Content Community Connection

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# National Electrical Code Training - Changes and Fundamentals

View Course Details

### COURSE DATES AND TIMES

**March 23-24 , 2026**

10:00 am - 4:30 pm ET

**April 27-28 , 2026**

10:00 am - 4:30 pm ET

**May 18-19 , 2026**

10:00 am - 4:30 pm ET

## Why Proper NEC Training Matters

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 in understanding the 2026 National Electrical Code.

Also, our course will instruct electrical professionals on how to access and navigate the National Electrical Code cost-effectively. 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

## Learning Outcomes

This interactive 12-hour 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

- NEC Training Certificate
- 1.2 Continuing Education Unit (CEU) Credits (12 Progessional Development Hours)
- FREE 100-Page Digital Electrical Safety Handbook (Value $20)
- $100 Coupon Toward any Future Electricity Forum Event (Restrictions Apply)
- FREE Magazine Subscription (Value $25.00)
- Course Materials in PDF Format

### COURSE OUTLINE

# NEC Training Course Outline

**DAY ONE**

**SECTION 1 – NEC Structure, Use, and General Requirements**

• History, purpose, intent of the NEC
• How to navigate Articles, Chapters, Tables, and Annexes
• California Electrical Code amendments (overview)
• Definitions, terminology, Article 100

• Working spaces, clearances, access requirements

**SECTION 2 – Branch Circuits: Rules, Ratings, and Required Outlets**

• Branch-circuit types and ratings
• Required outlets (210.52)
• GFCI and AFCI rules (210.8, 210.12)
• Small appliance, laundry, and dwelling-unit circuits
• Introduction to branch-circuit calculations

**SECTION 3 – Feeders, Services, and Overcurrent Protection**

• Feeder rules and sizing
• Service conductors, service equipment, service disconnects
• Overcurrent protection (240), short-circuit and ground-fault protection
• Outside feeders and supplies to detached structures (225)
• Basic feeder/service load calculations

**SECTION 4 – Grounding and Bonding Essentials**

• Grounding vs bonding (definitions and distinctions)
• Grounding electrode systems and electrode conductors
• Bonding of raceways, enclosures, equipment grounding conductors
• Neutral–ground separation rules
• Common field errors and inspection notes

**SECTION 5 – Conductors, Raceways, and Wiring Methods**

• Conductor types, insulation, temperature ratings (310)
• Raceway types: EMT, RMC, IMC, FMC, LFMC, ENT, PVC
• Cable types: NM, NMC, NMS, UF, SE, AC, MC, MI
• Boxes, bending space, fittings, pull/junction boxes
• Conduit fill, derating, and ampacity adjustment

**SECTION 6 – Load Calculations: Dwelling & Non-Dwelling**

• Demand factors (220.42–220.55)
• Dwelling-unit general lighting and receptacle loads
• Appliance loads and fixed-equipment calculations
• Multifamily load calculation examples
• Voltage-drop considerations and examples

# DAY TWO

## SECTION 7 – Equipment for General Use (Article 400–490 Overview)

• Switches, receptacles, and connectors
• Luminaires, lighting equipment, and controls
• Appliances and heating equipment
• Switchboards, panelboards, and disconnects
• Working through common Article 404, 406, and 410 issues

## SECTION 8 – Motors, HVAC, Transformers & Generators

• Article 430 motor-circuit and conductor sizing
• Motor overload and short-circuit protection
• Air-conditioning and refrigeration equipment
• Transformer installation, ventilation, OCPD rules
• Generator installation essentials and labeling

## SECTION 9 – Wiring for Special Occupancies (Chapter 5 Overview)

• Hazardous locations: Class I, II, III basics
• Commercial garages and motor-fuel dispensing
• Health care facilities (Article 517)
• Agricultural buildings, marinas, RV parks (overview)
• How occupancy changes affect wiring rules

## SECTION 10 – Special Equipment (Chapter 6 Essentials)

• Fire pumps (695)
• Elevators and lifts (620)
• Signs and outline lighting (600)
• Electric vehicle supply equipment (625)
• Photovoltaic systems (690) — overview only

## SECTION 11 – Special Conditions & Low-Voltage Systems

• Emergency systems (700), legally required systems (701)
• Optional standby (702)
• Class 1, 2, 3 circuits (725)
• Fire alarm systems (760)
• Communications, data, and telecom circuits (Chapter 8 overview)

## SECTION 12 – Code Interpretation, Field Scenarios & Q&A

• How to read tables, annexes, notes, and exceptions
• Practical examples: sizing conductors, grounding, load calcs
• Common inspection failures and real jobsite mistakes
• Open code questions, clarifications, and applied?learning review

**COURSE SCHEDULE**

**Both Days:**

Start: 10:00 a.m. Eastern Time
Finish: 4:30 p.m. Eastern Time