



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

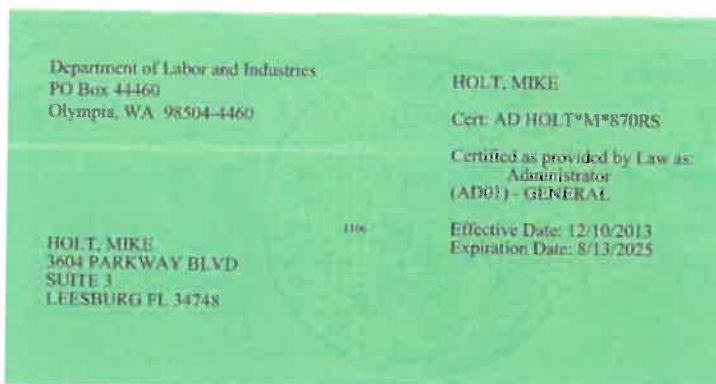
Mike Holt is a well-respected author and developer of software, books and video training programs. He has developed nearly 50 different electrical home-study training and business management programs which have been in use since 1978 by electrical apprenticeship training programs, contractors, inspectors, 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: 03/21/2024

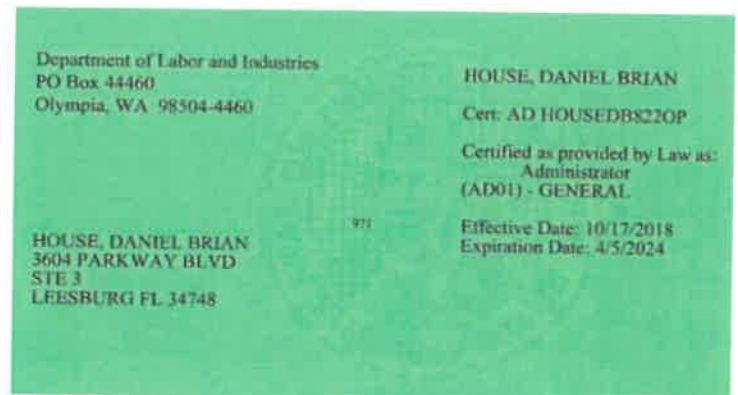
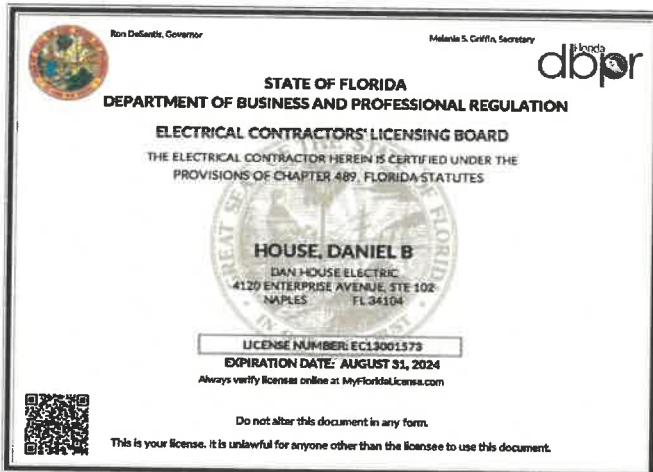


Daniel Brian House Biography

Brian House is a high-energy entrepreneur with a passion for doing business the right way. He’s a licensed electrical contractor, and worked in varying aspects of electrical contracting throughout the southeast United States since the 1990s. From single family homes to industrial manufacturing he’s enjoyed everything from service work to designing energy-efficient lighting retrofits, exploring “green” biomass generators, and partnering with residential PV companies. Brian has first-hand experience with the ups and downs of electrical contracting and a vision for its future. He expresses his commitment to the industry and his love for its people whether he’s teaching, or working on books or instructional programs.

Since 2000 Brian has enjoyed teaching at seminars and apprenticeship classes. In 2010 he joined the Mike Holt video teams, and in 2014 joined the Mike Holt Enterprises staff as the technical director. He is still actively involved in developing in-house electrical apprenticeship programs, and continues to teach nationally for Mike Holt Enterprises on a variety of topics including Code Changes, Grounding vs. Bonding, Exam Preparation and How to Be a Great Instructor.

Brian and his wife Carissa have shared the joy of their four children and many foster children during 18 years of marriage. When not mentoring youth at work or church, he can be found racing mountain bikes with his kids or fly fishing on Florida’s Intracoastal Waterway. Passionate about helping others, he regularly engages with the youth of the local community to motivate them into exploring their future.



Florida EC13001573 Exp: 08/31/2024

Washington HOUSEDB822OP Exp: 04/05/2024

Mario Valdes

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Phone: (786) 285-2157 • E-Mail: Mario@mikeholt.com



Experience

Electrical Content Specialist

Mike Holt Enterprises Inc

01/04/ 2021 – current

- Edited and reviewed Understanding National Electrical Code volume 1 & 2 text, both 2017 and 2020 editions
- Edited and reviewed Electrical Exam Preparation 2017 & 2020 edition, assisted in development of practice questions.
- Edited and reviewed Solar & Energy systems 2017 & 2020 editions, assisted in development of graphics for PowerPoint.
- Edited and reviewed Grounding & Bonding 2017 & 2020 editions, assisted in development of video content.
- Edited and reviewed Basic Electrical Theory 2022 edition, assisted in development of video content.

Electrical Instructor

College of Business & Technology

01/15/2017 – 01/01/2021

- Provide NEC code classes to students in electrical associates science program to facilitate their knowledge
- Created entire curriculum including power points, quizzes, midterm, & final exams.
- Effectively educated students on electrical blueprint reading regarding estimating take offs & interpretations of riser diagrams, panel schedules, basic electrical theory of AC & DC fundamentals in wiring, motors, transformers, and generators
- Cover detailed standards in PLC programming, Photovoltaic systems, & Fire alarm systems
- Part of Mike Holt 2017 & 2020 exam preparations video team & certified instructors by his Curriculum.
- Voluntary member of UL standards technical panel for UL869A, UL67, UL1773, & UL98.

Chief Electrical inspector / plan examiner

Absolute Engineering

05/30/2016 - 01/01/2021

Private Provider

- Inspected all commercial, industrial, residential and public buildings, medical buildings, health care facilities, assisted living and elderly housing complexes.
- Reviewed and approved plans for electrical compliance with federal, state, & local codes. Monitored workmanship and recommended methods of improvements. Worked with engineers, consultants and lawyers to amend plans during the plan review process.
- Maintained detailed records and documentation of all site visits, inspections and violations.
- Calculate documents to improve operations and speed up turn-around times while working cooperatively to achieve excellent customer service.
- Administrative capabilities of leading an inspection team in efforts to cover construction deadlines.
- Attended meetings to discuss common grounds regarding electrical comments to engineering drawings

- Ability to interpret NEC codes & apply to practical applications out In the field
- Involved in different organizations such as IAEI, NFPA, BOAF, ICC in order to be informed on new standards
- Experience in large construction such as hi-rise buildings, multi-story residential, commercial build out improvements, schools, hospitals, and industrial motor – controls centers

Electrical plan examiner / Inspector

West Palm Beach – Municipal Support

04/20/2015- 5/23/2016

- Performed mathematical engineering computations to analyze electrical system.
- Reviewed and approved complex electrical plans and specs for compliance to NEC codes.
- Evaluate tests and data for suitability of electrical materials plus methods of construction installations.
- Respond to architects, engineers, contractors by scheduling conferences to interpret code issues and give recommendations for design professional problems
- Conduct field inspections using professional judgment and common sense for the intent of code enforcement.
- Inspected all commercial, industrial, residential and public buildings, medical buildings, health care facilities, assisted living and elderly housing complexes.
- Maintained detailed records and documentation of all site visits, inspections and violations & ensured compliance with appropriate federal, state and local codes.
- Investigated complaints, prepared and issued permits, certificates of occupancies, reports and maintained records of work performed. Issued violation notices and processed court appearances.
- Participated in inspector meetings relating to code changes and scheduled week hours in the absence of chief electrical inspector.

Project Manager / Estimator- MV Electrical Services

07/19/2012 - 03/11/2015

- Performed material takeoffs from blueprints, created material lists and contacted suppliers for pricing.
- Conducted pre-job walk-thru with customers and various subcontractors to discuss timelines and deadlines; attended weekly and monthly project meetings to update customer and various subcontractors on job progress.
- Supervised crews and handled manpower issues for multiple jobs being conducted simultaneously.
- Laid out day-to-day and/or week-to-week work duties for electricians.
- Produced quality engineering plans, ensuring compliance with department, project, company, utility, regional electrical entity and industry requirements and standards were met.
- Performed hands-on field work and troubleshooting of electrical systems in multifamily dwellings, commercial spaces and custom projects.
- Communicated with customers regarding change orders and how they affected the projects, and redistributed manpower accordingly keep projects within established deadlines.

Master Electrician- MV Electrical Services

05/02/2009 - 07/18/2012

- Connection of wires to transformers, circuit breakers, as well as other components.
- Fabrication and construction of parts, using hard tools and other specifics.
- Inspection of electrical equipment and systems to recognize defects, hazards and the requirement for repairs or modifications.
- Installation of ground leads and connection of power cables to various equipment.
- Replacement and repair of electrical wiring, fixtures, and equipment.
- Testing of circuit and electrical systems using devices including, voltmeters, ohmmeters, and oscilloscopes.
- Business management duties such as maintaining files and records.

Licenses

State Electrical Contractor

EC13005576

ICC and State of Florida License- BN6698

Standard Electrical Inspector

ICC and State of Florida License- PX3618

Electrical Plan Examiner

Education

CBT college

Associates Degree in Electrical Engineering.

In Progress

Mike Holt Electrical Apprenticeship Program

Master Exam Code preparation.

09/2012

Turner Tech community college

Electrical fundamentals and code.

01/2012

HML High School

High School Diploma.

06/2007

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

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

Charles "Mike" Holt, Sr.
Certified Instructor

Bonding and Grounding Review, 2023 NEC

Provider Information

Provider	Instructor	Email
Mike Holt Enterprises	Mike Holt, Brian House, Mario Valdes	ceuonline@mikeholt.com

General Information

Course Length
8 Hours

Course Description

This course is based on the content from *Mike Holt's Illustrated Guide to Bonding and Grounding NEC 2023* textbook and video program. It provides students with a thorough review of Article 250 and other related NEC articles.

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 or a video presentation 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.

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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

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 the instructors dissecting the rules, 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
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:

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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: 50 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:

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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

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Topics	Module Details
<p>Article 376—Metal Wireways 376.1 Scope 376.60 Equipment Grounding Conductor</p> <p>Article 386—Surface Metal Raceways 386.1 Scope 386.60 Equipment Grounding Conductor</p> <p>Article 392—Cable Trays 392.1 Scope 392.60 Equipment Grounding Conductor</p>	
<p>Chapter 4—EQUIPMENT FOR GENERAL USE</p> <p>Article 404—Switches 404.1 Scope 404.9 General-Use Snap Switches, Dimmers, and Control Switches 404.12 Bonding of Enclosures</p> <p>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</p> <p>Article 408—Switchboards and Panelboards 408.1 Scope 408.40 Equipment Grounding Conductor</p> <p>Article 410—Luminaires 410.1 Scope 410.30 Supports 410.44 Connection to the Equipment Grounding Conductor 410.182 Equipment Grounding Conductor</p> <p>Article 440—Air-Conditioning Equipment 440.1 Scope 440.9 Equipment Grounding Conductor</p> <p>Article 450—Transformers 450.1 Scope 450.10 Grounding and Bonding</p>	<p>Estimated Time Spent: 45 minutes</p> <p>Format: Text, Video, & Questions</p>
<p>Chapter 6—SPECIAL EQUIPMENT</p> <p>Article 600—Electric Signs 600.1 Scope 600.7 Grounding and Bonding</p>	<p>Estimated Time Spent: 55 minutes</p> <p>Format:</p>

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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>

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