



## LIGHTNING PROTECTION AND TRANSIENT OVERVOLTAGE

### **DESCRIPTION:**

The course explains the fundamental principles of lightning protection and gives step by step instructions to manage lightning protection for transmission and distribution lines, high voltage substations, and industrial applications. It is designed to provide a background in lightning protection for those people responsible for the reliability of power distribution and transmission systems as well as substations.

Great emphasis is placed on assisting attendees with an understanding of the key principles and concepts regarding lightning protection of power systems. The effects of routing, structure type, insulation, shielding, and grounding on transmission lines will be discussed. The course will also provide design information for the methods historically and typically applied by substation designers to reduce direct lightning strokes to equipment and buswork within substations. Identification and discussion of design procedures to provide protection of outdoor substations and transmission lines from IEEE standards will be presented.

### **AFTER PARTICIPATING IN THIS COURSE, YOU WILL BE ABLE TO:**

- Gain familiarity with the management and design of lightning protection for transmission and distribution lines, high voltage power substations, and industrial applications.
- Select an efficient lightning protection design system in order to avoid the main cause of transmission and distribution line outages affecting reliability of power supply and economic losses.
- Provide cost-effective solutions to reduce lightning overvoltage in power systems.
- Apply the principles of lightning protection to other industries, such as industrial, chemical, renewable energy, nuclear, and oil and gas.
- Understand the key principles and concepts regarding lightning protection and transient overvoltage.

### **WHO SHOULD ATTEND**

- Municipal, Provincial and National /Federal Government Engineers and Managers
- Design Engineers
- Design Technicians
- Engineers in Training
- Construction personnel
- Power Engineers
- Consulting Engineers
- Project Engineers
- Electrical and Mechanical Engineers
- Project Managers
- Plant Managers
- Operating and Maintenance personnel
- Commissioning and Testing Engineers
- Electrical Contractors