

# Agenda

Presented by J.D. White

2023 National Electrical Code: Overview of Major Changes

Chapter 1: National Electrical Code

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

Chapter 2: Wiring and Protection

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

Grounding and Bonding

Grounding of service entrances  
Grounding of separately-derived systems  
Grounding electrodes  
Sizing of grounding electrode and grounding conductor  
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	Receptacle requirements
Switchboards and panel boards	Short circuit rating
Luminaires, appliances, transformers and motors	

Chapter 5: Special Occupancies

Hazardous locations	Commercial garages
Health care facility requirements	Recreational vehicle parks

Chapter 6: Special Equipment

Signs, outline lighting, elevators	
Hybrid vehicle plug in requirements	
Data center requirements	Pools and spas
Solar photovoltaic systems	Small wind turbine 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 - Friday, November 8, 2024

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EAU CLAIRE, WI  
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Altoona, WI 54720-0278



## Learning Objectives

**You'll be able to:**

**Review** major changes in the 2023 National Electrical Code.

**Explore** requirements for electrical installations.

**Comply** with code provisions on grounding, bonding and wiring.

**Review** code requirements for equipment for general use  
as well as equipment for special occupancies.

**Discuss** special equipment including equipment for data centers,  
renewable energy systems and electric vehicle charging systems.



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Your LIVE Education Leader Presents

# National Electrical Code 2023

Live, Interactive Webinar - Friday, November 8, 2024



**Explore** the development,  
adoption and enforcement of  
the National Electrical Code  
2023

**Discuss** provisions on wiring,  
and on grounding and  
bonding

**Comply** with requirements for  
equipment for general use and  
for special occupancies

**Meet** requirements for  
renewable energy systems  
and electric vehicle charging  
systems

**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)

AIA  
Continuing  
Education  
Provider



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# Webinar Information

Online - Friday, November 8, 2024

<b>Log into Webinar</b> 8:00 - 8:30 am CST	<b>Break</b> 12:30 - 1:00 pm CST
<b>Morning Session</b> 8:30 am - 12:30 pm CST	<b>Afternoon Session</b> 1:00 - 4:30 pm CST

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# Faculty

**J.D. White**  
*Professor of Electrician Education, Freelance Electrical System Design and Drafting*  
Professor White's 48 years' experience in the electrical industry, his 25 years of teaching apprentices and CEU courses for electrical contractors, architects and engineers has provided perspectives he enjoys sharing. He has written and revised more than 150 college course syllabi. He transitioned the entire skilled trades catalog of courses at one institution from quarter hours to semester hours. He has created and changed numerous college programs of study for associate degrees and various trade certificates. He has taught for IEC Central Ohio, Columbus State Community College, and most recently Midlands Technical College Columbia, South Carolina. Professor White has also been teaching CEU seminars for various training agencies and private companies since 2007. He has a strong understanding of the National Electrical Code and tries to create interactions with seminar attendees. Regarding electrical system design, he has completed more than 100 projects including simple single buildings, multiple occupancy strips, and multi-use buildings.

# Credit Information

This webinar is open to the public and is designed to qualify for 7.0 PDHs for professional engineers and 7.0 HSW continuing education hours for licensed architects in all states that allow this learning method. Please refer to specific state rules to determine eligibility.

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The American Institute of Architects Continuing Education System has approved this course for 7.0 HSW LUs (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .7 CEUs in the specialty area of Electrical (Preferred Provider No. 1232).

Attendance will be monitored, and attendance certificates will be available after the webinar for those who attend the entire course and score a minimum 80% on the quiz that follows the course (multiple attempts allowed).

## On-Demand Credits

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7.0 HSW LUs (AIA)

# Additional Learning

- 2024 International Building Code: Special Uses and Mixed Uses**  
- Tuesday, October 8, 2024 | 12:00 - 4:30 pm CDT
- Air-Source Heat Pumps for Residential and Small Commercial Buildings**  
- Tuesday, October 8, 2024 | 9:00 am - 4:50 pm CDT
- Deep Dive into Energy Benchmarking Building Performance Standards**  
- Tuesday, October 8, 2024 | 11:30 am - 4:00 pm CDT
- Energy Benchmarking and Why It Is Important**  
- Tuesday, October 8, 2024 | 9:00 - 11:00 am CDT
- Handling Ethical Issues in Construction Management**  
- Tuesday, October 8, 2024 | 10:00 - 11:00 am CDT
- Healthy Buildings**  
- Tuesday, October 8, 2024 | 1:00 - 3:00 pm CDT
- Modular Construction and Prefabricated Components: Residential, Multi-Family and Commercial Buildings**  
- Wednesday, October 9, 2024 | 9:00 am - 3:50 pm CDT
- Natural Fiber Insulation**  
- Wednesday, October 9, 2024 | 10:00 am - 12:00 pm CDT
- Special Inspections Under Chapter 17 of the International Building Code**  
- Thursday, October 10, 2024 | 9:00 am - 5:00 pm CDT
- Construction Contracting**  
- Tuesday, October 15, 2024 | 9:00 am - 5:00 pm CDT
- Planning for EV Charging Infrastructure for L2 and DC Fast Charge**  
- Wednesday, October 16, 2024 | 10:00 am - 12:00 pm CDT
- 2024 International Building Code: Fire Protection**  
- Tuesday, October 22, 2024 | 12:00 - 4:30 pm CDT
- Construction Manager at Risk (CMAR) Project Management System**  
- Tuesday, October 22, 2024 | 9:00 am - 4:00 pm CDT
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