

Course Overview:

Rapid progress in power plants and utilities leads to a parallel needs in distributed control actions in different sites and environments.

Advanced control systems have created the world's most advanced distribution automation suite, including designing, planning, management, and automatic feeder restoration.

This course ranges from revision of power utilities needs for local and remote measurements and control for different sites, to the advanced robot manipulation and rapid action execution.

Course Objective:

- Understand the basic concepts of the design of power systems measurement and control.
- Apply different control techniques.
- Know the different methods of systems identifications.
- Analyze linear discrete-time systems.
- Design digital control systems.
- Be familiar with distributed sensor systems.

Course Outline:

1. INTRODUCTION TO ELECTRICAL CIRCUITS
2. ELECTRICAL COMPONENTS, STANDARDS AND SYMBOLS
3. MOTOR AND MOTOR-BRANCH-CIRCUIT PROTECTION
4. GENERAL ENGINEERING CONSIDERATIONS
5. CONTROL CIRCUITS DESIGN.
6. CONTROL AND PROCESS DESIGN CONSIDERATION
7. NETWORKS VOLTAGE CONTROL
8. LOADS POWER FACTOR CORRECTION
9. VOLTAGE RELATION WITH REACTIVE POWER
10. VOLTAGE STABILITY INTERRELATION WITH REACTIVE POWER AVAILABLE
11. LOADS VOLTAGE CONTROL BY REACTIVE POWER INJECTIONS

Who Should Attend:

Electrical and mechanical engineers and technicians

Training Language:

EN / AR

Training Methodology:

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