THE ELECTRICITY FORUM
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Instrumentation and Control Training

Contact us Today for a FREE quotation to deliver this course at your company?s location.

https://www.electricityforum.com/onsite-training-rfq

This Instrumentation and Control training course is intended for electrical engineering and maintenance professionals, electrical technologists and technicians, and consulting electrical engineers who wish to learn how modern instrumentation and control systems are designed to control HVAC, water and wastewater, manufacturing, petrochemical and other industrial processes. The course is intended for those who work in related disciplines such as electrical, mechanical, chemical and civil. The course utilizes a comfortable learning pace, and live demonstrations. Packed with valuable information, the course takes the mystery out of instrumentation and control systems, and explains it all in clear, plain language. Our Instrumentation for Electrical Professionals Training course is designed to instruct electrical control professionals on how to successfully integrate Instrumentation and control technologies into their actual day-to-day industrial electrical processes. It not only deals with the hardware and software, but all the surrounding systems that must be compatible to achieve a safe and reliable Instrumentation and control system.

LEARNING OBJECTIVES

- Understand how instrumentation & control systems work - in plain language
- Be able to communicate intelligently with the I&C people in your company
- Work more effectively with I&C contractors
- Be able to design basic control systems
- Be able to create, load and debug basic PLC programs
- Understand how to specify instruments
- Understand SCADA, DCS and DDC systems—where and why they are used
- Understand the concepts of the new generation of digital controls
- Be able to read instrument and control drawings
- Know how to commission and test new installations

WHO SHOULD ATTEND

- Industrial, commercial, institutional electrical engineers, and technologists
- Consulting Electrical Engineers
- Project engineers
- Design engineers
- Field technicians
- Electrical technicians
- Plant operators
- Plant engineers
- Electrical supervisors

STUDENTS RECEIVE

- 100-Page Electrical Handbook - Value $20 (Details Below)
- 1.4 Continuing Education Unit (CEU) Credits
- A **FREE** Magazine Subscription (Value $25)
- **$100** Coupon Toward Any Future 2016 Electricity Forum Event (Restrictions Apply)
- Course Presentations In Paper Format

COURSE OUTLINE

DAY ONE

SESSION 1: INSTRUMENTATION AND CONTROLS INTRODUCTION

SESSION 2: TWO-STATE CONTROL: RELAYS AND TIMERS

SESSION 3: PROGRAMMABLE LOGIC CONTROLLERS

SESSION 4: ANALOG LOOPS

SESSION 5: ANALOG CONTROL WITH PLCs

SESSION 6: CONTINUOUS AND BATCH PROCESS CONTROL

SESSION 7: FEED-FORWARD CONTROL

SESSION 8: FEEDBACK CONTROL

SESSION 9: PROCESS LOOP RESPONSE AND DYNAMICS

SESSION 10: PID CONTROLLERS

SESSION 11: CONTROLLER TUNING

SESSION 12: P&I DIAGRAM

DAY TWO

SESSION 13: INSTRUMENT TERMINOLOGY

SESSION 14: INSTRUMENT ACCURACY & ERROR

SESSION 15: TEMPERATURE MEASUREMENT

SESSION 16: PRESSURE MEASUREMENT

SESSION 17: LEVEL MEASUREMENT

SESSION 18: FLOW MEASUREMENT

SESSION 19: ON-LINE ANALYZERS

SESSION 20: VARIABLE SPEED MOTOR DRIVES

SESSION 21: SAFETY AND MISSION CRITICAL SYSTEMS

SESSION 22: DIGITAL COMMUNICATIONS

SESSION 23: SCADA

SESSION 24: FIELD CONTROL SYSTEMS (FCS)

Questions and Answers

COURSE TIMETABLE

Both days:

Start: 8:00 a.m.
Coffee Break: 10:00 a.m.
Lunch: 12:00 noon

Restart: 1:15 p.m.
Finish: 4:30 p.m.