

Course Overview:

This advanced-level course is designed for professionals managing or operating complex electrical power systems. It addresses the growing need for mastery in protection schemes, fault analysis, and relay coordination in high-stakes environments. Participants will gain in-depth knowledge of cutting-edge technologies and best practices essential for ensuring system reliability and safety.

Course Objective:

- Analyze and apply complex power system protection schemes
- Perform advanced fault analysis and optimize relay coordination
- Evaluate and implement emerging protection technologies
- Maintain system stability and troubleshoot protection devices
- Ensure compliance with safety standards and international regulations

Course Outline:

Module 1: Advanced Protection Schemes

- Design and operation of protection schemes
- Differential and distance protection
- Advanced relay systems

Module 2: Fault Analysis Techniques

- Fault calculation methods
- Impact analysis of system faults
- Techniques for fault identification

Module 3: Relay Coordination and Settings

- Principles of relay coordination
- Setting calculations
- Optimizing relay performance

Module 4: Protection System Technologies

- Emerging technologies in system protection
- Digital and smart relay systems
- Integration with power system automation

Module 5: System Stability and Protection

- Maintaining system stability
- Protection against transients and faults
- Dynamic performance of protection equipment

Module 6: Maintenance and Troubleshooting

- Routine maintenance of protection systems
- Troubleshooting techniques
- Performance analysis and upgrades

Module 7: Safety Standards and Compliance

- Adhering to safety regulations
- Best practices for system safety
- Compliance with national and international standards

Module 8: Case Studies and Practical Applications

- Real-world examples in power system protection
- Challenges in advanced system protection

Training Language:

English/Arabic

Training Methodology:

The course combines various teaching methods, including instructor-led presentations, group discussions, case study analyses, and assessments through quizzes and a final exam to engage participants and ensure they understand and retain the material.

Venue | Date | Fees

Riyadh | 12-10-2025 | 17,250 SAR

-Learning from industry experiences and innovations

Who Should Attend:

- Electrical Engineers
- Power System Protection Specialists
- Maintenance Engineers in Electrical Departments
- Electrical System Design and Safety Professionals