



Fibreplus Ltd
Network Specialists

City & Guilds

3666 Unit 3

City & Guilds

Fibre optic Cabling in an External environment 3666 (Unit 3)

Description: Unit 3, optional to achieve a complete 3666 full accreditation, for installation of fibre optic in an external environment.
Venue: Fibreplus Ltd. Training Centre, Wiltshire
Duration: Five Days
Dates: This course is offered continuously throughout the year. Please refer to the calendar enclosed for the start date of the next convenient course.
Price: Please refer to current price list. **FIBREPLUS PRICE GUARANTEE**. We guarantee you will not be able to find this course at a lower advertised fee anywhere else in the UK. or we will provide your course at 5% less.

Introduction
- Telecommunications
- Pros and cons of fibre optics
- Measurement units
- Components

Optical Fibres
- How fibre works
- Multi mode and Single mode
- Parameters of operation
- Bandwidth, Frequency & Wavelength
- Refractive Index

Safety
- BS.7671 recommendations
- Safe working practices
- Laser radiation and safety

Fibre Types
- Single Mode Variants
- Dispersion Shifted
- Non Zero Dispersion Shifted
- Leaf & Ribbon
- G652 to G657

Cable Types
- Cable types, use and construction
- OPGW, ADDS, Loose Tube, & Tight Buffered

Cable Installation and Preparation
- Cable handling issues
- Techniques and tools

Jointing of Fibre Optics
- Splice through and mid span
- Patch Panel components

Connectors
- Connectors basics and types
- Polishes i.e. Super, Flat, Angled and Super Angled
- Use of microscope and identifying issues
- Practical Workshop

Optical Splitters & Couplers
- WDM, DWDM & CWDM

Understanding of systems
- TDM
- DWDM
- WDM
- Multiplexing

Splicing
- Fusion splicing / Mechanical splicing
- Splicing - new developments
- Splicing pigtails v's direct connectorisation
- Cleaving
- Trouble shooting
- Splicing parameters
- Routine maintenance
- Arc Calibration

Installation & Planning Considerations
- Procedures to European & International Standards
- ISO 11801
- BS EN 50174
- BS EN 60825

Test Equipment and Correct Procedures
- Using the VLS
- Setting up ILM Kit and referencing
- Light Source & Power Meter (ILM) Testing
- Workshop with Practical ILM Kit Use
- Understanding all Test equipment
- Understanding OTDR features and principles
- Event types i.e. Reflective and Non-Reflective
- Macro & Micro Bending explained
- Correct Fault Locating Principles
- Test Leads, Launch & Tail Leads
- OTDR Trace Analysis & Bi-Directional trace interpretation
- OTDR capability and limitation explained
- Workshop with Practical OTDR Use

Assessment
- Practical and Written assessments
- C&G Multiple Choice Exam
- Simulated installation exercise