

FIBER OPTIC TRAINING COURSE

FOA APPROVED CLASS NO. 183

Course Outline Day One

Introduction to Fiber Optics

1. History
2. Advantages

Theory and Principles of Fiber Optics

1. Total internal reflection
2. Attenuation
3. Dispersion
4. System parameters

Fiber Types

1. Multimode (step index)
2. Multimode (graded index)
3. Singlemode (step index)

Cable Types

1. Loose tube construction
2. Tight buffered construction
3. Breakout construction

Network Cabling Design

1. Point to point design
2. Star configuration
3. Logical ring/physical star
4. Logical star/physical star
5. Building backbone

Installation

1. Duct installation
2. Aerial installation
3. Direct buried installation

Fiber Optic Splices/Splicing

1. Mechanical splices
2. Fusion splices

Fiber Optic Connectors

1. Common connector types
2. Field installable
3. Pigtail splicing
4. Preconnectorized assemblies

Patch Panels/Distribution

1. Splice panels
2. Patch panels
3. Distribution panels
4. LAN panels

Course Outline Day Two

Testing and Maintenance

1. OTDR
2. Power meters
3. Factory testing
4. Field testing

Emergency Restoration Planning

1. System design
2. Plan of attack
3. Materials required

Fiber Optic Standards

1. Test and measurement
2. Transmission
3. Installation and design

LED's and Lasers

1. Opto-electric interface
2. LED
3. Laser

Detectors

1. Silicon (SE)
2. Germanium (Ge)
3. Indium Gallium Arsenide Phosphide (InGaAsp)

Applications

1. Voice
2. Data
3. Video
4. Sensing

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Course Outline Day Three

Review of Day One and Two

1. Questions and answers
2. Hands-on training
3. Mechanical splice
4. Connector assembly
5. Fusion splicing
6. Power meter testing
7. OTDR testing
8. VFL testing
9. Splice tray assembly
10. Splice Case assembly
11. Cable preparation
12. Cable entry

Course Outline Day Four

Final Review and Test

1. Questions and answers
2. 100 question FOA test

Tests will be graded same day and another review of the questions and answers will take place. FOA patch and wall certificate will be presented to students. FOA CFOT (certified fiber optic technician) certification card will be mailed to student's home address.

Class is instructed by:

Craig J. Getchel CFOS/I No. 8698

Certified Fiber Optic Specialist/Instructor