



Training Course:
Power System Transmission and Control

25 - 29 July 2027
Cairo (Egypt)

Training Course: Power System Transmission and Control

Training Course code: EN235128 From: 25 - 29 July 2027 Venue: Cairo (Egypt) - Training Course Fees: 4410 € Euro

Introduction

Power system transmission and control are fundamental to ensuring reliable, stable, and efficient delivery of electricity across modern grids. With increasing demand, grid interconnections, and integration of renewable energy, effective control and coordination of transmission systems are essential for maintaining system performance and preventing disturbances.

This program, designed by Global Horizon Training Center, equips participants with the technical knowledge and practical skills required to analyze, operate, and control power transmission systems in accordance with modern industry practices.

Course Objectives

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

- Understand the fundamentals of power transmission systems and control mechanisms
- Analyze transmission system performance and operational behavior
- Apply control strategies for voltage, frequency, and power flow
- Interpret system data and monitor grid performance
- Utilize SCADA and control systems for transmission operations
- Identify and mitigate system disturbances and faults
- Ensure system stability and reliability
- Apply industry standards and best practices in transmission control

Target Audience

This program is designed for:

- Electrical and Power System Engineers
- Transmission and Grid Operation Engineers
- Control and Protection Engineers
- SCADA and Control Room Operators
- Utility and Energy Sector Professionals
- Technical Specialists in power systems

Outline

Day 1: Fundamentals of Power Transmission Systems

- Overview of power transmission networks and components
- Transmission line parameters and characteristics
- AC and DC transmission systems
- Grid structure and interconnections
- Introduction to system operation principles

Day 2: Power System Control Principles

- Basics of power system control
- Voltage control and reactive power management
- Frequency control and load balancing
- Power flow control techniques
- Control strategies in interconnected systems

Day 3: Monitoring and SCADA Systems

- SCADA systems and architecture
- Data acquisition and real-time monitoring
- Control room operations and visualization tools
- Alarm management and event handling
- Integration with Energy Management Systems EMS

Day 4: System Stability and Protection Coordination

- Types of system stability steady-state, transient, dynamic
- Disturbance analysis and fault conditions
- Protection coordination and relay systems
- Fault detection and system recovery
- Contingency planning

Day 5: Advanced Control and System Optimization

- Advanced control techniques FACTS, HVDC control
- Load forecasting and demand management
- Grid optimization and efficiency improvement
- Integration of renewable energy sources
- Case studies and real-world applications

Registration form on the Training Course: Power System Transmission and Control

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

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