



ERNEST ORLANDO LAWRENCE  
BERKELEY NATIONAL LABORATORY

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**Environment, Health, & Safety  
Training Program**

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**EHS 0536 Electrical Switching for non-QEWs  
Course Syllabus**

**Subject Category:** Electrical Safety

**Course Length:** 2 hours

**Delivery Mode:** Classroom

**Course Prerequisite:** None

**Medical Approval:** None

**Frequency:** Every 3 years

**Course Purpose:**

The purpose of the course is to familiarize the student with electrical safety work practices required for **non-QEWs** (Qualified Electrical Workers) to perform non-hazardous operation of electrical devices (switching) on premises wiring panelboards, circuit breakers or disconnect switches rated at 15 Amps or greater.

**Course Objectives:** Upon completion of the course the student will be able to:

- Define non-hazardous switching and determine when a non-QEW can switch.
- Explain the nature of electrical switching.
- Describe some common electrical switching devices.
- Defining hazardous switching (QEW required) and the restrictions and limits of each QEW level (1, 2, 3)
- Discuss failure in switching devices.
- Recognize shock and arc flash hazards as applied to switching activities.
- Demonstrate proper body positioning for electrical switching.
- Interpret contributing factors and conditions when deciding whether to reclose a tripped breaker.

**Subject Matter Expert:** Mark Scott, Stephanie Collins

**Training Compliance Requirements:** LBL Electrical Safety Manual, EHS Safety Manual (formerly PUB-3000)- Chapter 8, *Electrical Safety Program*, 29CFR 1910.147, 29CFR 1910.333, NFPA 70E

**Course Instructional Materials:** PowerPoint presentation and video

**Performance Criteria:** Student must pass a written test to demonstrate their understanding of the conditions that must be met for electrical switching to be considered non-hazardous and the PPE and body positioning required to perform the action safely in order to receive course credit.

**Web Resource:** Electrical Safety web page, Field Guide 9A: Non-hazardous Non-QEW Switching Requirements, <http://electricalsafety.lbl.gov/resources/field-program-guides/>