



ISA-CIAT - PLC Automation for College Students

Bridging the gap between theory learned in college and knowledge applied in actual Industry

Syllabus - for students only 4 weeks			
Day 1	Module A	Module B	
Day 2	Module C	Module D	Module E
Day 3	Module F	Module G	
Day 4	Module G &	Practicals	
Day 5	Module H		
Day 6	Module H contd		
Day 7	Sunday		
Day 8	Practicals		
Day 9	Module I		
Day 10	Practicals		
Day 11	Module J &	Practicals	
Day 12	Practicals &	Module K	
Day 13	Module L		
Day 14	Sunday		
Day 15	Module L	Module L	
Day 16	Module L	Module M	
Day 17	Module M		
Day 18	Module M		
Day 19	Module M	Module N	
Day 20	Module N		
Last week : Introduction to new technology like GSM , Servo , Barcode and watching real time Industrial application movies, discussion and more PLC practice.			

We cover/teach PLCs used World Wide like Allen Bradley, Messung , Mitsubishi, Siemens, which also includes MMI , AC Drives and the most popular Intellution SCADA.

Topics Covered in 4 Weeks Diploma Batch

Program content

Module A **Basics of electrical**

This covers topics involving AC, DC voltages, hydraulics, pneumatics. Electrical symbols used in industries, 1Phase & 3Phase power supply.

Module B **Basics of electrical**

Control panel basics, Use of wiring & different PBs, Limit switches & Proximity sensors

Module C **PLC Details**

History of PLC, difference between relay, contactor & PLC logic, PLC architecture. A detail description of different PLC modules & cards.



Module D I/O configuration & Memory Mapping

Why I/O configuration is required? How the I/O modules are addressed for Messung, Mitsubishi, AB & Siemens - PLCs

Module E Programmers & Ladder diagrams

First steps with the programming device, introducing the basic ladder logic instructions, contacts, coils, and PLC scan.

Module F Introduction to Ladder Software

Covers Introduction to Allen Bradley, Siemens, Mitsubishi and Messung PLC ladder programming softwares.

Module G PLC Instructions Set

NO/NC, Set, Reset Instructions with examples

Module H PLC Instructions Set

Timer and Counter related Instruction with examples.

Module I PLC Instructions Set

Move, Compare, Arithmetic and Logical Instructions with examples.

Module J PLC Instructions Set

Jump and Subroutine Instructions.

Module K Trouble-Shooting & Fault Finding

Discussion on Fault Findings in PLCs, possible causes & its remedies.

Module L MMI

Introduction to MMI, its need, operation details and fundamentals of MMI, fault display in MMI, timer counter setting from MMI. Interfacing with PLCs.

Module M SCADA

Introduction to SCADA, configuration of different drivers, gateway. Database of tags and its se. Interfacing with PLC and simulation of PLC application in SCADA.

Module N AC Drive

Fundamentals of AC Drive, block diagram of AC drive, configuration of different drives. Control of drive with and without PLCs. Various applications of AC Drive. Interfacing with PLCs.

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