

Course Overview:

Digital technology of the Relay requires an understanding of system faults and their detection, as well as their reliable safe isolation from the system. This course presents comprehensive and systematic descriptions of the concepts and principles of application and operation of digital relaying schemes applied for various power system elements. In addition, the course enforces the concepts by presenting several actual case studies occurred on the relay.

Course Objective:

This course is designed to review for the participant the fundamental concepts of digital techniques relaying, relay protection using symmetrical components. It advances to important issues regarding the protection, of transformers, generators, transmission lines, breaker failures, buses, motors and shunt capacitors.

Course Outline:

- INTRODUCTION TO RELAYING
- CLASSIFICATION OF RELAYS
- PROTECTIVE RELAYS TECHNOLOGY
- PHILOSOPHY OF SYSTEM PROTECTION
- PHASORS
- POLARITY IN RELAY CIRCUITS
- FAULTS ON POWER SYSTEM
- BASIC RELAY UNITS
- INTEGRATED CIRCUITS
- INSTRUMENT TRANSFORMERS FOR RELAYING
- CURRENT TRANSFORMERS
- ESTIMATION OF CURRENT TRANSFORMER PERFORMANCE
- MICROPROCESSOR RELAYING FUNDAMENTALS
- ELEMENT OF DIGITAL PROTECTION

Who Should Attend:

The course curriculum is designed for electric power utility engineers, technicians and designers involved in the control, operation, and protection of electric power systems. It is also intended for consulting and manufacturing engineers as well as engineers with protective relaying relay supply companies.

Training Language:

EN / AR

Training Methodology:

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