

## 2023 NEC Review of Changes for Services, Feeders, & Branch Circuits

### Provider Information

Provider	Instructor	Email
Mike Holt Enterprises	Mike Holt	ceuonline@mikeholt.com

### General Information

#### Course Length

16 Hours

#### Course Description

This course is based on the content from *Mike Holt's Illustrated Changes to the NEC 2023* textbook and video program. It provides students with an overview of the significant changes involving services, feeders, and branch circuits from the NEC.

#### Expectations and Goals

The format of the course is designed to encourage constant interaction with the student. This course provides students with pages of text and graphics followed by a question related to that material. This provides immediate application of the content learned. This format keeps students actively engaged in their learning through the entirety of the course.

#### Student Interaction

Our online course provides the student with the ability to send questions about the course and content to Mike Holt and our CEU department 24 hours a day through our "Submit a Question" and "Report an Error" section. During normal business hours (8:30am to 5:00pm EST) all calls are answered by customer service and questions that are emailed to the department are always responded to and resolved within 2 hours during normal business hours. Questions that are emailed while the office is closed are addressed within 6-8 hours.

### Course Materials

#### Required Materials

Students are required to have a computer and reliable internet connection to properly use our online courses. Our courses are optimized to perform on Firefox or Google Chrome.

Students are not required to purchase any additional training materials, such as textbooks.

### Methods of Presentation

#### Text

The course utilizes text and full-color illustrations to help you visualize the change and safety requirements in practical use. You will review author's comments & analysis, cautions

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regarding possible conflict or confusing NEC requirements, tips on proper electrical installations, and warnings of dangers related to improper electrical installations.

### Quiz Questions

Student comprehension is tested immediately with page or video level questions. They must pass these quizzes with a 75% or better to receive credit for this course.

### Video

Optional course videos are provided throughout the program to help a student review the topic in depth if needed. The videos correspond with the course outline. Our videos showcase a dynamic classroom type training with Mike and his panel of experts dissecting the changes, their impact, and how they will translate and apply in the field. These videos allow for our instructors to clarify the meaning of the change and to provide an in-depth analysis of the background information.

## Course Security

### Affidavits

Students will be required to electronically sign the following affidavit when taking this online course:

I hereby certify that I am the person completing the following course (Name of Course) and that I will complete this course completely on my own. By entering my name below, I am ensuring I am the student who is enrolled in and completing this course

### Course Timer

Our courses track all student progress and has a built-in timer. We require students to be engaged in the course for a minimum of 50 minutes per credit hour. Students will not be able to receive credit unless they have met the minimum time requirement for this course. Students can track their time remaining by viewing the course timer while they are logged into the course.

### Student Computer

Students will not be allowed to be logged into multiple computers at once while completing our courses. Students will only be able to log into one computer to successfully take the course.

### Inactivity Timer

Students will automatically be logged out of the course after 30 minutes of inactivity.

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## Course Topics

Topics	Module Details
<b>Article 90—Introduction to the National Electrical Code</b> 90.1 Scope 90.2 Use and Application 90.4 Enforcement 90.5 Mandatory Rules, Permissive Rules, and Explanatory Material, (C) Explanatory Material	Estimated Time Spent: 100 minutes Format: Text
<b>Article 110—General Requirements for Electrical Installations</b> 110.3 Use and Product Listing (Certification) of Equipment 110.8 Wiring Methods 110.12 Mechanical Execution of Work 110.16 Arc-Flash Hazard Warning 110.17 Servicing and Maintenance of Equipment 110.20 Reconditioned Equipment 110.22 Identification of Disconnecting Means 110.26 Spaces About Electrical Equipment	Estimated Time Spent: 150 minutes Format: Text
<b>Article 200—Use and Identification of Grounded Conductors</b> 200.6 Means of Identifying Grounded Conductors	Estimated Time Spent: 20 minutes Format: Text
<b>Article 210—Branch Circuits</b> 210.1 Scope 210.4 Multiwire Branch Circuits 210.5 Identification for Branch Circuits 210.8 Ground-Fault Circuit-Interrupter Protection for Personnel 210.11 Branch Circuits Required 210.12 Arc-Fault Circuit-Interrupter Protection 210.17 Guest Rooms and Guest Suites 210.19 Conductors—Minimum Ampacity and Size 210.23 Multiple-Outlet Branch Circuits 210.52 Dwelling Unit Receptacle Outlets 210.62 Show Windows 210.65 Meeting Rooms 210.70 Lighting Outlets Required	Estimated Time Spent: 200 minutes Format: Text
<b>Article 215—Feeders</b> Conductor Sizing 215.15 Barriers 215.18 Surge Protection	Estimated Time Spent: 40 minutes Format: Text

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Topics	Module Details
<b>Article 220—Branch-Circuit, Feeder, and Service Load Calculations</b> 220.1 Scope 220.5 Calculations 220.53 Appliance Load—Dwelling Unit(s) 220.57 Electric Vehicle Supply Equipment (EVSE) Load 220.60 Noncoincident Loads 220.70 Energy Management Systems (EMSs) 220.87 Determining Existing Loads 220.120 Receptacle Loads	Estimated Time Spent: 60 minutes Format: Text
<b>Article 225—Outside Branch Circuits and Feeders</b> 225.1 Scope 225.27 Raceway Seal 225.41 Emergency Disconnects 225.42 Surge Protection	Estimated Time Spent: 50 minutes Format: Text
<b>Article 230—Services</b> 230.1 Scope 230.7 Service Conductors Separate from Other Conductors 230.8 Raceway Seal 230.24 Clearances 230.43 Wiring Methods for 1000V, Nominal, or Less 230.62 Service Equipment—Enclosed or Guarded 230.67 Surge Protection 230.71 Maximum Number of Disconnects 230.85 Emergency Disconnects	Estimated Time Spent: 100 minutes Format: Text
<b>Article 240—Overcurrent Protection</b> 240.4 Protection of Conductors 240.6 Standard Ampere Ratings 240.24 Location of Overcurrent Protective Devices	Estimated Time Spent: 60 minutes Format: Text
<b>Article 242—Overvoltage Protection</b> 242.9 Indicating	Estimated Time Spent: 20 minutes Format: Text

**Important Disclaimer**

The estimated time spent is based on data collected from thousands of students completing our apprenticeship and CEU programs and additionally supported by educational organizations calculations for average for students reading technical material. Based on our data and research, we've determined students spend on average 2-6 minutes per page and question. Reference:

<https://catalog.shepherd.edu/mime/media/12/913/SU+Credit+Hour+Policy+Appendix+B.pdf>

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# Mike Holt Biography

## Educator

Mike has taught over 1,000 classes on over 40 different electrical related subjects to over 20,000 students. He is committed to the electrical industry and is recognized as one of America's most knowledgeable and dynamic Electrical Educators. He has touched the lives of many thousands with his dynamic and animated teaching style, which is relaxed, direct and fun. Perhaps Mike's best quality is his ability to motivate his students to become successful. Mike draws on his experience to help him develop training programs that the electrician understands and enjoys. His extensive use of illustration in all of his training programs makes learning fun. His ability to take the intimidation out of learning is reflected in the success rate of his students. His development of educational products that are interesting as well as technically correct has brought his name to become synonymous with quality education. His dedication to electrical training is the result of his own struggles as an electrician looking for a program that would help him succeed in this challenging industry.

## Author

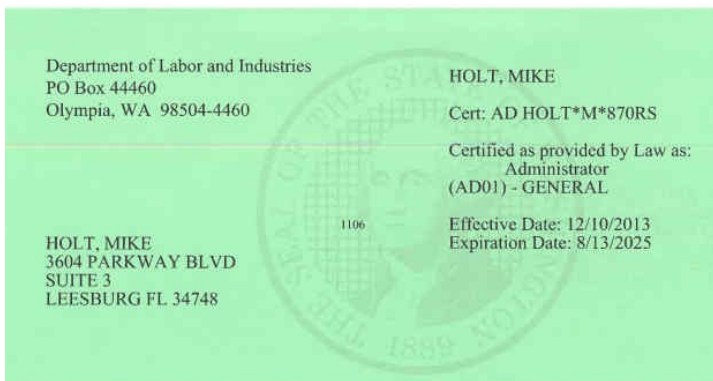
Mike Holt is a well-respected author and developer of software, books and video training programs. He has developed nearly 50 different electrical home-study training and business management programs which have been in use since 1978 by electrical apprenticeship training programs, contractors, inspectors, electricians, engineers and plant personnel. Mike has worked his way up the trade from Apprentice Electrician, Journeyman Electrician, Master Electrician, Electrical Inspector, Electrical Contractor, Electrical Designer and developer of training programs for the electrical industry. He was formerly a contributing Editor to Electrical Construction and Maintenance Magazine (EC&M) and Construction Editor to Electrical Design and Installation Magazine (EDI). His articles have been seen in CEE News, Electrical Contractor (EC) International Association of Electrical Inspectors (IAEI News), The Electrical Distributor (TED) and Power Quality Magazine (PQ).

## Industry Expert

Mike has devoted his career to studying and understanding the National Electrical Code. His research and background has not only made Mike an expert, but it has earned him the respect of his peers. Mike teaches seminars throughout the United States and abroad, for individuals, organizations such as NECA, IAEI, IBEW and ICBO, and Fortune 500 companies such as IBM, Boeing, Motorola, and AT&T. He has been an active member of the International Association of Electrical Inspectors, National Board of Electrical Examiners, National Fire Protection Association, National Association of Licensing Boards, Florida Association of Electrical Contractors, and the Electrical Council of Florida. Mike Attended the University of Miami's Masters in Business Administration, MBA program.

Mike's courses are approved in over 32 states for online and home-study courses, and approved for live classes in over 18 states

## Current Licenses



Washington Holt\*M\*870RS Exp:8/13/2025



North Carolina L.25602 Exp: 03/21/2023

# CERTIFICATE OF COMPLETION

Mike Holt Enterprises hereby certifies that

**Sample Student**

Student State License Number

has successfully completed the

**Title of Course**

January 1, 2022



MikeHolt.com | 888.632.2633

A handwritten signature in black ink that reads "Mike Holt". The signature is written in a cursive style and is positioned above a horizontal line.

Charles "Mike" Holt, Sr.  
Certified Instructor

Final Score:

Course Hours:

Certificate No.:

State Approval No.:

State Provider No.: