

2014 NFPA 70 NEC Essentials

Updated National Electrical Code Training



Course Description

Improve your ability to use and apply the NEC requirements in your work environment with three days of applied learning taught by the nation's leading electrical code experts.

NFPA's updated 2014 NEC Essentials Seminar features three days of high-impact training to help you navigate and apply the 2014 NFPA 70 National Electrical Code. You'll interact with NFPA's renowned electrical instructors in a collaborative learning environment. Restructured, topic-driven lessons are tailored to situations encountered in the field, with dynamic discussion, activities, and practical exercises on key NEC concepts.

Increase confidence in your ability to recognize potential problems and avoid costly rework or safety violations. The 2014 NEC Essentials Seminar provides the Code knowledge and vital takeaways you need to ensure safe and compliant electrical installation design in your work setting.

Students Will Learn

- **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**
- **And more...**

Target Audience

Electrical system designers, electrical engineers, electrical contractors, safety engineers, installation and maintenance professionals, manufacturers, electrical inspectors, project managers and anyone who uses or enforces the updated 2014 NEC.

Prerequisites

Basic electrical background is suggested.

Course Outline

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: Conductor Identification (Articles 200, 250, 310, 210, 215, 110, 517)

Module 6: Wiring Methods (Article 300, Chapter 3)

Module 7: Raceway Fill (Chapters 3 and 9)

Module 8: General Overcurrent Considerations

Module 9: General Conductor Sizing Considerations

Module 10: Conductor Ampacity Calculations (Article 310)

Module 11: General Overcurrent Protection Requirements (Articles 240, 210, 400, 405)

Module 12: Overcurrent Protection Location and Tap Rules (Article 240)

Module 13: Service and Other Special Overcurrent Protection (Articles 240, 230, 215)

Module 14: Transformer and Panelboard Protection (Articles 450, 408)

Module 15: General Considerations and Requirements for Motors (Article 430)

Module 16: Motor Circuit Overcurrent Protection, Special Motor Requirements (Articles 430, 440)

Module 17: Grounding and Bonding Definitions (Articles 250)

Module 18: Grounding and Bonding at Services (Article 250)

Module 19: Grounding Electrode System (Article 250)

Module 20: Grounding Separately Derived Systems (Article 250)

Module 21: Grounding at Separate Structures not Supplied by Services (Article 250)

Module 22: Equipment Grounding and Bonding (Article 250)

Module 23: Supply-Side and Load-Side Bonding (Article 250)

Module 24: Special Bonding Requirements (Articles 250, 547, 517, 680, Chapter 8)

Delivery Method

Instructor-Led with numerous activities and exercises throughout the course.

Equipment Requirements

(This apply's to our hands-on courses only)

BTS always provides equipment to have a very successful Hands-On course. BTS also encourages all attendees to bring their own equipment to the course. This will provide attendees the opportunity to incorporate their own gear into the labs and gain valuable training using their specific equipment.

Course Length

3 Days