

National Electrical Code® – 2017

4 Days, 3.2 CEUs

This course is developed to provide a comprehensive study of Chapters 1 through 4, including a brief overview of Chapter 5, of the 2017 National Electrical Code®. Major updates and revisions from previous editions are addressed throughout this course. The class participant learns how to apply the Code to properly install electrical circuits and equipment. This course provides a study of the definitions of electrical terms; requirements for electrical installations, such as branch circuits and grounding systems; wiring methods and materials; overcurrent protection, voltage drop, neutral load and other calculations through practical exercises; the method for determining conductor ampacity through practical exercises; sizing circuits and devices for motors and motor circuits through practical exercises; and more. The content of the NEC®–2017 course also addresses the OSHA 29 CFR 1910.302-.308 mandated requirements for electrical installations.

This course is intended for electricians, electrical inspectors and electrical contractors who have a need to meet federal, state and local requirements for performing electrical work.

Each participant will receive a softbound copy of the NEC®–2017 standard, along with the AVO textbook.

Pre-Requisite:

Working knowledge of basic electricity is necessary for understanding the requirements of the NEC®. Each participant must bring a standard calculator.

Classroom Attire:

AVO is committed to the personal safety of each participant. Lecture courses may involve a tour of a work or shop area and for this reason open-toe shoes and shorts are not considered appropriate attire for the classroom.

Learning Objectives:

Upon completion of this course, the participant will demonstrate by attaining a minimum average of 80% in the final exam, that he/she is able to:

- Describe the organization of the 2017 National Electrical Code® and its general requirements.
- Explain grounding and bonding requirements.
- Identify and use the various tables.
- Outline the method for determining conductor ampacity.
- Calculate neutral, branch circuit, and feeder loads.
- Summarize how to calculate electrical enclosure and conduit conductor fill.
- Determine acceptable wiring methods.
- Relate the process of sizing motor circuits and required components.
- List the requirements for GFCI use with temporary wiring.

SCOPE

Day 1

- I. Introduction**
 - A. Schedule
 - B. Course Outline
- II. Introduction and General Requirements**
 - A. History & Development
 - B. Enforcement
 - C. Purpose & Scope
 - D. Definitions
 - E. Installation Requirements
- III. Wiring and Protection**
 - A. Grounded Conductor Requirements
 - B. Branch Circuit Requirements

Day 2

- C. Services
- D. Overcurrent Protection
- E. Grounding & Bonding

IV. Wiring Methods and Materials

- A. Protection Against Physical Damage

Day 3

- B. Conductors for General Wiring
- C. Wire Bending Space Requirements
- D. Box Sizing
- E. Cables & Raceways

V. Equipment for General Use

- A. Cords, Cables, and Fixture Wires
- B. Switches and Receptacles
- C. Panelboards and Luminaires

Day 4

- D. Designing Motor Circuits
- E. Transformers & Capacitors

VI. Special Applications

- A. Special Occupancies
- B. Special Equipment and Conditions
- C. Communications Systems
- D. Tables
- E. Informative Annexes and Index

VII. Conclusion

- A. Course Material Review
- B. Final Exam
- C. Completion of Course Paperwork

*Class scheduling times may vary based on discussions and size of class

TRAINING INSTITUTE, INC.



A SUBSIDIARY OF MEGGER