



2020 NFPA 70 – National Electric Code [NEC] Analysis of Changes

DURATION: 2 DAYS – 16 HOURS



Live Online Training
Single Class Capacity: 15



Onsite – In Class Training
Single Class Capacity: 25

Focused on industrial applications, this 2-day course is for individuals already familiar with the code and want to know reasoning behind the changes and participants will gain a deep understanding and practice applying the new changes via practical field scenarios applications.

In addition to significant changes throughout the 2020 National Electrical Code, you will find four new articles in the 2020 edition of the NEC. Two of the articles are built around the concept of “combine articles and expand.” One new article adds a different type of cable and one new article appears in Chapter 8. For example:

- Article 242 Overvoltage Protection
- Article 311 Medium Voltage Conductors and Cable
- Article 337 Type P Cable
- Article 805 General Requirements for Communications Systems

WHAT THIS COURSE COVERS

- New Article 242 Overvoltage Protection
- Changes in Grounding and Bonding Article 250
- New Article 311 Medium Voltage Conductors and Cable
- New Article 337 Type P Cable
- Change for electronic protection of motors
- Changes to Hazardous (Classified) Locations articles
- New in Article 680: Splash pads
- New allowances for PV connectors
- New Article 805
- New section on interconnected power systems

WHO SHOULD TAKE THIS?

- Electricians
- HVAC technicians
- Owners & managers
- Maintenance technician
- Energy management personnel
- Stationary engineers

COURSE OUTCOMES

- Understand how NEC® safeguards people and property.
- Make your facility and operations NEC® compliant.
- Become current with the most recent NEC® updates.



Every NTT course is eligible for CEUs (or Continuing Education Units) with your governing board approval or your states approval.

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COURSE AGENDA

COURSE INTRODUCTION

- Determine any specific topic needs of attendees
- Review minor changes to Article 90 Introduction

CHAPTER 1 GENERAL

- New and revised definitions and impacts to code
- Understanding Communications Cabling requirements now in Article 110
- Updated terminal torque requirements
- Updated 110.26 Spaces About Electrical Equipment

CHAPTER 2 WIRING AND PROTECTION

- Expansion and revision of GFCI requirements
- New Article 242 Overvoltage Protection
- Changes in Grounding and Bonding Article 250
- Article 230 Changes for Services

CHAPTER 3 WIRING METHODS AND MATERIALS

- Expansive review of the reorganized Article 310 Conductors for General Wiring
- New Article 311 Medium Voltage Conductors and Cable
- New Article 337 Type P Cable

CHAPTER 4 EQUIPMENT FOR GENERAL USE

- Revisions to receptacle requirements in bath and shower stall areas
- Revisions to installation of panelboards, switchboards and switchgear

- Change for electronic protection of motors
- Improving transformer ventilation through new marking requirements

CHAPTER 5 SPECIAL OCCUPANCIES

- Changes to Hazardous (Classified) Locations articles including the addition of Part III to Article 100
- Revision of receptacle, bonding and ground-fault protection for marinas and boatyards

CHAPTER 6 SPECIAL EQUIPMENT

- New in Article 680: Splash pads – what they are and their installation requirements as compared to swimming pools
- In Article 690, the reference to new UL3741 Standard and certifications for PV Hazard Control – what it is and what are the impacts
- New allowances for PV connectors
- Exceptions to grounding requirements for certain PV systems

CHAPTER 7 SPECIAL CONDITIONS

- New section on interconnected power systems on the requirements of the Power Control System
- Changes to Article 725 affecting low-voltage and communication

CHAPTER 8 COMMUNICATIONS SYSTEMS

- Re-organization of Chapter 8
- Changes in individual articles
- New Article 805



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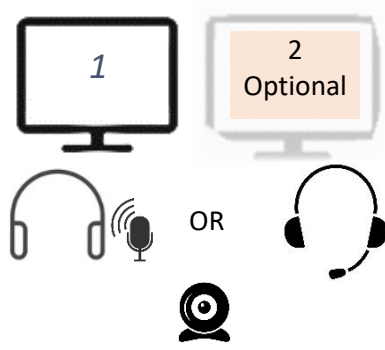
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EQUIPMENT & MATERIALS

CLIENT PROVIDED COMPUTER REQUIREMENTS (Live Online Training only)

- Student email address to receive access to NTT’s online platform
- Internet Access through a computer (laptop or desktop)
 - 1:1 Participant minimum bandwidth requirements: 1.2 Mbps (download)
- Ability to download and view files online
- Two monitors recommended but only one required
- Computer Speakers
- Computer Microphone
- Computer Web Camera
- Browser Requirements are:
 - Chrome 78, 79, 80
 - Edge 44 (Windows only)
 - Edge 79
 - Firefox 71 and 72 (Extended Releases are not supported)
 - Safari 12 and 13 (Macintosh only)
- CLIENT PROVIDED for Onsite courses
 - Classroom, with easy access, of 750 square feet or greater.
 - Projection screen, white board and/or flip chart(s).



NTT PROVIDED STUDENT MATERIALS

- Access to NTT’s online platforms:
 - Canvas for digital exercises
 - Zoom for web video conference
 - No purchase or install necessary but students will be required to test the system they will be taking the class on before the day of training.
- Student Materials
 - Hard-Copy of Texts & Industry Standards, NTT Job Aids and general consumables: notepad, pens/highlighters, tabs
 - Digital-copies NTT materials including Phone Apps

