



# Joint Online Faculty Development Program (FDP) with TATA IIS

## Industrial PLC Programming & Industry 4.0 Applications

### Course Date & Duration

13 July to 17 July 2026

Daily 3 Hours



## **FACULTY DEVELOPMENT PROGRAM (FDP)**

### **Industrial PLC Programming & Industry 4.0 Applications**

**A structured Faculty Development Program (FDP) aimed at upskilling educators in modern industrial automation technologies.**

#### **Parameter Details**

Participants	Faculty members of Diploma and Degree Engineering Colleges
Program Duration	15 hours (3 hours per day for 5 days)
Delivery Mode	Online



#### **Program Objectives**

**By the end of this FDP, participants will be able to**

- Understand the role of PLCs in industrial automation and Industry 4.0.
- Explain PLC hardware architecture and automation system fundamentals.
- Develop and simulate basic PLC ladder logic programs.
- Configure digital operations, timers, counters, and PLC tags.
- Understand PLC networking, HMI integration, and industrial communication basics.
- Relate PLC applications to modern manufacturing industries.
- Design practical learning activities and mini-projects for engineering students.

## Fee Structure

# ₹ 1,700 PER PARTICIPANT

## Registration and Payment link

<https://u.payu.in/PAYUMN/frWSYPU8tAmf>



Scan to Register and Pay



## Chief Patrons

**Hon. Mr. Vishal Dada Patil**

**Hon. Mr. Amit Dada Patil**

## Patrons

**Dr. Santosh Mohite,**  
Director, P.V.P.I.T.

**Dr. Sachin Sawant,**  
Representative, TATA IIS

## Convenor

**Dr. Shital S. Gunjate,** Dean Training And Corporate Relations

## Institutional Advisory Committee

**Dr. A.B. Shinde,**  
Dean Academics

**Dr. N.S. Bembade,**  
Dean R and D

## Co-ordinator

**Dr. Sneha A. Patil,**  
Dean, Industry  
Institute Interactions

**Dr. Sandesh S. Awati,**  
Dean, Student Welfare

## Day-Wise Training Schedule

**The curriculum is divided into five distinct modules designed to take participants from foundational automation principles to advanced smart manufacturing deployment.**

Day / Duration	Module	Topics Covered	Learning Focus
Day 1 (3 Hours)	Industrial Automation Fundamentals	Industry 4.0, Automation Ecosystem, PLC Overview, Industrial Safety, 5S, PLC Hardware Architecture	Understand modern industrial automation systems and PLC fundamentals
Day 2 (3 Hours)	PLC Programming Fundamentals	PLC Software Interface, Ladder Logic Basics, Digital Logic, PLC Addressing, Digital Inputs & Outputs	Develop foundational PLC programming and digital control skills
Day 3 (3 Hours)	Timers, Counters & Structured Programming	PLC Timers, Counters, Sequencing, PLC Tags, Data Types, Function Blocks	Build structured PLC logic for industrial automation applications
Day 4 (3 Hours)	PLC Networking & HMI Integration	Industrial Communication, PLC Networking, Ethernet Communication, HMI Basics, Visualization	Understand industrial connectivity and HMI integration concepts
Day 5 (3 Hours)	Advanced PLC Applications & Troubleshooting	Smart Manufacturing Applications, Material Handling Automation, Motor Control, Process Automation, PLC Troubleshooting, Predictive Maintenance	Apply PLC concepts to industrial automation and troubleshooting scenarios

**Implementation Note:** The progressive structure of this course ensures that faculty members can seamlessly transition from understanding hardware architectures to designing comprehensive mini-projects, enriching the academic experience for their engineering students.

Dr. Vasantroodada Patil Shetkari Shikshan Mandal's