

2023 NFPA 70® Analysis of Changes

COURSE AGENDA

Contact Hours: 16.00

CEUs: 1.6



This course makes extensive use of the Analysis of Changes text by IAEI, focusing on Industrial Applications.



DAY 1

CHAPTER I: Introduction and Overview

- How The Organization Of The NEC® Has Affected Navigation Of The NEC®
- Identifying Changes
- Basic Requirements Of Articles 90, 100, And 110
- Termination And Torque Requirements
- Working Spaces

CHAPTER II: Wiring And Protection

- Distribution System From The Utility Service To Individual Loads
- Size And Installation Requirements For:
 - Branch Circuits
 - Feeders
 - Fuses
 - Services
- GFCI Protection
- Reconditioned Equipment
- Load Calculations
- Article 250: Grounding & Bonding
- Overcurrent Device Selection And Sizing
- Overvoltage Protection
- New Articles Covering Over 1,000v

CHAPTER III: Wiring Methods And Materials

- General Requirements For Wiring
- Conductors
- New Articles Covering Over 1,000v
- Cables (Armored, Metal-Clad, MV, Non-Metallic)
- Conduits
- Box Fill
- Cabinets, Cutout Boxes, Meter Socket Enclosures
- Flexible Bus Systems
- Cover Requirements
- Typically Used Cables And Conduit Installation Requirements
- Cable Tray and Busway



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COURSE AGENDA - Continued

DAY 2

CHAPTER IV: Equipment For General Use

- Switches
- Luminaries
- Low Voltage Lighting
- Appliances
- Industrial Process Heating
- Motors, Motor Circuits And Controllers
- Air Conditioning And Refrigeration
- Generators
- Transformers
- Resistors
- Panelboards, Switchboards Requirements
- Switchgear Requirements
- Ground Fault Protection Of Equipment
- Tamper Resistant Receptacles
- Industrial Control Panels
- Equipment Over 1,000v

CHAPTER V: Special Occupancies

- Hazardous Locations
- Cannabis Oil Equipment
- Health Care Facilities
- Casinos And Gaming Facilities
- Agricultural Buildings
- Marinas, Boatyards, And Docking Facilities
- Temporary Installations

CHAPTER VI: Special Equipment

- Signs
- Elevators
- Electric Vehicle Power Transfer
- Welders
- Modular Data Centers
- Industrial Machinery
- Solar Photovoltaic

CHAPTER VII: Special Conditions

- Emergency Systems
- Legally Required Standby Systems
- Interconnected Electric Power Production Sources
- Energy Storage Systems
- Power Limited Systems
- Fire Alarms

CHAPTER VIII: Communication Systems

- General Requirements For Communication Systems
- Communication Circuits
- Premises-Powered Broadband Communication Systems

CHAPTER IX: Tables

- Equipment Suitable For Hazardous Locations



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Our analysis of changes course is based on the IAEI analysis and focuses on industrial applications. This two-day course is for individuals already familiar with the NEC. The course will cover new material, revised material, the reasoning behind the change and the impact this will have on the electrical industry.

For example: Many of the Articles have made additions which include reconditioning of equipment. Many of these are located in the sections (##.2) of the Articles. The sections point out what equipment is permitted to be reconditioned and what equipment is not permitted to be reconditioned.



Lecture



Hands-on



DURATION

2 Days (16 hours)



LIVE ONLINE TRAINING

2 days



ONSITE - IN CLASS TRAINING

2 days

WHAT THIS COURSE COVERS

The Major Changes To The Code 2023 Edition including:

- 13 New Articles have been added
- 3 Articles have been deleted
- New Tables have been added
- All definitions have moved to Article 100
- Power limited class 1, 2, 3 circuits have been revised
- Additional items added for box fill calculations

WHO SHOULD TAKE THIS

- Those who perform electrical equipment installation and maintenance, for example:
 - Electricians
 - Contractors
 - Engineers
 - Installers
 - Facility Maintenance Personnel

COURSE OUTCOMES

- Become current with the most recent NEC® updates
- Be able to discuss changes in the NEC affecting the participant's work

COURSE AGENDA

- Chapter 1: General
- Chapter 2: Wiring and Protection
- Chapter 3: Wiring Methods and Materials
- Chapter 4: Equipment for General Use
- Chapter 5: Special Occupancies
- Chapter 6: Special Equipment
- Chapter 7: Special Conditions
- Chapter 8: Communication Systems
- Chapter 9: Tables



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