



CENTRE FOR DEVELOPMENT OF ADVANCED COMPUTING
A-34, PHASE VIII, INDUSTRIAL AREA, MOHALI
TELEPHONE NO: 0172-2237052,53,54,, 6619000 FAX : 0172-2237050
EMAIL: enquiry-mohali@cdac.in, website : www.cdac.in

SUMMER TRAINING ON “INDUSTRIAL AUTOMATION AND PLC PROGRAMMING”

Duration: 6 Weeks/3 Hours a day (including 2 weeks project work)

Fee: Rs. 6400/-+ TAX@14.5%, can be paid in cash at CDAC, Mohali during office hours or through Demand Draft drawn in favour of “Director CDAC”, payable at Mohali

ELIGIBILITY: B.E / B.TECH. 2ND OR 3RD YEAR STUDENTS

Course Contents

PLC (4 WEEKS)

- History of PLC's
- Advantages of PLC's over other type controls
- Block Diagram of PLC
- Functional Capabilities of PLC's
- Programming of PLC's with LADDER networks
- Instruction set: Bit level instructions, Timer/Counter, Compare, Move/Logical, Math, Program Control Instructions etc
- Advanced Instructions:: Pulse train output (PTO)/Pulse with modulation (PWM), High speed counters (HSC), Real Time (RTC), Proportional Integral Derivative Control (PID),Memory Module (MMI)
- Creating programs for various applications Simulated experiments):Star-Delta Starter, Direct online Starter, Resistance Welding, Traffic Lights, Tank Water Level Control, Reaction vessel, Sequential switching of motors, slipping motor starter, Analog Signal Processing
- PLC testing/troubleshooting through software
- PLC Communications
- Programming on Allen Bradley/Micrologix 1500, SLC5/01) through PSLogix 500 software
- Programming on Siemens (S7-200 CPU216) through Step7 Software

DRIVERS (1 WEEK)

- Basic Fundamentals and need of AC drivers
- Basics of AC motors, Construction, Working, Characteristics, various methods of speed variations
- Basics of AC drivers: Requirements
- Differential control strategies: Frequency control, vector control, Sensor less vector control, servo control
- Study of drive's architecture/Block diagram
- Programming of Siemens(Micromaster) AC Drive in various modes for speed control



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INTRODUCTION TO HMI (1 WEEK)

- Need of HMI
 - Configuration for given interface (screens) using: Push buttons, Indicators, text Boxes, Bar graphs, Graphics etc
 - Other features: Trends generation, Data logging, Alarm Generation
- The participants will be introduced to HMI systems

ALLEN BRADLEY

- Panel View

SIEMENS

- Protocol Pro
- Introduction to SCADA system

PROJECT WORK

- Final Project Design Review (PDR). Each project team presents development plan and milestones

HOW TO APPLY: For Admission, submit your College reference/training letter, admission form (download from www.cdac.in) along with full fee at CDAC, A-34, Phase 8, Industrial Area, Mohali .

NOTE:

- Seats are limited and admission is on first come first serve basis.
- Fee once deposited is neither refundable nor transferable from one course to another course.