

**KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE**

Opp : Yerragattu Gutta, Hasanparthy (Mandal), WARANGAL - 506 015, TELANGANA, INDIA

काकतीय प्रौद्योगिकी एवं विज्ञान संस्थान, वरंगल - ५०६०१५, तेलंगाना, भारत

కాకతీయ సాంకేతిక విజ్ఞాన శాస్త్ర విద్యాలయం, వరంగల్ - ౫౦౬ ౦౧౫ తెలంగాణ, భారతదేశము

(An Autonomous Institute under Kakatiya University, Warangal)

(Approved by AICTE, New Delhi; Recognised by UGC under 2(f) & 12(B); Sponsored by EKASILA EDUCATION SOCIETY)

website: www.kitsw.ac.in

E-mail: principal@kitsw.ac.in

☎ : +91 9392055211, +91 7382564888

U24EL108 PRACTICUM-I**A Report on Practicum**

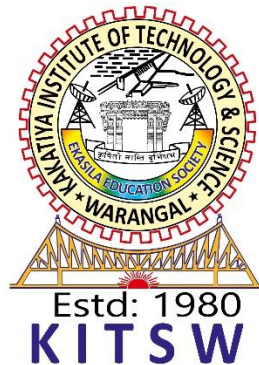
titled

“PORTABLE SOLAR DC-AC CONVERTER”

by

AKASH CHERUKU**B24xxxxxx***Under the guidance of***Dr. P. Nagarjuna Reddy**

Assistant Professor, Dept. of EEE

**KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE, WARANGAL**

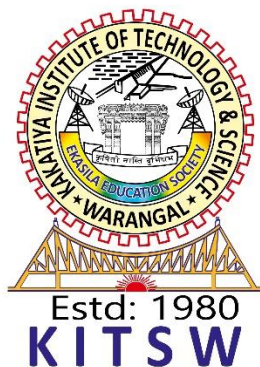
(An Autonomous Institute under Kakatiya University, Warangal)

(2024-25)

KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE, WARANGAL

(An Autonomous Institute under Kakatiya University, Warangal)

CERTIFICATE



This is to certify that, this is the bonafide record of Practicum entitled **PORTABLE SOLAR DC-AC CONVERTER** in the course **Basic Electrical Engineering** carried out by **Akash Cheruku** bearing **Roll No. B24XXXX**, student of **B. Tech, EEE, I Semester** in partial fulfilment for the Degree of Bachelor of Technology in Department of **ELECTRICAL & ELECTRONICS ENGINEERING**.

**SUPERVISOR/
COURSE TEACHER**

Dr. P. Nagarjuna Reddy
Assistant Professor
Dept. of EEE, KITSW

**PRACTICUM COORDINATOR/
CLASS TEACHER**

Dr. P. Nagarjuna Reddy
Assistant Professor
Dept. of EEE, KITSW

HEAD OF THE DEPARTMENT

Dr. G. Rajendar
Assoc. Professor & Head
Dept. of EEE, KITSW

ACKNOWLEDGEMENT

You have to write your Acknowledgements for those who helped you in the process of completing the Practicum.

It is impossible to complete a project without the assistance of others, who could be your practicum guide (course teacher), faculty counsellor, class teachers, college personal, friends, technical experts or family members. Writing an acknowledgement customarily is a fantastic approach to appreciate everyone who assisted you in completing your task.

- *Practicum Guide: Thank your practicum guide for giving you an opportunity to learn new skills*
- *Faculty counsellor: Thank your faculty counsellor for guiding you in finishing your practicum*
- *Class teacher: Thank your class teacher for timely coordination of practicum*
- *Technical experts, if any: Thank all the people who helped you in finishing your practicum*
- *Others: Thank all others who helped you in completing the practicum*

(A sample acknowledgement is attached at the end)

AKASH CHERUKU
(B24XXXX)

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LIST OF ACRONYMS

Abbreviation	Full Form

LIST OF FIGURES

Figure No.	Title of figure	Page number

LIST OF TABLES

Table No.	Title of table	Page number

CHAPTER 1

Overview of the Practicum

1.0. Introduction

(Max. 200 words)

In this section, you have to

- *briefly introduce the field of practicum and latest trends in the field*

1.1. Literature review

(Max. 200 words)

1.1.1. Literature Review:

(Max. 200 words)

In this section, you have to

- *synthesize the knowledge gained from the literature, you referred, related to the practicum*
- *cite the literature, you listed in References section (Chapter 6), with proper numbering*

1.1.2. Research Gaps:

(Max. 200 words)

In this section, you have to

- *identify the gaps found in the relevant literature and list them accordingly. Based on the identified gaps, you have to focus on aim and objectives.*

1.2. Aim and Objectives

(Max. 200 words)

In this section, you have to

- *list the aims and objectives which you have identified for your practicum*

1.3. Report Organisation

(Max. 200 words)

In this section, you have to

- *briefly describe how the report has been organized into different chapters and what is present in each chapter*

CHAPTER 2 METHODOLOGY

2.0. Introduction

(Max. 200 words)

In this section, you have to

- *briefly introduce the aim and objectives of the practicum*

2.1. Block Diagram & Description

(Max. 400 words)

In this section, you have to

- *include the block diagram of working model/ simulation model of your practicum (with neat labelling of major components) as figure, with self-explanatory title and give numbering as per format*
- *briefly describe the inputs and the output of your model*

2.2. Programming Code

In this section, you have to

- *include the program code developed for solving the Practicum problem.*
- *include comments in the program to improve readability*

2.3. Difficulties encountered during programming

In this section, you have to

- *describe the difficulties/ challenges you encountered during programming.*

CHAPTER 3

RESULTS AND ANALYSIS

3.0. Introduction

(Max. 100 words)

In this section, you have to

- *list the key objectives/ hypothesis for this work*

3.1. Results

(Max. 400 words)

In this section, you have to

- *present any raw data collected, such as numerical data, observations or logs.*
- *use tables, charts and graphs wherever needed and ensure they have self-explanatory titles and give numbering as per format*
- *summarize the raw data for easier interpretation and highlight important results/ trends observed (ensure that they are aligned with objectives which you mentioned in section 3.0)*

3.2. Analysis

(Max. 400 words)

In this section, you have to

- *analyze the patterns, graphs or relationships which you listed in section 3.1*
- *compare actual outcomes with expected outcomes, if any*

CHAPTER 4

DEMONSTRATION & PRESENTATION

4.0. Introduction

(Max. 200 words)

In this section, you have to

- *list the date of demonstration/presentation*
- *mention the place of demonstration*
- *audience attended (number only)*

4.1. Demonstration & Presentation

(Max. 400 words)

In this section, you have to

- *Demonstration:*
 - *provide a detailed description of how the demonstration was conducted*
 - *list the experts who evaluated your demonstration*
 - *challenges experienced during the demonstration, if any*
 - *include geotagging photographs, if any, taken during demonstration, as figures, with self-explanatory titles and give numbering as per format*
- *Presentation:*
 - *outline the flow of your PowerPoint Presentation (PPT) (eg: introduction, activity, methodology followed, field work conducted, key learnings etc)*
 - *mention any visual aids used during the presentation (eg: ppts, flowcharts, graphs, videos, prototypes)*
 - *list the experts who evaluated your presentation*
 - *include geotagging photographs, if any, taken during presentation, as figures, with self-explanatory titles and give numbering as per format*

I have collected feedback from the audience and the feedback analysis is appended as Appendix – B.

I have appended slides (4 slides per page) of my PPT as Appendix-C

4.2. Video Pitch

(Max. 200 words)

In this section, you have to

- *mention the platform used for video pitch*
- *duration of video pitch*
- *procedure, if any followed, for preparing the video pitch*

Eg: I have created video pitch of my practicum and played during demonstration to the audience and the supervisor on November 11, 2024. The duration of the video is 4 minutes 36 seconds, and it is prepared using Screenpal platform.

CHAPTER 5

CONCLUSION

5.0. Conclusions

(Max. 300 words)

In this section, you have to

- *summarise the main findings and their relevance*
- *state how well the practicum objects were met through the results and analysis*

5.1. Recommendations for Future Research

(Max. 150 words)

In this section, you have to

- *suggest improvements or future directions for the practicum project*

5.2. Learnings

5.2.1 New knowledge and skills acquired during Practicum

(Max. 100 words)

In this section, you have to

list the new knowledge and skills you acquired during this practicum

5.2.2 Improvement in confidence levels & communication

(Max. 100 words)

In this section, you have to

describe how practicum improved your confidence levels & communication skills (quote an example)

5.2.3 Expected impact of Practicum on professional career

(Max. 100 words)

In this section, you have to

list the ways how practicum is expected to help your professional career

5.3. Relevance to society

(Max. 150 words)

In this section, you have to

describe how practicum and the related field work is relevant to society

CHAPTER 6

REFERENCES

In this section, you have to

- *List the references i.e. Books, Book chapters, Journal papers, Conference Papers, Patents etc. you have studied, in IEEE format style*

Appendix -A

(include the plagiarism report of the report)

Appendix -B

FEEDBACK ANALYSIS

(Prepare a simple but informative feedback form and give copies to the audience & experts before the start of the demonstration/presentation. Collect filled-in feedback forms after your demonstration/presentation. Ensure that the feedback form shall consist of questions that gives you an overview of what the audience felt about your presentation and any recommendations for future)

(Max. 200 words)

In this section, you have to

- *analyze the feedback received during demonstration/representation*
- *if applicable, include numerical data or statistics that provide an objective view of the feedback (e.g., number of respondents, average ratings, percentage of satisfaction of the audience after attending the demonstration/presentation)*
- *if applicable, present graphs, tables, or charts to visually represent trends or distribution of feedback (e.g., satisfaction ratings, frequency of positive and negative comments). Ensure that the graphs, tables & charts have self-explanatory titles and give numbering as per format*
- *list actionable recommendations for future projects based on feedback received (if any)*

Appendix -C
PPT SLIDES
(4 slides per page)

Fonts & Style to be adapted
--

Important Note: Print on both sides of paper

CHAPTER 1 (Upper case letters, Font size: 14, Times New Roman, Bold, Alignment: Center)

Overview of the Activity (Title case letters, Font size: 14, Times New Roman, Bold, Alignment: Center)

1.0. Introduction (Title case letters, Font size: 12, Times New Roman, Bold, Alignment: Left)

(Max. 100 words)

In this section, you have to

briefly introduce about the activity. (Sentence letters, Font size: 12, Times New Roman, Alignment: Justified, First line spacing for each paragraph: 1 Tab (1.27 cms))

describe the importance of the activity

1.1. Literature Review

1.1.1. References (Title case letters, Font size: 12, Times New Roman, Bold, Inclined, Alignment: Left)

(Max. 100 words)

In this section, you have to

- *List the textbooks and web resources referred (relevant literature)*

1.2. Goals Identified

(Max. 100 words)

In this section, you have to

- *List the goals identified to complete the activity*

1.3. Action Plan

(Max. 100 words)

In this section, you have to

- *List the goals identified to complete the activity*

ACKNOWLEDGEMENT

(This is a sample copy only. You have to write your own acknowledgement for the individuals who helped you in the process of completing the Practicum)

I wish to express a sense of gratitude to my guide **Dr. P. NAGARJUNA REDDY, Assistant Professor**, Department of Electrical & Electronics Engineering, Kakatiya Institute of Technology & Science, Warangal, who guided me at every moment during my entire Practicum work and gave valuable suggestions. His continuous encouragement at each point of work and effort to push the work through are grateful and acknowledged.

I sincerely thank the Practicum coordinator, **Dr. P. NAGARJUNA REDDY, Assistant Professor**, for timely coordination.

I am indebted to **Dr. G. RAJENDAR, Assoc. Professor & Head of the Department**, Electrical & Electronics Engineering. I also extend my gratitude to all the faculty members of the department without whose support at various stages this report will not be materialized.

Also, I offer my sincere admiration to **Prof. K. ASHOKA REDDY, Principal**, Kakatiya Institute of Technology & Science, Warangal for his kind patronage and permission to utilize the resource of the institute to carry out the work.

Last but not least I wish to thank my friends and seniors who helped me directly or indirectly in the successful completion of this work.

AKASH CHERUKU
(B24XXXX)