

GUIDELINES FOR B. TECH PROJECTREPORT PREPARATION



DEPARTMENT OF CIVIL ENGINEERING

GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

HYDERABAD

INTRODUCTION

This document is intended to provide a set of specific and uniform guidelines to the B. Tech students in the preparation of the eighth semester project report. The content of the report, which is submitted to the Institute in partial fulfillment for the award of the degree of Bachelor of Technology, is very much important. It is also imperative that the report, to be acceptable by the Institute, should essentially meet a uniform format emphasizing readability, concordance with ethical standards and Institute-wide homogeneity.

REPORT LAYOUT

The thesis has to be organized in the following order:

1. Cover Page
2. Inside Title Page
3. Certificate signed by the Supervisor(s) (in the stipulated format)
4. Declaration signed by the Candidate (in the stipulated format)
5. Acknowledgements
6. Abstract
7. Table of Contents
8. List of Figures
9. List of Tables
10. Abbreviations/ Notations/ Nomenclature (if any)

11. Text of the Report

Chapter 1- Introduction

Introduction may be the first chapter or its first major division. In either case, it should contain a brief statement of the problem investigated. It should outline the scope, aim, general character of the research and the reasons for the student's interest in the problem.

Chapter 2 – Literature Review

Chapter 3 - Experimental Investigations

Chapter 4 – Test Results

Chapter 5 - Discussion of Test Results

Chapter 6- Conclusions – preferably not more than 2 pages

A further and final sub-division titled “*Scope* for Further Work” may follow.

12. References
13. Appendices (if any)
14. Non-paper material (if any)

GENERAL GUIDELINES

Preparation of Manuscript and Copies

The thesis needs to be prepared using a standard text processing software and must be printed in black text (color for images, if necessary) using a laser printer or letter quality printer in standard typeface (Times New Roman).

Thesis should be free from typographical errors.

Report Size

The maximum number of pages of the Report should be preferably between 50 -75 pages including references and appendices. It is suggested that the report be printed on one side of the paper.

Paper Size

Use A4 size paper (210 mm wide and 297 mm long). The thesis must be printed on only one side of white paper. All copies of thesis pages must be clear, sharp and even, with uniform size and uniformly spaced characters, lines and margins on every page of good quality white paper of 75 GSM or more.

Paper Quality

White bond paper should be used. Essentially the same quality of paper should be used throughout. Photographs or images with dense colors may be printed in single side on glossy paper.

Margins

The top, bottom and right side margins should be 25 mm, whereas the left side margin should be 35 mm for both textual and non-textual (e.g., figures, tables) pages. No print matter should appear in the margin except the page numbers. All page numbers should be centered inside the bottom margin, 20mm from the bottom edge of the paper.

Font

Times New Roman (TNR) 12 point font has to be used throughout the running text. The captions for tables and figures should have font size of 11 and foot notes should be set at font size 10.

Line Spacing

The line spacing in the main text should be 1.5. Single line spacing should be given for quotations, abstract, figure captions, table captions, figure legends, footnotes, and references. The equations, tables, figures, and quotations should be set off from the main text both before and after with spacing of 1.5. Two consecutive paragraphs should be separated by triple line spacing.

Headings

Following format has to be followed in heading of chapters and sections.

Sample:

CHAPTER 3

TITLE PAGE- CENTERED Times New Roman 17- POINT BOLD ALL CAPS

3.1 Section Heading

Left aligned with number, Times New Roman 17 points, bold and leading caps

3.1.1 Second level section heading

Left aligned with number, Times New Roman 14 points, bold and sentence case.

3.1.1.1 Third level section heading

Left aligned with number, Times New Roman 12 points, bold and sentence case.

Fourth-level section heading

Numbered subsections beyond third level are not recommended. However, fourth-level subsection headings may be included without numbering, Times New Roman 12-point font, left aligned and italicized.

* Running text should be set in 12-point Times New Roman and fully justified. First line of paragraph should have indentation of 15 mm.

Table / Figure/equation Format

Tables, figures and equations shall be numbered chapter-wise. For example, second figure in Chapter 3 will be numbered Figure 3.2. The figure can be cited in the text as Fig. 3.2 or Figure 3.2, however consistent citation format should be followed throughout the thesis. Tables shall be numbered similarly (Table 2 in Chapter 3 will be numbered Table 3.2) and shall be cited in the text as Table 3.2. Figure caption shall be located below the figure. Table number and caption shall be located above the table. Equations are aligned to the centre of the page with equation number in the text has to be given at the end of the line within brackets as given below.

$$f(x) = a_0 + \sum_{n=1}^{\infty} \left(a_n \cos \frac{n\pi x}{L} + b_n \sin \frac{n\pi x}{L} \right) \quad (\text{eq. 2.1})$$

Images, Photographs, etc. must be scanned in resolution exceeding 200dpi with 256 greyscales for the monochrome images and 24 bit per pixel for the color images.

Citing References

One author

Monika (2007) developed this method of Subsequently other researchers have adopted this technique (Ramakrishna, 2009; Bhaskar, 2010).

Two authors

Monika and Ram (2008) developed the model of Subsequently other researchers adopted this technique (Ramakrishna, 2009; Rao and Ram, 2011)

Multiple authors & more than one publication in a year

“Ram et al. (2005a) has designed the model” when given in sentence.

“Model AAB could regulate the control unit more efficiently (Ram et al., 2005b)” while given in brackets

Citing multiple references

When many authors are cited in sentence it is given as “.....Similar work was also proposed by Singh and Robin (2008); Ram et al. (2009); Prakash (2011).....”

“Similar work was demonstrated for varied data set by many researchers (Singh and Robin, 2008; Ram et al., 2009; Prakash, 2011).....”

Listing of the References

References are to be listed after last chapter. They are to be listed in alphabetical order and numbered. Within a reference the line spacing should be single. Each reference should be separated by one blank line. The reference number should be left aligned. The text of the reference should have an indentation of 10 mm.

The reference format to be followed for journal articles, text books, conference proceedings etc. are given below.

Journals

For referencing an article in a scientific journal the suggested format should contain the following information: authors, title, name of journal, volume number, page numbers and year.

Name of the author(s) (year of publication), Title of the paper, Name of the journal in italics, Volume Number, Issue number, page numbers.

1. H.E. Exner, "Physical and Chemical Nature of Cemented Carbides," *International Metals Review*, 1979, v. 24, pp. 149-173.
2. Prakas, K. (2011), 'Remediation of concrete using microorganisms', *ACI Materials*, volume 26 Issue 2, pp 301–320.

Text books

For referencing an article published in a book, the suggested format should contain, authors, the title of the book, editors, publisher, year, page number of the article in the book being referred to.

Author name (year of publication), title of the book, edition year , Publisher name and place.

1. Myers, D. G. (2007). *Psychology* (1st Canadian ed.). reprint 2005, Worth: New York.

Conference proceedings

1. Payne, D.B. and Gunhold, H.G. (1986). Digital sundials and broadband technology, In *Proc. IOOC-ECOC*, 1986, pp. 557-998.
2. W.H. Baek, M.H. Hong, S. Lee, and D.T. Chung, "A Study on the Shear Localization Behavior of Tungsten Heavy Alloy," *Tungsten and Refractory Metals 2*, A. Bose and R.J. Dowding (eds.), Metal Powder Industries Federation, Princeton, NJ, USA, 1995, pp. 463-471.

Reports

1. Milton, M and Robert, L. (2004). Atmospheric carbon emission through genetic algorithm, *Environment and Technical Report No.3.*, Indian Meteorological Department., New Delhi.

Online journals with a DOI (Digital Object Identifier)

1. Krebs, D.L. and Denton, K. (2006). Explanatory limitations of cognitivedevelopmental

approaches to morality. *Psychological Review*, 113(3): 672- 675. doi: 10.1037/0033-295X.113.3.672

Chapters from a book

1. Krebs, D.L. and Denton, K. (1997). Social illusions and self deception: The evolution of biases in person perception. In J. A. Simpson & D. T. Kenrick (Eds.), *Evolutionary social psychology* (pp.21-48). Hillsdale, NJ: Erlbaum.

Dissertations and Thesis

For referencing a thesis the suggested format should contain, author, the title of thesis, where thesis was submitted or awarded, year.

1. Mack, S. (2000). “Desperate Optimism” M.S. Thesis, University of Calgary, Canada.
2. J.L. Johnson, “Densification, Microstructural Evolution, and Thermal Properties of Liquid Phase Sintered Composites,” Ph.D. Thesis, The Pennsylvania State University, University Park, PA, USA, 1994.

Patents

V. Oenning and I. S. R. Clark, U. S. Patent No. 4988386, 1991.

Page Numbering

Page numbers for the prefacing materials (Inside title page, dedication, certificate, declaration, acknowledgements, abstract, table of contents, etc.) of the thesis shall be in small Roman numerals and should be centered at the bottom of the pages.

The body of the thesis starting from Chapter 1 should be paginated in Arabic numerals and should be centered 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.

Printing

Printing of all material in general should be single –sided in black ink

Non-Paper Material

A report may contain non-paper material, such as CDs and DVDs, if necessary. They have to be accommodated in a closed pocket in the back cover page of the thesis. The inclusion of non-paper materials must be indicated in the Table of Contents. All non-paper materials must have a label each clearly indicating the name of the candidate, student roll number and the date of submission.

Binding

Thesis copies to be submitted for evaluation are to be fully hard bounded. The cover page should be printed on glossy black material. The front cover of the bound copy should be the same as the title page of the thesis. The front cover should have printing on the side to include the author’s name, abbreviated thesis title (optional), degree, department, and the year.

Electronic Copy

An electronic version of the report should be submitted to the Head of the Department. The file name should contain student roll number, name of the candidate and date of submission.

Other Information

1. The title of the report should remain same as that given in the Abstract
2. Cover page should contain the title of the report and the name of the candidate
3. The title page (first inner page) should be similar to the cover page.
4. Units should be in SI format.
5. Use of spelling and grammar software is strongly recommended.
6. Do *not* use underlining.
7. Use *italics* for emphasis
8. All references, figures, tables, equations, etc. must be cross-referenced in the text.

TITLE OF THE PROJECT REPORT

< Times New Roman Font with 18-point size, bold, centered, one and a half line Spacing>

*A Report submitted
in partial fulfillment for the Degree of*

< Times New Roman, 14-point size, Bold, Italics and Centered

B. Tech

in

Civil Engineering

Times New Roman, 14-point size, Bold, Centered

by

NAME OF THE CANDIDATE(S)

< Times New Roman Font, 14-point size in Bold>

Department of Civil Engineering

<Times New Roman, 14-point size, Bold, Centered>



**GOKARAJU GANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY
HYDERABAD
(Autonomous)**

Times New Roman, 14-point size, Bold, Centered

CERTIFICATE

This is to certify that the project report entitled <**Title of the project**> submitted by <**Name of the candidate**> to the **Gokaraju Gangaraju Institute of Engineering And Technology , Hyderabad**, in partial fulfillment for the award of the degree of **B. Tech in Civil Engineering** is a *bona fide* record of project work carried out by him/her under my/our supervision. 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 supervisor with date >

<Name of the supervisor>

<Designation>

<Name of the Department and College>

<Signature of HOD with date>

<Name of the HOD>

<Designation>

<Name of the department and College>

<External Examiner>

DECLARATION

I declare that this project report titled <**Title of the report**> submitted in partial fulfillment of the degree of **B. Tech in Civil Engineering** is a record of original work carried out by me under the supervision of <**Name(s) of the Supervisor(s)**>, 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>

<Name of the candidate>

<Student roll number>

<Date>

ACKNOWLEDGMENTS

All acknowledgements are to be included here. Please restrict to **one page** (optional).

The name of the candidate shall appear at the end, without signature.

I take this opportunity to thank Dr. xxxxxx, Director - GRIET, Dr. xxxx, Dean –Students Activities, and other faculty members who helped in preparing the guidelines.

I extend my sincere thanks to one and all of GRIET family for the completion of this document on the project report format guidelines.

<Name of the Candidate>

ABSTRACT

Abstract of the report is to be given here. Please restrict to a maximum of 300 words. NOTE: The abstract should not have any citations, or abbreviations, nor should it be divided into sections. It can be divided into adequate number of paragraphs as the author wishes. It is advisable to avoid any equations in the Abstract. Figures and tables are to be avoided. Note that all paragraphs in the Abstract start with an indent of 15 mm, and there is no extra spacing between two successive paragraphs. The text should be Times New Roman font size 12, single spaced. A list of keywords should follow the abstract.

Abstract Template

Title of the Project

Abstract

< Maximum of 300 words>

Keywords: Not more than 5 key words or phrases

<Candidate Name >
<Roll number with Batch No>

<Guide signature >
<Guide name and Designation>

TABLE OF CONTENTS

DESCRIPTION	PAGE NUMBER
CERTIFICATE	iii
DECLARATION	v
ACKNOWLEDGEMENTS	vii
ABSTRACT	ix
LIST OF FIGURES	xiii
LIST OF TABLES	xv
ABBREVIATIONS/ NOTATIONS/ NOMENCLATURE	xvii
1. TITLE OF CHAPTER 1	1
1.1 Section heading name	1
1.2 Section heading name	1
1.2.1 Second level section heading	3
1.3 Section heading name	4
1.4 Section heading name	5
1.4.1 Second level section heading	8
1.4.2 Second level section heading	11
1.4.2.1 Third level section heading	20
2. TITLE OF CHAPTER 2	23
2.1 Section heading name	23
2.2 Section heading name	24
2.2.1 Second level section heading	25
2.3 Section heading name	26
2.4 Section heading name	28
2.4.1 Second level section heading	30
2.4.2 Second level section heading	35
3. TITLE OF CHAPTER 3	41
3.1 Section heading name	41

Sample Sheet 7

LIST OF FIGURES

FIGURE	TITLE	PAGE NUMBER
1.1.	Schematic diagram showing the proposed mechanism	5
1.2.	Next figure alpha	9
2.1.	Next figure beta	35
2.2.	Next figure gamma	39
3.1.	Next figure alpha, alpha	46
4.1.	Plot of concentration vs time	120
5.1.	Next figure beta, beta	310

LIST OF TABLES

TABLE	TITLE	PAGE NUMBER
1.1.	Percentage composition of fuel components	11
1.2.	Name of Table delta	12
2.1.	Name of Table gradient	35
4.2.	Name of Table alpha	100
5.1.	Kinetic parameters calculated for the system	310

Sample Sheet 8

ABBREVIATIONS/ NOTATIONS/ NOMENCLATURE

Utmost care should be taken by the project student while using technical abbreviations, notations and nomenclature.

The abbreviations should be listed in alphabetical order as shown below.

AFM Atomic Force Microscopy

BBB Blood Brain Barrier

CNT Carbon Nanotube

The meaning of special symbols and notations used in the report should be explained.

$|x|$ - absolute value of x

μ - mean

$\log_n(x)$ - logarithm (x) to the base n

Chemical nomenclature

NH_4^+ - ammonium

CH_4 - methane

OH^- - hydroxide

SO_4^{2-} - sulphate

Biological nomenclature

Soneratia apetalla - saline tolerant species

Oryza sativa - common rice

CHAPTER 1

INTRODUCTION

1.1. Green house gases

The green houses gases are receiving so much of attention these days from the scientific community. The careful management of these gases is a serious research problem. Recently, Attanas and Monica (2012) reported the hazards associated with the mismanagement of these gases. Table 1.1 lists the percentage distribution of the gases.

The studies related to the management of these systems need to follow a unified approach as suggested by earlier workers (Ram et al., 2005a; Ram et al., 2005b). However reports from Gurudeep and Mahin (2009) indicate the permissible level of green house gases¹.

Table 1.1 Title of the table (Times New Roman 11)

A ^a	B ^b	C	D

^a A is admonishment coefficient of total population (Times New Roman 10)

^b B is Bombardment coefficient of the mean population (Times New Roman 10)

1.1.1 Motivation of the study

Alarming rate of climate change, sea level rise and other natural disasters are to be managed efficiently. Assessment and management of green house gases thus become very much essential..

¹ Adapted from Monika and Ram, 2008 (Times New Roman 10)

IMPORTANT INSTRUCTIONS

1. Every student should submit brief abstract not exceeding 250 words (one page) for record keeping with HOD.
2. To have the Project thesis examined, the number of thesis copies to be submitted to the Head of the Department (HOD) should correspond to (a) Three copies – for Guide, HOD and Department Library and (b) During Viva-Voce Exam each candidate should carry his own thesis copy duly signed by HOD and Guide
3. It is mandatory for all the students to attend **two** Project Review Meetings and give seminar before Departmental Project Review Committee for evaluation of the project.
4. The thesis has been prepared without resorting to plagiarism. All sources used have been cited appropriately
5. The final copy of the report has to contain all the modifications/corrections suggested by the Guide (including the members of the Departmental Project Review Committee
6. Each project batch needs to submit all their work immediately after the final internal review on a CD for preserving the work.
7. All projects must be demonstratable both in Road show and during Final Evaluation.

NOTE:

The Project report must strictly comply with the Guide Lines suggested.