



"Code Made Simple"

DETAILED 2023 NEC® WORKSHOP Day II - 10 CEU

Course Syllabus

Description

On day one of this two-day workshop, students learned about the basic flow and navigation of the National Electrical Code and National Fire Alarm and Signaling Code. Students will now review various Tables and Articles in detail. Students are expected to have studied on their own before coming to this workshop. They will use this time to reinforce learned concepts with the instructor and ask clarifying questions.

Learning Objectives

- Students will learn how to effectively run a safe electrical business.
- Students will review NEC changes and how to incorporate these changes within their day to day jobs.
- Students will practice calculations and relate these calculations to the NEC.

Registration: 7:30am-8am

Participants are required to sign a state-specific roster(s) and show a government issued picture ID upon entering the workshop. Arriving late or leaving early results in non-reporting of hours. Students are provided a written explanation of attendance and transfer policies at the time of their workshop confirmation.

Conductors for General Wiring: 8-9

Conductor Tables & Ampacities
Multiplying vs Dividing
High Voltage - Article 240
Medium Voltage - Tables 311
Practice

Wire Bending Spaces and Box & Conduit Fill: 9-10

Wire Bending Spaces - Article 312
Pancake boxes & Domed fixtures
Box volume/Fill calculation - Table 314
Box & Conduit body fill
Counting Conductors
Pull boxes
Practice

Cable Tray Fill, Switches & Wireways: 10-10:30

Cable Tray Fill - Article 392
Conduit & Tubing Fill

Practice

Fixed Electric Space Heating: 10:30-11

Space Heating Equipment - Article 424

Branch Circuits 125%

Practice

Motors & Motor Circuits: 11-12

The Six Pack- Article 430

Motor Ampacities

Motor Branch Circuits

Overload Protection

Overcurrent Protection

Motor Controller

Motor Disconnect

Practice

Additional Equipment: 12-1

A/C Equipment - Article 440

Transformers - Article 450

Practice

Bonding & Grounding: 1-2

Article 250

Electrodes Permitted for Grounding

Grounding Electrode Conductor Sizing

Grounding Electrode Conductor for AC Systems

Grounding Conductor, Main Bonding Jumper, System Bonding Jumper, and Supply-Side Bonding Jumper for AC Systems

Minimum Sizing Equipment Grounding Conductors for Grounding Raceway & Equipment

Highlight and Interpret: 2-2:30

Article 90

Article 110

Article 200

Practice

Branch Circuits/Outside Branch Circuits & Feeders: 2:30-4

Article 210

Required Branch Circuits in Dwellings

Intro of continuous loads/continuous duty

Feeders - Article 215

Article 225

Services & Overcurrent Protection: 4-4:15

Article 230

Article 240
Key Points & Highlights
Practice

Wiring Methods & Materials: 4:15-4:30

Chapter 3
Key Points

Book of Specials: 4:30-5

Chapters 5, 6, & 7
Hazardous Classified Locations - Articles 500-516
Tables 505 & 506
Healthcare Facilities - Article 517
Mobile Homes & Park Trailers - Article 550 & 552
Floating Buildings & Marinas - Article 553 & 555
Temporary Power & Sensitive Electronic Equipment - Article 590 & 647
Cranes & Hoists - Article 610
Pools & Fire Pumps - Article 680 & 695

Flow & Navigation of the NFPA-72: 5-5:30

Code Organization & Layout
Arrangement of Code Chapters
Components of Systems, Appliances, & Devices
Interface of Systems & Chapter 21
Alarm system types
Annex and Index

Business Management, Law, and Safety: 5:30-6

Eight basic forms - state license, etc
Elements to a business - delegation, etc
Types of businesses - Sole, S vs C, LLC
Insurance - workmen's comp, etc
Bonds - six types
Estimating - Take off method, etc
Forms & Bookkeeping - Profit & Loss, etc
Permits & Violations - OSHA, etc

Method of Instructional Delivery

Classroom – lecture, discussion of topics, and hand-on problem solving and calculations as discussed

Materials and Instructional Aids

Instructor utilizes a PowerPoint presentation throughout instruction. Workshop participants are provided with a **Detailed NEC Instructional Manual** and a copy of **PowerPoint slides**. Participants bring a **National Electrical Code Book & National Fire Alarm and Signaling**

Code Book (Current Editions). It is suggested to bring a notebook, calculator, and a highlighter to class.

Availability of Courses to the General Public

All submitted courses are open to the public for registration and attendance.

Evidence of Completion

Each participant is provided with a Certificate of Completion at the end of class. JCR Productions, Inc. retains original copies of all signed rosters and has electronic copies kept indefinitely.

Costs

One Day = \$325.00 - includes workshop & materials.

Class Location & Size

Workshops are held monthly at the following locations:

- Hampton Inn, 3920 Arrow Drive, Raleigh, NC 27612 - Class size: ~60
- Springhill Suites, 121 Gateway Blvd, Mooresville, NC 28117 - Class size: ~40
- Holiday Inn & Suites, 42 Tunnel Rd, Asheville, NC 28805 - Class size: ~40

Instructor

Victor Ring- Code Consultant, JCR Productions, Inc.