

## Electrical Measurement Safety

(Multimeter Training, based on Fluke Educational Module)

4-Hour Course + 2-Hour Practical Exam

### OVERVIEW

This course includes four hours of classroom instruction based on the Electrical Measurement Safety Educational Module by Fluke. Students learn the basics of electrical measurement using a DMM and other test tools, along with the importance of working safely and how to avoid common safety hazards such as shocks, burns, and fire.

The second component of this course is an extended practical exam. Students are paired and simulate setting up an Electrically Safe Work Condition on actual de-energized equipment. The instructor will observe and track students' progress. ***Students must demonstrate 100% of the identified critical tasks to successfully complete this course.***

### PREREQUISITE

e-Hazard Low Voltage Qualified Course (8 Hours)

### MATERIALS

e-Hazard *Electrical Measurement Safety Workbook*

1. **What electrical power can do to a DMM – and to YOU**

2. **Common safety hazards**

3. **Leading safety standards organizations**

- NFPA and IEC Safety Standards

4. **Arc blast**

5. **Meter safety**

- Inspection
- Check list

6. **Multimeter specifications**

7. **Multimeter measurements**

- Ohm's Law
- Special functions
- Voltage
- Current
- Resistance
- Testing components
- Measuring temperature

8. **Non-linear loads**

- True-rms vs. average-sensing

9. **Major aspects practical exam**

- Conduct job briefing
- Barricade at proper distances
- Choose appropriate PPE for shock and arc flash hazards
- Verify Electrically Safe Work Condition
- Return electrical equipment to its normal operation