

---

**Description** The BTEC accredited Advanced Test & Measurement course provides additional training for those who wish to increase their understanding or specialize in the field of fibre optic testing.

---

**Venue** Melksham, Wiltshire

**Duration** 5 Days

---

## COURSE CONTENT

### Unit 1: Concepts of Fibre Optic Testing

- ◆ Introduction to fibre optic testing
- ◆ Common terms used
- ◆ Power & loss budgets
- ◆ Fibre types
- ◆ Recognising fibre issues
- ◆ Fibre equipment types

### Unit 2: Fibre Optic Installation & Commissioning

- ◆ Stage 1a, 1b and 2 testing
- ◆ Optical loss budgets
- ◆ Fusion splicing
- ◆ Test leads
- ◆ Standards
- ◆ Testing procedures
- ◆ Documentation

### Unit 3: Fibre Optic Fault Finding & Testing

- ◆ Introduction to advanced testing and common terms used
- ◆ Power & loss budgets
- ◆ Connectors
- ◆ Testing equipment & techniques
- ◆ Documentation

### Unit 4: Understanding Chromatic, Polarisation Mode Dispersion and FTTx Testing.

- ◆ Effects of PMD and CD
- ◆ Limitations
- ◆ How to minimise PMD and CD
- ◆ How to test PMD and CD
- ◆ Additional considerations when testing FTTx.

**Description**

The BTEC accredited Advanced Test & Measurement course provides additional training for those who wish to increase their understanding or specialize in the field of fibre optic testing.

**Venue**

Melksham, Wiltshire

**Duration**

5 Days

## COURSE CONTENT

### Fibre Optic Testing

- ◆ Common terms used
- ◆ Symbols and system diagrams
- ◆ Fibre types
- ◆ Absorption and scattering, electromagnetic spectrum
- ◆ Wavelength, frequency and loss
- ◆ Health & Safety
- ◆ Testing and cable issues
- ◆ Bandwidth limitations, dispersion & attenuation

### System Testing Procedures

- ◆ Stage 1A Acceptance testing
- ◆ Stage 1B testing laid cable
- ◆ Stage 2 Final testing of complete system
- ◆ Testing fibre on the drum
- ◆ Attenuation co-efficiency
- ◆ PMD & CD Testing
- ◆ Termination options for testing
- ◆ Loss testing
- ◆ Micro & macro bends
- ◆ Schematics & test documentation
- ◆ Troubleshooting & maintenance
- ◆ Post testing
- ◆ FTTx Testing
- ◆ Earthing & Bonding

### Equipment

- ◆ Standard equipment
- ◆ Leads and related issues
- ◆ Single & multi-mode fibre issues
- ◆ Understanding connectors & adapters
- ◆ Types of adapters & faults
- ◆ Polishing
- ◆ BFA & mechanical splices
- ◆ Correct uses of mechanical splices
- ◆ Bare fibre adapters and testing
- ◆ Visible light source (VLS)
- ◆ Insertion loss measurement (ILM)
- ◆ Fibre identifiers, mandrels and microscopes
- ◆ Optical time domain reflectometer (OTDR)
- ◆ Understanding correct use of equipment
- ◆ Reflective & non-reflective events
- ◆ Interpreting results
- ◆ Fault locating results and documentation
- ◆ OTDR dynamic range

### Exam and Assessment Method

- ◆ Written exam
- ◆ Practical assessment