

**Course Overview:**

This course covers the theory, operation, maintenance and testing of transformers and auxiliary equipment. Topics included are transformer fundamentals, transformer ratings, transformer cooling, nitrogen gas systems and insulation systems. The source concludes with in-depth discussions on transformer testing techniques. This course is applicable to technicians and engineers who need a sound understanding of power transformer operation and maintenance.

**Course Objective:**

- Explain the basic operation of a transformer.
- Discuss turns ratios and calculate terminal voltage and current.
- Discuss terminal markings and various single phase and three phase wiring schemes. (WYE vs DELTA)
- Explain how to perform a polarity test on a potential transformer.
- Discuss the electrical testing performed on transformers such as insulation resistance testing, excitation and power factor testing.
- Discuss the various tests performed on insulating oil.

**Course Outline:**

- Transformer Principles
- Transformer Classifications
- Magnetizing Circuits
- Transformer Construction (Construction)
- Cooling
- Tap Changers
- Transformer Connections
- Transformer Maintenance
- Transformers and Relaying

**Who Should Attend:**

Field and shop technicians, field engineers, supervisors and others responsible for the testing and maintenance of power transformers

**Training Language:**

EN / AR

**Training Methodology:**

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