Late Purushottam Hari (Ganesh) Patil Shikshan Sanstha's
Mauli Group of Institution's,
College of Engineering & Technology, Shegaon.
Department of Electrical Engineering
Session: 2025-2026

Date: - 01/07/2025

Activity Report on

"ISTE Approved 6 Days STTP on PLC and SCADA"

- **Title of the Program: -** 6 Days Short Term Training Program (STTP) on PLC & SCADA.
- **Organized by** :- Electrical Engineering Department, MGI-COET, Shegaon
- **Date** :- 23th June 2025 to 29th June2025
- **Time:** 11:00 AM to 5:00 PM
- **Approved by** :- Indian Society for Technical Education (ISTE)
- **Venue**:- Computer Lab, MGI-COET, Shegaon, Maharashtra
- **Duration** :- 6 Days
- **Mode** :- Offline
- **Instructor:** Mr. Mohan Patel (Project Engineer)

Objective of the Training Program

The objective of a PLC SCADA program for students is to provide a comprehensive understanding of industrial automation systems. This includes learning the fundamentals of Programmable Logic Controllers (PLCs), Supervisory Control and Data Acquisition (SCADA) systems, and their integration for real-world applications. Students will gain practical skills in PLC programming, SCADA system design, and troubleshooting, preparing them for careers in industrial automation.

Overview of the Program

PLCs are essentially industrial computers that control machines and processes, while SCADA systems provide a user interface for operators to visualize, monitor, and control these processes, often remotely. Essentially, the PLC acts as the "brain" making real-time decisions, and the SCADA system acts as the "eyes and ears" for operators.

Circular or Brochure: -

ISTE Chapter

Organising

One Week Short Term Training Program(STTP)

on

"Technical Training on PLC SCADA"

from

Date: 23/06/2025 to 29/06/2025

Venue: Classroom No.118

Name of Resource Person: Mr. Mohan Patel

Session Highlights

Day 1:-

i) Introduction to PLCs:

Understanding the basic concepts of PLCs, their role in industrial automation, and their advantages over traditional control systems.

ii) PLC Architecture:

Learning about the different components of a PLC, including the CPU, I/O modules, power supply, and communication interfaces.

iii) PLC Programming Languages:

Gaining proficiency in programming PLCs using languages like ladder logic (most common), function block diagram, and structured text.

Day 2:-

i) Ladder Logic Programming:

Developing skills in writing ladder logic to control and automate industrial processes, including understanding Boolean logic, timers, counters, and other control instructions.

ii) PLC Hardware Interfacing:

Learning how to connect and configure various input and output devices to a PLC, including sensors, actuators, and other control components.

iii) PLC Troubleshooting:

Developing the ability to diagnose and resolve common issues that may arise in PLC systems.

SCADA (Supervisory Control and Data Acquisition):

Day 3:-

i) Introduction to SCADA:

Understanding the principles of SCADA systems, their role in monitoring and controlling industrial processes, and their relationship with PLCs.

ii) SCADA Architecture:

Learning about the different components of a SCADA system, including Remote Terminal Units (RTUs), Master Terminal Units (MTUs), communication networks, and Human-Machine Interfaces (HMIs).

iii) SCADA Software Configuration:

Gaining experience in configuring SCADA software, including creating databases, setting up communication protocols, and developing HMIs.

Day 4:-

i) HMI Design:

Learning how to create user-friendly interfaces for operators to monitor and control processes, including designing screens, adding dynamic elements, and configuring alarms.

ii) Data Acquisition and Logging:

Understanding how SCADA systems collect data from various sources, store it in databases, and generate reports.

Day 5:-

i) SCADA Security:

Learning about the security measures necessary to protect SCADA systems from unauthorized access and cyber threats.

Day 6:-

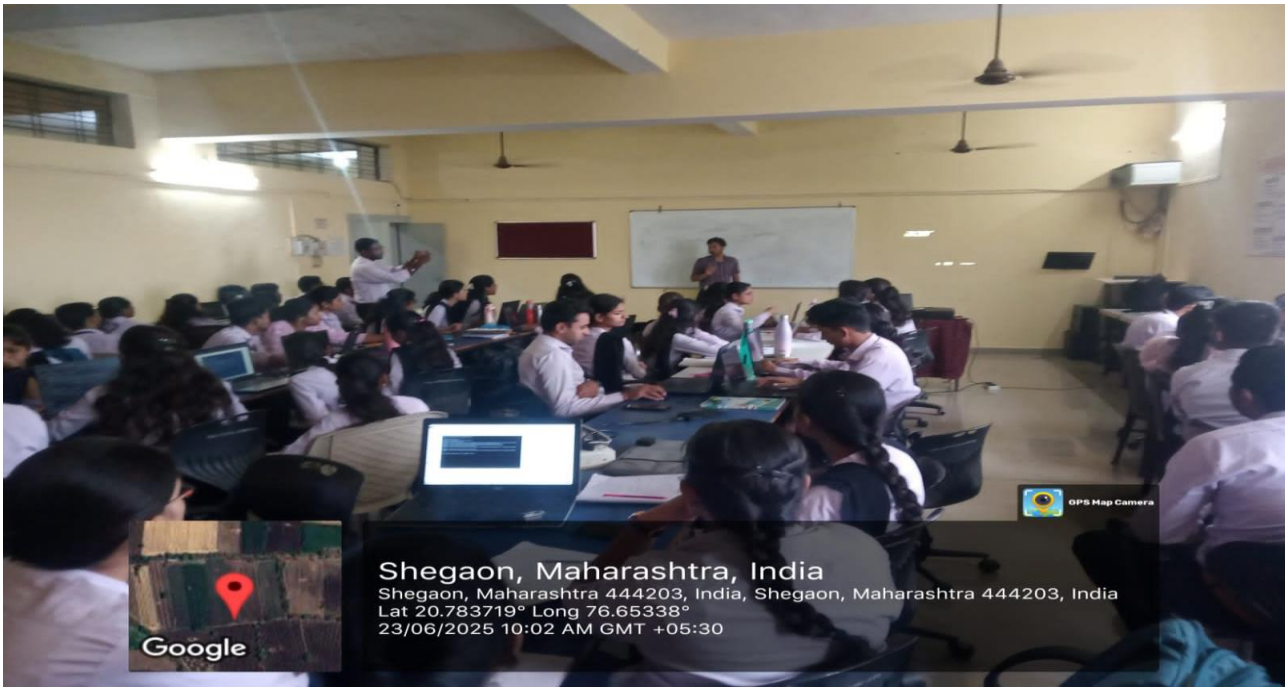
i) SCADA Troubleshooting:

Developing skills in diagnosing and resolving issues that may arise in SCADA systems, including communication problems and data inconsistencies.

ii) Interfacing with PLCs:

Learning how to establish communication between SCADA systems and PLCs to enable remote monitoring and control.

5 Days STTP Highlights:-



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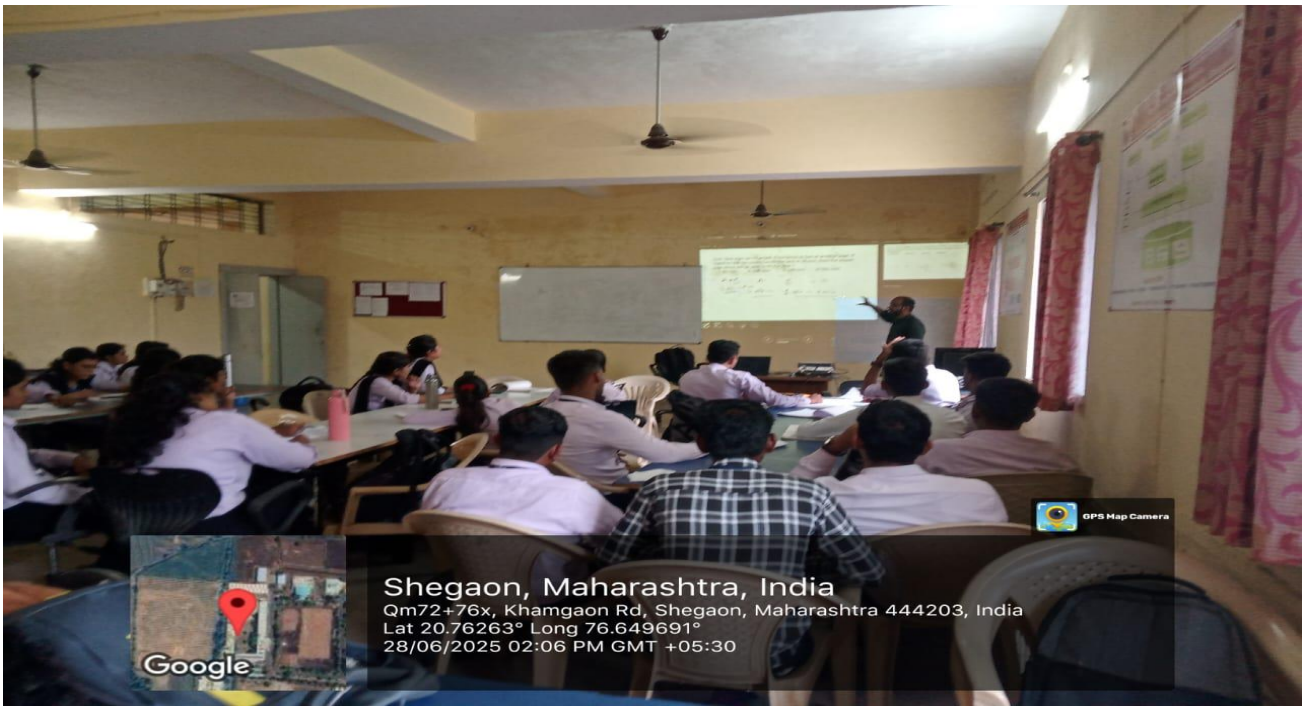


Valedictory Function

The program ended with the valedictory function which was graced with the presence of Mr. Tushar Badhe Sir, TPO, MGI-COET, Shegaon.

Tushar Badhe Sir, T & P Head, MGI-COET, in his valedictory talk, started with congratulating coordinators and organizing committee for the successful conduct of STTP. He also explained the importance PLC SCADA. He emphasized the need of such programs as they provide a unique opportunity to explore the boundaries of what is currently known in various domains of Engineering and Technology, through a range of research experience. He also mentioned that such programs provide a common platform to discuss and learn new methodology to upgrade ourselves.

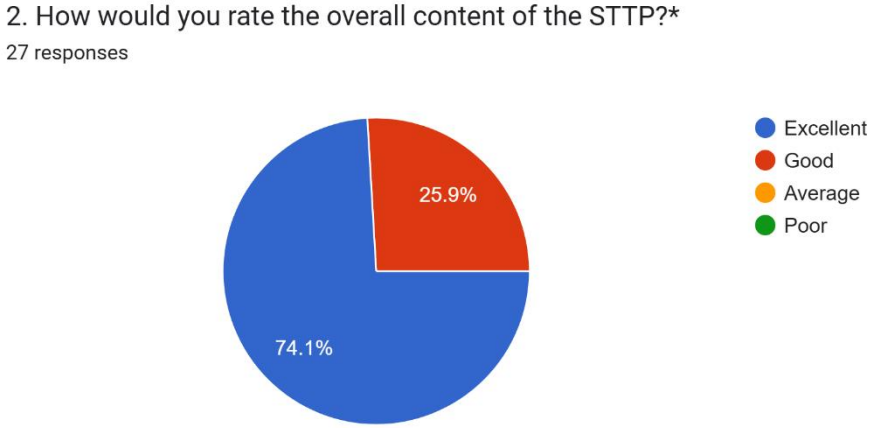
"Valedictory function with TPO, MGI-COET, Shegaon. Mr. Tushar Badhe Sir"

Feedback and Suggestions

Participants expressed high satisfaction with the quality of the sessions and the depth of content covered. They appreciated the practical sessions, which allowed them to apply the theoretical knowledge gained during the lectures. The feedback indicated that the training program was a valuable learning experience and would be beneficial for future research and teaching initiatives.

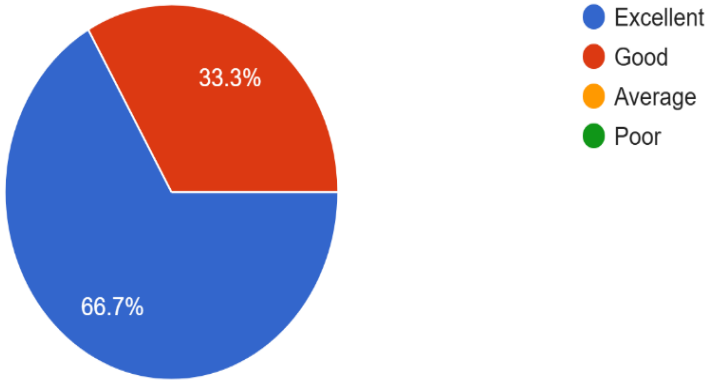
Suggestions for future programs included:

- Providing more time for practical hands-on work.
- Expanding the scope to cover more advanced topics like simulation optimization.



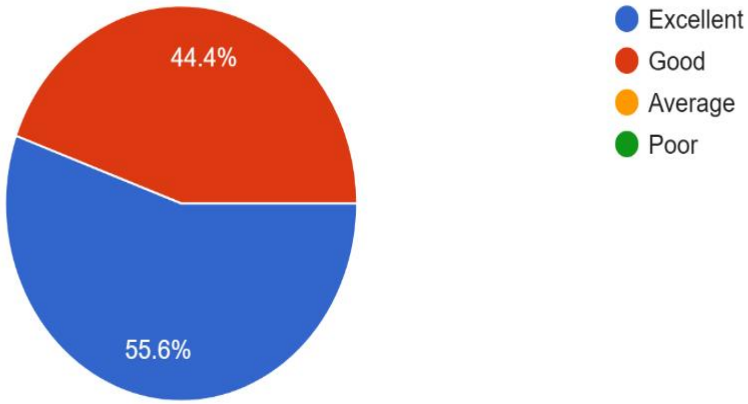
3. How relevant was the content to your professional development?

27 responses

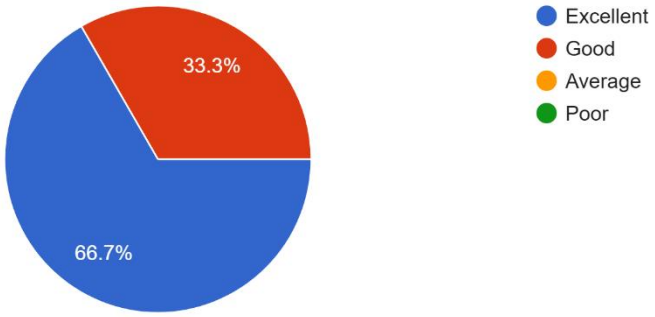


4. How engaging and clear were the instructors in their explanations?

27 responses



5. Overall, how satisfied are you with the STTP?
27 responses



6. Do you have any suggestions for improving the training? 14 responses

No
Everything is good for the session ☺
Everything is good no need to improve
Training session is very well
Good
Everything is good.
Respected sir has teaching is in simple concept and good explanation
It's good and got solved many doubt about
Easy to understand

Program Outcomes

By the end of the 6-day program, participants gained:

- **Improved Understanding:** Participants gained a comprehensive understanding of **PLC** and SCADA and its applications in mechanical engineering.
- **Enhanced Practical Skills:** They developed hands-on expertise on Ladder Diagram. Elaborate the working of various sensors, Transducers and actuators used in industrial automation.
- **Real-World Applications:** Exposure to real-world case studies provided insights into solving practical engineering problems using simulation tools.
- **Industry-Academia Collaboration:** The program strengthened links between industry and academia through interactions with experts and professionals.

Prof. S. R. Chauhan
ISTE Dept. Coordinator

Dr. M. A. Beg
HOD

Dr. C. M. Jadhao
Principal

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List of Faculty Development Program / Details

TECHNICAL TRAINING ON PLC AND SCADA

APPROVED

Name and Address of Host Institution

Name:	Email:	Phone:
M. G. OF INSTITUTION'S COLLEGE OF ENGG. & TECH.	rahul4ingle@gmail.com	9730752607

City:	State:	Pin Code:
DIST. BULDHANA	MAHARASHTRA	444203

Address:

KHAMGAON ROADSHEGAON-

Incharge Details

First Name:	Last Name:	Designation:
DR. C. M. JADHAO	Jadhao	Professor

Email:	Mobile Number:
dr.rahulingle@gmail.com	9730752607

Program Details

Intended For:	Specialization:	Course Type:
Student and Teachers	Electrical	Subject updating course

Programme Duration:

One week

Proposed Dates(From-To) :	Proposal covered categories:
6/23/2025 - 6/28/2025	Industry-based programmes with substantial involvement of industry and its experts

Do you have enough expertise within your institute and neighbouring places to offer the course satisfactorily :

No

Name Of Subject Expert

Mr Mohan Patel	Adayprabhu
Mr Hassan Sazil	Mr Hassan Sazil

Course Coordinators

Details	Coordinator 1	Coordinator 2
Name	Prof S R Chauhan	Prof A P Padol
Designation	Assistant Professor	Assistant Professor
Address	Shegaon	Shegaon
Telephone	09096456969	07020734482
Mobile	9096456969	7020734482
Email	src5xv@gmail.com	abhijit.padol@gmail.com
Highest Qualification	M Tech	M E
Area Of Specialization	Eelctrical	Electrical
Teaching Experience(Years)	1	11
Industry Experience(Years)	4	0
Total Paper Published	3	5
Total Short Term Courses Attended	1	10
Total Short Term Courses Conducted	0	0

Course Details

Significance & Objectives of the programme

- To provide a comprehensive understanding of industrial automation systems

Developing SCADA	10	Mr Hassan Sazil
Ladder logic	5	Mr Mohan Patel
HMI Design	10	Ms Shweta Adayprabhu
Data Acquisition	5	Mr Hassan Sazil
Networking	5	Mr Mohan Patel

Course Schedule

Total Working Days	Lecture(hrs)	Practical(hrs)	Visits(hrs)	Others(hrs)	Tota Enga
6	20	20	2	4	46

Details of special equipment or laboratory facilities available for the course

Computer and PLC and HMI

Collaboration with Regulating Authority / Department

Organization	Nature Of Collaboration	Expert Name	Area Of Expertise
Gryphon	MOU	Ms Shweta Sanjay Adayprabhu	Design

Details of Course Faculty

Name	Designation	Institute	Highest Qualification	Specialization
Ms Shweta Sanjay Adayprabhu	Trainier	Gryphon	M E	Design

Audio Visual Facilities:

- LCD Projector

Mode of Course:

Offline

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Membership Number	Certificate
2194	View Download

Does your institution have an ISTE Faculty Chapter : Yes

Chapter Certificate

Chapter Number	Certificate
MAH 204	View Download

Certified By Coordinator

Name:	Place:	Date:	Signature:	
Prof S R Chauhan	SHEGAON	6/20/2025	View	Download

Certified By Principal

Name:	Place:	Date:	Request Letter:	
Dr C M JADHAO	SHEGAON	6/20/2025	View	Download

Signature:

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