Global Horizon
TRAINING CENTER

# *Training Course:*
# *Advanced Fiber Optic Networking and Design*

*7 - 11 December 2025*
*Dubai (UAE)*
*Residence Inn by Marriott Sheikh Zayed Road, Dubai*

# Training Course:
# Advanced Fiber Optic Networking and Design

Training Course code: SC235073 From: 7 - 11 December 2025 Venue: Dubai (UAE) - Residence Inn by Marriott Sheikh Zayed Road, Dubai Training Course Fees: 4900  Euro

## Introduction

This training program on Advanced Fiber-Optic Networking and Design is designed to provide participants with a comprehensive understanding of the fundamentals, principles, and advanced concepts of fiber optic technology, networking, and design. Participants will learn the necessary skills to design, install, maintain, and optimize high-speed fiber optic networks for a variety of applications.

## Methodologies

The training program will consist of a mix of lecture sessions, demonstrations, hands-on activities, case studies, and group discussions. Participants will have the opportunity to learn from experienced instructors with expertise in fiber optic networking and design. The program will also incorporate real-world scenarios to help participants apply the learned concepts to practical situations.

## Target Audience

This training program is suitable for professionals involved in the design, installation, maintenance, and optimization of fiber optic networks. It is ideal for network engineers, system administrators, technicians, project managers, and other professionals interested in advancing their knowledge and skills in fiber optic networking and design.

## Objectives

- To provide participants with a comprehensive understanding of the fundamentals of fiber optic technology and networking.
- To enable participants to design, install, maintain, and optimize high-speed fiber optic networks for a variety of applications.
- To equip participants with the necessary skills to perform link budget analysis and optimization, PMD and CD considerations, and high-speed networks design.
- To introduce participants to advanced concepts such as optical amplifiers, regenerators, and switches, and their applications in fiber optic networking.
- To provide participants with a thorough understanding of fiber optic project management best practices, including planning, scheduling, budgeting, risk management, and quality assurance.
- To offer participants hands-on experience with fiber optic design, installation, and project management tools.
- To prepare participants to apply their knowledge and skills to practical situations and real-world scenarios.

## Outline

### Day 1: Fiber Optics Fundamentals and Network Topologies

- Introduction to fiber optics technology
- Types of fiber optic cables and connectors
- Fiber optic splicing and termination techniques
- Testing and troubleshooting fiber optic systems
- Network topologies and architectures
- Optical fiber transmission systems
- Wavelength-division multiplexing WDM systems

### Day 2: Advanced Fiber Optic Networking

- Optical amplifiers and regenerators
- Optical switches and routers
- Network planning and design
- Fiber optic link budget analysis and optimization
- Polarization mode dispersion PMD and chromatic dispersion CD considerations
- High-speed networks design
- Safety and regulatory considerations

### Day 3: Fiber Optic Design and Implementation

- Design considerations for fiber optic networks
- Installation and implementation of fiber optic systems
- Fiber optic system performance evaluation
- Network monitoring and management
- Fault management and restoration
- Security and protection of fiber optic networks
- Performance optimization and capacity planning

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### Day 4: Fiber Optic Applications

- Fiber optic sensing and measurement applications
- Fiber optic communications in aerospace and defense
- Fiber optic communications in healthcare and life sciences
- Fiber optic communications in financial services and trading
- Application-specific fiber optic systems design and implementation

### Day 5: Fiber Optic Project Management

- Project planning and scheduling
- Budgeting and cost management
- Risk management and contingency planning
- Quality assurance and project evaluation
- Best practices in fiber optic project management
- Hands-on practice with fiber optic design, installation, and project management tools

# Registration form on the Training Course: Advanced Fiber Optic Networking and Design

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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
- ☐ Please invoice my company

## 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. |
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