming and legibility. Normally, international A4, not less than 75 gsm white paper should be used for the thesis which should be printed on single side of the paper. Exceptionally, paper other than international A4 size may be used when the nature of the thesis requires it.

- 4.4. A Times New Roman font, size 12-point, 10 to 12 characters per inch must be used with 1.5 line spacing.
- 4.5. Top and bottom margins should be 25 mm, right margin should be 20 mm and Left Margin should be 35 mm for both textual and non-textual (figures, tables, etc.) pages. Header footer should be 10 mm each. Exceptionally, margins of a different size may be used when the nature of the thesis requires it.
- 4.6. Figures and Illustrations: Figures, tables, etc., should be positioned according to the scientific publication conventions of the discipline.

4.7. Pagination:

Beginning with the first page of chapter 1 (Introduction) of the thesis, all pages shall be numbered consecutively using Arabic numerals in 12 point fonts. Page numbers of all the pages where a chapter begins shall appear at the center of the footer. Page numbers of all the pages, starting from the title page to the page before the chapter 1 starting page, shall be lower case Roman numerals (e.g. i, ii, iii etc.), placed at the center of footer. However, the page number on the title page shall not be printed.

4.8. Paragraph Format:

The paragraph of each section and subsection shall start without any indentation. A vertical space of around 12 points should be left between the section title line and the first paragraph of each section and subsections. All the paragraphs in the thesis shall be in single column format with full justification. A paragraph should normally comprise more than one line. A single line paragraph shall not be placed at the top or bottom of a page.

4.9. Chapter(s):

A chapter always begins on a fresh page. The capitalized word “CHAPTER” with a font size of 20 should begin with an additional top margin of 30 mm (total 55 mm) followed by chapter no. with center aligned. Next, place the chapter heading with 20 font size and leaving around 18 points vertical spaces and center justified. Leave around 36 points vertical space after chapter heading. In the chapter heading, capitalize the first letter all the words. Use boldface letters and numbers only.

4.10. Sections and Subsections:

A chapter is usually needed to be divided into sections, subsections, etc. So as to present concepts with different aspects separately. As mentioned above, a vertical space of around 36 point should be left between the chapter heading and the title of the first section of every chapter. For all subsequent sections/subsections, leave a vertical space of around 24 points before the section/subsection headings. A vertical

space of around 12 points should always be left between the first line and the title of every section/subsection. Sections and subsections shall be numbered chapter wise and consecutively. For example, say the first and second sections in chapter 5 shall be numbered as 5.1 and 5.2, respectively. Likewise, the third subsections of sections 1 and 2 in a chapter 4 shall be numbered as 4.1.3 and 4.2.3, respectively. Same style as in chapter heading but with font size of 14 and 12 for section and subsections, respectively, shall be followed for their titles, with a gap of around six characters between their numbers. Use boldface letters and numbers and the entire writable horizontal space to write their numbers and titles. Sub-subsection of a subsection should not be numbered. The title of such topic should all be boldface capitalized letter followed by a colon (:) the content of the same should start after the colon leaving a single character. Leave a space of around 12 points before a sub-subsection. Further division of topics is not recommended.

4.11. Tables, figures, and Equations:

- All tables and figures should be printed on the same papers used to print the text.
- As far as possible, tables and figures are presented in portrait style.
- All tables, figures, and equations must be numbered sequentially and chapter-wise using Arabic numerals. It must reflect the chapter number also, e.g. 2.1, 6.25 etc. Use boldface letters and numbers (separated by a single space) to number a figure and table, e.g., Figure 2.1, Table 3.2. While a caption (figure number) should be placed below the figure, a caption (table number) should be placed above the table. A figure/table should be separated from its number by 1.5 lines. Equations shall form a separate line, having 6 points paragraph separation above and below, with equation numbers within parenthesis and flushed to the right.
- When a figure or table is referred to in the body of the text, the first letter of the word needs to be capitalized with appropriate abbreviations as, for instance, Table 2.17 and Fig. 3.24.
- When an equation is referred to in the text and appears as the first word of the sentence, it needs to be capitalized without any abbreviation as, for instance, Equation (2.5). In all other cases of referring an equation, simply write the equation number in parenthesis as, for example, (2.5).
- All figures and tables shall be appropriately captioned using sentence style format and immediately below the corresponding numbers with an additional space of 6 points in between. If more than one line is needed for the caption they should be separated with single line spacing. A caption needs to be justified with the table/figure borders.

- Font sizes of legends, axis labels etc. of figures should be sufficiently large so that even after compression of the figure, they are legible enough (having same sizes as in the general text).
- Short (less than around half of the writable page area) figures and tables should be presented immediately following their first mention in the text and preferably on the upper portion (before the text) of the following page or bottom portion of the same page, but separated by single lines spacing from the text. If they are placed in between then they should be separated by single lines spacing from both above and below. On the other hand, large figures and tables should be presented on page(s) following their first mention in the text.
- Images, Photographs, etc. must be scanned in resolution at least 600 dpi.

4.12. References

All references must be cited in the text by the reference number using superscripts. No links between superscripts in the text and actual references in the Reference Sections may be used. Notes may be used to cite manuscripts in preparation, Unpublished observations and personal communications. References cited should follow the style given below example:

PAPERS

1. Thiel WJ and Nguyen LT, “Fluidized bed film coating of an ordered powder mixture to produce micro encapsulated ordered units.” *J. Pharm. Pharmacol.* **1984**, *36*, 145-152.
2. Isyumov N, “Criteria for acceptance of wind induced motions of tall buildings”, International Conference on Tall buildings, Rio De Janeiro, CTBUH, 2003.

WEB SITE

1. Boggs, D, “Acceleration and Drift due to Gust forces”, accessed on 10 July 2009, www.cppwind.com/papers/structural/PEAKvsRMS.pdf

BOOKS

1. Pelzar MJ., Chan ECS., and Krieg NR. In *Microbiology*; 5th Edn; Tata McGraw Hill Publishing Company Limited, New Delhi, 1993, pp 536.

DISSERTATIONS

1. Vaishnav D.K, PhD Thesis, “.....” Gujarat Technological University, July 2012.
2. Pathak VK. Ph.D. Thesis, “.....”,Gujarat University, 1979.

PATENTS

1. Trevor M, Aggelos N and Helmut S. Process for the preparation of aceclofenac. European Patents EP 1082290 A1, 1999.

Authors are responsible for obtaining written approval for all personal communications and sending a copy of the manuscript to those cited as authors of personal communications.

5. Review Cards

- 5.1. Photo copy of all review comment cards of all the previous reviews viz. Dissertation Phase I, Mid Sem. along with Remedial of review (if applicable) should be submitted along with the thesis. Thesis will not be accepted without Photo Copy of all Review Comment Cards. Review comment cards should be attached as appendices after references. After review comment cards, student has to put compliance report of all such comments.

6. Thesis Submission

- a) For examination purpose, required number of copies (student, guide, co-guide/external guide if any, institute library and GTU library) of the bound thesis are to be submitted to the Institution Head / University with soft copy (CD/DVD) in pdf mode at last page of thesis. Write enrollment no., branch code & name on submitted CD/DVD.
- b) **Student has to come with thesis which must be submitted to examiner on day of exam. After completion of exam, student has to collect that thesis duly signed by examiners.**
- c) Institute has to submit branch wise one CD/DVD comprising softcopy of thesis of students (in .pdf format) in separate folders, wherein they have to give enrolment number followed by name of students as folder name.

For example: 122050909000_Patel Akash. Different sections of thesis of respective

student should be included under his/her respective folder only.

- d) For each branch, separate CD/DVD along with appropriate labeling on the CD/DVD cover is required.

7. Anti-plagiarism Check

- 7.1. The student has to check his/her dissertation thesis for plagiarism, which indicates % similarity of the languages used during drafting, using Turnitin software.
- 7.2. GTU has provided the Id & Password to each institute for Turnitin software.
- 7.3. On the first page of report, % similarity is mentioned with other published literatures. Preferably it should be $\leq 30\%$. **If the similarity is $> 30\%$ then the thesis will not be accepted by university.**
- 7.3. Students have to take a print out of 1st page of Turnitin report, detailed Turnitin report and it is required to be signed by respective guide.
- 7.5. As per UGC Guidelines, all dissertation should be made available on University website. Later on if university receives any complaint regarding plagiarism, respective student and his/her Guide should be liable for all consequences if occurred. As per the UGC norms, University can revoke M.E. degree conferred to such students.

8. Mark Evaluation for DP-II:

It is mandatory for Master of Engineering (M. E.) Students to submit/publish minimum one technical paper of his/her dissertation (research) work in UGC approved journal before appearing for the DP-2 (final presentation).

Student will not be eligible for DP-2 if paper not submitted / published in any UGC approved journal.

Students will be evaluated on the following bases:

DP-2 is of 100 Marks which are divided in to three components:

- 1) Thesis/DP2, 70% weightage
- 2) Research Paper, 15% weightage
- 3) Publication 15% weightage.

- **Marks will be given by the examiner as per below structure and condition.**

- 8.1 **Thesis/DP2:** 70 marks will be given to the student on the basis of student's research work presentation, will be given by examiner at the time of DP-II examination.
- 8.2 **Research Paper:** There are three criteria for Research Paper:
 - 8.2.1 If the paper is published or accepted for publication, the student will get full 15 marks for paper.
 - 8.2.2 If the paper is only submitted in UGC approved journal, then Examiner will evaluate paper and will give marks out of 15.
 - 8.2.3 If the paper is accepted by UGC approved journal, but not published then student have to provide proof for submission of paper for example: mail copy of acceptance of paper / acknowledgement slip of paper acceptance.
- 8.3 **Publication:** There are two criteria for Publication:
 - 8.3.1 If the paper is published in UGC approved journal, then full marks will be given by examiner to the student for paper publication.
 - 8.3.2 No marks will be given to the students whose paper is neither published nor accepted for publication.

ANNEXURE - I

[SAMPLE TITLE PAGE]

[Thesis Title]

(5 blank lines)

By

(single line)

[Your name as found in official GTU records and in next line your enrollment number]

(two lines)

[Guide name (with qualification and designation)]

(3 blank lines)

A Thesis Submitted to

Gujarat Technological University in Partial Fulfillment of the Requirements for
the Master of Engineering Degree in [Name of Program]

(3 blank lines)

Month and Year

Institute Logo

Institute name and Address

ANNEXURE – II

[SAMPLE THESIS CERTIFICATE PAGE]

CERTIFICATE

This is to certify that research work embodied in this dissertation titled “_____” was carried out by **(Student Name)** at **(Institute Name with college code)** for partial fulfillment of Master of Engineering degree in **(Branch Name)** to be awarded by Gujarat Technological University. This research work has been carried out under my guidance and supervision and it is up to my satisfaction.

[GTU Logo Watermark]

Date :

Place :

Signature and Name of Guide

Signature and Name of Principal

Seal of Institute

(If the work is carried out in industry then a certificate from industry shall also be attached.)

COMPLIANCE CERTIFICATE

This is to certify that research work embodied in this dissertation titled “_____” was carried out by **(Student Name with Enrollment no.)** at (Institute name & code) for partial fulfillment of Master of Engineering degree to be awarded by Gujarat Technological University. He/ She has complied to the comments given by the Dissertation phase – I as well as Mid Semester Thesis Reviewer to my satisfaction.

[GTU Logo Watermark]

Date :

Place :

Signature and Name of Student

(Student Enrollment No.)

Signature and Name of Guide

PAPER PUBLICATION CERTIFICATE

This is to certify that research work embodied in this dissertation titled “_____” was carried out by **(Student Name with Enrollment no.)** at **(Institute name & code)** for partial fulfillment of Master of Engineering degree to be awarded by Gujarat Technological University has published article **(Full Title)** for publication by the **(International/National Journal/Conference)** at **(Place)** during/on **(Duration/Date)**.

Date:

Place:

Candidate Name
(Enrollment No.)

Guide Name & Sign.

Signature/Stamp and Name of Principal
(Seal of the Institute)

THESIS APPROVAL CERTIFICATE

This is to certify that research work embodied in this dissertation titled “_____” was carried out by **(Student Name with Enrollment no.)** at (Institute name & code) is approved for the degree of Master of Engineering with specialization in (Branch Name) by Gujarat Technological University.

[GTU Logo Watermark]

Date :

Place :

Examiner's Sign and Name:

(_____)

(_____)

ANNEXURE - III

[UNDERTAKING ABOUT ORIGINALITY OF WORK]

We hereby certify that we are the sole authors of this thesis and that neither any part of this thesis nor the whole of the thesis has been submitted for a degree to any other University or Institution.

We certify that, to the best of our knowledge, the current thesis does not infringe upon anyone's copyright nor violate any proprietary rights and that any ideas, techniques, quotations or any other material from the work of other people included in our thesis, published or otherwise, are fully acknowledged in accordance with the standard referencing practices. Furthermore, to the extent that we have included copyrighted material that surpasses the boundary of fair dealing within the meaning of the Indian Copyright (Amendment) Act 2012, we certify that we have obtained a written permission from the copyright owner(s) to include such material(s) in the current thesis and have included copies of such copyright clearances to our appendix.

We declare that this is a true copy of thesis, including any final revisions, as approved by thesis review committee.

We have checked write up of the present thesis using anti-plagiarism database and it is in allowable limit. Even though later on in case of any complaint pertaining of plagiarism, we are sole responsible for the same and we understand that as per UGC norms, University can even revoke Master of Engineering degree conferred to the student submitting this thesis.

[GTU Logo Watermark]

Date :

Signature of Student : _____

Signature of Guide : _____

Name of Student : _____

Name of Guide : _____

Enrollment No : _____

Institute Code : _____

ANNEXURE – IV

[SAMPLE CONTENTS PAGE]

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