

Engineering Staff College of India

Autonomous Organ of The Institution of Engineers (India)



Old Bombay Road, Gachi Bowli, Hyderabad – 500 032. TS, India

POWER & ENERGY DIVISION

Classroom Continuing Professional Development Programme on

PLC, DCS & SCADA for Power Plants and Process Industries

12 - 15 September, 2023

at ESCI, Hyderabad





(An IMS Certified (ISO 9001:2015 QMS, ISO 14000:2015 Envtl. Mgmt., ISO 45001:2018 (OH&SM), ISO 50001:2018 EnM), AICTE & CEA Recognized Institution)

Centre for Promotion of Professional Excellence

INTRODUCTION

Any industry with a complex process needs continuous monitoring and control of process variables to ensure the final product conforming to the required specifications. It may require sequencing of various processes / repetitive operations in a particular order. This, in a nutshell, is Automation. Industrial automation refers to application of various control systems to operate equipment in factories or other manufacturing units. Today, industrial automation is used for operating several factories, machinery, heat treatment furnaces, steering and ship stabilization, switching on telecom networks, aircrafts and related applications, and automotive assemblies. Over several years, with incredible investment in research and development, the global industrial automation market has evolved to reduce the burden of labor on humans.

Programmable logic controllers popularly known as PLC are highly helpful in this regard. When the process has large number of control loops breaking down to sub processes and each sub process having large number of drives to be controlled employing a Distributed Control System (DCS) would be essential. Most complex process industries such as Chemical, Petrochemical industries and Power Generating Stations need clear understanding of the Control loops and Distributed controls for achieving optimal performance.

OBJECTIVE

The objective of the course is providing in depth understanding of the PLCs and DCS for the Operation, control engineers in the Power Plant.

COURSE COVERAGE

- Understanding the Role of Control Systems and Supervisory Systems in a Process Industry / Power Plants
- Building Control Logic using Logic Gates
- Programmable Logic Controllers (PLCS) Hardware, Software & Interfacing to Actuators
- PLC Interface Standards
- PLC Applications
- Overview of DCS Monitoring Critical Parameters in Industry and Power Plant
- Binary On-Off Control Systems for Interlocks & Protection
- Binary Automatic Sequence Controls for Automatic Start-up and Shutdown
- Typical Specifications of DCS
- Trouble Shooting
- DCS Applications, Advances, Industrial Internet of Things & Case Studies
- Practical Demos on PLCs & DCS
- Retrofits
- Hands on experience on PLC's in Classroom Demonstration

METHODOLOGY

The programme will be conducted in an interactive environment providing greater scope for discussions. Emphasis will be on a highly participative style of learning. The classrooms are provided with latest audio – visual teaching aids. The ambience in the campus and classrooms facilitate in effective learning by participants.

FACULTY

Apart from Core Internal Faculty, Consulting Firms, Government Organisations, Manufacturing, Academic and Research Institutions etc. will share the sessions.

TARGET PARTICIPANTS

Operation / Control / Electrical / Instrumentation Engineers from Process Industries and Power Generating Plants / Faculty and Lab Assistants from Educational Institutions.

PROGRAMME VENUE, DATES & TIMINGS

Engineering Staff College of India (ESCI) Campus, Old Bombay Road, Gachi Bowli, Hyderabad - 500032, Telangana, India

DATES

12 - 15 September, 2023

TIMINGS

On the first day registration will commence at 0900 Hrs. On all other days the programme timings will be from 0945 to 1715 hrs with breaks in between for tea and lunch.

ACCOMMODATION

Participants will be accommodated in our Executive Hostel located within ESCI Campus. The accommodation will be on twin sharing basis.

COURSE DIRECTOR

Dr. V. Vidyasagar

Sr. Faculty - Power & Energy Division, ESCI (Mob: 9421801203)

COURSE FEE

Residential Fee is Rs.22,000/- per participant. Residential fee includes Course Material, Course Kit, and Twin-sharing / Single AC accommodation as per availability, Breakfast, Lunch, Dinner, Tea / Coffee and Snacks.

DISCOUNTS

Non-Residential Fee: 10% discount on course fee is allowed for non-residential participants.

Group Discount: 10% discount for three or more participants if sponsored by the same organization.

(All discounts are applicable only if fee is received at ESCI a week before the commencement of the programme)

GST @18% (as applicable) is to be paid extra over and above the training fee. ESCI's **Provisional ID No. 36AAATT3439Q1ZV, PAN Card No. AAATT3439Q**.

The course fee is to be paid in favour of "IE (I) – ENGINEERING STAFF COLLEGE OF INDIA" in the form of demand draft payable at Hyderabad.

Alternatively the payment may be made by **Electronic Fund Transfer (EFT) to ESCI** – **Current A/c No. 33705165550** with The SBI, Manikonda Branch, Gachi Bowli, Hyderabad – 500 032 by **NEFT / RTGS / IFSC Code No: SBIN0011076 – MICR No: 500002107.**

While using EFT method of payment, please ensure to communicate us your company name, ESCI invoice reference and programme title.

Online registration is available on ESCI website. To register, manually please send your nominations (**10 days** prior to date of commencement of the programme) giving details of name, designation, contact address, email address, mobile number, telephone and fax number of the participant along with the details of mode of payment of fee, addressed to:

Head, Power & Energy Division

Engineering Staff College of India Gachi Bowli, Hyderabad – 500 032 Phone: 040–6630 4170 to 4176 ; 040-6630 4173 / 4176, Fax: 040 – 23000336, 66304103 Email:pe.esci@gmail.com / pe@escihyd.org; Website: www.escihyd.org

CERTIFICATE: A certificate of participation will be awarded to each participant on conclusion of the programme.

GENERAL INSTRUCTIONS

- ESCI encourages participants to present case studies from their respective organizations.
- For the convenience of the outstation participants ESCI will facilitate pickup and drop from Airport / Railway Station / Bus Stations, if travel plans are received at least 3 days in advance along with mobile number by fax or email. The charges shall be paid by the participants directly to the cab driver.
- ESCI provides complimentary accommodation to participants a day prior to the commencement and after the conclusion of the programme. (Check in at 12:00 hrs a day prior to the commencement & check out at 12:00 hrs a day after completion of the programme)
- Overstay charges of @ Rs.990/- per day / per head (Food will be charged extra).
- Well-developed Information Centre and Internet facilities are available to the participants free of cost.