

MOTHER TERESA INSTITUTE OF SCIENCE & TECHNOLOGY SATHUPALLY, KHAMMAM DIST, TELANGANA



Guidelines to prepare B.Tech Project Documentation

Font: 1. Chapter names - 16 TNR (bold) all caps

2. Headings
3. Subheadings
4. Sub-Subheadings
14 TNR (bold) Title case
12 TNR (bold) Title case

5. Body of Paper - 12 TNR

6. Text in Diagrams - 12 TNR (all lower case)

7. Diagrams/ Table headings/ Fig. Headings - 12' TNR Title case

(write figure name below the figure Ex: Fig 1.1,1.2...(figure 1.1 belongs to 1st chapter 1st figure)

(write Table name above the table Ex: Table1.1,1.2...(Table1.1 belongs to 1st chapter 1st table)

8. If any text - 12' TNR Title case

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Spacing: 1. **2** Line Spacing between heading and body text

2. **1.5** line spacing in body text.

3. New paragraph start with single tab.

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1. Front Pages Small Roman numbers

(Excluding title page, Certificate page, Acknowledgement page)

2. Body pages 1, 2, 3.....

3. Annexure I,II,III.....

(Separate for each Annexure)

Pages:- Size: A4 paper Color: White

PREPARATION OF DOCUMENTATION

The sequence in which the Project Report should be arranged as follows and should be hard bounded.

Title page (color print)

College Certificate (color print)

Project Certificate (color print)

Institute Vision & Mission

Department Vision & Mission

PO Statements, PEO's, PSO's

Project CO-PO Statements

Project CO-PO Mapping

Declaration

Acknowledgement

Contents

List of figures

List of tables

List of symbols & abbreviations

Abstract

Chapter-1: Introduction

Chapter-2: Literature Survey

Chapter-3: Proposed Methodology

Chapter-4: Result Analysis and Discussion

Chapter-5: Conclusion

Chapter-6: Future Scope of the Project

(A) Appendices [Continuation of lower-case Roman Numerals from (A)]

References

Biodata

TOTAL NUMBER OF PAGES: 40 to 60.

Book Should be a proper Binded copies: 08 (Batch copies-03, Individual copies-05).

PROJECT REPORT

On

"CONTINUOUSLY VARIABLE TRANSMISSION (CVT)"

Submitted For Partial Fulfillment & Award of BACHELOR OF TECHNOLOGY
In
Electronics & Communication Engineering

[Name(s) of the Student]

Under the Guidance of [Name of the Project Guide] **Designation**



DEPARTMENT OF XXXXX ENGINEERING

MOTHER TERESA INSTITUTE OF SCIENCE AND TECHNOLOGY

Accredited By NAAC with 'A⁺' Grade
Approved by AICTE, Govt.of Telangana & SBTET, Affiliated to JNTUH, Hyderabad.
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Sanketika nagar, Sathupally-507303, Khammam(Dist), Telangana State.

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Sanketika nagar, Sathupally-507303, Khammam(Dist), Telangana



CERTIFICATE

This is to certify that the Project entitled "TITLE OF THE PROJECT" is a bonafide work done by STUDENT NAME(H.NO). In partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in BRANCH NAME from Jawaharlal Nehru Technological University Hyderabad During the Academic Year 2023-2024.

Name of the Guide Qualification

Name of HOD Head of the Department Qualification

Internal Examiner Date:

External Examiner Date:

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Date: Name of the HOD

QualificationHead of the Department

Head of the Department
Department of xxxxxx Engineering
Mother Teresa Institute of Science & Technology

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Date:

Name of the Guide, Qualification

Designation

Department of xxxxxxx Engineering Mother Teresa Institute of Science & Technology

ACKNOWLEDGEMENT

We are grateful to numerous individuals who contributed to the preparation of our Project Report.

We wish to express our sincere and heart full gratitude to our Project guide Name of the Guide, M.Tech Designation, Name of the Branch, who encouraged us to taking up this project in sync with Industry needs.

We thank and deep sense of gratitude to **Name of the HOD Qualification.**Designation, BRANCH NAME, for their constant encouragement and cooperation during the Project work.

We would like to thank and express our gratitude to **Dr. Sk. Jakeer Hussain**, **M.Tech**, **Ph.D**, Dean Engineering, Mother Teresa Institute of Science & Technology for the support and encouragement during the completion of the project.

We express our gratitude and utmost regards to **Dr. C. Hari Krishna** M.E., Ph.D., M.I.E.E.E., MISTE Principal, Mother Teresa Institute of Science & Technology for their constant support, encouragement and providing necessary permissions during the completion of the project.

We also thank the entire faculty members and fellow classmates who directly or indirectly helped us to complete this project.

Name of the Student Roll no

DECLARATION

I hereby certify that the Project Report entitled "Title of the project" under the guidance of Name of the Guide, Qualification is submitted in partial fulfillment of the requirements for the Award of the Degree of Bachelor of Technology in BRANCH NAME. This is a record of bonafide work carried out by us and the results embodied in this Project Report have not been submitted to any other University or Institute for the Award of any other Degree.

Name of the Student Roll No

DATE:Department of XXXXXX Engineering

Mother Teresa Institute of Science & Technology,

Sathupally.

INSTITUTE VISION

To be a state-of-the-art centre for learning with a social commitment transforming the youth into dynamic professionals.

INSTITUTE MISSION

IM₁: Foster unmatched excellence in professional education

IM₂: Provide quality eco-system to inspire learning aligned to needs.

IM₃: Inculcate ethical and moral values to groom good citizens.

IM₄: Involve in activities with team spirit and collaborations towards nation building.

DEPARTMENT VISION

To be recognized as a contributor of Mechanical Engineering proficiency and enable entrepreneurship, innovation, and values.

DEPARTMENT MISSION

DM₁: To train Stake holders on modeling and analysis software's for developing their computational capabilities as well as promoting studies and research works.

DM₂: Create awareness about the needs of mechanical industries through alumni and industry-institute interactions.

DM₃: To impart strong ethical values, lifelong learning and serve the society.

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PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: Succeed in Mechanical engineering field and to pursue research endeavors with a solid foundation in basic sciences, engineering fundamentals and analytical skills.

PEO 2: Exhibit industry readiness with the state of the art in Mechanical and allied engineering for successful career.

PEO 3: Acquire lifelong learning skills, professional ethics, good communication capabilities and leadership qualities.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Identify, analyze and build manufacturing and thermal systems using fundamental principles and techniques.

PSO2: Use modeling and analysis software tools such as SOLIDWORKS, CFD, and ANSYS.

PSO3: Exhibit managerial and technical skills to work effectively in teams with ethics

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Sanketikanagar, Sathupally-507303, Khammam(Dist), Telangana State.

DEPARTMENT OF BRANCH NAME

Course: Project Stage II AY: 2023-2024

Class: IV B. Tech II Sem

СО#	CO Statement
CO1	Demonstrate the knowledge and skills of a professional engineer to make a project.
CO2	Identify latest information related to the project from various sources to analyse the project.
CO3	Apply knowledge and demonstrate to manage project in multidisciplinary areas. Develop a prototype/model of the project by distribution of tasks among the team
CO4	Develop a team for carrying the project and perform documentation effectively. Create a good report of the project as per the guidelines and present to the panel of experts
CO5	Create abstract for given project by identifying the requirements and prospective solution. Analyse the results of the designed module or circuit.
CO6	Design the necessary module of the selected project as per specifications, Demonstrate the project working with the help of Presentation.

Name of the Guide, Qualification
Designation
Department of BRANCH NAME

PROGRAM OUTCOMES

Engineering Graduates will be able to:

- 1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- 6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- 8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- 11. **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- **12. Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

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Department of BRANCH NAME Project – PO Mapping

Pro	oject T	itle:													
(Guide(s):													
Stude	ent Na	me(s):													
Studer	nt Roll	l No(s):												
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Mapping															

Name of the Guide, _{Qualification}
Designation
Department of BRANCH NAME

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LIST OF ABBREVIATIONS AND SYMBOLS

VLSI : Very Large Scale Integration

FPGA: Field Programmable Logic Controller DSP: Digital Signal

Processing

x[n] : Filter Input Signal y[n] : Filter Output Signal

 $\delta[n]$: Delta Function

h[n] : Filter Impulse Response

H[n] : Transfer Function

* : Convolution Operator

REFERENCES

- [1] S. Ariponnammal and S. Natrajan, "Transport Phenomena of Semiconductors," Journal of Medical Physics, Vol. 42, No 5, pp. 421-425, May 2005.
- [2] P. Banerjee, M. Haldar, D. Zaertsky and R. Anderson, "Overview of 4 Compiler for Synthesizing Matlab Programs onto FPGAs," IEEE Transactions on Very Large Scale Integration (VLSI) System, Vol. 12, No 3, pp. 312-324, March2004.
- [3] J. Jores (2006), "Contact Mechanics," Cambridge University Press, UK, Chapter 6, pp. 144-164.
- [4] C. Rovers Eds., "Recent Advances in DSP Techniques," 2nd ed., Taylors Frances Group, USA 2006.
- [5] R. Smith (2008), "Contact of Cylindrical Surfaces". Available Online at: http://www.casphy.cenm.edu/homepage.html
- [6] H. D. Cheng, "Image Features Extraction using Volterra Filters," Proc. of 5th IEEE International Conference on Machine Vision and Artificial Intelligence, China, pp 42-57, October 2009.
- [7] A. K. Barnard, "A Study of Stereo Matching Algorithms for Mobile Robots," A Thesis Report for University of Bath, U.K., 2005.
- [8] J. P. Williamson, "Non-Linear Resonant Granit Devices," US Patent 3 624 12, July 16, 1990.
- [9] Motorola Semiconductor Data Manual, Motorola Semiconductor Products Inc., Phoenix, AZ, 1987.

BIODATA

Name	
Father name:	
Roll. No	:
Date of Birth:	
Nationality	:
Communication	Addres
Town/Village:	
Mandal	:
District :	
Pin code	:
Ph.no	:
E-mail :	
Permanent Add	ress:
Town/village	:
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