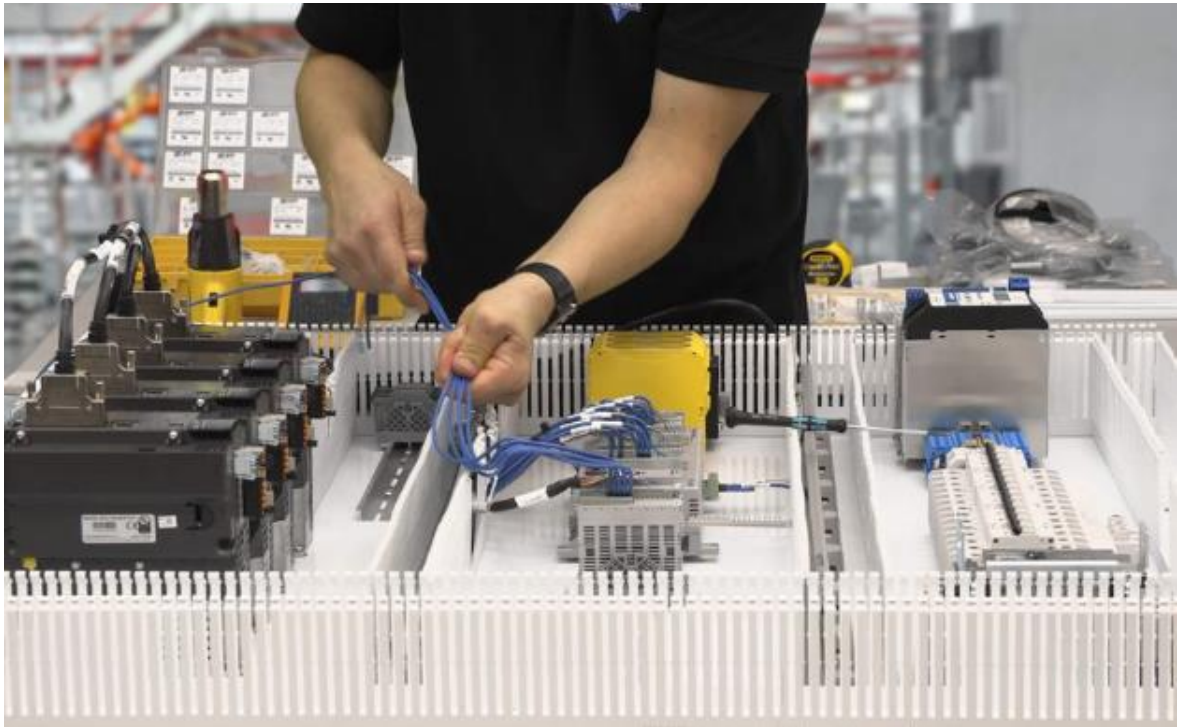




Control Panel Design & Construction

Course Introduction:

This 5-day theoretical training course, "Control Panel Design & Construction," is designed to provide participants with a comprehensive understanding of the principles, standards, and best practices involved in designing and constructing control panels. As industries prioritize automation and efficiency, mastery of control panel design is essential for ensuring system reliability, safety, and compliance with regulatory standards.

Throughout the course, participants will explore key topics such as electrical design principles, component selection, wiring practices, and the relevant industry standards governing control panel construction. By examining case studies and discussing the latest technologies, attendees will gain insights into the design process and the critical considerations that must be considered for effective control panel development. This course aims to equip professionals with the knowledge necessary to create robust and efficient control panels that meet the operational needs of their organizations.

Course Objectives:

By the end of the program, participants will be able to:

- Understand the fundamentals of control panel design and construction.
- Explore electrical design principles and industry standards.
- Learn about component selection and wiring practices.
- Analyze the role of safety and compliance in control panel design.
- Gain insights into best practices and emerging technologies in control panel construction.

Who Should Attend?

This course is intended for Electrical engineers and technicians, Control system designers and integrators, Automation and instrumentation professionals along with Project managers and supervisors in electrical construction.

Course Outline:

Day 1: Introduction to Control Panel Design

- Overview of control panels: definitions and significance
- Key components and functions of control panels
- Understanding the control panel design process

Day 2: Electrical Design Principles

- Fundamentals of electrical design in control panels
- Circuit design and layout considerations
- Introduction to schematics and wiring diagrams

Day 3: Component Selection and Wiring Practices

- Criteria for selecting components: relays, switches, and circuit breakers
- Best practices for wiring and interconnections
- Understanding power distribution in control panels

Day 4: Safety and Compliance Standards

- Overview of industry standards (IEC, NEMA, UL, etc.)
- Importance of safety in control panel design
- Risk assessment and mitigation strategies

Day 5: Best Practices and Emerging Technologies

- Case studies on successful control panel designs
- Discussion of emerging technologies in control systems
- Future trends in control panel design and construction

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work

Course Fees:

To be advice as per course location. This rate includes participant's manual, Hands-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session