Advanced Diploma in PLC/SCADA/DCS Engineer

Objective of the Course:
This course is aimed at equipping a Diploma holder/ Engineer/B.Sc/M.Sc holder (in specific streams) with appropriate knowledge and skills in Industrial automation systems with the use of DCS, PLCs, Industrial Field Instruments, Industrial PCs, SCADA/ HMI and related Software.

Learning Outcomes:
Automation engineers to meet the requirements of setting up appropriate industrial automation systems.

Expected Job Roles:
  Instrumentation Engineer

Duration of the Course (in hours)   *360 hrs*

Appr. Fees (INR):   Rs. 34,000/- (Service Tax Extra)

Minimum eligibility criteria and prerequisites if any

    a. Diploma/B.Sc/M.Sc/BE/B.Tech in the following discipline. Electrical/ Electronics/ Instrumentation/ Industrial electronics/ Chemical Engineering/ Applied Electronics and Instrumentation/ Instrumentation & Control/ Electronics & Communication/ Mechatronics / Computer Science.

    b. Diploma/B.Sc candidates must produce Provisional / Degree certificate & M.Sc /BE/B.Tech Students must produce Course Completion/ Provisional /Degree certificate at the time of admission.

Outline of the Course

S. No	Topic	Minimum No. of Hours
1.	PLC & PID Controllers	
2.	SCADA/HMI System Development	
3.	Distributed Control System (DCS)	360
	Theory/ Lecture Hours:	80
	Practical/ Tutorial Lecture Hours:	280
	Total Hours:	360

Books recommended for reference and reading:

REFERENCES

1. Distributed computer control for Industrial Automation, by: Popovic & Bhatkar, Dekker.

2. Process Dynamics and Control, by: Dale E seborg, John Wiley.
3. Process Control- Modeling, Design and Simulation, by: B.Wayne Bequette, PHI.
4. Chemical Process Control- Introduction to Theory and Practice, by: Stepano Paulose, PHI.
5. Standard Recommended Practices for Instrumentation & Control, Vol 1-3,11[th] edition; Instrument Society of America.
6. Process Control Systems, application design and tuning, 3rd edition; by: F.G.Shinskey, McGraw- Hill.
7. Microsensors: Principles and Applications; by: Gardner, J W, Wiley (1994)
8. Measurement Systems, Application and Design, 4th edition; by: Ernest O.Doebelin, McGraw- Hill.
9. Industrial Instrumentation Principles and Design, 1st edition; by:Tattamangalam. R.Padmanabhan, Springer Verlag.
10. Handbook of Transducers, 1st edition; by: Harry N.Norton, Prentice Hall.
11. Advances in Distributed Sensor Technology; by: S.S.Iyengar, L.Prasad, Hla Min; Prentice Hall PTR
12. Introduction to Programmable Logic Controllers, Dunning, Gary
13. Programmable Logic Controllers: Principles and Applications, Webb, John W
14. Programmable Controllers, Theory and Implementation, L. A. Bryan
15. Manuals of PLC (ABB, AB and Siemens), DCS and SCADA

In addition manufacturer's device data sheets and application notes are to be referred to get practical application oriented information.

Group Code:	CADD	Group Name:	AutoCad / Instrumentation
Course Code:	AD02	Course Name:	Advanced Diploma in PLC/SCADA/DCS Engineer