

**Course Overview:**

This advanced course is tailored for professionals working with electrical systems, focusing on the in-depth use of ETAP software for system modeling, analysis, and troubleshooting. It equips engineers and analysts with the practical know-how to simulate and interpret complex electrical behaviors using real-world scenarios. The course enhances decision-making and technical accuracy in electrical network planning and optimization.

**Course Objective:**

- Utilize ETAP software proficiently for electrical system modeling and analysis
- Conduct detailed short circuit, load flow, harmonic, and stability analyses
- Design and assess protection schemes with relay coordination
- Diagnose and resolve system performance issues using ETAP simulations
- Apply learned techniques in practical case studies and engineering challenges

**Course Outline:**

1. Introduction to ETAP Software
  - Overview of ETAP Capabilities
  - Basic Interface and Features
  - Setting Up Projects in ETAP
2. Power System Modeling with ETAP
  - Creating Electrical Models
  - Component Selection and Configuration
  - Modeling Different Electrical Systems
3. Load Flow Analysis
  - Performing Load Flow Studies
  - Analyzing System Performance
  - Optimization Techniques for Load Flow
4. Short Circuit Analysis
  - Short Circuit Calculation Methods
  - Identifying Fault Conditions
  - Impact Analysis of Short Circuits
5. Protection and Coordination
  - Designing Protection Schemes
  - Relay Coordination Studies
  - Ensuring System Safety and Reliability
6. Transient and Stability Analysis
  - Transient Analysis Techniques
  - System Stability Studies
  - Mitigating Transient Effects
7. Harmonic Analysis and Mitigation
  - Harmonic Sources and Effects
  - Conducting Harmonic Studies
  - Strategies for Harmonic Mitigation
8. Practical Applications and Case Studies
  - Real-World Applications using ETAP

**Training Language:**

EN

**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**

Jubail | 07-09-2025 | 17,250 SAR

- Challenges and Solutions in Electrical Analysis
- Best Practices and Lessons Learned

**Who Should Attend:**

- Electrical Engineers
- Maintenance Engineers
- Power System Analysts
- Engineering Professionals using ETAP