
GUIDELINES FOR B.TECH PROJECT REPORT PREPARATION



DEPARTMENT OF MECHANICAL ENGINEERING

INDIAN INSTITUTE OF TECHNOLOGY

GUWAHATI

Guidelines for preparation of Project Reports

Preamble

The aim of this document is to present the basic guidelines on how a report should be constructed for B.Tech project. Any student must confer to the rules and guidelines that have been laid out in the following sections while writing their final report. It must also be kept in mind that the soft copy of the report that any student prepares will also have to be submitted in the institute library for future reference.

1. Organization of the Project Report

This project 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 project 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 project 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 Discussions

This shall form the penultimate chapter of the project 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 project 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 the separate appendices, which shall be numbered in Roman Capitals (e.g. “Appendix IV”).

1.7 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] Jones, C.D., A.B. Smith, and E.F. Roberts, *Efficient Real-Time Fine-Grained Concurrency*, 2nd Ed., Ch. 3, pp. 145-7, Tata McGraw-Hill, New Delhi, 1994.

- 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:

[23] Prasad, A.B., Kumar, C.D., Jones, E.F., and Frost, P.: “Cable Television Broadband Architectures”, *IEEE Comm. Magazine*, vol. 39, pp. 134-141, June 1991.

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

Sample References

1. **Abraham, J., F.V. Bracco, and R.D. Reitz (1985)** Comparison of Omputed and Measured Premixed Charge Engine Combustion. *Combustion and Flame, Vol. 60*, 309 – 322.
2. **Affes, H., N. Trigui., D. Smith, and V. Griaznov (1998)** Shape Optimization of IC Engine Ports and Chambers. *SAE Paper No. 980127*.
3. **Anderson, J.D. (1995)** *Computational Fluid Dynamics*. McGraw Hill, Singapore 1995.
4. **Arcoumanis, C., A.F. Bicen, and J.H. Whitelaw (1993)** Measurments in a Motored Four Stroke Reciprocating Model Engine. *Journal of Fluids Engineering, Vol. 104*.
5. **Arcoumanis, C., J.H. Whitelaw, W. Hentschel, K.P. Schindler (1994)** Flow and Combustion in a Transparent 1.9 Litre Direct Injection Diesel Engine. *Proc. Instn. Mech. Engrs., Vol. 208*.
6. **Arcoumanis, C., Z. Hu, and J.H. Whitelaw (1993)** Steady Flow Characterization of Tumble-Generating Four – Valve Cylinder Heads. *Proc.Instn. Mech. Engrs. Vol 207*.

1.7 Acknowledgements

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

Statement of Thesis Preparation

1. Thesis title
2. Degree for which the thesis is submitted
- 3 Thesis Guide was 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.

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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.

2 PROJECT REPORT FORMAT

2.1 Paper

2.1.1 Quality

The project report shall be printed 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 A 4; height 297 mm, width 210 mm.

2.1.3 Type Setting, Text Processing and Printing

The text shall be printed 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 line spacing.

2.1.4 Page Format

The 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 and Right Margins

The candidates shall have the options of single or double sided printing

- Single sided/odd number page (in double sided printing)

Left Margin 30mm

Right Margin 20 mm

- Double sided/ even numbered page

Left Margin 20mm

Right Margin 30mm

2.1.5 Pagination

Page numbering in the text of the project 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 (fresh odd number page in case of double sided printing). 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., “ii”.

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 (s) he 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 (odd number page in case of double sided printing) 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 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. 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

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.

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

3.2 Front Covers

The front covers shall contain the following details:

- Full title of project report in 6 mm 22 point's size font properly centered and positioned at the top.
- Full name of the candidate in 4.5 mm 15 point's size font properly centered at the middle of the page.

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- A 40 mm dia 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 project report

3.4 Title Sheet

This shall be the first printed page of the project report and shall contain the submission statement: the Project Report submitted in partial fulfilment of the requirements of the Degree B. Tech, the name and Roll No. of the candidate, name of the Supervisor, 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 may dedicate his/her project 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 centre of the footer.

The top line shall be:

Report Approval for B. Tech Projects

The Approval Sheets are to be included only in the hard bound copies which are submitted after the successful viva voce examination.

A sample copy of the Approval Sheet is appended (**Specimen `D'**)

3.7 Abstract

The 500 word abstract shall highlight the important features of the project report and shall correspond to the electronic version to be submitted to the Library for inclusion in the website. The Abstract in the project report, however, shall have two more parts, namely, the layout of the project report giving a brief chapter wise description of the work and the key words.

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).

3.10 A Declaration of Academic Honesty and Integrity

A declaration of Academic honesty and integrity is required to be included along with every project report after the approval sheet. The format of this declaration is given in **Specimen `C'** attached.

Specimen 'A': Title Sheet

(TITLE OF THE PROJECT)

*Project report submitted
in partial fulfillment of the requirement for the degree of*

Bachelor of Technology

By

**Name of the student
(Roll No.)**



**DEPARTMENT OF MECHANICAL ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI**

(Month and Year)

Specimen `B' CERTIFICATE

It is certified that the work contained in the project report titled “Title of the Project Report,” by “Name of the Student,” has been carried out under my/our supervision and that this work has not been submitted elsewhere for a degree

Signature of Supervisor(s)
Name(s)
Department(s)
I.I.T. GUWAHATI
Month, Year

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.

(Signature)

(Name of the student)

(Roll No.)

Date: _____

Specimen `D': Approval Sheet

This project report entitled (Title) by (Author Name) is approved for the degree of _____ (Degree details).

Examiners

Supervisor (s)

Chairman

Date : _____

Place: _____