

Course Title: 3667-02 Level Award in Communications Cabling
Unit 102 and 103 Combined Fibre Optic Cabling in an Internal and External Environment

Duration: 5 days

Course Overview:

This unit is concerned with the installation, splicing, termination and testing of fibre optic cable in a typical datacomms environment, characterised by low fibre count cables (typically less than 24 fibres) terminated in patch panels/equipment racks in an internal and external environment.

Delivery Method:

Classroom instructor led with hands on practical exercises

Objectives:

At the end of this unit the student will be able to:

1. Work safely with optical fibres in an internal and external environment
2. Follow recommended installation procedures
3. Prepare fibre optic cable for fibre splicing
4. Splice together optical fibres
5. Terminate fibre optic cables by fitting connectors
6. Test fibre optic links

Content Headings:

Working Safely with Optical Fibres in an Internal and External Environment

- Safe working procedures of installation of fibre cables
- Safe working in preparation of fibre cables
- Special precautions and safe working procedures in relation to splicing and termination

Recommended Installation Procedures

- Use of fibre optics in LAN.s
- Types of optical fibres
- Fibre specifications and parameters
- Fibre and cable test methods and documentation
- Components within an optical fibre communication system
- Best practices and fibre management of installation

Preparation for fibre Splicing

- Cable characteristics
- Constructional features of fibre optic cable
- Cutting and stripping tools
- Fibre preparation, cleaning and techniques used
- Fibre cleaning materials and techniques
- Preparing cable for splicing

Splicing Together Optical Fibres

- Principles and methods of splicing
- Cleaving
- Fusion and mechanical splicing equipment and applications
- Troubleshooting
- Cable jointing environment
- Preparing bare fibre
- Splicing fibres
- Sealing and cable retention for joint enclosure

Terminating Fibre Optic Cable by Fitting Connectors

- Types and uses of common connectors
- Termination tools and materials
- Fitting procedures for connectors
- Common faults in termination
- Performance tests

Testing Fibre Optic Links

- Test methods
- Measuring loss
- Operating Test equipment and their features
- Testing procedures
- Understanding and identifying test results
- Documenting and comparing results

Assessment:

Practical Assignment – Establish a fibre link, test and record results.

102 Fibre Optic Cabling in an internal environment – exam duration 1 hour

103 Fibre Optic Cabling in an internal environment – exam duration 1 hour