

GUIDELINES FOR B.TECH PROJECT REPORT PREPARATION



INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, NAGPUR
BSNL ,RTTC, Near TV tower, beside Balaji Temple, Seminary Hills,
Nagpur-440006. Website: www.iiitn.ac.in

Guidelines for preparation of B.Tech. Project Report

Prelude

This document presents the basic guidelines on how a B.Tech project report should be constructed. Every student must follow the rules and guidelines that have been laid out in the following sections while writing their final report. Every student must also submit both soft and hard copy of their project report in the institute library for future reference.

1. Organization of the Thesis/ Dissertation/ Report

This project report must be presented in a number of chapters. The first chapter should start with an Introduction and last chapter must be on Summary and Conclusions. Each of the other chapters will have a precise title reflecting the contents of that chapter. In order to present the content discretely and with due emphasis, each chapter can be subdivided into *sections, subsections and sub subsection*. The numbering of chapters will be continuous right through.

1.1 Introduction

The title of Chapter 1 shall be “*Introduction*” and it should contain a brief statement of the problem investigated and scope of the work predicted. It shall justify and highlight the problem proposed, define the topic and explain the aim and scope of the work presented in the project report. It may also highlight the significant contributions from the investigation and the importance of the investigation. At last, it shall include the “Organization of the Thesis” (short summary regarding each chapter included in project report). Only Arabic Numerals shall be used. Chapter numbering shall be centered on the top of the page using large bold print (all in capitals, Times New Roman, bold, 16pt & center text).

1.2 Literature Review

This shall normally be Chapter 2 of the report and shall present a significant review of the previous work published in the literature pertaining to the topic of the investigation. The coverage of the chapter shall depend on the nature of the investigation.

For example, several researchers attempted to develop dual band antenna which would reduce the implementation size, cost and complexity. Different techniques have been also reported for designing low cost, small profile, and efficient dual-band antennas, like dual-frequency operation by means of two narrow slots close to the patch radiating edges which were investigated by S. Maci, B. B. Gentili, P. Piazzesi (1997) and dual band operation, each with a combination of a slot and a parasitic wire technique investigated by T. Morioka, S. Araki, and K. Hirasawa (1997) . These approaches are for fixed dual band operation and do not allow for electronic tuning.

The work which is expected to be carried out in the light of above review should be the end paragraph of this chapter.

1.3 Work done :(Report on the present investigation)

The work carried out shall be presented in one or more chapters depending on the nature of the investigation. Consequence shall be given to procedures adopted, techniques developed, methodologies developed and adopted, and experimental setups.

- Each chapter should have suitable title.
- Each chapter must have several sections and subsections with suitable sub-titles.
- All chapters shall be presented with important and short derivations and representative data in the tables and figures. Information such as lengthy derivations, voluminous tables and large numbers of figures shall be presented in the appendix.

- All figures shall be drawn by drafting software. Free hand text will not be permitted.
- Xerox of figures, graphs, tables and photographs from any reference is not permitted.
- All figures, tables and graphs shall be titled properly. Title of table with table number should appear at the top whereas for figures and graphs, it should appear at the bottom with figure/graph number.
- Mathematical portion should preferably be typed, however, wherever it is not possible, plenty space shall be left for equations and symbols that shall be inserted in permanent black ink.

1.4 Results and Discussions

This chapter shall include a methodical evaluation of the investigation carried out and divulge the contributions from the study. The discussion shall logically lead to inferences and conclusions as well as scope for possible future work.

1.5 Summary and conclusions

This will be the final chapter of the project report. A brief report of the work carried out shall form the initial part of the Chapter. Conclusions derived from the logical analysis presented in the Results and Discussions shall be followed. Finally, the scope for future work should be stated clearly in the last part of the chapter. The chapter shall be presented and enumerated clearly with each point stated separately.

1.6 Appendix

The detailed information, lengthy derivations, raw experimental observations, etc. are to be presented in the separate appendices, which shall be numbered in Roman Capitals (e.g. “Appendix III”). Since references can be drawn to published/unpublished literature in the appendices, these should come first in “Literature Cited” section.

1.7 References

The list of references shall appear as a consolidated list with references listed sequentially as they appear in the text of the thesis. Follow all the instructions given below while preparing the references.

- Number all the references.
- Use a chronological bibliography.
- Each listed reference in the bibliography must be cited in the text of the report.

For a book, give the name(s) of author(s), title of book, edition, chapter number, and page numbers, publisher, location and year of publication.

Example:

[25] Constantine A. Balanis, *Antenna Theory Analysis and Design*, 3rdEd., Ch. 6, pp. 318-22, A. JOHN WILEY and SONS, Canada, 2005.

For a journal/conference paper, give the name(s) of authors, title of paper, name of journal/ conference, volume and issue number (for journal), page numbers, and month and year of publication.

Example:

[2] Fan, M., R. Hu, Z. H. Feng, X. X. Zhang, and Q. Hao, “Advance in 2D-EBG structures research,” *The Journal of Infrared and Millimeter Waves*, Vol. 22, No. 2, 2003.

For a World Wide Web page, give the author or company's name and the URL.

Example:

[3] Ghosh, P. (2019, April 10). First ever black hole image released. BBC News. <https://www.bbc.com/news/science-environment-47873592>. Last accessed 21st Apr 2019:

Sample References

[1] Tirado-Mendez, J. A., M. A. Peyrot-Solis, H. Jardon-Aguilar, E. A. Andrade-Gonzalez, and M. Reyes-Ayala, "Applications of novel defected microstrip structure (DMS) in planar passive circuits," Proceedings of the 10th WSEAS International Conference on CIRCUITS, 336–369, Vouliagmeni, Athens, Greece, Jul. 10–12, 2006.

[2] Naima A. Touhami¹, Mohamed Aghoutane, Safae El Amrani, Antonio Tazon, and Mohamed Boussouis Hanae Elftouh, "Miniaturized Microstrip Patch Antenna with Defected Ground Structure," Progress In Electromagnetics Research C, Vol. 55, 25–33, 2014

[3] Zulkifli, F. Y., E. T. Rahardjo, and D. Hartanto, "Mutual coupling reduction using dumb bell defected ground structure for multiband microstrip antenna array," Progress In Electromagnetics Research Letters, Vol. 13, 29–40, 2010.

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1.8 Publications by the candidate

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

1.9 Acknowledgments

The acknowledgments shall indicate the extent to which the assistance has been received from the various sources by the candidate in his/her work.

2. Statement of Thesis Preparation

1. Thesis title
2. Degree for which the thesis is submitted
3. Thesis guidelines were referred to for preparing the thesis.
4. Specifications regarding thesis format have been closely followed.
5. The contents of the thesis have been organized based on the guidelines.
6. The thesis has been prepared without resorting to plagiarism.
7. All sources used have been cited appropriately.
8. The thesis has not been submitted elsewhere for a degree.

3. GUIDELINES FOR CONSTITUTION CONTENTS OF THESIS

3.1 Sequence of Contents: The thesis material should be arranged and bound in a sequence given as follow:

1. Cover page (Specimen-A)
2. Inside cover page (same as cover page)
3. Declaration-I (Specimen-B)
4. Declaration-II (Specimen-C)
5. Thesis certificate (Specimen- D)
6. Acknowledgments
7. Abstract
8. Table of Contents
9. List of Figures
10. List of Tables
11. List of Symbols, Abbreviations or Nomenclature
12. Chapters
13. References
14. Appendices
15. List of Publications
16. Photocopy of published papers
17. Facsimile of certificate from industry in case of industry-based project.
18. Photocopy of award winning certificates for technical competitions, if any.

4. PROJECT REPORT FORMAT

4.1 Paper

The project report shall be printed on white bond paper, whiteness 95% or above.

4.2 Paper Size

The size of the paper shall be standard A4.

4.3 Font size

The standard font shall be Times New Roman of 12 pts. with 1.5 line spacing.

4.4 Text Processing and Printing

The text shall be printed employing LaserJet or Inkjet printer, the text having been processed using a standard text processor.

4.5 Page Format

The Printed Sheets shall have the following written area and margins:

Margins: Top 1, Bottom 1.25, Left 1.5, Right 0.8 (all measurements in inches).

4.6 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 she/he has provided sufficient paragraph separation.

4.7 Chapter and Section Format

4.7.1 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 with 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 also between chapter title line and the first paragraph.

4.7.2 Sections and Subsections

A chapter can be divided into Sections, Subsections and Sub subsections 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.

4.7.3 Table / Figure Format

Tables and figures shall be numbered chapter wise. For example, the fourth figure in chapter 6 will bear the number Figure 6.4. Table number and title will be placed above the table, while the figure number and caption will be located below the figure. Reference for Tables and Figures reproduced from elsewhere shall be cited in the last and separate line in the table and figure caption.

5 Bound Volume Instructions:

5.1 Binding

The evaluation copies of the project report may be spiral bound or soft bound. The final hard bound copies to be submitted after the examination/evaluation will be accepted during the submission of project report.

Binding: Perfect binding Cover: black color.

All lettering: shall be embossed in gold

No. of Copies = No. of Students + No. of Supervisors+ 1 (Dept. Copy) +1(Central Library Copy)

Printing of cover: As per format below

<p style="text-align: center;">Back <i>(Photo of IIT icon building)</i></p>	<p style="text-align: center;">B Tech</p> <p style="text-align: center;">Dept Code ,</p> <p style="text-align: center;">Year</p>	<p style="text-align: center;">Main <i>(Same as cover page without copy right)</i></p>
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Blank Sheets: In addition to the white sheets (binding requirement), two white sheets shall be put at the beginning and the end of the project report.

■ **Title Sheet [Cover page (Specimen-A)]**

This shall be the first printed page of the project report and shall contain the submission statement: The Project Report submitted in partial fulfillment of the requirements of the B.Tech Degree, Name and Enrollment No. of the candidate, name of the Supervisor, Department, Institute and year of submission. Sample copy of the 'Title Sheet' is appended (Specimen 'A').

■ **Declaration-I (Specimen- B)**

This shall be the second printed page of the project report and shall contain the project work titled and Department name with name and Enrollment No. of the candidate with the statement that the work carried out is original and has not been submitted earlier whole or in part for the award of any degree. Sample copy of the “Declaration-I” is appended (Specimen 'B').

■ **Declaration-II (Specimen- C)**

This shall be the third printed page of the project report and shall contain the Name and Enrollment No. of the candidate with the statement that no portion of his/her work can be considered as plagiarism and he/she will take full responsibility if such complaint occurs. Sample copy of the “Declaration-II” is appended (Specimen 'C').

■ **Thesis certificate (Specimen- D)**

This shall be the fourth printed page of the project report and shall contain the project work titled and Department name with name and Enrollment No. of the candidate, name of the Supervisor, Department and name of Head of the department. Sample copy of the “Thesis Certificate” is appended (Specimen 'D')

■ Abstract

The abstract should not exceed 700 words, should be double-spaced, and should adhere to the same style manual as the thesis manuscript. In abstract, mention the background of the topic and its importance. It shall consist of investigations, problem to be solved, various methodologies, and implications of discoveries. The abstract should provide to the point descriptive account of the thesis.

■ Table of Contents

The Table of 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.

■ List of Figures

Separate lists of Figure captions along with their numbers and corresponding page numbers against them shall follow the Table of Contents.

■ List of Tables

Separate lists of Table titles along with their numbers and corresponding page numbers against them shall follow the List of Figures.

■ List of Symbols, Abbreviations or 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.

Specimen 'A'

Title

(Times New Roman 18)

*Project report submitted to
Indian Institute of Information Technology, Nagpur, in
partial fulfillment of the requirements for the award of
the degree of*

(Times New Roman 12 Italic bold)

Bachelor of Technology In Department of Electronics and Communication Engineering

(Times New Roman 18 bold)

by

Author 1 (Enroll. No.) (OR)

Author 1 (Enroll. No.)

Author 2 (Enroll. No.) (OR)

Author 1 (Enroll.No.) Author 2 (Enroll.No.) Author 3 (Enroll. No.)

(Times new Roman 16 bold)

Under the guidance of

Name of the Supervisor

(Times New Roman 16 bold)



**Department of Electronics and
Communication Engineering
Indian Institute of Information Technology,
Nagpur 440 006(India)**

(Times New Roman 16)

Year

(Times New Roman 16 bold)

© Indian Institute of Information Technology, Nagpur (IIIT) 2020 (Times New Roman 10)

Specimen- B



Department of _____(Times New Roman 16)
Indian Institute of Information Technology, Nagpur
(Times New Roman 14)

Declaration

I/We, _____, hereby declare that this project work titled
“ _____ ” is carried out by me/us
in the Department of _____ Engineering of Indian Institute of
Information Technology, Nagpur. The work is original and has not been submitted earlier
whole or in part for the award of any degree/diploma at this or any other Institution
/University.

Date:

Sr.No. Enrollment No. Names Signature

Specimen- C

Declaration

I / We, _____, Enrollment No (_____), understand that plagiarism is defined as any one or the combination of the following:

1. Uncredited verbatim copying of individual sentences, paragraphs or illustrations (such as graphs, diagrams, etc.) from any source, published or unpublished, including the internet.
2. Uncredited improper paraphrasing of pages or paragraphs (changing a few words or phrases, or rearranging the original sentence order).
3. Credited verbatim copying of a major portion of a paper (or thesis chapter) without clear delineation of who did or wrote what. (Source: IEEE, the institute, Dec.2004) I have made sure that all the ideas, expressions, graphs, diagrams, etc. that are not a result of my own work, are properly credited. Long phrases or sentences that had to be used verbatim from published literature have been clearly identified using quotation marks.

I affirm that no portion of my work can be considered as plagiarism and I take full responsibility if such complaint occurs. I understand fully well the guide of the thesis may not be in a position to check for possibility of such incidences of plagiarism in this body of work.

Date:

Sr.No. Names Signature

**Dept.Name
IIIT , NAGPUR**

Specimen- D

Certificate

This is to certify that the project titled “_____”, submitted by **Name of the students** in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology in _____**, IIT Nagpur. The work is comprehensive, complete and fit for final evaluation.

Date:

Name of the Supervisor
Designation, Dept, IIT, Nagpur

Name of the Head
Designation, Dept, IIT, Nagpur

Instructions for Project Report writing

Sequence of papers–

Part A

- | | | |
|---|--------------------|-------------------|
| 1 | Cover page | Without copyright |
| 2 | Inner first page | With copyright |
| 3 | Declaration –I | |
| 4 | Declaration –II | |
| 5 | Thesis Certificate | |
| 6 | Acknowledgement | |

Note - Cover page & Inner page will be same except inner page will have copyright instruction

Part B

- | | | | | | |
|----|------------------------------------------------|---|---|---|------------------------|
| 7 | Abstract (one page only)- | - | - | - | Roman page nos.(start) |
| 8 | Table of Contents | | | | |
| 9 | List of Figures | | | | |
| 10 | List of Tables | | | | |
| 11 | List of Symbols, Abbreviations or Nomenclature | | | | |

Part C

- | | | |
|----|----------------------------------------------------------------------------|----------------------------------------------------------------------|
| 12 | Chapters | Numerals/page no. from 2 nd page onwards of every chapter |
| 13 | References | |
| 14 | Appendices | |
| 15 | List of Publications | |
| 16 | Photocopy of published papers | |
| 17 | Facsimile of certificate from industry in case of industry-based project. | |
| 18 | Photocopy of award winning certificates for technical competitions if any. | |