CENTER for APPRENTICESHIP & ADULT TRAINING
520 Butler Farm Rd, Hampton VA 23666
757-766-1101
www.nhrec.org/cfaat

Course Name: Electrical Level II

Contact Hours: 144

Number of Sessions: 48

Number of Hrs. /Session: 3

Mode of Instruction: Classroom, Virtual, or Online

Course Description:
This Course is designed using the Mike Holt Electrical Apprentice Curriculum. This level continues the study of OSHA's construction safety rules and then focuses on the first three chapters of the National Electrical Code. Some equipment specific to alternating current will be introduced. Residential and commercial wiring methods and practices will also be covered in depth during this training level.

Text: OSHA Construction Safety Training Handbook, 6th Edition J.J. Keller & Associates, ISBN 978-1-60287-891-4, 2010 ▸ Mike Holt's Understanding the National Electrical Code, Volume 1 Mike Holt Enterprises ISBN 978-1-950431-07-6, 2020 Suggested Additional Resources* ▸ National Electrical Code, 2020 Edition National Fire Protection Association ISBN 978-145592297-0

Course Outline and Modules:

Semester 1 to Winter Break (72 hours)

Quarter 1

- Session 1: Introduction | Orientation | Tools Level 2
- Session 2: OSHA Construction Safety — Electrical Safety and PPE
- Session 3: OSHA Construction Safety — Confined Space, Emergency Response, and Lockout/Tagout
- Session 4: NEC — Article 90 Introduction
- Session 5: NEC — Article 100 Definitions
- Session 6: NEC — Article 110 Requirements for Electrical Installations 1

- Session 7: NEC — Article 110 Requirements for Electrical Installations 2
- Session 8: NEC — Article 200 Use and Identification of Grounded (Neutral) Conductors
- Session 9: NEC — Article 210 Branch Circuits 1
- Session 10: NEC — Article 210 Branch Circuits 2
- Session 11: NEC — Article 210 Branch Circuits 3
- Session 12: Quarter 1 Review
- Session 13: Quarter 1 Exam

Quarter 2

- Session 1: NEC — Article 215 Feeders
- Session 2: NEC — Article 220 Branch-Circuit, Feeder, and Service Calculations 1
- Session 3: NEC — Article 220 Branch-Circuit, Feeder, and Service Calculations 2
- Session 4: NEC — Article 225 Outside Branch Circuits and Feeders
- Session 5: NEC — Article 230 Services 1
- Session 6: NEC — Article 230 Services 2
- Session 7: NEC — Article 240 Overcurrent Protection 1
- Session 8: NEC — Article 240 Overcurrent Protection 2

- Session 9: Apprenticeship Supplement — Article 250 Grounding and Bonding
- Session 10: Lab — GFCI Devices
- Session 11: Flex Day — School/Instructor Choice
- Session 12: Quarter 2 Review
- Session 13: Quarter 2 Exam

WINTER BREAK

Semester 2 (Quarters 3 & 4)

Quarter 3

- Session 1: NEC — Article 242 Surge-Protective Devices (SPDs)
- Session 2: NEC — Article 300 General Requirements for Wiring Methods and Materials 1
- Session 3: NEC — Article 300 General Requirements for Wiring Methods and Materials 2
- Session 4: NEC — Article 310 Conductors for General Wiring 1
- Session 5: NEC — Article 310 Conductors for General Wiring 2
- Session 6: NEC — Article 312 Cabinets, Cutout Boxes, and Meter Socket Enclosures
- Session 7: NEC — Article 314 Outlet, Device, Pull, and Junction Boxes; Conduit Bodies; and Handhole Enclosures 1

- Session 8: NEC — Article 314 Outlet, Device, Pull, and Junction Boxes; Conduit Bodies; and Handhole Enclosures 2
- Session 9: NEC — Articles 320 and 330 Armored Cable (Type AC) and Metal-Clad Cable (Type MC)
- Session 10: Lab/Activity — Voltage-Drop Calculations
- Session 11: Flex Day — School/Instructor Choice
- Session 12: Quarter 3 Review
- Session 13: Quarter 3 Exam

Quarter 4

- Session 1: NEC — Articles 334, 336, and 338 (Cable Types NM, NMC, TC, SE, and USE)
- Session 2: NEC — Articles 340, 342, and 348 (Cable Type UF; Conduit Types IMC and FMC)
- Session 3: NEC — Articles 350, 352, and 356 (Conduit Types LFMC, PVC, and LFNC)
- Session 4: NEC — Articles 344 and 358 (Conduit Types RMC and EMT)
- Session 5: NEC — Articles 362 and 376 (Conduit Type ENT and Metal Wireways)
- Session 6: NEC — Articles 380, 386, and 392 (Multioutlet Assemblies, Surface Metal Raceways, and Cable Trays)
- Session 7: Lab/Activity — Conduit Bending
- Session 8: Lab/Activity — Raceway Sizing Calculations

- Session 9: Flex Day — Training Institution/Instructor Choice
- Session 10: Quarter 4 Review
- Session 11: Quarter 4 Exam
- Session 12: Level 2 Review
- Session 13: *Make up Exams*