

## Introduction to Industry 4.0 (DIGI-IN4.0)

---

### Content

---

#### History of industrial revolutions

- Introduction to Industrial revolutions – 1.0, 2.0, 3.0 & 4.0
- IIoT Emerging force in every industry
- Rise of cyber physical systems
- Scope of IoT in manufacturing Industries
- Evolution and its impact

#### TIA portal programming interface and hands-on

- S7 communication
- OPC UA
- Modbus TCP/IP
- Profinet

#### TIA portal programming interface and hands-on

- Siemens PLC's and SCADA Portfolio with Information Regarding Licensing of Software with TIA Portal V 16.X
- Configuring PLCs
- FC, FB, DB concepts
- Implementing basic programming via tasks
- Setting up Data points

#### Introduction to Cloud technology and overview of deployment models

- Siemens offering in cloud technology - MindSphere open IoT cloud platform long with details licensing, hardware & software solution.
- Siemens Use case & its impact on customer business.
- Overview of data analytics (DA) and impact on upcoming trends

#### Setting up the IOT 2040 & Hands-on

- Introduction to hardware
- Commissioning of the IOT2040
- Changing the IP-Addresses
- Establish internet connection on device – wireless / LAN
- Connectivity with Clouds like MindSphere

#### Data Acquisition & Visualization

- Creation of local dashboards
- Data visualization on MindSphere
- Data acquisition for cloud services using MindConnect IoT gateway
- End to End data visualization using Mind Apps like Notifier etc.

#### Cybersecurity

- Industrial Security Basics
- Recognize what risks your plant may be subject to.
- Configure and integrate suitable devices into your system to prevent unwanted access
- Need of industrial security, difference btw OT/IT security & SIEMENS solutions along with use cases

#### Introduction to cutting edge technologies

- Introduction to WinCC Unified
- Introduction to Industrial Edge at Siemens
- Concept of digital twin and Siemens offering
- Overview on Virtual commissioning and operator training with SIMIT
- Introduction to ML and AI
- Industrial 5G

#### Hands-on

- Demo using available hardware
- Exercises defined based on Topic explained.

#### Prerequisites

---

Participants should have the knowledge of

- TIA portal & STEP 7
- Programming a PLC with the use of basic instructions
- Various communication protocols

---

**Type**

Face-to-face training

---

**Duration**

3 days

---

**Language**

en

---

**Fee**

19,500 INR

18% GST additional on course fees