

Course Overview:

This course is designed to provide the participants with complete knowledge about fault calculations, fault detection and protective relays used for power systems and networks.

Course Objective:

- To know the basic information of three phase power system under balanced and unbalanced conditions.
- To know about the per-unit system and analytical circuit based techniques to calculate industrial power systems for faults.
- Gain best knowledge about balanced three-phase faults and unbalanced faults and their analysis using symmetrical components.
- Understanding the application of impedance reduction techniques and positive, negative and zero sequence circuits and their interconnection for faults.

Course Outline:

- Power System Sources and Configurations
- Electrical Engineering Basic Concepts
- One Line and Three Line Diagram
- Generation System Layout
- Load Classifications
- Single Phase System
- Three Phase System
- System Analysis in the Per Unit System
- Symmetrical Components
- System Behavior due to Abnormal Conditions
- Short Circuit Calculations & Circuit Interruption
- Earthing and Faults Current Level
- Transmission Lines and Feeders Faults Analysis and Protective Relays
- Power Transformers Faults Analysis and Protective Relays
- Motor and Generator Fault Analysis and Protective Relays

Who Should Attend:

Electrical Engineers, Highly Qualified Technicians those working in Operation and Maintenance of Electrical Networks. Also, Engineers and Technicians those working in Protection of Electrical Networks.

Training Language:

Eng/Ar

Training Methodology:

- Presentation & Slides
- Audio Visual Aids
- Interactive Discussion
- Participatory Exercise
- Action Learning
- Class Activities
- Case Studies
- Workshops
- Simulation