National Electrical Code 2017 and 2020

Livonia, MI - Thursday, April 23, 2020

Discuss major changes in the brand new 2020 National Electrical Code

Learn in-depth, chapter-by-chapter specifics of the 2017 National Electrical Code which was adopted by Michigan in 2019

Get an overview of new 2017 NEC Articles

Continuing Education Credits

Professional Engineers
7.0 Continuing Ed. hours

Architects
7.0 HSW Continuing Ed. Hours
7.0 AIA LU|HSW

International Code Council
0.7 CEUs (Electrical)

Contractors
Non-Credit Continuing Ed.

Analyze wiring and protection, grounding and bonding, and wiring methods and materials

Explore equipment for general use, special occupancies, and special equipment

Learn about special conditions and communication circuits, and review NEC tables

Agenda

Overview of Major Changes in 2020 National Electrical Code
- Expanded GFCI requirements
- Dwelling service disconnect requirements
- Required surge protection
- Expanded torque requirements
- Lighting loads for non-dwellings
- Pool systems, follow-up inspections
- New code articles

Overview of new 2017 NEC Articles
- Article 425: Fixed Industrial Process Heating
- Article 691: Large-Scale PV Electric Power Production
- Article 706: Energy Storage Systems
- Article 710: Stand-Alone Systems
- Article 712: Direct-Current Microgrids

Chapter 1: National Electrical Code
- Requirements for electrical installations, including clearances and free space requirements about equipment
- New reconditioned equipment, identification and traceability
- New limited access working space requirement
- New short-circuit current documentation

Chapter 2: Wiring and Protection
- Grounded conductors
- Branch circuit, feeder and services calculations
- New GFCI protection for non-dwelling units
- Grounding and bonding
- Grounding of separately derived systems
- Bonding of services

Chapter 3: Wiring Methods and Materials
- Wiring methods—underground installation requirements
- Conductor ampacity correction and adjustments
- New single-phase dwelling services and feeders

Chapter 4: Equipment for General Use
- Switchboards and panel boards
- Short circuit rating
- Luminaires, appliances, transformers and motors

Chapter 5: Special Occupancies
- Commercial garages
- Health care facility requirements
- Recreational vehicle parks

Chapter 6: Special Equipment
- Hybrid vehicle plug in requirements
- Pools and spas
- Solar photovoltaic systems

Chapter 7: Special Conditions
- Emergency systems
- 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

Learning Objectives

You’ll be able to:

Explain what is now required in the state of Michigan by understanding the 2017 National Electrical Code.

Discuss dwelling service disconnect requirements, required surge protection, and other major changes to the brand new 2020 National Electrical Code.

Understand the limited access working space requirement and short-circuit current documentation.

Learn about GFCI protection for non-dwelling units and single phase dwelling services and feeders.

Identify requirements for emergency systems, fire alarm circuits and communications circuits.

Find us on Facebook
Faculty

JD White
Consultant at Freelance Electrical System Design and Drafting

Mr. White has spent the past 12 years with Columbus State Community College as its Skilled Trades Program Coordinator. This role has provided him with insights beyond teaching including their migration to semesters, providing oversight of 1/4 apprenticeship courses, and 28 open enrollment courses covering Construction, Carpentry, Electrical, Plumbing, and Welding. He helped personally write some of these new courses. Mr. White helped craft 15 Plans for Study for various Certificates, AAS majors, and ATS majors. He has been an active part of articulation agreements, with various vocational career programs and apprenticeship programs. He started a new open enrollment program in June of 2007, which had over 200 active students and filling 28 course sections per term, prior to handing it over to a new faculty member. Mr. White is presently working with 10 apprenticeship partnerships with an annual enrollment of 1,500 students. He has oversight of five labs, equipment, and materials and lab personnel.

Here’s what past attendees had to say about the program and presenter JD White:

“JD was great. — General Contractor

“Great presenter. Kept full group engaged.” — Consulting Engineer

“Probably the best HEI course I have attended!” — Civil Engineer

“Instructor is an expert on this topic.” — Electrical Engineer

Additional Learning

Webinar Series

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<th>Seminar Name</th>
<th>Dates</th>
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<tr>
<td>Tree Science</td>
<td>Wed., April 15, 2020</td>
<td>11:00 AM - 1:00 PM CDT</td>
<td>Overview of the Role of Forensic Engineering</td>
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Continuing Education Credit Information

This seminar is open to the public and offers 7.0 continuing education hours to professionals. It has not been approved for credit by New York engineers and architects. HalfMoon Education is deemed an approved continuing education sponsor for (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York engineers and architects.

The International Code Council has approved this event for 7 CEUs in the specialty area of Electrical (Preferred Provider No. 1252). This seminar offers contractors a non-credit continuing education opportunity. It has not been submitted to any state contractor licensing entity for continuing education approval.

Attendance will be monitored, and attendance certificates will be available after the seminar for most individuals who complete the entire event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

Can’t Attend? Order the Manual and Audio from the Live Seminar as a Self-Study Package!

Audio recordings of this seminar are available for purchase starting at $279. See registration panel for more information and please refer to specific state license rules or certification requirements to determine if this learning method is eligible for continuing education credit.

Registration

National Electrical Code 2017 and 2020
Livonia, MI - Thursday, April 23, 2020

How to Register

Online: www.halfmoonseminars.org
Phone: 715-835-5900
Fax: 715-835-6066
Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278

Complete the entire form. Attach duplicates if necessary.

Tuition

($) I will be attending the live webinar. Single Registrant - $299.00. Three or more registrants from the same company registering at the same time - $279.00 each.

($) I am not attending. Please send me the self-study package:

• Downloadable MP3 Audio/PDF Manual for $279.00
• CD/Manual Package for $299.00
• USB/Manual Package $299.00. (S&H included. Please allow five weeks from seminar date for delivery)

Checks: Make payable to HalfMoon Education Inc.
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