Global Horizon
TRAINING CENTER

Training Course:
Optical Fiber Maintenance and Troubleshooting Training

7 - 11 July 2025
Kuala Lumpur (Malaysia)
Royale Chulan Kuala Lumpur

Training Course:
Optical Fiber Maintenance and Troubleshooting Training

Training Course code: SC235787 From: 7 - 11 July 2025 Venue: Kuala Lumpur (Malaysia) - Royale Chulan Kuala Lumpur
Training Course Fees: 6000 Euro

Introduction

The telecommunications industry relies on optical fiber networks to ensure high-speed, high-capacity, and reliable communication. However, maintaining and troubleshooting fiber optic systems requires specialized knowledge and skills. This training program, designed by Global Horizon Training Center, provides participants with in-depth expertise on optical fiber maintenance, fault detection, and effective troubleshooting techniques.

Tailored for Nepal Telecom professionals, this course covers fiber optic principles, testing procedures, splicing techniques, and advanced troubleshooting methodologies. The training ensures that participants gain hands-on experience with industry-standard tools and best practices to enhance network reliability and service quality.

Objectives

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

- Understand the fundamentals of optical fiber communication and its components.
- Identify and analyze common fiber optic faults and network issues.
- Apply industry best practices in fiber optic testing and troubleshooting.
- Perform fiber optic splicing and termination with precision.
- Utilize OTDR Optical Time-Domain Reflectometer and other diagnostic tools for fault location.
- Implement preventive maintenance strategies to ensure network longevity and performance.

Course Methodology

This training employs a hands-on, interactive approach to ensure participants gain practical experience. The methodology includes:

- Instructor-led presentations with real-world examples.
- Live demonstrations of fiber optic testing and splicing techniques.
- Practical workshops using fiber optic cables, splicing machines, and OTDRs.
- Case studies focused on Nepal Telecom's network infrastructure.
- Group discussions and problem-solving exercises.

Organizational Impact

Upon completion of this training, Nepal Telecom will benefit from:

- Enhanced workforce capabilities in fiber optic network maintenance.
- Reduced downtime and service disruptions through improved troubleshooting techniques.
- Increased efficiency in diagnosing and repairing fiber optic faults.
- Better management of optical fiber infrastructure for long-term performance.
- Cost savings by minimizing network failures and external repair dependencies.

Target Audience

This training is ideal for:

- Telecommunication Engineers and Technicians
- Network Maintenance Personnel
- Field Service Engineers
- Fiber Optic Installation and Repair Teams
- Quality Assurance and Inspection Teams
- IT and Network Operations Professionals

Outline

Day 1: Fundamentals of Optical Fiber Communication

- Overview of Optical Fiber Technology
- Structure and Types of Optical Fibers Single-mode & Multi-mode
- Optical Fiber Components and Their Functions
- Optical Signal Transmission and Loss Mechanisms
- Common Causes of Fiber Optic Signal Loss
- Introduction to Fiber Optic Safety Procedures
- Hands-on Session: Fiber Optic Cable Handling & Safety Practices

Day 2: Fiber Optic Splicing, Termination, and Installation

- Importance of Splicing and Termination in Fiber Optic Networks
- Types of Splicing Fusion & Mechanical
- Step-by-Step Fiber Optic Splicing Procedures
- Best Practices for Fiber Optic Connector Termination
- Testing and Inspection of Spliced and Terminated Fibers
- Hands-on Workshop: Fiber Splicing and Connector Termination

Day 3: Optical Fiber Testing and Measurement Techniques

- Overview of Fiber Optic Testing and Troubleshooting Tools
- Optical Power Meters and Light Sources
- Optical Time-Domain Reflectometer OTDR - Function and Interpretation
- Fiber End-Face Inspection and Cleaning Techniques
- Testing Fiber Optic Attenuation and Reflectance
- Hands-on Session: OTDR Testing and Fiber End-Face Cleaning

Day 4: Fault Identification and Troubleshooting Techniques

- Common Fiber Optic Failures and Their Causes
- Fault Localization Using OTDR and Visual Fault Locators
- Fiber Bend Loss and Macro/Micro Bends Analysis
- Identifying and Repairing Fiber Cuts and Breaks
- Fiber Optic Maintenance Strategies to Minimize Failures
- Practical Session: Troubleshooting Real-World Fiber Optic Issues

Day 5: Preventive Maintenance and Network Optimization

- Developing a Proactive Fiber Optic Maintenance Plan
- Scheduled Inspections and Preventive Maintenance Procedures

- Advanced Fiber Monitoring Systems and Automated Fault Detection
- Case Studies: Best Practices in Optical Fiber Maintenance
- Review and Q&A Session
- Certification Test & Hands-on Practical Evaluation

Registration form on the Training Course: Optical Fiber Maintenance and Troubleshooting Training

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
Personal E-Mail: .....
Official E-Mail: .....

Company Information

Company Name: .....
Address: .....
City / Country: .....

Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
Personal E-Mail: .....
Official E-Mail: .....

Payment Method

☐ Please find enclosed a cheque made payable to Global Horizon

☐ Please invoice me

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Easy Ways To Register

Telephone: +201095004484 to provisionally reserve your place.	Fax your completed registration form to: +20233379764	E-mail to us : info@gh4t.com or training@gh4t.com	Complete & return the booking form with cheque to:Global Horizon 3 Oudai street, Aldouki, Giza, Giza Governorate, Egypt.