

Agenda

Presented by Mark D. Cook, CESCO

2023 National Electrical Code: Overview of Major Changes

- Overview of major changes in 2023 NEC
- New Articles for systems over 1000 volts AC or 1500 volts DC
- New 10-amp branch circuit permitted
- Class 4 fault-managed systems
- GFCI and AFCI expansion

Chapter 1: National Electrical Code

- Requirements for electrical installations, including clearances and free space requirements about equipment

Chapter 2: Wiring and Protection

- Grounded conductors
- Branch circuit, feeder and services calculations
- GFCI receptacle outlet requirements
- Voltage drop calculations
- Transformer protection
- Service requirements

Grounding and Bonding

- Grounding of service entrances
- Grounding of separately-derived systems
- Sizing of grounding electrode and grounding conductor
- Grounding electrodes
- Bonding of services

Chapter 3: Wiring Methods and Materials

- Wiring methods—underground installation requirements
- Conductors for general wiring
- Conductor ampacity correction and adjustments
- Number of conductors in a raceway
- Pull and junction box fill calculation

Chapter 4: Equipment for General Use

- Flexible cords and cables
- Switchboards and panel boards
- Luminaires, appliances, transformers and motors
- Receptacle requirements
- Short circuit rating

Chapter 5: Special Occupancies

- Hazardous locations
- Health care facility requirements
- Commercial garages
- Recreational vehicle parks

Chapter 6: Special Equipment

- Signs, outline lighting, elevators
- Hybrid vehicle plug in requirements
- Pools and spas
- Small wind turbine systems
- Data center requirements
- Solar photovoltaic systems

Chapter 7: Special Conditions

- Emergency systems
- Class 1, 2, and 3 power-limited circuits
- Fire alarm circuits

Chapter 8: Communications Circuits

- Premises-powered broadband communication systems
- Network-powered broadband communication systems

Chapter 9: Tables

- Conductor fill and raceway calculation example

National Electrical Code 2023

Live, Interactive Webinar - Wednesday, April 10, 2024

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Learning Objectives

You'll be able to:

Get an overview of major changes in the National Electrical Code 2023.

Examine requirements for wiring and protection.

Learn about grounding and bonding.

Explore special equipment and special occupancies.

Discuss communications circuits, emergency systems and fire alarm circuits.



HalfMoon Education Live Webinars

National Electrical Code 2023

Live, Interactive Webinar - Wednesday, April 10, 2024



Review major changes in the National Electrical Code 2023

Review requirements for electrical installations

Meet requirements for emergency systems and fire alarm circuits

Examine regulations for elevators and data centers

Comply with requirements for hazardous locations, healthcare facilities, commercial garages and recreational vehicle parks

Continuing Education Credits

Professional Engineers
7.0 PDHs

Architects
7.0 HSW CE Hours
7.0 AIA LU | HSW

International Code Council
.7 CEUs (Electrical)



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Faculty

Mark D. Cook, CESP
Electrical Education Specialist, CESP. at Faith Technologies, Appleton, WI
Mr. Cook is a master electrician in Wisconsin and held an Arizona electrical contractor's license for over 20 years. (K-11) He holds an administrator's and a journeyman's license in Washington State. Mr. Cook has been in the electrical industry since 1978, and he owned and operated his own electrical contracting business in Arizona. He was an instructor for the Independent Electrical Contractors of Arizona (I.E.C.), a four-year apprenticeship program facilitated at Gateway Community College in Phoenix. Mr. Cook continues to train for the Electric League of Arizona educational program, teaching classes on NFPA 70E, Arc Flash, Grounding and Bonding and other topics of the National Electrical Code. He has presented the NEC for HalfMoon Education and the Arizona Department of Transportation as well. He authors, *Code Corner*, a monthly article appearing in *The Electric Times* (AZ) and *The Daily Reporter* (WI). Mr. Cook has contributed articles to the *IAEI magazine*. He is a National Fire Protection Association member, an International Association of Electrical Inspectors member, and a certified commercial electrical inspector for the State of Wisconsin. He was recently appointed to Code Making Panel 2 for the 2023 National Electric Code, NFPA 70. Mr. Cook is approved as a CEU provider for more than 12 states.

Credit Information

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- Wednesday, February 28, 2024 | 9:00 am - 12:15 pm CST

Fire Protection for Special Occupancies: Industrial Facilities
- Wednesday, February 28, 2024 | 1:00 - 4:15 pm CST

Planning for Electric Vehicle Charging Infrastructure for Level 2 and DC Fast Charge
- Wednesday, February 28, 2024 | 12:00 - 2:00 pm CST

International Residential Code 2021
- Friday, March 1, 2024 | 8:30 am - 5:00 pm CST

2021 International Residential Code: Mechanical Systems
- Tuesday, March 5, 2024 | 12:00 - 4:30 pm CST

Residential Energy Efficiency Code Compliance and Stretch Code Requirements
- Thursday, March 7, 2024 | 8:30 am - 4:30 pm CST

Practical Fluid Mechanics
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Current Issues in New Urbanism
- Thursday, March 14, 2024 | 9:00 am - 4:00 pm CDT

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Sustainable Site Design
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