

**Course Name:** Passive Optical Networks (PON)

**Course Overview:** This training course will focus on passive optical networks. Time will be spent talking about driving factors and network topologies.

**Course Length:** 1 day

**Who should Attend:**

- Field service technicians
- Design engineers
- Managers/field supervisors
- Field engineers
- Installers
- Telecom technician

**You will Learn:**

- Basics of the Passive optical industry
- The functions of PON Components
- PON Network Topologies
- Basics of Designing a PON

**Prerequisites:** Basic knowledge of Fiber Optics

**Course Fees:**

- 1 day course at a TESSCO Location \$475 per person
- 1 day course at your location \$3,000 for up to 10 attendees

**Customizable Course:** Yes

**Course Content:**

PON Overview:

- Description
- Origins and Development
- PON Specifications, Standards & Work Groups

Implementation of PON

- FTTP
- FTTH
- FTTB

PON Communication Basics

- Common Terms used in Networking
  - TDM / TDMA
  - Voice (APON)

- Video (Broadband/APON)
- Data (APON/EPON)
- SONET

#### PON Variations

- A-PON
- B-PON
- E-PON
- G-PON
- T-PON

#### PON Components

- OLT
- ONT
- ONU
- NT

#### Transmitters and Receivers

- ODN
  - Fiber/Cable
  - Closures
  - Pedestals and cabinets
  - Splices
  - Connectors
  - Splitters
  - Attenuators

#### PON Topologies

- Point to Point
- Point to Multipoint
- Star
- Bus
- Ring

#### Fiber Testing

- OTDR
- OLTS
- ORL
- Fiber identifier and laser fault locator

#### Designing the PON

- Fiber distribution hub
- Loss Budgets
- Fiber Optic Counts
- Passive and Active Components