DCT Copper Systems.

Duration: 5 Days

About this course:

DCT Structured cabling is a unique Multi-vendor course that introduces Structured Cabling standards for both Coppe & Fibre installations. The class-based training offers advanced hands on experience labs to prepare students for any deployment scenarios for structured cabling. It's a three-day course (Day1- Copper cabling systems, Day2- 4Fibre cabling systems and Day 5-Labs and Exam.)

Objectives:

• Delegates are equipped with the knowledge, skills and expertise to competently undertake the installation of the Structured Cabling Solutions

Pre-requisite:

- Those attending this course require basic understanding of network topology Certificates

 - Giganet Certified Installer • Siemon RI (Registered Installer)
 - DCT Certified Installer

Course Content

Copper

Introduction to Balanced Twisted-Pair Cables

Connecting Hardware

- Telecommunications Outlets
- Patchpanels
- Wiring Blocks

Networks

- Local and Wide Area Networks
- Prons and Cons of a Network
- Network Topologies
- Generic (Structured) Cabling
- **Cabling Standards**
- ANSI/TIA/EIA Standards
- ISO/IEC Standards
- CENELEC Standards
- Cable Categories

Horizontal Cabling

Horizontal Channels

- Channel Lengths
- Horizontal Pathways
- Maximum Pathway Fill

Backbone Cabling

- Backbone Cabling Systems
- Backbone Cabling Distance Limitations

Work Area Cabling

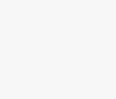
- Work Area Components
- Telecommunications Outlets
- Work Area Cable Termination
- **Telecommunications Spaces**
- Equipment Rooms
- Telecommunication Rooms
- Electromagnetic Interference (EMI)

Target Audience:

Network Engineers

Labs

- Terminations, Troubleshooting and testing on:
- Category 6 UTP Cabling system
- Category 6A FTP Cabling system
- Trouble shooting and Testing of both Cat 6 and Cat 6A cabling
- Fibre Field terminations
- Fibre splicing
- Fibre Trouble shooting and Testing





Course Code: DCT - INFR- SC



Credly

Entrance Facilities





DCT Fiber Systems.

Duration: 5 Days

Fiber Content:

- **Introduction to Fibre Optics**
- What are Optical Fibres?
- Optical Fibre Construction
- Fibre Sizes
- Optical Fibre Transmission
- Fibre optic transmission systems and data links
- Transmitting and receiving devices
- Transmission over different types of fibre
- Electromagnetic Spectrum and Wavelengths
- Fibre Optic Transmission Windows
- Fibre Optic Cable Construction
- Loose-Tube and Tight Buffered
- Simplex and Duplex
- Distribution and Break-out cables
- Indoor/Outdoor
- Self-supporting
- Armoured
- Fibre Splicing and Terminating
- Mechanical and Fusion Splicing
- Types of fibre connector
- Hot and Cold Cure Termination
- Mechanical Termination
- Fiber Connector Types (Styles)
- Flat Fiber Connector
- PC Fiber Connector
- UPC Fiber Connector
- APC Fiber Connector

FIBER OPTICS CONTENT

Inspecting and Cleaning Optical Fiber Connectors

- Core alignment.
- Physical contact.

- EMI Pristine connector interface
- Power Separations Signal Degradation
- Installation Practices Dispersion
- Cable Management Attenuation
- Bend Radius Scattering
- Cable Stacking Height Absorption
- Cable Stress Factors Affecting Splice Points
- Cable Support

Designing Fibre Optic Cabling in the Local

Area Network

- Rack Clearance
- Equipment Locations Fibre vs Copper
- Mounting Connecting Hardware Fibre in the
- LAN
- Earthling And Bonding Channel
- Classifications
- Cable Pulling Channel Attenuation
- Cable Termination Optical Fibre Categories

Testing - Fibre Cable Classifications

- Permanent Link Testing Fibre Channel Lengths
- Channel Testing Optical Fibre Applications
- Test Parameters Fibre Cabling Design

Administration - Fibre in the Work Area

Labels

Fibre Optic Safety

- Records Chemical Hazards
- Administration Classes (1-4) Optical Hazards

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Warrantees:

- Test Results Environment
- Warranty Registration Form
- Safety for Everyone

Fibre Optic Cable Installation

- Conduct a thorough site survey prior to cable
- placement.
- Develop a cable-pulling plan.
- Follow proper procedures.
- Do not exceed cable minimum bend radius.
- Do not exceed the cable maximum
- recommended load.
- Document the installation.

FlukeTesting

- Types of tests required
- Flashlight and Visual Fault Locator
- Fibre Microscope
- Attenuation testing using Light Source and Power
- Meter
- Channel Attenuation Calculation
- Optical Time Domain Reflectometer

Fiber Troubleshooting

- Verifying the problem.
- Isolating the source of the problem.
- Repairing the problem.
- Testing the repaired system to ensure that it functions correctly.