Global Horizon
TRAINING CENTER

Training Course: Implementation of Cross and Longitudinal Connections (30/66 kV)

27 December 2026 - 7 January 2027
Istanbul (Turkey)
DoubleTree by Hilton Istanbul Esentepe

Training Course:
Implementation of Cross and Longitudinal Connections (30/66 kV)

Training Course code: EN235693 From: 27 December 2026 - 7 January 2027 Venue: Istanbul (Turkey) - DoubleTree by Hilton Istanbul Esentepe Training Course Fees: 11150 Euro

Introduction

Cross and longitudinal connections in 30/66 kV distribution and sub-transmission networks are essential for improving system reliability, flexibility, and continuity of power supply. These interconnections allow load transfer, fault isolation, and network optimization, especially in complex and expanding grid systems.

This 10-day advanced training program, developed by Global Horizon Training Center, provides a comprehensive understanding of the design, implementation, operation, and protection of cross and longitudinal connections in medium- and high-voltage networks.

Participants will gain practical expertise in planning network interconnections, ensuring protection coordination, managing switching operations, and maintaining system stability and safety.

Course Objectives

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

- Understand the concept and importance of cross and longitudinal connections
- Design and implement interconnection schemes in 30/66 kV systems
- Analyze load transfer and network flexibility
- Apply protection and coordination strategies
- Perform switching operations safely
- Ensure system reliability and fault isolation
- Integrate interconnections into existing networks
- Optimize network performance and redundancy

Target Audience

- Electrical and Power Engineers
- Substation and Transmission Engineers
- Protection and Control Engineers
- Utility and Distribution Network Engineers
- Maintenance and Operation Personnel

Outline

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Day 1: Fundamentals of 30/66 kV Power Systems

- Overview of medium and high-voltage networks
- System components and configurations
- Role of interconnections in grid stability
- Network operation principles

Day 2: Concepts of Cross and Longitudinal Connections

- Definition and types of interconnections
- Cross connections vs longitudinal connections
- Benefits and operational applications
- Case studies of interconnected networks

Day 3: Network Design and Planning

- Planning interconnections in existing systems
- Load flow considerations
- Voltage regulation and system balancing
- Design standards and criteria

Day 4: Equipment and Infrastructure Requirements

- Switchgear and circuit breakers
- Transformers and busbars
- Protection relays and communication systems
- Cable and overhead line considerations

Day 5: Protection and Coordination

- Protection schemes for interconnected networks
- Relay coordination and selectivity
- Fault detection and isolation
- Backup protection strategies

Day 6: Switching Operations and Safety

- Switching procedures and sequences
- Load transfer techniques
- Safety protocols and lockout/tagout LOTO
- Operator responsibilities

Day 7: Load Flow Analysis and System Stability

- Load flow studies for interconnected networks
- Power flow optimization
- Voltage and frequency control
- Stability considerations

Day 8: Fault Analysis and Troubleshooting

- Types of faults in interconnected systems

- Fault analysis methods
- Troubleshooting operational issues
- Case studies on system failures

Day 9: Maintenance and Reliability Management

- Maintenance strategies for interconnected systems
- Preventive and predictive maintenance
- Reliability indices and performance monitoring
- Asset management

Day 10: Integrated Network Implementation & Final Workshop

- Designing cross and longitudinal connection schemes
- Integrating with existing grid infrastructure
- Risk assessment and optimization
- Group project and presentation
- Final review and evaluation

Registration form on the Training Course: Implementation of Cross and Longitudinal Connections (30/66 kV)

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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.