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

2026 NEC Bonding and Grounding Review

Provider Information

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

General Information

Course Type

Online/Distance Learning Course

Course Subjects/Hours

Section Subject	Time
Article 90—Introduction to the National Electrical Code	10 Minutes
Article 110—General Requirements for Electrical Installations	30 Minutes
Chapter 2—Wiring and Protection	160 Minutes
Chapter 3—Wiring Methods and Materials	100 Minutes
Chapter 4—Equipment for General Use	40 Minutes
Chapter 6—Special Equipment	60 Minutes
	Total time: 400 Minutes/8 Hours

Course Objectives

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. 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.

Source Materials/References

The subjects covered in each section is included directly in the course. This course is based on *Mike Holt's Understanding NEC Requirements for Bonding and Grounding* textbooks and video programs.

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.

Contact Us:

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

Proof of Compliance for Interactive Distance Learning

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 Interactivity

Each chapter and module have page questions and quizzes throughout the course. This course is presented in an interactive online format and includes content and page questions throughout the course. The program can be taken from any computer and is available 24 hours a day.

The format of the course is designed to encourage constant interaction with the student. Each course is set-up to provide students with a page of text followed by a question that they must answer as they go through the material. This provides immediate application of the content learned. This format keeps students actively engaged in their learning through the entirety of the course.

In addition, all students give feedback on courses through surveys and we are able to continue to enhance the program based on this consistent feedback.

Student Verification

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.

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

> *Beginning of the 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
>
> *At the end of the course:*
>
> I hereby certify that I have completed all questions and exams in the following course (Name of Course). I have completed this on my own without any help from others. By entering my name below, I am agreeing that all information is accurate.

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.

Inactivity Timer

Students with automatically be logged out of the course after 15 minutes of inactivity.

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Typing DNA

Our system utilizes software that verifies the student who activates course, creates and logs into their account, enters any profile and license information, and enters and takes the course, is the same person by their typing DNA. This security feature matches the student key strokes which validates it's the same live person by how they type, which is unique to each individual. If there isn't a match, our system will require facial recognition verification immediately.

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Course Topics

Topics	Module Details
Article 90—Introduction to the National Electrical Code 90.1 Scope 90.2 Use and Application of the NEC 90.3 Code Arrangement 90.4 NEC Enforcement 90.5 Mandatory Requirements and Explanatory Material 90.7 Examination of Equipment for Safety	Estimated Time Spent: 10 minutes Format: Text, Video, & Questions
Article 110—General Requirements for Electrical Installations 110.1 Scope 110.2 Approval of Conductors and Equipment 110.3 Use of Equipment 110.5 Conductor Material 110.6 Conductor Sizes 110.7 Wiring Integrity 110.8 Suitable Wiring Methods 110.11 Deteriorating Agents 110.12 Mechanical Execution of Work 110.14 Conductor Termination and Splicing	Estimated Time Spent: 30 minutes Format: Text, Video, & Questions
Article 215—Feeders 215.1 Scope 215.6 Feeder Equipment Grounding Conductor	Estimated Time Spent: 10 minutes Format: Text, Video, & Questions
Article 250—Grounding and Bonding **Part I. General** 250.1 Scope 250.4 Performance Requirements for Grounding and Bonding 250.6 Objectionable Current 250.8 Connection of Grounding and Bonding Conductors 250.10 Protection of Ground Clamps and Fittings 250.12 Clean Surfaces	Estimated Time Spent: 20 minutes Format: Text, Video, & Questions
Part II. System Grounding and Bonding 250.20 Systems Required to be Grounded 250.28 Main Bonding Jumper and System Bonding Jumper 250.30 Transformer Separately Derived Systems	Estimated Time Spent: 30 minutes Format:

Topics	Module Details
250.32 Buildings Supplied by a Feeder	Text, Video, & Questions
Part V. Bonding 250.92 Bonding Metal Service Raceways and Enclosures 250.94 Bonding for Communications Systems 250.97 Bonding Metal Raceways and Metal Cables Containing 277V and 480V Circuits 250.98 Bonding Loosely Jointed Metal Raceways 250.100 Bonding in Hazardous (Classified) Locations 250.102 Bonding Jumper Sizing 250.104 Bonding of Piping Systems and Exposed Structural Metal 250.106 Lightning Protection Systems	Estimated Time Spent: 30 minutes Format: Text, Video, & Questions
Part VI. Equipment Grounding Conductors 250.109 Metal Enclosures, Effective Ground-Fault Current Path 250.114 Equipment Connected by Cord and Plug 250.118 Types of Equipment Grounding Conductors 250.119 Identification of Wire-Type Equipment Grounding Conductors 250.120 Equipment Grounding Conductor Installation 250.122 Sizing Wire-Type Equipment Grounding Conductors	Estimated Time Spent: 30 minutes Format: Text, Video, & Questions
Part VII. Equipment Grounding Conductor Connections 250.134 Equipment Connected by Permanent Wiring Methods 250.138 Cord-and-Plug-Connected 250.140 Frames of Ranges, Ovens, and Clothes Dryers 250.146 Connecting Receptacle Grounding Terminal to an EGC 250.148 Continuity and Attachment of Equipment Grounding Conductors in Boxes	Estimated Time Spent: 40 minutes Format: Text, Video, & Questions
Chapter 3—WIRING METHODS AND MATERIALS **Article 300—General Requirements for Wiring Methods and Materials** **Part I. General Requirements** 300.1 Scope 300.3 Conductors 300.6 Protection Against Corrosion 300.10 Electrical Continuity 300.12 Mechanical Continuity 300.20 Reducing Inductive Heating	Estimated Time Spent: 30 minutes Format: Text, Video, & Questions
Article 314—Boxes, Conduit Bodies, and Handhole Enclosures **Part I. General** 314.1 Scope 314.3 Nonmetallic Boxes	Estimated Time Spent: 10 minutes Format:

Topics	Module Details
314.4 Metal Boxes 314.30 Handhole Enclosures	Text, Video, & Questions
Article 320—Armored Cable (Type AC) 320.1 Scope 320.108 Equipment Grounding Conductor **Article 330—Metal-Clad Cable (Type MC)** 330.1 Scope 330.108 Equipment Grounding Conductor **Article 334—Nonmetallic-Sheathed Cable (Type NM)** 334.1 Scope 334.108 Equipment Grounding Conductor **Article 340—Underground Feeder and Branch-Circuit Cable (Type UF)** 340.1 Scope 340.108 Equipment Grounding Conductor **Article 342—Intermediate Metal Conduit (IMC)** 342.1 Scope 342.60 Equipment Grounding Conductor **Article 344—Rigid Metal Conduit (RMC)** 344.1 Scope 344.60 Equipment Grounding Conductor **Article 348—Flexible Metal Conduit (FMC)** 348.1 Scope 348.60 Equipment Grounding and Bonding Conductors **Article 350—Liquidtight Flexible Metal Conduit (LFMC)** 350.1 Scope 350.60 Equipment Grounding and Bonding Conductors **Article 352—Rigid Polyvinyl Chloride Conduit (PVC)** 352.1 Scope 352.60 Equipment Grounding Conductor **Article 356—Liquidtight Flexible Nonmetallic Conduit (LFNC)** 356.1 Scope 356.60 Equipment Grounding Conductor	Estimated Time Spent: 40 minutes Format: Text, Video, & Questions
Article 358—Electrical Metallic Tubing (EMT) 358.1 Scope 358.60 Equipment Grounding Conductor **Article 362—Electrical Nonmetallic Tubing (ENT)** 362.1 Scope 362.60 Equipment Grounding Conductor	Estimated Time Spent: 20 minutes Format: Text, Video, & Questions

Topics	Module Details
Article 376—Metal Wireways 376.1 Scope 376.60 Equipment Grounding Conductor **Article 386—Surface Metal Raceways** 386.1 Scope 386.60 Equipment Grounding Conductor **Article 392—Cable Trays** 392.1 Scope 392.60 Equipment Grounding Conductor	
Chapter 4—EQUIPMENT FOR GENERAL USE **Article 404—Switches** 404.1 Scope 404.9 General-Use Snap Switches, Dimmers, and Control Switches 404.12 Bonding of Enclosures **Article 406—Receptacles, Attachment Plugs, and Flanged Inlets** 406.1 Scope 406.3 Receptacle Rating and Type 406.4 General Installation Requirements 406.11 Connecting Receptacle Grounding Terminal to EGC **Article 408—Switchboards and Panelboards** 408.1 Scope 408.40 Equipment Grounding Conductor **Article 410—Luminaires** 410.1 Scope 410.30 Supports 410.44 Connection to the Equipment Grounding Conductor 410.182 Equipment Grounding Conductor **Article 440—Air-Conditioning Equipment** 440.1 Scope 440.9 Equipment Grounding Conductor **Article 450—Transformers** 450.1 Scope 450.10 Grounding and Bonding	Estimated Time Spent: 40 minutes Format: Text, Video, & Questions
Chapter 6—SPECIAL EQUIPMENT **Article 600—Electric Signs** 600.1 Scope 600.7 Grounding and Bonding	Estimated Time Spent: 60 minutes Format:

Topics	Module Details
Article 680—Swimming Pools, Spas, Hot Tubs, Fountains, and Similar Installations	Text, Video, & Questions
Part I. General Requirements for Pools, Spas, Hot Tubs, and Fountains	
680.1 Scope	
680.7 Grounding and Bonding	
Part II. Permanently Installed Pools	
680.23 Underwater Pool Luminaires	
680.24 Junction Box, Transformer, or GFCI Enclosure	
680.26 Equipotential Bonding	
Part IV. Hot Tubs	
680.40 General	
680.42 Outdoor Installations	
Part V. Fountains	
680.50 General	
680.54 Connection to an Equipment Grounding Conductor	
680.55 Methods of Equipment Grounding	
680.56 Cord-and-Plug-Connected Equipment	
Part VII. Hydromassage Bathtubs	
680.70 General	
680.74 **Equipotential Bonding**	

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

Charles (Mike) Michael Holt

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SUMMARY OF QUALIFICATIONS

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 electrical educators. He 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.

- More than 40 years' experience as a technical instructor. Skills include:

Curriculum Development	Individual and Large Group Training
Technical Expertise	Continuing Education
Publishing	Business Management & Growth

EXPERIENCE

President and CEO of Mike Holt Enterprises of Leesburg, Inc. 1975 - Present

Instructor

- Approved instructor in over 30 state electrical and construction boards in the U.S.
  - *Covering NEC® Changes, Electrical Theory, Grounding vs. Bonding, Solar Photovoltaic Systems, Limited Energy/Low Voltage, Understanding the NEC®, Train the Trainer, and Business Skills*
- Key Instructor for EC&M multiple annual seminars since 2000
- Created and taught an Electrical Train the Trainer program at the IEC National convention
- Taught an Electrical Train the Trainer workshop from 2000 - 2008
- Taught Exam Preparation at the local and state level since 1975.
- Instructed multiple seminars for the following Industry Organizations
  - NECA
  - GENERAC
  - IAEI
  - IBEW
  - ICBO
  - IBM
  - Boeing
  - Motorola
  - AT&T

Author

- Developed and authored multiple editions of the following titles that are sold to individuals and to electrical apprenticeship programs nationally.
    - *Understanding the National Electrical Code Volume 1 & 2*
    - *Basic Electrical Theory*
    - *Electrical Exam Preparation*
    - *Changes to the NEC®*
    - *Essential Rules of the NEC®*
    - *Power Quality*
    - *Limited Energy & Communication Systems*
    - *NEC Requirements for Grounding vs. Bonding*
    - *NEC Requirements for Solar Photovoltaic Skills*
    - *Business Management Skills*
    - *Electrical Estimating*
- *Created Homestudy Training Programs for Exam Preparation, Code Training, Theory, and more.*
- Current Code Writer for Electrical Construction & Maintenance Magazine, *EC&M*
- Wrote articles for top industry magazines and organizations
    - Electrical Design and Installation Magazine, *EDI*
    - *Solar Pro Magazine*
    - *IEC Magazine*
    - *Electrical Contractor*
    - CEE News
    - Electrical Contractor, *EC*
    - International Association of Electrical Inspectors, *IAEI*
    - The Electrical Distributor, *TED*
    - Power Quality Magazine, *PQ*
    - Electrical Construction & Maintenance Magazine, *EC&M*
- *Designed Electrical Estimating Software that was sold nationally*

Independent author for Leviton – 2000 – 2008

- Code Training book

Independent author for Delmar Publishers – 1999 – 2002

- Understanding the National Electrical Code
- Basic Electrical Theory
- Electrical Estimating

President and Founder of Electrical Contracting firm – Mike & Co., 1974 - 1980

- *Residential and Commercial Work*

Educational Background

- Studied Business Administration, M.B.A., University of Miami

State Licenses

- Electrical Contractor, State of North Carolina, L.25602 1999 - Present
- Electrical Administrator, State of Washington, HOLT*M*870RS 2013 - Present

CERTIFICATE OF COMPLETION

Mike Holt Enterprises hereby certifies that

Sample Student

Student State License Number

has successfully completed the

Title of Course

January 1, 2024

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.