

# **GUIDELINES FOR THE PREPARATION OF M.Tech. DISSERTATION REPORT**

## **Preamble**

While utmost attention must be paid to the content of the dissertation report, which is being submitted in partial fulfilment of the requirements of the M.Tech degree, it is imperative that a standard format be prescribed. The same format shall also be followed in preparation of the final soft copies to be submitted to the Library.

**Plagiarism:** The Dissertation report will be accepted only when the plagiarism is within 20%, which shall be submitted along with the Dissertation report.

## **1. ORGANIZATION OF THE DISSERTATION**

The Dissertation report shall be presented in a number of chapters, starting with Introduction and ending with Summary and Conclusions. Each of the other chapters will have a precise title reflecting the contents of the chapter. A chapter can be subdivided into sections, subsections and sub-subsection so as to present the content discretely and with due emphasis. When the work comprises two or more mutually independent investigations, the dissertation report may be divided into two or more parts, each with an appropriate title. However, the numbering of chapters will be continuous right through.

### **1.1 Introduction**

The title of Chapter 1 shall be Introduction. It shall justify and highlight the problem posed, define the topic and explain the aim and scope of the work presented in the Dissertation report. It may also highlight the significant contributions from the investigation.

### **1.2 Review of Literature**

This shall normally form Chapter 2 and shall present a critical appraisal of the previous work published in the literature pertaining to the topic of the investigation. The extent and emphasis of the chapter shall depend on the nature of the investigation.

### **1.3 Report on the present investigation**

The reporting on the investigation shall be presented in one or more chapters with appropriate chapter titles. Due importance shall be given to experimental setups, procedures adopted, techniques developed, methodologies developed and adopted. While important derivations/formulae should normally be presented in the text of these chapters, extensive and long treatments, copious details and tedious information, detailed results in tabular and graphical forms may be presented in Appendices. Representative data in table and figures may, however, be included in appropriate chapters. Figures and tables should be presented immediately following their first mention in the text. Short tables and figures (say, less than half the writing area of the page) should be presented within the text, while large table and figures may be presented on separate pages. Equations should form separate lines with appropriate paragraph separation above and below the equation line, with equation numbers flushed to the right.

### **1.4 Results and Discussion**

This shall form the penultimate chapter of the Dissertation report and shall include a thorough evaluation of the investigation carried out and bring out the contributions from the study. The discussion shall logically lead to inferences and conclusions as well as scope for possible further future work.

## **1.5 Summary and Conclusions**

This will be the final chapter of the Dissertation report. A brief report of the work carried out shall form the first part of the Chapter. Conclusions derived from the logical analysis presented in the Results and Discussions Chapter shall be presented and clearly enumerated, each point stated separately. Scope for future work should be stated lucidly in the last part of the chapter.

## **1.6 Appendix**

Detailed information, lengthy derivations, raw experimental observations etc. are to be presented in separate appendices, which shall be numbered in Roman Capitals (e.g. "Appendix IV"). Since reference can be drawn to published/unpublished literature in the appendices these should precede the "Literature Cited" section.

## **1.7 Literature Cited**

This should follow the Appendices, if any, otherwise the Summary and Conclusions chapter. The candidates shall follow the style of citation and style of listing in one of the standard journals in the subject area consistently throughout his/her report, for example, IEEE in the Department of Electrical Engineering, Materials Transactions in Department of Metallurgical Engineering and Materials Science. However, the names of all the authors along with their initials and the full title of the article/monogram/book etc. have to be given in addition to the journals/publishers, volume, number, pages(s) and year of publication. Citation from websites should include the names(s) of author(s) (including the initials), full title of the article, website reference and when last accessed. Reference to personal communications, similarly, shall include the author, title of the communication (if any) and date of receipt.

## **1.8 Publications by the candidate**

Articles, technical notes etc. on the topic of the dissertation report published by the candidate may be separately listed after the literature cited. This may also be included in the contents. The candidates may also include reprints of his/her publications after the literature citation.

## **1.9 Acknowledgements**

The acknowledgments by the candidate shall follow the citation of literature, signed by him/her, with date.

# **2. DISSERTATION REPORT FORMAT**

## **2.1 Paper**

**2.1.1 Quality:** The Dissertation report shall be printed / photo copied on white bond paper, whiteness 95% or above, weight 70 gram or more per square meter.

**2.1.2 Size:** The size of the paper shall be standard A4; height 297 mm, width 210mm.

**2.1.3 Type Setting, Text Processing and Printing:** The text shall be printed on both sides employing LaserJet or Inkjet printer, the text having been processed using a standard text processor. The standard font shall be Times New Roman of 12 pts with 1.5-linespacing.

**2.1.4 Page Format:** Printed Sheets shall have the following written area and margins:

Top Margin 15 mm;

Head Height 3 mm

Head Separation 12 mm

Bottom Margin 22 mm  
Footer 3 mm;  
Foot Separation 10 mm  
Text Height 245 mm  
Text Width 160 mm;  
When header is not used the top margin shall be 30 mm.  
Left Margin 30 mm  
Right Margin 20 mm  
Single sided

**2.1.5 Pagination:** Page numbering in the text of the report shall be Hindu Arabic numerals at the center of the footer. But when the candidate opts for header style the page number shall appear at the right and left top corner for the odd and even number pages, respectively. Page number “1” for the first page of the Introduction chapter shall not appear in print, only the second page will bear the number “2”. The subsequent chapters shall begin on a fresh page. When header style is chosen the first page of each chapter will not have the header and the page number shall be printed at the center of the footer. Pagination for pages before the Introduction chapter shall be in lower case Roman numerals, e.g., “iv”.

**2.1.6 Header:** When the header style is chosen, the header can have the Chapter number and Section number (e.g., Chapter 2, Section 3) on even numbered page headers and Chapter title or Section title on the odd numbered page header.

**2.1.7 Paragraph format:** Vertical space between paragraphs shall be about 2.5-line spacing. The first line of each paragraph should normally be indented by five characters or 12mm. A candidate may, however, choose not to indent if he/she has provided sufficient paragraph separation. A paragraph should normally comprise more than one line. A single line of a paragraph shall not be left at the top or bottom of a page (that is, no windows or orphans should be left). The word at the right end of the first line of a page or paragraph should, as far as possible, not be hyphenated.

## 2.2 Chapter and Section Format

**2.2.1 Chapter:** Each chapter shall begin on a fresh page with an additional top margin of about 75mm. Chapter number (in Hindu-Arabic) and title shall be printed at the center of the line in 6mm font size (18pt) in bold face using both upper and lower case (all capitals or small capitals shall not be used). A vertical gap of about 25mm shall be left between the Chapter number and Chapter title lines and between chapter title line and the first paragraph.

**2.2.2 Sections and Subsections:** A chapter can be divided into Sections, Subsections and Sub-sub Sections so as to present different concepts separately. Sections and subsections can be numbered using decimal points, e.g. 2.2 for the second section in Chapter 2 and 2.3.4 for the fourth Subsection in third Section of Chapter 2. Chapters, Sections and Subsections shall be included in the contents with page numbers flushed to the right. Further subsections need not be numbered or included in the contents. The Section and Sub-Section titles along with their numbers in 5 and 4mm (16 and 14 pt) fonts, respectively, in bold face shall be flushed to the left (not centered) with 15 mm space above and below these lines.

In further subdivisions character size of 3 and 3.5 with bold face, small caps, all caps and italics may be used for the titles flushed left or centered. These shall not feature in the contents.

**2.2.3 Table / Figure Format:** As far as possible, tables and figures should be presented in portrait style. Small size table and figures (less than half of writing area of a page) should be incorporated within the text, while larger ones may be presented on separate pages. Table and figures shall be numbered chapter-wise.

For example, the fourth figure in chapter 5 will bear the number Figure 5.4 or Fig 5.4 Table number and title will be placed above the table while the figure number and caption will be located below the figure. Reference for Table and Figures reproduced from elsewhere shall be cited in the last and separate line in the table and figure caption, e.g. (after McGregor [12]).

### 3 AUXILIARY FORMAT

**3.1 Binding:** The evaluation copies of the Dissertation report may be spiral bound or soft bound. The final hard bound copies need to be submitted after the viva-voce examination with the following color specification:

**M.Tech. Dissertation work      Grey**

**3.2 Front Covers:** The front covers shall contain the following details:

Full title of report in 6 mm 22 point's size font properly centered and positioned at the top. Full name of the candidate(s) in 4.5 mm 15 point's size font properly centered at the middle of the page. A 40 mm diameter replica of the Institute emblem followed by the name of department, name of the Institute and the year of submission, each in a separate line and properly centered and located at the bottom of page.

**3.2.1 Lettering:** All lettering shall be embossed in gold.

**3.2.2 Bound back:** The degree, the name of the candidate and the year of submission shall also be embossed on the bound (side) in gold.

**3.3 Blank Sheets:** In addition to the white sheets (binding requirement) two white sheets shall be put at the beginning and the end of the report.

**3.4 Title Sheet:** This shall be the first printed page of the Dissertation report and shall contain the submission statement: the Dissertation Report submitted in partial fulfilment of the requirements of the B.Tech Degree, the name and Roll No. of the candidate, name(s) of the Supervisor and Co-supervisor(s) (if any), Department, Institute and year of submission. Sample copy of the 'Title Sheet' is appended (Specimen 'A').

**3.5 Dedication Sheet:** If the candidate so desires(s), he/she may dedicate his/her report, which statement shall follow the title page. If included, this shall form the page 1 of the auxiliary sheets but shall not have a page number.

**3.6 Approval Sheet:** In the absence of a dedication sheet this will form the first page and, in that case, shall not have a page number. Otherwise, this will bear the number two in Roman lower case "ii" at the center of the footer. The top line shall be:

Dissertation approval for M.Tech.

A sample copy of the Approval Sheet is appended (Specimen 'B')

**3.7 Abstract:** The 500-word abstract shall highlight the important features of the Dissertation report and shall correspond to the electronic version to be submitted to the Library for inclusion in the website.

**3.8 Contents:** The contents shall follow the Abstract and shall enlist the titles of the chapters, section and subsection using decimal notation, as in the text, with corresponding page number against them, flushed to the right.

**3.8.1 List of Figures and Tables:** Two separate lists of Figure captions and Table titles along with their numbers and corresponding page numbers against them shall follow the Contents.

**3.9 Abbreviation Notation and Nomenclature:** A complete and comprehensive list of all abbreviations, notations and nomenclature including Greek alphabets with subscripts and superscripts shall be provided after the list of tables and figures. As far as possible, generally accepted symbols and notation should be used.

Auxiliary page from dedication (if any) to abbreviations shall be numbered using Roman numerals in lower case, while the text starting from the Introduction shall be in Hindu Arabic.

The first pages in the both the cases shall not bear a page number.

**3.10A Declaration of Academic Honesty and Integrity:** A declaration of Academic honesty and integrity is required to be included along with every Dissertation report after the approval sheet. The format of this declaration is given in Specimen 'C' attached.

**Specimen 'A': Title Sheet (Title)**

Submitted in partial fulfilment of the requirements of the degree of  
(Master of Technology) by  
(Name of the Student) (Roll No.\_\_\_\_\_)

Supervisor (s):

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(Name of the Department)

NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

(Year)

**Specimen 'B': Approval Sheet**

This Dissertation Work entitled (Title) by (Author Name) is approved for  
the degree of (Degree details).

Examiners

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Supervisor (s)

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Chairman (Program Coordinator)

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Date\_\_\_\_\_

Place:\_\_\_\_\_

### **Specimen 'C' – Declaration**

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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(Signature of the student)

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(Name of the student)

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(Roll No.)

Date: \_\_\_\_\_

### **Specimen 'D' – Certificate**

This is to certify that the Dissertation work entitled "*name of the Dissertation work*" is a bonafide record of work carried out by "*Mr/Ms name of the student with Roll No.*", submitted to the faculty of "*name of the department*", in partial fulfilment of the requirements for the award of the degree of Bachelor of Technology in "*name of the program*" at National Institute of Technology, Warangal during the academic year -----.

Name and signature of the Supervisor  
Designation  
Department of  
NIT Warangal