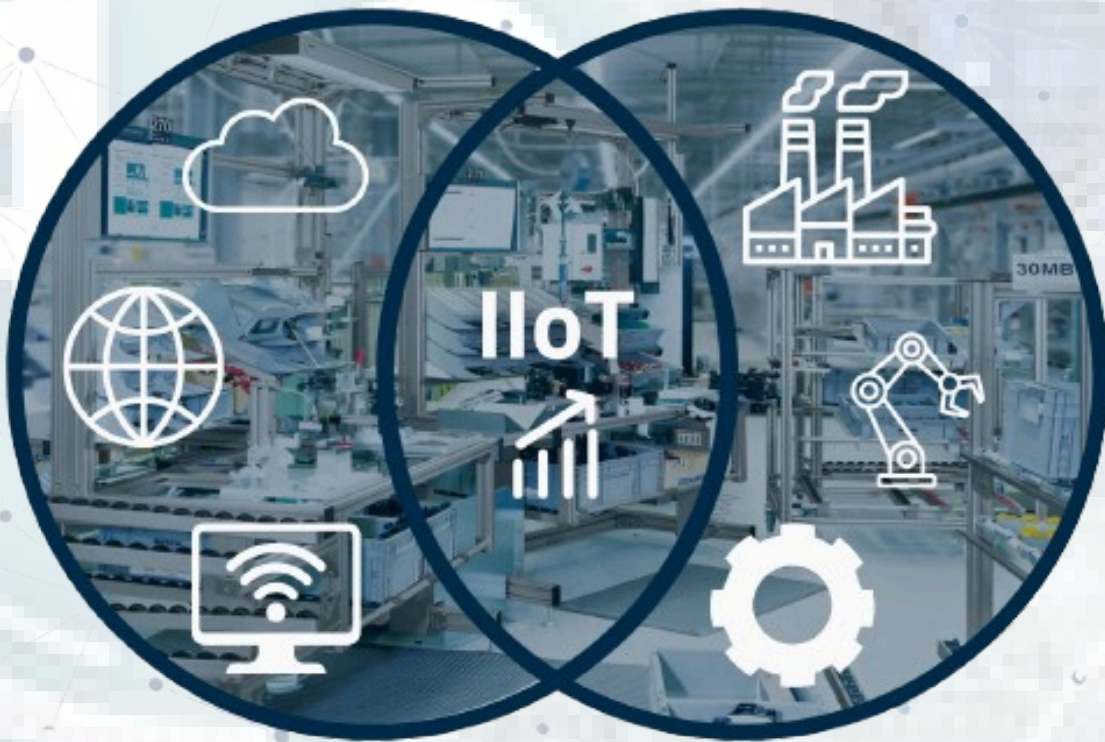# Industrial Automation with Industry 4.0

Sponsored by Premier Mills Pvt. Ltd., Coimbatore

19th - 31st January 2026
Time: 10.00AM

Venue:Tamilnadu Smart and Advanced Manufacturing Centre, C-wing North, 6th floor,Tidelpark,Taramani, Chennai - 600113

# Industrial Automation with Industry 4.0

## CSIR–Central Scientific Instruments Organization (CSIO)

- Training Coordinator (CSIR–CSIO)
  **Dr. C. Sethuraman**
  Senior Principal Scientist & Nodal BDG
  CSIR–Central Scientific Instruments
  Organization (CSIO), Chennai

## Hindustan Institute of Technology & Science

- Training Coordinator
  **Dr. S. Priya**
  Director SOM

## Tamil Nadu Smart Advance Manufacturing Center

- TANSAM Center Head
  **Mr. Girish Ramakrishnan**
  Chief Executive Officer

- Training Organizer
  **Mr. Natesh C**
  Manger

- Training Coordinator
  **Mr. Praveen Kumar G**
  Industry 4.0 Specialist

# Industrial Automation with Industry 4.0

## Terms & Conditions

- **Eligibility:** The training program is open only to PG Engineering students from relevant disciplines such as Instrumentation Engineering, Embedded Systems, Control & Instrumentation, Power Electronics & Drives, and Communication & Networking.

- **Training Duration:** The program will be conducted for 12 working days as per the approved schedule. Participants are expected to attend all sessions.

- **Attendance:** A minimum of 80% attendance is mandatory to be eligible for the certificate.

- **Certificates:** Certificates will be issued only to participants who successfully complete the training and meet attendance requirements. Certificate distribution will take place on the Valedictory Day (Day 12).

- **Food & Refreshments:** Lunch and tea will be provided on all training days. Accommodation and travel expenses will not be provided.

- **Discipline:** Participants are expected to maintain discipline, professional conduct, and follow laboratory safety guidelines throughout the program.

- **Use of Facilities:** Training equipment and lab facilities should be used carefully. Any damage caused due to negligence will be the responsibility of the participant/institution.

# Industrial Automation with Industry 4.0

Course Title: Industrial Automation with Industry 4.0
Total Duration: 84 Hours
Mode: Offline
Duration: 2 Weeks
Week 1 – Foundation & Core Automation

| Day | Training Focus | Module Coversge | Key Outcomes |
|-----|----------------|-----------------|--------------|
| Day 1 | Program Inauguration & Overview | Introduction to Industry 4.0 | Understanding Industry evolution, CPS, Smart Factory concepts |
| Day 3 | PLC Logic Development | PLC Programming Basics | Ladder logic, timers, counters, PLCSIM simulation |
| Day 4 | Advanced PLC Programming | PLC Programming Basics | Structured Text, debugging, program structuring |
| Day 5 | Industrial Field Devices | Industrial Automation & HMI | Sensors, actuators, wiring, signal conditioning |
| Day 6 | HMI & Control Integration | Industrial Automation & HMI | HMI design, alarms, PLC–HMI communication |

# Industrial Automation with Industry 4.0

## Week 2– IoT, Smart Applications & Project

| Day | Training Focus | Module Coversge | Key Outcomes |
|---|---|---|---|
| Day 7 | Automation System Design | Industrial Automation & HMI | Control loops, interlocks, fault handling |
| Day 8 | Industrial IoT Basics | IoT & Cloud Integration | Node-RED setup, MQTT, data flow concepts |
| Day 9 | Cloud & Dashboards | IoT & Cloud Integration | Siemens Insights Hub, real-time monitoring |
| Day 10 | Smart Manufacturing Use Cases | Smart Applications | Predictive maintenance, OEE, energy monitoring |
| Day 11 | Emerging Technologies | Emerging Trends | Digital Twin, AI in manufacturing |
| Day 12 | Capstone Project & Assessment | Project | Project execution, presentation, viva |