



LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

Accredited by NAAC & NBA (CSE, IT, ECE, EEE & ME)

Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada

L.B.Reddy Nagar, Mylavaram-521230, Krishna Dist, Andhra Pradesh, India

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

REPORT on Three-Day work shop on PCB Circuit Design

Event Type	:	Workshop
Date / Duration	:	27.03.2023 to 29.03.2023 /Three days
Resource Person	:	Mr.S.Pradeep Kumar, ADAQ Technologies Pvt.Ltd
Name of Coordinator(s):		Dr.G.L.N.Murthy & Mr.Ch.Mallikharjuna rao
Target Audience	:	II Semester B.Tech Students
Total no of Participants:		II semester Students-70 Nos.
Objective of the event:		To expose the students to usage of modern tools in the design & development of electronic systems.
Outcome of event	:	By attending the workshop, the students can be able to perform Mini as well as Major projects, as part of the curriculum. Further, the students will gain knowledge on hardware design related issues that enables them to face interviews confidently.

Description / Report on Event:

The three day workshop began with inaugural address by Dr.Y.Amar babu, Head , Department of ECE ,who highlighted the significance of the training. It was mentioned that the students should always learn the basics needed for doing mini or main projects. It was mentioned that as the technology is fast evolving, the students should always get equipped with latest tools to compete in the global scenario. Printed circuit board design will definitely enable the students to get acquainted both software and hardware requirement needed for circuit design. As the technology is continuously evolving, students should also enhance their skills in the emerging areas, instead of always restricted to curricular knowledge, as told by the head of the department. Dr.G.L.N.Murthy, Coordinator , RC club, have informed the students about initiatives taken by the department to enhance the learning and presentation skills of the students. It was told that department is having technical magazine and RC club to promote the inherent skills of the students as well as exposing

them to current trends. activities that are being conducted by Reconfigurable computing club. All the students are advised to actively participate in such events and enhance their skills.

On first day, resource person Mr.S.Pradeep Kumar explained the basic concepts of circuit design. It was told that in regular laboratories, bread board is used to perform the experiments which is always not reliable. If any wire is missed, the outcome of the experiment will be affected. Unlike this scenario, if Printed circuits are available, batch production can be used to generate multiple boards. All the students were explained about the significance of PCB design and the steps in the design process. The layout and the interconnects should be optimally planned that results in such a board where there exist no problems in near future.

A printed circuit board (PCB) mechanically supports and electrically connects electronic components or electrical components using conductive tracks, pads and other features etched from one or more sheet layers of copper laminated onto and/or between sheet layers of a nonconductive substrate. Components are generally soldered onto the PCB to both electrically connect and mechanically fasten them to it. Printed circuit boards are used in all but the simplest electronic products. They are also used in some electrical products, such as passive switch boxes.

On day two, all the students were asked to simulate the PCB design process. All the students have practiced proteus software that is used for electronic circuit simulation. The Proteus Design Suite is a proprietary software tool suite used primarily for electronic design automation. The software is used mainly by electronic design engineers and technicians to create schematics and electronic prints for manufacturing printed circuit boards

On Day three, students have been taken to EDC laboratory for prototyping of circuits they have simulated. The students have done etching followed by printing the circuits designed using software on the board. Sample projects like water level indicator, LDR based light controller were given to the students for implementation. All the students grouped in batches, have exposed to hands on practice on various steps in the circuit preparation.

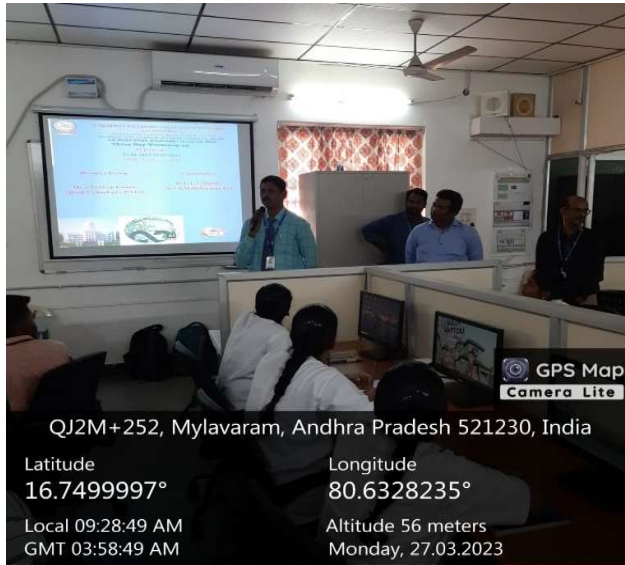
Feedback / Suggestions:

1. During practice sessions each individual student is to be taken care.
2. Conduct the workshop for all interested students.
3. More PCBs for each batch.
4. Required a greater number of days.

Comments on feedback:

1. Care is taken to clarify the doubts of students. It is the responsibility of the student to interact with the faculty for further elaboration.
2. All the students have been intimated well in advance to register for the workshop to fix the slots. Those who came late and shown less interest are not considered. Further, conducting for a greater number of days for each batch it requires the computer labs to be made free from all sessions which is not possible.
3. The objective of the workshop is to make the student gain knowledge on the PCB design process not that how many were developed. Based on the knowledge gained they can extend the works carried out during the program.
4. Organizing the workshop for a greater number of days is not possible due to the freeness of the computer laboratories. The workshop has provided the opt knowledge for PCB Design which student should extend.

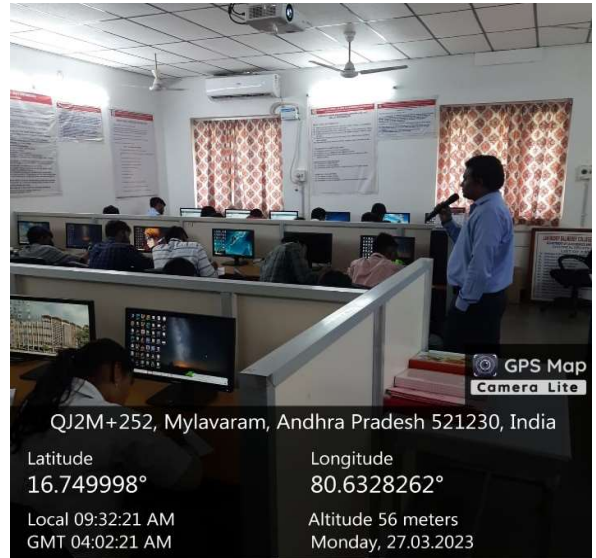
Photos:



QJ2M+252, Mylavaram, Andhra Pradesh 521230, India

Latitude	Longitude
16.7499997°	80.6328235°
Local 09:28:49 AM	Altitude 56 meters
GMT 03:58:49 AM	Monday, 27.03.2023

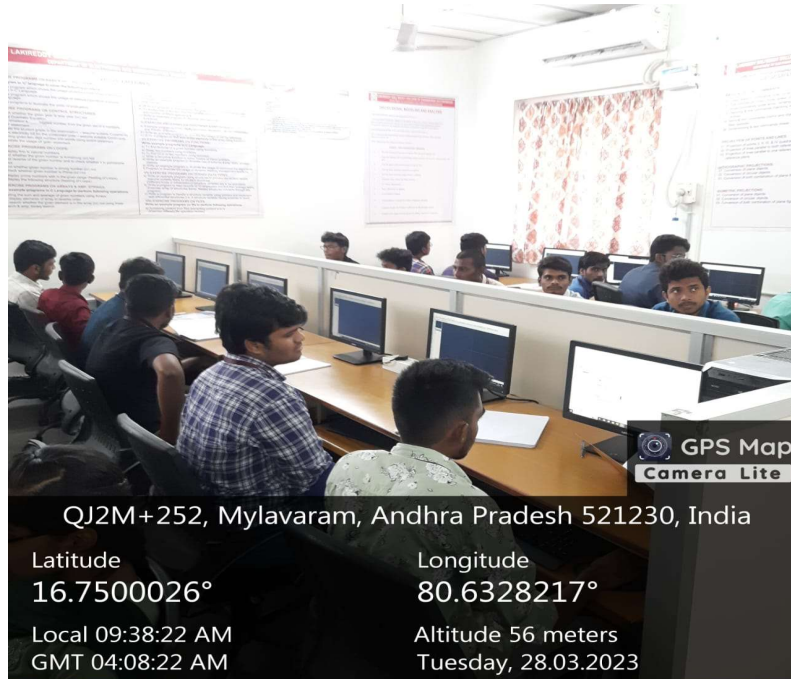
Addressing by Dr.Y.Amar Babu,
Head of the Department



QJ2M+252, Mylavaram, Andhra Pradesh 521230, India

Latitude	Longitude
16.749998°	80.6328262°
Local 09:32:21 AM	Altitude 56 meters
GMT 04:02:21 AM	Monday, 27.03.2023

Introductory session by Mr.S.Pradeep kumar, ADQA
Technologies Pvt.Ltd.



QJ2M+252, Mylavaram, Andhra Pradesh 521230, India

Latitude	Longitude
16.7500026°	80.6328217°
Local 09:38:22 AM	Altitude 56 meters
GMT 04:08:22 AM	Tuesday, 28.03.2023

Practice session using Proteas software

ప్రింటింగ్ సర్క్యూట్ బోర్డు (పీసీబీ) డిజైన్ పై వర్క్ షాప్



మైలవరం - మార్చి - 29 (మనం న్యూస్)స్థానిక లకిరెడ్డి బాలిరెడ్డి ఇంజనీరింగ్ కళాశాలలో ఎలక్ట్రానిక్స్ అండ్ కమ్యూనికేషన్ విభాగం వారి ఆధ్వర్యంలో మొదటి సంవత్సరం విద్యార్థిని విద్యార్థులకు ప్రింటింగ్ సర్క్యూట్ బోర్డు (పీసీబీ) డిజైన్ నందు మూడు రోజుల పాటు (ది :27-03-2023 నుండి 29-03-2023) జరిగిన వర్క్ షాప్

ముగిసింది. ఈ వర్క్ షాప్ నందు విద్యార్థిని విద్యార్థులు ప్రాటీస్ సాఫ్ట్ వేర్ ద్వారా తమ ప్రాజెక్ట్ లలో సర్క్యూట్ డిజైన్ లను ఎలా రూపొందించవచ్చో తెలుసుకున్నారు. అలాగే ఈ సిములేషన్ ఆధారిత డిజైన్ ను కాపర్ లేయర్ కలిగిన బోర్డుల మీద ప్రింటింగ్ చేసి తమ్ ప్రాజెక్ట్ లకు కావాల్సిన ఎలక్ట్రానిక్ పరికరాలను ఆ బోర్డు పై ఏవిధంగా అమర్చాలో వారు నేర్చుకొన్నారు.

ఏ డి ఏ క్యూ టెక్నాలజీస్ ప్రైవేట్ లిమిటెడ్ నుండి. ఎస్ .ప్రదీప్ కుమార్ విద్యార్థిని విద్యార్థులకు ప్రాజెక్టుల రూప కల్పన మరియు సిములేషన్ ఆధారిత డిజైన్ అంశాలు క్షుణ్ణం గా తెలియచేశారు . ఈ సందర్భంగా ఈ.సి.ఈ విభాగాధిపతి అమర్ బాబు మాట్లాడుతూ తమ కళాశాలలో అన్ని విభాగపు విద్యార్థిని విద్యార్థులకు పాఠ్య అంశాలే కాక వివిధ రకాల సర్టిఫికేషన్ కోర్సెలు నిర్వహిస్తున్నామని తద్వారా అన్ని విషయాలలో నిష్ణాతులు కాగలరని తెలిపారు. ఈ కార్యక్రమానికి రికాన్సిగరబుల్ కంప్యూటింగ్ క్లబ్ ఇన్ చార్జ్ జి.యల్.యన్. మూర్తి , సి.హెచ్ మల్లికార్జున రావు కో ఆర్డినేటర్స్ గా వ్యవహరించారు.



Head of the Department