Protection of Electrical Power Systems: Principles & Practice

2027 □□□□□ 3 – □□□□ 30
Istanbul (Turkey)



Protection of Electrical Power Systems: Principles & Practice

Ref: 20222851_236569 **Date:** 30 **Location:** Istanbul (Turkey) **Fees:** 4900 GBP

Course Description

This intensive 1-week course provides a comprehensive understanding of electrical power system protection principles and practices. Participants will learn about protection system components, fault analysis, and various protection schemes for different power system elements. The course combines theoretical concepts with practical applications, preparing engineers to design, implement, and maintain effective protection systems.

Learning Objectives

- Understand the fundamentals of power system protection and its importance
- Analyze different types of faults and their impact on power systems
- Design and implement protection schemes for various power system components
- Evaluate and select appropriate protective devices and settings
- Apply industry standards and best practices in power system protection

Course Modules

Day 1: Introduction to Power System Protection

- Fundamentals of power systems and protection
- Components of protection systems
- Instrument transformers and their applications
- Fault analysis and symmetrical components

Day 2: Overcurrent and Earth Fault Protection

- Principles of overcurrent protection
- Earth fault protection schemes
- Directional overcurrent protection
- Setting calculations and coordination

Day 3: Distance and Differential Protection

- Principles of distance protection
- Distance relay characteristics and settings
- Differential protection schemes
- Applications for transformers and generators



Day 4: Bus, Transformer, and Generator Protection

- Bus protection schemes
- Transformer protection principles
- Generator protection systems
- Motor protection techniques

Day 5: Advanced Topics and Practical Applications

- Digital and numerical relays
- Wide area protection systems
- Protection system testing and maintenance
- Case studies and real-world applications

Practical Wins for Participants

- Ability to design comprehensive protection schemes for power systems
- Skills to troubleshoot and optimize existing protection systems
- Knowledge to select and apply appropriate protective devices
- Confidence in implementing industry best practices for system reliability

