

Course Overview:

Reactive power had not paid sufficient attention in past. Great attention is now paid to reactive power flow on lines and to generated and compensated reactive power. Most problems of voltage control can be solved and voltage instability and voltage collapses will not occur if reactive power is judiciously managed and accurately controlled. Also, blackouts can be avoided and service interruptions will be minimized. Transmission lines can be loaded to their thermal limits.

Course Objective:

To clarify the importance of reactive power control and to show the importance of reactive power in power system operation and control. Influence of reactive power flow on system voltages are to be clarified. Methods of compensation of reactive power such as static VAR compensators and FACTS will be explained in detail. Optimum capacitor locations in transmission system busbars will be defined by special programs. Optimum controllers will be found. Techniques of voltage control by reactive power injections will be found. voltage security is to be studied

Course Outline:

- Reactive Power Definition
- Networks Voltage Control
- Loads Power Factor Correction
- Voltage Relation With Reactive Power
- Shunt And Series Static VAR Compensators
- Static VAR Compensator
- Flexible Ac Transmission Systems (Facts)
- Voltage Stability Interrelation With Reactive Power Available
- Loads Voltage Control By Reactive Power Injections
- Generators Reactive Power Generated Effects:
- Blackouts Due To Lack Of Reactive Power
- Reactive Power Role In Voltage Security
- Filters Equipped With Reactive Power Compensators
- Harmonic

Who Should Attend:

This course is a must for electrical engineers, electrical maintenance personnel, plant electricians, electrical contractors, power specialists, maintenance managers, consultants and technologists responsible for the design, construction, installation, inspection, operation, or maintenance of electrical systems, electrical technicians, inspectors, safety personnel and other employees responsible for the operation and maintenance of electrical systems in a commercial, industrial, institutional or utility setting.

Training Language:

EN / AR

Training Methodology:

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