

Course Outline - 8-hours NEC2017 training with a focus on Wiring Methods

Wiring Methods is designed to meet the 8-hour Professional Development Unit (PDU) requirements for Continuing Competency for electrical licenses in Colorado as well as 8 hours of Continuing Education Units (CEUs) for many other states. The course curriculum covers NEC2017 Overview and Definitions, Conductor Ampacity and Derating, Sizing Overcurrent Devices and Conductors, Conduit and Tubing Fill, Wireways, Sizing Junction Boxes, and Sizing Pull Boxes.

Element 1 – NEC2017 Overview – NEC 2014 Overview gives a broad overview of how the NEC2017 is formatted. Chapters 1-4 cover general requirements, Chapters 5-7 supplement or modify Chapters 1-4, and Chapter 8 covers Communication Systems. Also discussed are several Tables and Informative Annexes. Included are practice review questions and answers.

Total time: 55 minutes and 35 seconds

Element 2 – Definitions, Conductor Ampacity and Derating – Definitions and Conductor Ampacity and Derating covers many Article 100 definitions that are important to understand in order grasp the basic concepts of the NEC2017 as well as the 3 basic steps for determining conductor ampacity. Included are practice review questions and answers.

Total time: 57 minutes and 52 seconds

Element 3 – Conductor Ampacity and Derating Continued – Conductor Ampacity and Derating continues with the consideration of the temperature ratings of terminations, ambient temperature correction factors, more than 3 current-carrying conductors in the same raceway, flexible cords and cables, and neutral conductors. Included are practice review questions and answers.

Total time: 55 minutes and 24 seconds

Element 4 – Conductor Ampacity and Derating Continued – Conductor Ampacity and Derating continues with Non-Metallic Sheathed Cable as well as many examples of applying the correction factors previously discussed. Included are practice questions and answers.

Total time: 54 minutes and 24 seconds

Element 5 – Conductor Ampacity and Derating Continued – Conductor Ampacity and Derating continues with sizing dwelling unit service conductors, flexible cords and cables, continuous loads, MC and AC Cables, and using several additional ampacity Tables. Included are practice questions and answers.

Total time: 48 minutes and 3 seconds

Element 6 – Conductor Ampacity and Derating Continued, Sizing Overcurrent Devices and Conductors – Conductor Ampacity and Derating and Sizing Overcurrent Devices and Conductors continues with further examples of dwelling unit service conductors and ampacities of flexible cords and cables. Sizing overcurrent devices rated 800 amperes or less as well as sizing overcurrent devices rated over 800 amperes and the conductors are also discussed. Included are practice questions and answers.

Total time: 55 minutes and 13 seconds

Element 7 – Conduit and Tubing Fill, Wireways – Conduit and Tubing Fill and Wireways covers conduit and tubing conductor fill based on Table 1 of Chapter 9. Also discussed is conductor fill for various type of nipples as well as conductor fill in Wireways. Included are practice questions and answers.

Total time: 55 minutes and 23 seconds

Element 8 – Sizing Junction Boxes, Sizing Pull Boxes – Sizing Junction Boxes and Sizing Pull Boxes illustrates how to size junction boxes that contain conductors ranging in size from 18 AWG through 6 AWG. Sizing pull boxes illustrates how to size junction boxes that contain conductors 4 AWG or larger. Also discussed is proper sizing of conduit bodies. Included are practice questions and answers.

Total time: 59 minutes and 36 seconds