Haridwar Centre

रा.इ.सू.प्रौ.सं
NIELIT

National Institute of Electronics and Information Technology

(An ISO 9001:2015 certified Organization)

Ministry of Electronics and Information Technology

Government of India

Online Course Prospectus

Industrial Automation Using PLC & SCADA

Course Description

The objective of this course is to enable students to enhance their knowledge about automation in industries using various automation tools like PLC, SCADA, HMI, etc. also student will interact with various instructions and commands used in PLC and SCADA and can able to design ladder logic program and SCADA window program for industrial automation. The course is best suited for the students who want to explore their career as a PLC programmer or as a maintenance engineer.

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OR

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Who can attend?

Anyone who is interested to build their career in the field industrial automation or as a PLC programmer/maintenance engineer.

- Beginners.
- Appearing or pass out engineering students looking to upgrade their knowledge and expertise in this area.

Course Content for PLC

- Introduction to industrial automation
- Relay operation
- Introduction to Programmable Logic Controller
- Introduction to Siemens STEP-7 SIMATIC manager
- Working with STEP-7 SIMATIC manager
  - SIMATIC manager toolbar description
  - Hardware description & configuration of S7-300 (CPU ET200s,CPU 313c etc.) series
  - Configuration of PG/PC interface
- STEP-7 addressing mode (input, output, & memory)
- Introduction to PLC programming
  - Ladder logic concepts
  - Latching & unlatching concept
  - Interlocking concept
- Power circuit and control circuit of Star & Delta starter
- Memory concept
- Working operation of various instructions and functions block (bit logic, comparator, convertors, counter, timer, DB call, jump, integer, floating point, move, program control, word logic, status bit, shift and rotate).
- Exercise- : Designing of Ladder logic program for different Industrial Applications

Course Content for SCADA

- Introduction to SCADA
- Working with communication tags
- SCADA Window Creation
- Recipe Creation
- Alarm Management
- Historical Data
- Open Database Connectivity (ODBC)
- Report Generation
- Exercise- : Designing of SCADA program for different Industrial Applications

Prerequisite

- Candidate must possess knowledge of computer.

Duration

- 8 Weeks (without project) / 10 Weeks (with project)

The internship/industrial training programme includes about 80 Hrs of intensive interactive instructor-led online sessions and about 120 Hrs of practical assignments that student can perform at their end. In some training programmes, the facility of virtual lab can also be extended subject to availability. The ten weeks programme includes two weeks (20 Hrs.) of project that student is required to develop and a presentation is to be made by student (in Online mode) to the faculty.

Certificate

E-Certificate will be issued to each participant after completion of the training. Participant needs to maintain minimum 75% attendance during the online classes and is required to score minimum 50% marks in the online test in order to successfully complete the course.

Minimum Requirements

- Candidate must have latest computer/laptop with preferably 4 GB RAM or higher.
- Candidate must have downloaded .net framework 3.5 directly from Microsoft site to support
  SIMATIC STEP-7 Professional software.
- Software-:
  - SIMATIC STEP-7 Professional for Ladder logic programming.
  - SIMATIC WinCC flexible for SCADA.

How to Apply

Interested candidates may apply online on the link https://nielit.gov.in/haridwar/content/online-courses after submitting the Course Fee in following account:

Name	**:**	NIELIT Haridwar
Account Number	**:**	12922122001331
IFSC Code	**:**	PUNB0129210
Bank Name	**:**	Punjab National Bank
Branch	**:**	Pentagon Mall, SIDCUL, Haridwar

NOTE: Copy of transaction slip is required to be uploaded at the time of filling online form. Candidate may keep a copy of the same for future reference.

Terms and Conditions

1. In case, any registered candidate could not attend the online session due to technical issue at their side there will not be any refund of the course fee and the sessions will not be repeated.
2. In case, the online course is cancelled/postponed due to some technical issue at NIELIT side and new date is not convenient to the candidate, our liability is limited to the refund of the course fee and NIELIT shall not be responsible for any consequential damages.

Course Coordinator

Mr. Kailash Chandra Joshi
Ph: 8171627088
Email : haridwar@nielit.gov.in

Faculty Profile

Mr. Sandeep Pharswan, B.Tech (ECE) having 7+ years of teaching experience

NIELIT Haridwar is the Regional Centre of NIELIT in the state of Uttarakhand and is situated in SIDCUL Haridwar. It is well known for the advanced training programmes in the areas of Future Skills such as **Cloud Computing, Machine Learning, Artificial Intelligence, Internet of Things, MATLAB, Big Data, Embedded Systems etc** in addition to the various National Skill Qualification Framework (NSQF) aligned long-term and short-term courses in Electronics & Information Technology. The Centre has **MOUs** with various prestigious institutions and Universities of Uttarakhand for academic collaboration, technical support, summer/industrial training and internships of the students. The Centre provides a conducive learning environment with the state-of-the-art infrastructure and expert faculties.

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