

Premises/LAN Installation and Maintenance

Course Description

This two-day class features 8 hours of classroom training and 8 hours of hands-on skills labs that provide the practical understanding and skills required to properly design, install, and maintain premises-based local area networks (LANs). Students will use the latest fiber optic technology and equipment to learn how to splice, connectorize, test, and troubleshoot premises-based optical fiber networks in order to increase efficiency, reliability, and on-the-job safety as well as reduce costs and downtime.

Course Level

Introductory to intermediate. Beginners to experienced fiber technicians find the class and extensive hands-on skills training beneficial.

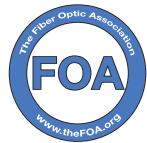
Course Options

Two days – Classroom lecture and hands-on exercises.

Certification

FOA Certified Fiber Optic Technician

FOA Advanced Fiber Optic Technician



Complete the two-day Premises/LAN Installation and Maintenance course and pass the Fiber Optic Association's Certified Fiber Optic Technician (CFOT) or Advanced Fiber Optic Technician (AFOT) exam.

NEW

Fiber Optics for Pro-AV

Ask about our **Fiber Optics for Pro-AV** custom course, which is designed to teach fiber optics to the audio/video industry.



COURSE FEES

- Two-day Course \$995
- Optional FOA CFOT or AFOT Exam \$60

Classroom (8 Hours)

Introduction to Fiber Optics

Development Timeline
Advantages of Optical Fiber Media

Fiber Optic Transmission Theory

Structure of Optical Waveguides
Types of Optical Fibers
Basic Fiber Parameters
Operating Wavelengths

Optical Fiber Manufacturing

Fiber Optic Cable Technology

Cable Design Objectives
OSP Cables and Loose Buffer Protection
ISP Cables and Tight Buffer Protection

Fiber Optic Cable Installation Methods

Comparison to Metallic Cable
Basic Installation Parameters
Underground, Aerial, and Direct Buried Installations

Termination and Splicing of Optical Fiber

Connector Types
Installation Methods
Field Installable versus Factory Termination
Splicing Methods

Field Testing and Troubleshooting

Types of Field Tests
Visual Continuity and Connector Inspection
Insertion Loss Test Measurements
Optical Time Domain Reflectometer Testing

Standards and Codes

System Design Parameters

Insertion Loss Values
System Dynamic Range
Restoration Margin

Hands-on (8 Hours)

TRAINING LABS AND CERTIFICATION TESTING

Safety Meeting

Station #1 – Fiber Optic Cable Preparation

Loose Tube Cable Preparation
Tight Buffer Cable Preparation
Fanout Kit Installation
Pulling Grip Set Up

Station #2 – Fusion Splicing

Fiber Cleaning and Preparation
Fiber Optic Cleaving Process
Core Alignment Splicers
V-groove Alignment Splicers
Splicing 250- μ m to 900- μ m Fiber
Equipment Maintenance and Cleaning

Station #3 – Fiber Connectorization

Fiber Cleaning and Preparation
Anaerobic (Epoxy) Field Connector Installation
Cleave and Crimp Field Connector Installation
250- μ m Fiber Fan Termination
900- μ m Tight Buffer Termination
2-mm and 3-mm Cordage Termination

Station #4 – Field Testing and Troubleshooting

Cleaning Connectors
Evaluation of Connector Endfaces
Continuity Test with Visual Fault Locator
Bidirectional Insertion Loss Methods
Launch Conditions for Multimode Systems
Bidirectional OTDR Traces
OTDR Event Analysis
Compute Link Loss Budget and Test Acceptance
Testing and Troubleshooting Tips
Documentation Requirements

"This course went beyond my expectations. This was my first exposure to fiber optics and it brought me completely up to my expectation of being able to talk to my customers and know what products to look at buying." – Gary Weber, G N REPAIR & TECHNOLOGY