DEPARTMENT OF ELECTRICAL ENGINEERING

(A.Y 2024-25)

NOTICE

Date:- 15/7/2024

All students of BE are hereby inform that the Department of Electrical Engineering is going to conduct free of cost VAP on **"PLC Programming"** on date 22/7/2024 to 26/7/2024 for BE student's interested students enroll their name to Prof. Prof. N. A. Amodkar before **19/07/2024.**

Resource Person: Prof. T. J. Bharambe, EE Dept, SITRC, Nashik

Time: 10:00AM To 5.00PM

Venue: EE Dept .SITRC, Nashik

Dr. N. S. Patil
HOD
Electrical Engineering

Dr. Amol D. Potgantwar
Principal
SITRC, Nashik

Sandip Institute of Technology and Research Centre
At & Po – Mahirawani, Trimbak Road, Tal & Dist .– Nashik
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Theory Course Content- Topics covered during the Value Added Program-

Module 1: Introduction to PLC and Basic Concepts

Module 2: Ladder Logic Programming and Control Structures

Module 3: Advanced PLC Programming Concepts

Module 4: PLC Communication and Networking

Module 5: Troubleshooting, Maintenance, and Real-World Applications

Program Agenda-

Day	Time	Program	Topic
1	10 am To 1 pm	Morning session	Module 1: Introduction to PLC and Basic Concepts
	1 pm To 2 pm		Lunch Break
	2 pm To 5 pm	Evening Session	Module 1: Introduction to PLC and Basic Concepts
2	10 am To 1pm	Morning session	Module 2 Ladder Logic Programming and Control Structures
	1 pm To 2 pm		Lunch Break
	2pm To 5 pm	Evening Session	Module 2: Ladder Logic Programming and Control Structures
3	10 am To 1pm	Morning session	Module 3: Advanced PLC Programming Concepts
	1 pm To 2 pm		Lunch Break
	2pm To 5 pm	Evening Session	Module 3: Advanced PLC Programming Concepts
4	10 am To 1pm	Morning session	Module 4: PLC Communication and Networking
	1 pm To 2 pm		Lunch Break
	2pm To 5 pm	Evening Session	Module 4: PLC Communication and Networking
5	10 am To 1pm	Morning session	Module 5: Troubleshooting, Maintenance, and Real-World Applications
	1 pm To 2 pm		Lunch Break
	2pm To 5 pm	Evening Session	Module 5: Troubleshooting, Maintenance, and Real-World Applications

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VAP Report

Name of the Event: VAP on "PLC Programming"

Event Date: 22/7/2024 to 26/7/2024

Event Conduction Duration: 10.00 am to 5.00 pm

No of Participants: BE: 27 Students

Name of Resource Person: Prof. T. J. Bharambe, SITRC

Name of Event Coordinator: Prof. N. A. Amodkar (Asst. Prof, Electrical Dept., SITRC, Nashik)

PLC Programming, participants will have acquired the knowledge and skills necessary to program, troubleshoot, and maintain PLC-based automation systems. They will be able to confidently design control systems, work with various PLC communication protocols, and apply their skills in real-world industrial automation settings.

Course Objectives:

1. **Introduce PLC Fundamentals**: To provide participants with a solid understanding of the principles and components of a PLC, including its architecture and function in industrial automation systems.

2. **Develop Programming Skills in Ladder Logic**: To teach participants how to program PLCs using Ladder Logic, which is the most widely used PLC programming language for industrial control systems.

3. **Facilitate Understanding of PLC Communication**: To familiarize participants with communication protocols (such as Modbus, Profibus, and Ethernet/IP) used for networking PLCs with other devices, including HMIs, SCADA systems, and remote I/O.

Course Outcomes:

1. **Understand PLC Fundamentals**: Describe the basic components and architecture of a PLC (CPU, I/O modules, power supply, and communication ports).

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2. **Program PLCs Using Ladder Logic**: Develop simple PLC programs using Ladder Logic to control devices such as motors, sensors, and actuators.

3. **Work with Timers, Counters, and Other Control Functions**: Apply PLC timers (TON, TOF) and counters (CTU, CTD) to create time-based and count-based control systems.

4. **Implement Analog and Digital I/O Operations**: Configure and program PLCs to handle both digital and analog inputs/outputs.

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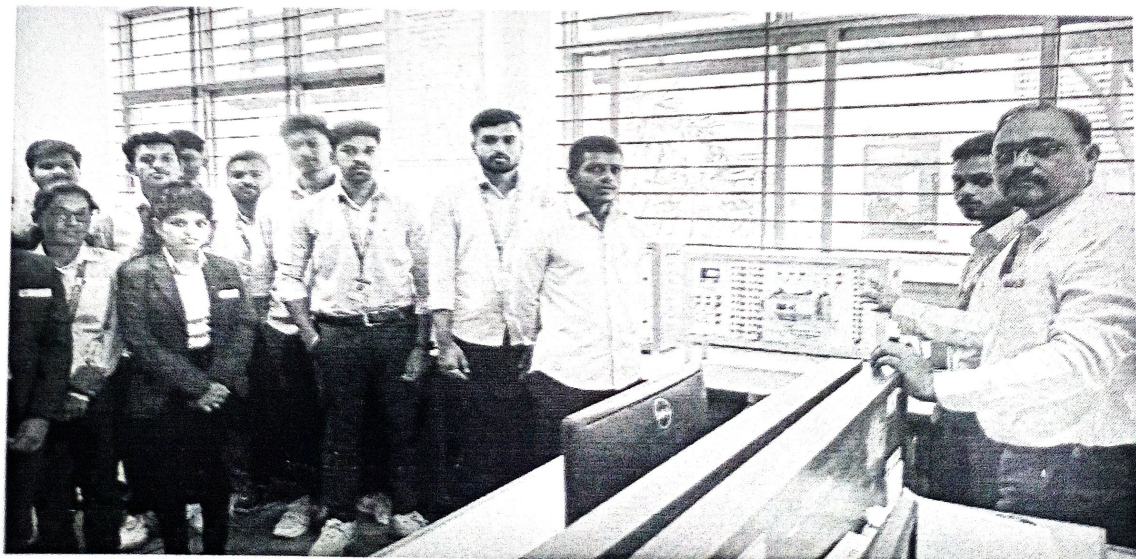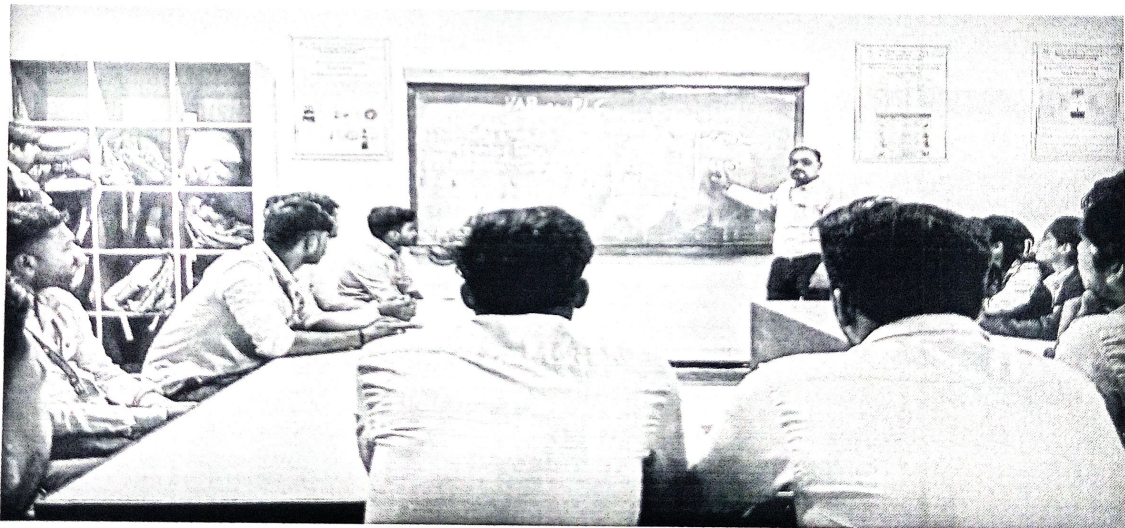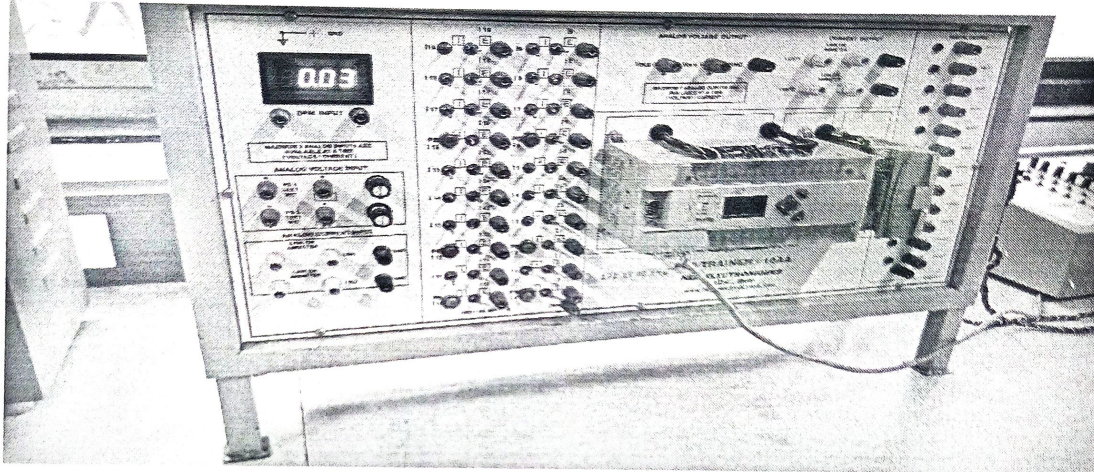Accredited with "A" grade by NAAC With CGPA Score of 3.11

EVENT PHOTOS:

Prof. T. J. Bharambe explaining about PLC Programming