



*"Code Made Simple"*

## **DETAILED 2023 NEC® WORKSHOP Day 1 - 10 CEU**

### **Course Syllabus**

#### Description

Students will learn about the basic flow and navigation of the National Electrical Code and National Fire Alarm and Signaling Code. Students are “reintroduced” to these references using correct terminology which helps them with effectively navigate and locate the answers to their questions. The instructor helps connect real life situations to these references so that students are more comfortable and familiar with utilizing their NEC and NFPA.

#### Learning Objectives

- Students will learn correct terminology used in the NEC and NFPA.
- Students will learn the arrangement of the NEC and NFPA in order to locate needed information.
- 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.

#### **Navigating the National Electrical Code: 8-10**

Code Formatting

History, Chapters & Articles, Arrangement & Format

Arrangement of Chapters - 1-4, 5-7, 8, 9

Navigation Methods of the Code

#### **The Paralleled Numbering System: 10-12**

Commonly Referenced Sections

Administration - Article 90

Definitions - Article 100

Neutral vs Grounded Conductor - Article 200

#### **Basic NFPA Code Requirements: 12-2**

Fire department basic requirements - disconnect, etc

Article Point Flow & Format

Remembering Code Articles - 210 to 250

Basic Code Occupancies - Dwelling vs Non-Dwelling

NEC math formulas - percentage math, volume math  
Code navigation methods & recommendations  
Grounded vs Grounding

### **Ohm's Law & Review of Electrical Calculations: 2-4**

Foundational Review  
Code Wide Factors - 125%, Rounding, Derations, etc  
100 Amp Rule  
Required Considerations - continuous, derated, phase, etc  
Single Phase vs Three Phase formula  
Wye vs Delta  
Article 240

### **Branch-Circuit, Feeder, & Service Load Calculations: 4-6**

Article 220  
Standard, Optional, Derations or Demands  
General Lighting Loads & Derations, Receptacle Loads & Derations  
Non-Dwelling, Optional Dwelling, Multi-family dwelling, Single family dwelling  
Show Window Lighting, Track Lighting Loads, Motor Loads, Heating Loads  
Dwelling appliance loads & derating  
Neutral sizing & Neutral derating  
Table 220  
Practice

### 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.