

## Expect Excellence Apprenticeship Program

### Level 2 – Semester 1 (Course 2A)

This semester introduces second-year apprentices to NEC foundational concepts, including the arrangement and purpose of the Code, key definitions, requirements for electrical installations, grounding and branch circuits, feeders, load calculations, services, and overcurrent protection. Emphasis is placed on applying the Code systematically and preparing apprentices for advanced applications.

### Course Objectives

- Interpret and apply NEC Article 90 for Code arrangement and enforcement.
- Define and correctly use terms from NEC Article 100.
- Apply installation requirements of NEC Article 110.
- Analyze requirements for grounded conductors (Art. 200), branch circuits (Art. 210), and feeders (Art. 215).
- Perform load calculations using NEC Article 220.
- Apply NEC rules for outside circuits (Art. 225) and services (Art. 230).
- Understand and apply NEC Article 240 for overcurrent protection devices.

### Course Topics and Hours

| Topic                                     | Hours | Description                                                                              |
|-------------------------------------------|-------|------------------------------------------------------------------------------------------|
| NEC Orientation & Arrangement             | 2     | NEC Article 90 — Purpose, arrangement, and enforcement.                                  |
| Definitions                               | 6     | NEC Article 100 — Terms and definitions critical to electrical work.                     |
| Requirements for Electrical Installations | 6     | NEC Article 110 — General requirements for installation and use of electrical equipment. |
| Grounded Conductors                       | 2     | NEC Article 200 — Identification and use of grounded conductors.                         |
| Branch Circuits                           | 6     | NEC Article 210 — General requirements, ratings, and outlet/device provisions.           |
| Feeders                                   | 2     | NEC Article 215 — Installation and ampacity requirements for feeders.                    |

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|------------------------------|----|--------------------------------------------------------------------------------|
| Load Calculations            | 4  | NEC Article 220 — Branch-circuit, feeder, and service calculations.            |
| Outside Circuits and Feeders | 2  | NEC Article 225 — Requirements for outside branch circuits and feeders.        |
| Services                     | 4  | NEC Article 230 — Service conductors, equipment, and clearances.               |
| Overcurrent Protection       | 6  | NEC Article 240 — Requirements for overcurrent protective devices and ratings. |
| Review & Exams               | 10 | Comprehensive review and exam covering Articles 90–240.                        |

**Total Contact Hours: 48**

### **Instructional Method**

The Expect Excellence Apprenticeship Program follows the Mike Holt curriculum, utilizing his textbooks and supporting materials. Classes are delivered virtually via Zoom. Students are required to keep their cameras on and remain visible. Instructors take roll at the beginning, middle, and end of each session, and student participation is required to ensure accountability. Assignments are given each class session and are graded and recorded through the program's Learning Management System (LMS), D2L.