Industrial Automation

Overview:

Automation, or automatic control, includes the use of various control systems for operating equipment such as machinery, processes in factories, boilers and heat-treating ovens, switching on telephone networks, steering, and stabilization of ships, aircraft, and other applications and vehicles with reduced human intervention. Automation covers applications ranging from a household thermostat controlling a boiler to a large industrial control system with tens of thousands of input measurements and output control signals. In control complexity, it can range from simple on-off control to multi-variable high-level algorithms. PLC or Programmable Logic Controller is an industrial digital computer and its course makes you ready for the mechanical automation process in manufacturing units and construction buildings.

Course Combinations List:

- Basics of Industrial Automation -
  Duration: 36 Hours (12 sessions* 3 hours)
- Advance Course of Industrial Automation-
  Duration: 50 Hours (16 Sessions * 3 hours)

Who Can Enroll?

This training is for the person who wants to enter into their respective core field in Electrical, Automation and Instrumentation field.

- Graduates in Electrical / Electronics / Control & Instrumentation Engineering.
- Working Staffs in Electrical / Electronics / Control & Instrumentation Engineering Related Field.
- College Students in Electrical / Electronics / Control & Instrumentation Engineering Studies

Scope of Industrial Automation Training:

- Operation & Maintenance Engineer
- Application Engineer
- Erection & Commissioning Engineer
- Project Engineer
- Technical Marketing Engineer
- SCADA & HMI Development Engineer
- Control & Instrumentation Engineer
- PLC Programming Engineer

Career of Industrial Automation Certified People

- Power plants
- Petro Chemical
- Oil & gas
- Off shore Industry
- Refinery
- Industrial plants
- Energy sector
- Chemical process
- EPC industry
- Consulting engineers
- Pharmaceutical industry
- Project & Construction
- Automotive Industries
- Aviation Industries
- Food & Beverage
- Water treatment plants
- Cement and Fertilizer

Training Features

- Industry experienced Trainer with 14+ years in Industrial Automation engineering.
- Training based upon live projects on Industrial Automation engineering.
- Sample Projects on Industrial Automation Engineering
- Audio & Video tutorials plus Hands on training on leading software.

Basic Industrial Automation Course

Duration: 36 Hours (12 sessions* 3 hours)
(10 Physical Classroom sessions+ 2 sessions Onsite Training)
Cost: 1,000,000 UGX

Course Outline

1. **Basics**
- Electrical basics
- Industrial Field Instruments
- Process Industry Instruments
- PLC, HMI, VFD Introduction and Basics
- Servo Motor and its basics

2. **Electrical Control System Training**
Industrial Control and Process Industry Field Equipment's
- Relay Logics
- Sensors and its Classifications
- Control Valves and its Classifications
- Variable Frequency Drive and its basics
- PLC and HMI basics
- Servo Motor and its basics

3. **Basics of VFD Training**
- VFD basics and VFD Selection
- Parameterisation
- Rated Voltage and Rated Current
- Rated Voltage and Commissioning, No Load Test
- Interfacing PLC to VFD
- Speed Modulation and ON/OFF Command
- Trip Status and PID Tuning

4. **Basics of PLC Training**
- PLC basics
- PLC fundamentals
- PLC hardware and operation
- PLC programming Basics
- PLC implementation
- HMI (Human Machine Interface) Introduction

Advance Industrial Automation Course

Duration: 50 Hours (16 Sessions * 3 hours)

(10 physical+ 5 online software training by Experts from India +1 Industry Visit)

Training Cost: 1,800,000 UGX

COURSE OUTLINE

1. Basic Industrial Automation Course

2. Advanced PLC Training

- PLC Programming
- Instruction examples
- PLC programming best practices
- Study real world programs
- Programming projects
- PLC Communications
- Industrial Network

1. PLC Troubleshooting

- Hands-on PLC Training
- Problem solving basics
- PLC troubleshooting best practices
- Experience troubleshooting faults using PLC

2. Servo Motor And Drive Training

- Servo Drive Programming Manual and Software
- Instruction examples
- Servo Drive programming best practices
- Study real world programs
- Programming projects
- Servo Drive Communications