

Course Name: FTTP Installation and Maintenance

Course Overview:

This course is designed to introduce you to Fiber-to-the-Premise (FTTP) technology with an in-depth look at installation and maintenance of Fiber and FTTP equipment. This course will cover everything from the basics of fiber optics to hands-on demos with FTTP equipment and test sets.

Course Length: 2 days

Who should attend?

- Field Service Technicians
- Field Engineers
- Managers/ Field Supervisors
- Design Engineers
- Managers or Supervisors

You will learn:

- The background of fiber and progression to modern standards.
- The basic building blocks for FTTP
- How to perform a fusion splice
- The network and design architecture of the PON
- Deployment basics of the PON
- How to effectively install, activate, and maintain the network
- Effective troubleshooting and maintenance

Prerequisites: None

Course Fees:

- 2 day course at a TESSCO Location \$950 per person
- 2 day course at your location \$6,200 for up to 10 attendees

Customizable Course: Yes

Course Content:

Industry Overview

- Why Fiber Optics
- FTTP Service Offerings
- FTTP Applications

FTTP Network Architecture

- The Passive Optical Network (PON)
- PON Architecture

- Types of PONs (APON, BPON, EPON, GPON)
- PON Equipment (OLT, splitter, FDH, MST, ONT, UPS)
- Connecting the Equipment- Fiber distribution feeds and drops

Basics of Fiber Optics

- Advantages of Fiber
- Basic Fiber Systems-transmitter, receiver, optic cable
- Fiber Optic Cable-core, cladding, jacket/buffer
- Types of Fiber-Multimode, Single Mode
- Fiber Connector Types
- Light power and attenuation-dB and dBm
- Fiber Wavelengths- 1310nm, 1490nm, 1550nm
- Loss Budgets
- Fiber Impairments

Optical Testing

- What should be tested
- Types of Tests to perform-OL, ORL, OTDR
- Optical Test set-Hands on demos

Optical Splicing

- Types of Splices- Fusion and Mechanical
- Intrinsic and Extrinsic factors that affect splicing
- Steps in performing a Splice
- Splicing- Hands on

Cleaning and Maintaining Fiber Connectors

- Importance of cleaning the connectors
- Types of cleaning tools
- How to properly clean fiber connectors
- Fiber Inspections- using a fiber scope

Installing FTTP Equipment

- OLT and office equipment
- Installing the splitter
- Installing the FDH and making jumper connections
- Installing the MST at the PED
- Verifying premise wiring and power
- Installing the ONT and power supply
- Installing and connecting the fiber drop
- Configuring network equipment and verify services