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## NEC Training - Code Fundamentals

Contact us Today for a FREE quotation to deliver this course at your company's location.

<https://www.electricityforum.com/onsite-training-rfq>

The National Electrical Code is not only being upgraded but also updated. Our NEC Training course is intended to do a lot more than instruct about what changes have taken place since the last National Electrical Code. This interactive course is designed for electrical professionals who are either at an introductory level or who are experienced in working with electrical systems who want to learn not only the rules but the intention behind the rules. By the end of the course, students will significantly increase their knowledge, skill level and confidence when it comes to understanding the National Electrical Code.

Also, our course will instruct electrical professionals on how to access and navigate through the National Electrical Code in a cost-efficient manner. Make sure that your organization is in compliance now so you can avoid reworking your electrical systems, after failing an inspection! Ampacity determination for sizing conductors, selecting overcurrent protection and grounding is used in this practical course. The definitions of electrical terms, requirements for electrical installations, such as branch circuits and grounding systems; wiring methods, materials, design and protection, voltage drop, neutral load and other calculations; motors and motor circuits; hazardous locations and more will be studied in this course.

The National Electrical Code is the basis for the California Electrical Code. You need to know both the national AND specific State code differences.

Designed and delivered by one of America's leading experts on the NEC (a certified Electrical Inspector and NEC Instructor), and NEC interpretation, the course will instruct not only on the latest code changes, but how to understand what the rules are and how to access the code with ease. Some people spend endless time searching for the rules that they need. This course will teach what you need to know, quickly and accurately. Our instructor will demonstrate how to find the answers you need in a few easy steps. You will find the answers easily and correctly, with our training approach.

You won't want to miss this learning opportunity!!

**It's a Proven Fact:**

Electrical Engineering, Design, Maintenance and Construction professionals who understand the most current NEC requirements will:

- Work more safely and provide a greater degree of electrical protection for electrical systems
- Work more productively. Make more money, save their clients' money
- Prevent system incompatibilities from holding up a job
- Experience a higher rate of passing electrical inspection

**STUDENT LEARNING OUTCOMES AND OBJECTIVES**

This interactive 2-Day Course will instruct industrial, commercial and institutional electrical professionals and electrical professionals on how to:

- Describe the application, purpose and intent of specific requirements in the National Electrical Code. Locate specific sections in the National Electrical Code in order to provide accurate information to applicants, contractors, property owners and co-workers.
- Interpret the National Electrical Code based on a thorough understanding of the code requirements in order to ensure code compliance on complex electrical systems.

Apply examination procedures by developing the ability to visualize various types of electrical methods and identify code issues and conflicts in installed electrical systems at various stages of construction.

- Interpret and apply the provisions of the National Electrical Code while performing plan quality assurance and quality control of advanced electrical systems.

This course is designed to be an interactive, problem-solving, learning environment for delegates of all disciplines.

The positive outcome of this training is to improve the quality of installations and to pass electrical inspection with fewer deficiencies. It means working more efficiently and productively, saving time, energy, and money.

#### WHO SHOULD ATTEND

- Electrical contractors
- Electricians
- Maintenance electricians
- HVAC maintenance and Repair Technicians
- Plant & facility maintenance technicians
- Building engineers
- Building managers & superintendents
- Plant & facility managers
- Stationary engineers
- Energy management personnel
- Safety directors

#### STUDENTS RECEIVE

- **FREE** 100-Page Digital Electrical Safety Handbook (Value \$20)
- **\$100 Coupon** Toward any Future Electricity Forum Event (Restrictions Apply)

- 1.4 Continuing Education Unit (CEU) Credits
- **FREE** Magazine Subscription (Value \$25.00)
- Course Materials in Paper Format

## **COURSE OUTLINE**

### **DAY ONE**

#### **Introduction to the NEC and General Requirements**

- Course Outline
- History and Development
- Purpose and Intent of the Code
- California Electrical Code Amendments
- How to Use the NEC
- Definitions and Code Terminology
- Clearances and Required Working Spaces

#### **Session 2: Wiring and Protection**

- Branch Circuits and GFCI & AFCI Protection
- Required Outlets
- Branch Circuit, Feeder, and Service Calculations
- Branch branch circuits and feeders
- Services
- Overcurrent Protection
- Grounding & Bonding

### **Session 3: Wiring Methods and Materials**

- General Requirements
- Conductors for General Wiring
- Cabinets, Cutout Boxes and Conductor Bending Space
- Outlet, Device, Pull and Junction Boxes
- Metallic Cable Types: AC, MC and MI
- Non-metallic Cable Types: NM, NMC, NMS, SE and UF
- Metal Conduits Types: IMC, RMC, FMC, LFMC and EMT
- Non-Metallic Conduit Types: PVC, LFNC and ENT
- Auxiliary Gutters
- Busways

### **DAY TWO**

### **Session 4: Equipment for General Use**

- Flexible cords and cables
- Switches
- Receptacles, cord connectors, and attachment plugs
- Switchboards and panelboards
- Luminaries
- Appliances
- Motors, motor circuits, and controllers
- Air conditioning and refrigeration equipment
- Generators
- Transformers

### **Session 5: Special Occupancies - Overview**

- Hazardous Locations
- Commercial Garages
- Motor Fuel Dispensing
- Health Care Facilities

### **Session 6: Special Equipment & Special Conditions - Overview**

- General Overview
- Fire Pumps
- Emergency Systems
- Class 1, 2 and 3 Circuits
- Fire Alarm Systems

### **Session 7: Questions and Answers**

### **COURSE SCHEDULE**

#### **Both Days:**

Start: 8:00 a.m.

Coffee Break: 10:00 a.m.

Lunch: 12:00 noon

Restart: 1:15 p.m.

Finish: 4:30 p.m.

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