



*Training Course:  
Fiber Optic Advanced Splicing*

*28 February - 4 March 2027  
Cairo (Egypt)*

## Training Course: Fiber Optic Advanced Splicing

Training Course code: SC234830 From: 28 February - 4 March 2027 Venue: Cairo (Egypt) - Training Course Fees: 4100 € Euro

### Introduction

This Fiber Optic Advanced Splicing training course is designed for those who layout, install, or maintain fiber optic cabling systems.

It identifies you as a Fiber Optic Advanced Splicing able to demonstrate a practical knowledge of fiber optic theory, codes, standards, and practices widely accepted in the fiber optics industry.

In addition, this training incorporates two days of individual hands-on training validating fiber optic installer skills, including fiber terminations, cable preparations, fusion splicing, OTDR, and optical loss testing.

### Training Objectives

Fiber Optic Advanced Splicing training will provide the participants with the necessary knowledge and skills to:

- Layout, install or maintain fiber optic cabling systems
- Demonstrate a practical knowledge of fiber optic theory, codes, standards, and installation practices
- Demonstrate a practical knowledge of individual hands-on skills including:
  - Performing industry standard fiber optic terminations
  - Preparing cables for inside and outside applications
  - Performing fusion splicing and splice tray preparation
  - Testing with the OTDR and optical loss test equipment

### Target Audience

- **Fiber Optic Advanced Splicing** is a specialized training program designed for both new and experienced personnel seeking a deeper understanding of fiber optic cabling system installation.
- The course focuses on enhancing practical and technical skills in advanced splicing techniques in line with industry standards.
- It provides comprehensive knowledge of fiber optic system installation, ensuring high-quality performance and efficiency.
- Ideal for professionals working across:
  - Construction
  - Education
  - Commercial
  - Industrial

- Utilities sectors
- Targeted at individuals involved in:
  - Designing fiber optic systems
  - Installation of fiber optic cabling
  - Maintenance activities
  - Testing and inspection of fiber optic networks
- The program aims to improve technical competency and support the successful delivery of fiber optic infrastructure projects.

## Course Outlines

### Day 1

#### Introduction to Fiber Optics

- Networking
- Fiber Optic Advantages and Applications
- Terminology and History
- The Fundamentals of Light Propagation
- Scales of Measurement and the Spectrum
- Characteristics of Single mode and Multimode
- Manufacturing, Bandwidth, and Linear Effects

#### Cables

- Optic fiber construction
- Cable Types, Construction, and Specifications
- Cable Marking
- Selection Criteria

#### Connectors and Terminations

- Temporary and Permanent Connections
- Connector Types
- Performance Specifications
- Connector Loss Issues
- Splicing Applications

## Day 2

### Splicing

- Fusion and Mechanical
- Fusion Splicing
- Cable Marking
- Mechanical Splicing

### Enclosures and Panels

- Distribution, Patch, and Splice Types
- Application Issues and Selection Criteria
- Aerial and Burial Enclosures
- Re-Entry and Expansion Capabilities
- Routing and Preparation

### Test Equipment

- Loss Testing Tools and Equipment
- Standards and Methods
- Return Loss, Bandwidth, and Dispersion
- OTDR Theory and Applications
- Loss and System Budget Calculations

## Day 3

### Restoration and Maintenance

- Tools and Equipment
- Practical Applications
- Time Saving Techniques
- Record Keeping and Documentation

## System Components and Design Issues

- Transmitters and Receivers
- Passive Optical Components
- Couplers and Splitters
- WDM and DWDM Issues

## Day 4

### Lab Workshop:

#### Fusion Splicing

- Properly prepare an inside plant cable for mounting into a splice tray.
- Demonstrate the proper way to strip, clean, cleave, and fusion splice 900µm fiber.
- Properly pre-trim the individual fibers into the splice tray before fusion splicing.
- Properly set up and fusion splice the individual fibers together.
- Properly wrap form & dress the individual fibers back into the tray.

#### Mechanical Splice Connector

- Properly prepare a simplex cable for this connector termination method.
- Properly use a precision cleaver for this termination method.
- Successfully mate a cleaved cable end into a mechanical splice-on connector.
- Test the assembly to TIA Tier 1 standard.

## Day 5

#### Mechanical Splice

- Perform a mechanical splice with < .3 dB of attenuation
- Explain the benefits of Index Matching Gel
- Use a precision cleaver to prepare fibers for splicing.
- Calculate A-B and B-A loss.

### Pigtail Fusion Splice

- Perform a fusion splice with  $\leq .1$  dB of attenuation
- Use a precision cleaver to prepare fibers for splicing.
- Calculate A-B and B-A loss.

## Registration form on the Training Course: Fiber Optic Advanced Splicing

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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  
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Giza, Giza Governorate,  
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