



Busway System Design and Implementation

Course Introduction:

This course covers the principles, design, and implementation of busway systems in electrical distribution. Participants will learn about the components, configuration, and best practices for effective busway installation.

Course Objectives:

Upon the successful completion of this course, each participant will be able to:-

- Understand the fundamentals of busway systems.
- Learn how to design busway layouts for various applications.
- Develop skills for selecting components and materials.
- Familiarize with installation practices and safety considerations.
- Explore troubleshooting and maintenance techniques

Who Should Attend?

- ✓ Electrical engineers and designers
- ✓ Project managers in electrical construction
- ✓ Installation technicians and maintenance personnel
- ✓ Anyone interested in power distribution systems

Course Outline:

Day 1: Introduction to Busway Systems

- **Morning Session**
 - Overview of electrical distribution systems
 - Definition and purpose of busway systems
- **Afternoon Session**
 - Types of busway systems: insulated, uninsulated, and flexible busways
 - Key components: busbars, connectors, supports, and enclosures

Day 2: Design Principles

- **Morning Session**
 - Fundamental design considerations: current rating, voltage drop, and thermal management

- Busway layout design: straight runs, bends, and transitions
- **Afternoon Session**
 - Hands-on exercise: creating a basic busway layout using design software
 - Discussion on load calculations and distribution requirements

Day 3: Component Selection

- **Morning Session**
 - Criteria for selecting busway materials and components
 - Understanding electrical ratings and standards (e.g., NEC, IEC)
- **Afternoon Session**
 - Case studies: evaluating different busway systems for specific applications
 - Group activity: selecting components for a sample project

Day 4: Installation Practices

- **Morning Session**
 - Installation best practices: site preparation, alignment, and mounting
 - Safety considerations during installation: PPE and hazard identification
- **Afternoon Session**
 - Hands-on training: installing a busway system in a simulated environment
 - Review of installation checklists and documentation

Day 5: Maintenance and Troubleshooting

- **Morning Session**
 - Routine maintenance practices for busway systems
 - Common issues and symptoms: overheating, loose connections, and corrosion
- **Afternoon Session**
 - Troubleshooting techniques: using diagnostic tools and methods
 - Final discussion: lessons learned and future trends in busway technology
 - Conclusion and distribution of certificates of completion

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
- Discussion
- Presentation

Course Certificate:

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

Course Fees:

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

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