Fundamental NEC Calculations

Mike Holt Enterprises
MikeHolt.com • 888.NEC.CODE (632.2633)

Provider Information

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

General Information

Course Length

8 Hours

Course Description

This course is based on the content from *Mike Holt's 2023 Fundamental NEC Calculations* textbook and video program. It provides students with a comprehensive introduction to the principles and calculations required for determining electrical loads and requirements.

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

Contact Us:

www.mikeholt.com/ceu | 888-632-2633 | ceuonline@mikeholt.com

Course Topics

Topics	Module Details
Article 210—Branch Circuits 210.1 Scope 210.19 Conductors—Minimum Ampacity and Size 210.20 Overcurrent Protection	Estimated time: 15 minutes Format: Text & Questions
Article 215—Feeders 215.2 Conductor Sizing 215.3 Overcurrent Protection Sizing 215.6 Feeder Equipment Grounding Conductor	Estimated Time Spent: 15 minutes Format: Text & Questions
Article 220—Branch-Circuit, Feeder, and Service Load Calculations 220.1 Scope 220.3 Applications of Other Articles 220.5 Calculations 220.11 Maximum Load 220.14 Other Loads—Occupancies 220.60 Noncoincident Loads 220.61 Neutral Calculated Load 220.70 Energy Management Systems (EMSs)	Estimated Time Spent: 60 minutes Format: Text & Questions
Article 230—Services 230.1 Scope 230.42 Conductor Sizing 230.90 Overload Protection—Where Required	Estimated Time Spent: 10 minutes Format: Text & Questions
Article 240—Overcurrent Protection 240.1 Scope 240.3 Other Articles (Overcurrent Protection of Equipment) 240.4 Overcurrent Protection of Conductors 240.5 Overcurrent Protection of Flexible Cords, Flexible Cables, and Fixture Wires 240.6 Standard Ampere Ratings 240.21 Location of Overcurrent Protective Device in Circuit	Estimated Time Spent: 60 minutes Format: Text & Questions
Article 310—Conductors for General Wiring 310.1 Scope 310.3 Conductors, Minimum Size and Material 310.4 Conductor Construction and Application 310.12 Dwelling Services and Feeders 310.14 Ampacities for Conductors Rated 0V to 2000V	Estimated Time Spent: 60 minutes Format: Text & Questions

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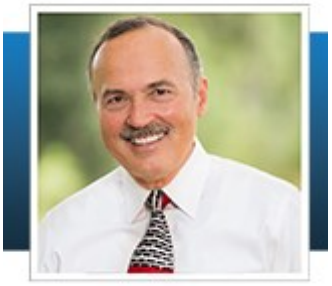
Topics	Module Details
310.15 Ampacity Tables 310.16 Ampacities of Insulated Conductors	
Article 334—Nonmetallic-Sheathed Cable (Type NM) 334.1 Scope 334.80 Conductor Ampacity	Estimated Time Spent: 10 minutes Format: Text & Questions
Article 376—Metal Wireways 376.1 Scope 376.22 Number of Conductors and Ampacity 376.23 Wireway Sizing	Estimated Time Spent: 20 minutes Format: Text & Questions
Article 422—Appliances 422.1 Scope 422.10 Branch Circuits 422.11 Overcurrent Protection	Estimated Time Spent: 25 minutes Format: Text & Questions
Article 424—Fixed Electric Space-Heating Equipment 424.1 Scope 424.4 Branch Circuits	Estimated Time Spent: 10 minutes Format: Text & Questions
Article 430—Motor Circuits, Controllers, and Adjustable-Speed Drives 430.1 Scope 430.6 Motor Table FLC versus Motor Nameplate Current Rating 430.17 Highest Rated Motor 430.22 Motor Conductor Ampacity 430.51 General 430.52 Branch-Circuit Short-Circuit and Ground-Fault Protection Table 430.248 Full-Load Current, Single-Phase Motors Table 430.250 Full-Load Current, Three-Phase Motors	Estimated Time Spent: 60 minutes Format: Text & Questions
Article 440—Air-Conditioning Equipment 440.1 Scope 440.4 Marking on Hermetic Motor-Compressors and Equipment	Estimated Time Spent: 10 minutes Format: Text & Questions
Article 445—Generators 445.1 Scope 445.13 Conductor Ampacity	Estimated Time Spent: 10 minutes Format: Text & Questions

Topics	Module Details
Article 450—Transformers 450.1 Scope 450.3 Primary Overcurrent Protection	Estimated Time Spent: 10 minutes Format: Text & Questions
Article 625—Electric Vehicle Power Transfer System 625.1 Scope 625.40 Electric Vehicle Branch Circuit 625.41 Overcurrent Protection 625.42 Load	Estimated Time Spent: 25 minutes Format: Text & Questions

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



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

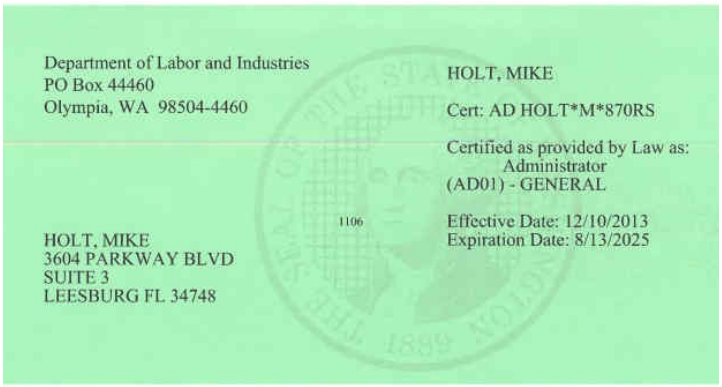
Mike Holt is a well-respected author and developer of software, books and video training programs. He has developed nearly 50 different electrical home-study training and business management programs which have been in use since 1978 by electrical apprenticeship training programs, contractors, inspectors, 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


Department of Labor and Industries
PO Box 44460
Olympia, WA 98504-4460

HOLT, MIKE

Cert: AD HOLT*M*870RS

Certified as provided by Law as:
Administrator
(AD01) - GENERAL

1106

Effective Date: 12/10/2013
Expiration Date: 8/13/2025

HOLT, MIKE
3604 PARKWAY BLVD
SUITE 3
LEESBURG FL 34748

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


LICENSE NUMBER
L.25602

STATE OF NORTH CAROLINA
BOARD OF EXAMINERS OF ELECTRICAL CONTRACTORS

EXPIRATION DATE
03/21/2026

THIS IS TO CERTIFY THAT:

Mike Holt

Charles Michael Holt

is duly registered and entitled to practice Electrical Contracting in the
Limited Classification License
Limitation: No one project to exceed $60,000.00 and 1,000 volts maximum.

Witness our hands and seal of the Board

Mike Holt
Suite 3
3604 Parkway Blvd
Leesburg, FL 34748

Chairman

Secretary-Treasurer

North Carolina L.25602 Exp: 03/21/2026

Course Materials

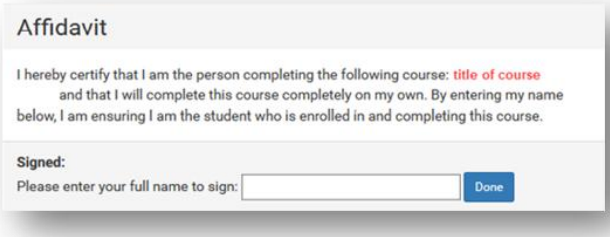
Courses are accessed through our online course portal, The Capacitor. This program requires a unique login to access the courses. If you need access to test the program, please email ceuonline@mikeholt.com with the email address you'd like to use as your log in. We will set up the account and test courses in our system immediately.

Online Course Attendance Verification

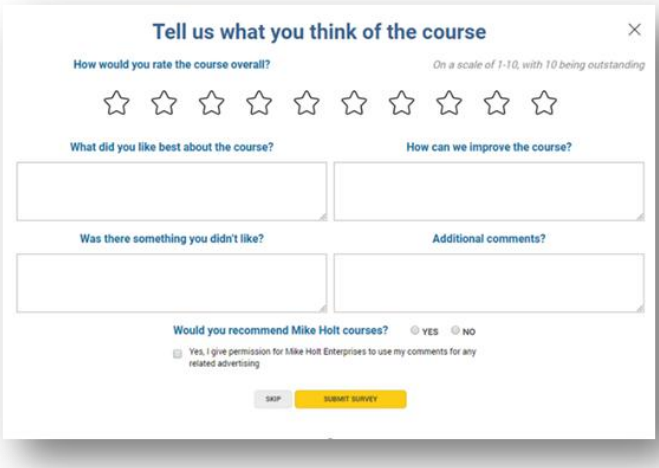
Mike Holt Enterprises, Inc.
3604 Parkway Blvd., Ste. 3, Leesburg, FL 34748
Phone: 888.NEC.CODE (632.2633) | Fax: 352.360.0983
www.MikeHolt.com | info@MikeHolt.com

The following features within our online courses will ensure students' attendance.

1. ***Affidavits.*** Students will be required to electronically sign an affidavit at the beginning and at completion of the course:



2. ***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.
3. ***Student Timer.*** Students will not be able to receive credit or complete the course until they have met the minimum time requirement for their state.
4. ***Student Inactivity Timeout.*** Students with automatically be logged out of the course after 30 minutes of inactivity.
5. ***Student Survey.*** Students are provided a feedback form at end of course and answers are submitted directly to the department. We frequently improve the program based on the student feedback.



CERTIFICATE OF COMPLETION

Mike Holt Enterprises hereby certifies that

Sample Student

Student State License Number

has successfully completed the

Title of Course (Letter Prefix:T)

January 1, 2023

MIKE HOLT ENTERPRISES

MikeHolt.com | 888.632.2633

Charles "Mike" Holt, Sr.
Certified Instructor

Final Score:
Course Hours:
Certificate No:
Course Approval No.
State Provider No.