

Certified Fiber Optic Technician

OEM: Tellabs • Code: SL40-CFOT-C

COURSE DESCRIPTION

This instructor-led course provides the knowledge and skills needed to install, splice, 'connectorize', and troubleshoot fiber optics. In addition, students will learn to confirm, test, and document the fiber optic installation. This course includes hands-on activities using training lab equipment, tools, and materials. It is designed to help students learn the concepts that have been presented and reinforce what they have learned. Participants completing the course exercises and lab requirements will be given the Fiber Optic Association (FOA) exam for Certified Fiber Optic Technicians. This exam is proctored by the certified FOA instructor and participants must score the minimum (70%) to meet the FOA certification requirements.

AUDIENCE PROFILE

- This section doesn't contain any content.

PREREQUISITES

- None

COURSE OBJECTIVES

By the end of this course, participants will be able to:

- Identify and specify components for the fiber optic system.
- Determine the appropriate fiber for different applications, install fiber optic cable and test for EIA/TIA acceptable losses.
- Utilize fiber optic test equipment, including an optical time domain reflectometer (OTDR), light source and power meter.
- Install and test mechanical and fusion splices to EIA/TIA standards.
- Identify damage to cables and the associated causes, also budget for losses in fiber optic systems.
- Utilize attenuators, to adjust power levels (dBm) at the receiver.

COURSE OUTLINE

Module 1: Basics of Fiber Optics

Lesson 1: Introduction to Fiber Optics

- What is “fiber optics?”
- Types of fiber optic applications
- The reason for industry standards
- Safety working with fiber optics
- The necessity of cleanliness in working with fiber

Lesson 2: Fiber Optic Jargon

- The language of fiber optics
- Systems of measurements
- Specialized fiber optic terms

Module 2: Fiber Optic Communications Networks

Lesson 1: Fiber Optic Communications

- The Advantages of Fiber Optics
- How Optical Fiber is Used in Communications Systems
- Other Uses for Fiber Optics

Lesson 2: Fiber Optic Transmission Systems & Components

- How fiber optic data links and transmission systems work
- What components are used in transceivers
- Types of sources and detectors used in transceivers
- Performance parameters of fiber optic transmission systems

Module 3: Fiber and Cable

- The types of fiber optic cables and their applications
- Differences between outside plant and premises cables
- Specifications for fiber optic cables

Module 4: Lab: Hands-On Cable Preparation and Pulling

- Using simulated cable installation hardware, see how cables are pulled and prepared for splicing and termination.

Module 5: Terminations & Splices

- The difference between connectors and splices
- Requirements for connectors and splices
- Connector styles
- Termination types of connectors
- Splice types
- Splicing procedures

Module 6: Lab: Hands-On Terminations and Splicing

- Splicing fiber optic cables with fusion and/or mechanical splices
- Installing splices in splice closures
- Testing splices with OTDR

Module 7: Testing

- Fiber optic tests and procedures and standards
- Tools for testing
- Visual Inspection
- Optical Power and Loss
- Troubleshooting power loss
- OTDR Testing

Module 8: Lab: Hands-On Fiber Optic Testing & Troubleshooting

- Proper use of fiber optic test equipment
- Testing cables, connectors, splices and network equipment
- Troubleshooting and fault location

Module 9: Fiber Optic Network Design

- Requirements of the designer
- The process of fiber optic network design
- The importance of documentation

Module 10: Installing the Fiber Optic Cable Plant

- Planning for the install
- The installation process
- What comes after the installation