



## Course Outline

### Occupational Electricity Safety

I. Introduction. **Occupational Electrical Safety** is an 8-hour (in-person) course exploring safety concerns. This training is intended for anyone working on or near premises wiring systems. References will include: **NFPA 70**, the **National Electrical Code (NEC)** requirements, **NFPA 70E, Standard for Electrical Safety in the Workplace**, and **29 CFR 1926.400; Subpart K** (OSHA). Additionally, manufacturer's literature, various online resources, a Solid State Educators Power Point Presentation, handouts, and multimedia presentations will be used.

#### II. Course Modules

- **MODULE 1** (2 hours):
  - Introduction
  - Basic Electrical Theory
  - **Solid State Educators** Power Point Presentation / Lecture
  - Magnetism and Reactive Forces
  - Induction Lab
  - **29 CFR 1926.400; Subpart K**
  - Shock Hazards
  - Interactive Discussion Throughout
- **MODULE 2** (2 hours):
  - **Solid State Educators** Power Point Presentation / Lecture
  - **NEC** Review
    - 1. Electrical Protective Schemes (for Equipment and People)
    - 2. Grounding and Bonding
  - **NFPA 70E** (Work Involving Electrical Hazards)
  - Interactive Review, Handouts, and Videos
  - **29 CFR 1926.400; Subpart K**
  - **"Things We Must Know"** Exam
- **MODULE 3** (2 hours):
  - Overcurrent Types Explained
  - **Standard for Electrical Safety in the Workplace** (In-Depth Look at the Standards)
    - 1. Arc Flash Protection and PPE Requirements
  - **Solid State Power Point** and multimedia presentations
  - **NEC**: Overcurrent Protection, Grounding and Bonding, Wiring Methods
- **LAB MODULE 4** (2 hours):
  - **Solid State Power Point** and multimedia presentations
  - Disconnecting Means (Purpose and Types)
  - Solar PV Systems and Batteries in Your Future
  - 29 CFR 1926.400; Subpart K
  - Interactive Discussion and Course Review

III. Summary. This course is intended to provide attendees with a proper understanding basic electrical theory, wiring methods likely to be encountered, the hazards presented by live circuits, and (most importantly) safe work practices.