

Fiber Optics Fundamental & Hands-ON

OVERVIEW

This 2-Day course has been designed to include hands-on skill to provide practical understand and skills required to properly design, install, test & commission, troubleshoot and maintain fiber optics network as well as to increase fiber optics network reliability and to reduce cost and network downtime.

Hands-On include fusion splicing, fiber optics standard testing & commissioning, troubleshooting using OTDR and maintenance aspect of fiber optic cabling network.

In order to appreciate the understanding of how & why fiber optics is designed that able to carry unlimited amount of data, one need to understand a simple light theory which will be incorporated into this 2-Day course.

WHO SHOULD ATTEND?

- Open to beginners and experienced fiber optics personnel
- Those who are maintaining fiber optics network
- Those who are in supervision of IT projects
- Open to businessmen to expand & diversify their business network
- Open those who like to upgrade technical knowledge and skills

METHODOLOGY

Lectures & Hands-ON

MODULE OBJECTIVES

- To understand in simple terms of light theory and how it works that able to carry video, voice and data simultaneously.
- Safety in Fiber Optics against injury to competent personnel
- To fully appreciate the design of fiber optics in order to keep fiber optics lifespan within 15 – 20 years.
- Proper Way to fiber optics cables installation
- To conform fiber optics dB loss are within fiber specification loss after installation & jointing of fiber optics cable
- Easy & simple steps in troubleshooting fiber optics problematic cable.



SBL CLAIMABLE



COURSE OUTLINE

DAY – 1

Module 1: Introduction to Fiber Optics

- 1.1 What is Fiber Optics
- 1.2 Why Fiber Optics
- 1.3 How Fiber Optics is made

Module 2: Introduction to Light Theory

- 2.1 Light Travel in a Straight Line
- 2.2 Electromagnetic VS Particle Theory
- 2.3 How Light Manage to Carry Video, Voice & Data

Module 3: Safety in Fiber Optics

- 3.1 Fiber Optics
- 3.2 Laser / LED

Module 4: Hands-ON

- 4.1 Introduction to Splicing / Jointing Machine
- 4.2 Jointing of fiber optics Singlemode & Multimode

DAY – 2

Module 5: Fiber Optics Cable

- 5.1 Type & Design
- 5.2 Installation – Indoor / Outdoor

Module 6: Fiber Optics Termination

- 6.1 Type & Design of Indoor Termination
- 6.2 Type & Design of Outdoor Fiber Optics Termination

Module 7: Testing & Commissioning

- 7.1 Introduction to Fiber Optics Test Gear
- 7.2 OTDR
- 7.3 Power Meter & Light Source
- 7.4 Measured Values vs Theoretical Value
- 7.5 Documentation & Maintenance

Module 8: Hands-ON

- 8.1 Troubleshooting of fiber optics problems
- 8.2 Visual Fault Locator
- 8.3 Optical Talk Set
- 8.4 OTDR, Power Meter & Light Source

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