



DESIGNING

Telecommunication Distribution System

Course Introduction:

This is an intensive 5-day course that focuses on designing a structured cabling system. You will design telecommunications spaces, horizontal and backbone distribution systems, respond to and bid an RFQ and select media. Effective strategies utilized to enhance your learning experience include case studies and structured application exercises using modernized blueprints with solutions based upon real-world conditions.

ICTD recommends 125+ hours of self-study (over a period of 5-weeks) following the formal training course (DTDS):

DESIGN BASICS

- Recommended design sequence, cabling infrastructure layout, terms & definitions, overview of standards & codes.

DESIGNING TELECOMMUNICATIONS ROOMS

- Determining type number & size according to usable floor space, specifying power, lighting & floor loadings.

DESIGNING HORIZONTAL DISTRIBUTION SYSTEMS

- Pathway sizing & routing considerations. Design rules for under-floor duct, cellular floors, conduit, & access floors. Use of ceiling distribution including ceiling zones method. Application exercises; design of under-floor conduit system & comparison with overhead plenum rated method. Specifying copper & fibre optic cabling complete with documentation methods. Examples of cable management during installation & cross connection. Installation sequence for zoned systems.

DESIGNING BACKBONE SYSTEMS

- Backbone design & planning, media selection options (copper versus fibre), colour codes, backbone pathways & spaces, sleeves, slots & conduits, planning & designing cable pull boxes, fire stopping, campus backbone design.

DESIGNING EQUIPMENT ROOMS

- Electrical power requirements & distribution, environmental, space & structural requirements, electrical ground & bonding. Application exercise: equipment room sizing & location.

DESIGNING ENTRANCE ROOMS

- Calculating total space requirements, types of terminations & hardware, electrical protection, network demarcation. Application exercise: entrance facility case study.

DESIGNING BUILDING SERVICES ENTRANCES

- Underground, buried & aerial.

FINAL APPLICATION EXERCISE

- Design a multi-building telecommunications infrastructure.

Who Should Attend?

This course is designed for:

- IT designers with at least two years of on- the-job experience in low-voltage cabling systems
- Professionals responsible for designing IP-enabled building systems (e.g., Security, AV, ELV)
- Individuals preparing to take the RCDD exam
- Individuals looking for a review of telecommunications distribution systems

Course Objectives:

As a result of attending this workshop, delegates will have developed:

Upon successful completion of this course, the delegates will be able to understand:

- Codes, standards and regulations
- Telecommunications pathways and spaces
- Backbone and horizontal distribution systems
- Bonding and grounding (earthing)
- Fire stopping
- Telecommunications administration
- Outside Plant (OSP) and campus cabling

Course Outlines:

DAY ONE:

- Principles of Transmission
- Electromagnetic Compatibility
- ITS Cables and Connecting Hardware
- Work Areas

DAY TWO:

- Horizontal Distribution Systems
- Backbone Distribution Systems
- Telecommunications Spaces
- Fire stopping
- Bonding and Grounding (Earthing)

DAY THREE:

- Power Distribution
- Telecommunications Administration
- Field Testing
- Design, Construction, and Project Management
- Private CATV Distribution Systems

DAY FOUR:

- Distributed Paging Systems
- Building Automation Systems
- Data Network Design
- Wireless
- Electronic Safety and Security

DAY FIVE:

- Outside Plant
- Data Centers
- Health Care
- Special Design Considerations
- Residential Cabling

Also included in the material:

- Comprehensive Glossary
- Comprehensive Listings of International Industry Standards and Codes

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 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 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

Cancellation Policy:

There is no cancellation charge if made before 15 days the course starting date.

There is 50% due fees if cancellation is made during 8-15 days before the course starting date.

There 100% fees due if the cancellation is made during 1 week before the course starting dates & a No-show invoice will be issued against the course fees.

