

Workshop - Introduction to Fiber Optic Testing

Course Number	Delivery Method	Course Length	Language
TT-Fiber-Intro-WS	Blended (Virtual Class & Instructor-Led at Customer Site)	2 two-hour Virtual Sessions 1 Day On-Site	English

Synopsis

This workshop is designed to teach students how to perform basic tests on fiber optic cable using hand held fiber test equipment in a lab environment. After an understanding of the technology is established, participants perform hands-on exercises using the tools necessary to test a fiber optic system. This workshop is part of the JDSU Fiber Series and is a preparation course for the ETA –FOT (Electronic Technicians Association) Fiber Optics Technician Certification.

Prerequisites

Fiber Optics for Managers (TT-FiberMgr-VC) or a basic understanding of fiber optics principles.

Who Should Attend

This workshop is designed for technicians, engineers, and technical support personnel who are directly or indirectly responsible for installing and troubleshooting fiber optic systems.

Course Goals

Upon completion of this course, participants will be able to:

- Identify the various types of fiber optic cables and connectors
- Detail the causes of loss in a fiber optic system
- Demonstrate an ability to clean and inspect fiber endfaces
- Perform common fiber optic tests using hand held fiber test equipment

Course Outline

Virtual Classroom 1

Review of Fiber Optics for Managers Course (TT-FiberMgr-VC)

Fiber Handling

- Safety
- Care & Cleaning

Fiber Cleaning Resources

- The importance of cleaning
- Manual fiber cleaners
- Compressed dry air
- Lint-free wipes
- Ferrule swabs
- Isopropyl alcohol
- Anti-static work surfaces
- Inspection microscopes
- Digital inspection probes

Fiber Care

- Technical Specifications
- Proper fiber handling, cleaning, & inspection techniques
- Analyzing endfaces

Virtual Classroom 2

Fiber Testing Resources

- The need for basic testing
- Visual fault locator (VFL)
- Optical time domain reflectometer (OTDR)
- Optical power meter (OPS)
- Optical light source (OLS)
- Optical continuous wave reflectometer
- Fiber cleaning kit
- Associated connectors and adaptors

To order and schedule training, call toll free 1-866-228-3762
Or visit www.jdsu.com/training.

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Virtual Classroom session breakouts are approximate.

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Performing Basic Fiber Tests

- VFL
- Optical insertion loss
- Optical return loss
- Optical receiver sensitivity

Fiber Measurements

- Length of fiber
- Locating fusion splices, mechanical splicing and optical cross-connects
- Locate Splice Gains
- Bidirectional testing
- Locate Fiber Anomalies-Fiber breaks, End of Fiber, Micro/Macro Bends
- Measure Insertion Loss Caused By Patch Panels & Fusion Splices

Troubleshooting Fiber Faults

- Basic troubleshooting steps
- The importance of cleaning
- Identifying fibers with the VFL
- Analyzing fiber link with the OTDR (advanced testing)
- Measuring optical insertion loss (OIL)
- Measuring optical return loss (ORL)

Hands-On Workshop

Performing Basic Fiber Tests Using

- VFLs
- Light Source
- Power Meters

Troubleshooting Fiber Faults

- Basic troubleshooting steps
- The importance of cleaning
- Identifying fibers with the VFL
 - Search for excessive bends or breaks using a VFL
 - Perform end to end loss testing with OPM and OLS
 - Test fiber connectors using OPM and OLS

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