Course Name: NEC 2008 Grounding and Bonding

Course Overview:
Every year thousands of people are injured or killed from electrical shocks/contacts. They are exposed to dangers such as electric shock, electrocution, burns, fires, and explosions. The proper grounding of electrode system, conductors, equipment, and equipment conductors can help us in reducing the number of casualties. In order to understand the grounding and bonding effectively, the course is divided into the following two segments:

- Grounding Electrode System and Grounding Electrode Conductors
- Equipment Grounding and Equipment Grounding Conductors

Moreover, this course covers the topics such as grounding electrodes; resistance of rod, pipe, and plate electrodes; methods of connecting the grounding or bonding conductor to the grounding electrode; types of equipment grounding conductors; identification of equipment grounding conductors; and much more that would certainly help you in understanding the best way of grounding and bonding as per the National Electrical Code (NEC) 2008 standards.

Course Length: On-line 4 hours

Prerequisites: None

Course Content:
- Advisory Board and General Powers and Duties
- License requirements
- Define electricity and its characteristics
- Discuss the generation and transmission of commercial electricity
- Describe how current flows
- Explain the fundamentals and elements of a circuit
- Know the difference between resistive and inductive loads
- Understand the relationship between transformers and loads
- Explain why electrons seek and use earth ground as a path back to the source of electricity
- Name the reasons for grounding electrical systems
- Define fault current
- Identify transformer voltage potentials from schematics
- Discuss NEC grounding requirements
- List NEC-approved grounding
- Describe proper methods for connecting grounding electrode conductors
- Define bonding and describe methods of bonding
- Discuss NEC requirements regarding equipment grounding
- Select and size equipment grounding conductors according to NEC requirements

- Recognize methods of equipment grounding