



Date: 16.09.2025

### CIRCULAR

All staff members handling the mini and major project are informed to consider mini and major project as normal course for obtaining the CO and PO/PSO attainment. Further, you are informed to consider the following COURSE OUTCOMES for mini and major project. The CO and PO/PSO matrix and lesson plan need to be updated in the LORARICH.

All mini and major project coordinator are informed to update the attendance on daily basis and monitor the student's project progress.

#### COURSE OUTCOMES OF PROJECT WORK ARE AS FOLLOWS.

CO1	Identify, review, and formulate a research problem through literature survey and domain understanding.
CO2	Design and develop appropriate solutions to address the identified problem.
CO3	Analyze, model, and apply suitable methodologies/technologies to solve complex engineering problems.
CO4	Plan, implement, and execute the project effectively by applying project management principles.
CO5	Prepare a comprehensive technical report and communicate the outcomes effectively through presentations and demonstrations.

#### CO - PO MAPPING TABLE

PO/PSO/CO's	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	3	3	2	2	1	1	2	2	2	2	3	2	1	2
CO2	3	3	3	2	2	1	1	2	2	2	2	2	2	1	2
CO3	3	3	3	2	2	1	1	2	2	2	2	2	2	1	2
CO4	2	2	2	2	2	1	1	2	3	3	3	2	3	3	2
CO5	2	2	2	2	2	1	1	2	3	3	3	2	3	3	2

The mini and major project coordinator can consider the following teaching plan as an example for conduct of mini and major project classes.

SN	Module	Topic
1	1	INTRODUCTION
2	2	Team formation
3	3	Titles discussion
4	3	Titles finalisation
5	3	Literature survey
6	4	Problem Formulation
7	5	Synopsis preparation
8	5	synopsis submission
9	5	phase 1 review
10	5	phase 1 review follow up
11	5	phase 2 review
12	5	phase 2 review follow up
13	5	phase 3 review
14	5	phase 3 review follow up
15	5	Report preparation
16	5	Report submission

PRINCIPAL

Tontadarya College of Engineering  
Mundargi Road, GADAG - 582 101

Students have to discuss with the mentor /guide and with their help he/she has to complete the literature survey and prepare the report and finally define the problem statement for the project work.

## Contents of the Report for Project Work Phase 1

- ## Course Outcomes

- ## PO/ PSO Mapping

[illegible]

# Project Work Evaluation

Title:					AY:	2024-25
Guide:						
		Phase - 1 (2022 Scheme)				Signature of the Guide
SN	Name/ USN	Report (50)	Presentation (25)	Q&A (25)	Total Marks (100)	
1						
2						
3						
4						
Signature of the Coordinator						
Signature of the HoD						

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Jnana Sangam, Machhe, Belagavi-590018

Video QR Code



Report QR Code

## Report on Project Phase 1

### “Effective Method of Power Generation with Waste Heat Using ThermoElectric Generator”

Submitted in Partial fulfillment of  
BACHELOR OF ENGINEERING DEGREE

IN

ELECTRICAL & ELECTRONICS ENGINEERING

Hanumappa Yallalinga Goudar  
2TG22EE005

Hanumappa Yallalinga Goudar  
2TG22EE005

Hanumappa Yallalinga Goudar  
2TG22EE005

Hanumappa Yallalinga Goudar  
2TG22EE005

Under the guidance of

**Prof. Santhoshkumar G. M.** B.E., M. Tech.

Assistant Professor

Dept. of Electrical & Electronics Engineering

TCE, Gadag



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

**TONTADARYA COLLEGE OF ENGINEERING**

MUNDARGI ROAD, GADAG-582 101

2024-2025



**S.T.S.K. K's**  
**TONTADARYA COLLEGE OF ENGINEERING**  
**GADAG – 582 101**



**DEPARTMENT OF**  
**ELECTRICAL AND ELECTRONICS ENGINEERING**

***CERTIFICATE***

*Certified that, the Project Phase I, entitled “Effective Method of Power Generation with Waste Heat Using ThermoElectric Generator” carried out by Mr./ Mrs. Hanumappa Yallalinga Goudar (2TG13EE027), Hanumappa Yallalinga Goudar (2TG13EE027), Hanumappa Yallalinga Goudar (2TG13EE027) and Hanumappa Yallalinga Goudar (2TG13EE027) the bonafide students of Tontadarya College of Engineering, Gadag, submitted the report, in partial fulfillment for the award of Bachelor of Engineering Degree in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi during the year 2024-25.*

*It is also certified that all corrections/ suggestions indicated for Internal Assessment have been incorporated in the report and deposited in the department library. The report has been approved as it satisfies the academic requirements in respect of mini-project work prescribed for the said Degree.*

<b>Signature of the Guide</b> Prof. Santoshkumar G. M. Assistant Professor EEE Dept., TCE Gadag	<b>Signature of HoD</b> Dr. Iranna Korachagaon Professor and HoD EEE Dept., TCE Gadag	<b>Signature of Principal</b> Dr. M. M. Awati Principal TCE Gadag



**S.T.S.K. K's**  
**TONTADARYA COLLEGE OF ENGINEERING**  
**GADAG – 582 101**



**DEPARTMENT OF**  
**ELECTRICAL AND ELECTRONICS ENGINEERING**

***Declaration***

*I/We, bonafide students of the Department of Electrical and Electronics Engineering at Tontadarya College of Engineering, Gadag, hereby declare that the Project Work - Phase 1, entitled “**Effective Method of Power Generation with Waste Heat Using ThermoElectric Generator**” has been carried out by me/us, under the supervision and guidance of the Department Staff Supervisor and submitted the report, towards the partial fulfillment for the award of Bachelor of Engineering Degree in Electrical & Electronics Engineering of the Visvesvaraya Technological University, Belagavi during the year 2024-25.*

*I/We also declare that the work has not been submitted previously for the award of any other degree or diploma, by the Institute.*

	Signature
Hanumappa Yallalinga Goudar (2TG13EE027)	
Hanumappa Yallalinga Goudar (2TG13EE027)	
Hanumappa Yallalinga Goudar (2TG13EE027)	
Hanumappa Yallalinga Goudar (2TG13EE027)	

## Acknowledgement

The satisfaction of successful completion of any task would be incomplete without the expression of gratitude to the people who have made it possible. I/ We acknowledge all the people who have guided and encouraged me/ us.

We would like to take this opportunity to thank our guide **Prof. Tahseen Shigli** and the coordinator Prof. Tahseen Shigli, Department of Electrical and Electronics Engineering, for the immense guidance and support, without which this work would have been unthinkable.

I/ We also sincerely thank Dr. Iranna Korachagaon, HoD, Department of Electrical and Electronics, TCE Gadag for his valuable suggestions and support.

I/ We extend our gratitude to Dr. M. M. Awati, Principal, TCE Gadag, for his generous support in all regards.

I/ We extend our heartfelt thanks to all the faculty members, teaching and non-teaching staff of Department of Electrical and Electronics Engineering, TCE Gadag, who have helped me/ us directly or indirectly for the completion of this work.