NFPA 70: National Electrical Code (NEC) (2017) Essentials

Length: 3 Days

Summary: This three-day course of high-impact instruction helps you ensure safe and compliant electrical installation and design in your work setting. Advance your ability to locate, interpret, and apply requirements in the ever-evolving NEC.

You will leave with vital takeaways that will help you comply, increase confidence in your ability to recognize potential problems, and avoid costly rework or safety violations.

Upon completion, you should be able to:

- Determine if an electrical installation complies with all access and space requirements
- Implement general requirements for service, feeder, and branch circuit conductors and overcurrent devices for a premises wiring system
- Recognize all critical component sizes and locations in an effective grounding scheme
- Clarify correct usage of metal piping and framing as grounding electrode conductors
- Apply the rules for raceway and conduit fill to groups of conductors
- Discuss the primary considerations in determining the ampacity of a conductor
- List the standard ratings of overcurrent devices for use in applying code requirements

Who Will Benefit: Anyone who uses or enforces the *NEC* including: electrical system designers, electrical engineers, electrical contractors, safety engineers, installation and maintenance professionals, manufacturers, electrical inspectors, facility maintenance personnel, and project managers

COURSE CONTENT

Module 1: Introduction to the NEC® and Organization of the NEC (Articles 90 and 100)

Module 2: General Requirements (Article 110)

Module 3: Access and Space Requirements (Article 110)

Module 4: Conductor Types and Differences (Articles 100, 210, 215, 225, 230)

Module 5: Wiring Methods (Article 300, Chapter 3)

Module 6: Raceway Fill (Chapters 3 and 9)

Module 7: Grounding and Bonding Definitions (Article 250)

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Module 8: Grounding and Bonding at Services (Article 250)

Module 9: Grounding Electrode System (Article 250)

Module 10: Grounding Separately Derived Systems (Article 250)

Module 11: Grounding at Separate Structures not Supplied by Services (Article 250)

Module 12: Equipment Grounding and Bonding (Article 250)

Module 13: Supply-Side and Load-Side Bonding (Article 250)

Module 14: Special Bonding Requirements (Articles 250, 547, 517, 680, Chapter 8)

Module 15: General Overcurrent Considerations

Module 16: General Conductor Sizing Considerations

Module 17: Conductor Ampacity Calculations (Article 310)

Module 18: General Overcurrent Protection Requirements (Articles 240, 210, 400, 405)

Module 19: Overcurrent Protection Locations and Tap Rules (Article 240)

Module 20: Service and Other Special Overcurrent Protection (Articles 240, 230, 215)

Module 21: Transformer and Panelboard Protection (Articles 450, 408)

Module 22: General Considerations and Requirements for Motors (Article 430)

Module 23: Summary