



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

**EHS 0538 QEWR Electrical Safety Basics
Course Syllabus**

Subject Category: Electrical Safety

Course Length: 4 hours
Delivery Mode: Classroom

Course Prerequisite: 1 of the following LOTO courses:
EHS 0370, EHS 0388, EHS 0389
Medical Approval: None
Frequency: Every 3 years

Course Purpose:

This is a required course for QEWR. The QEWR classification assumes that the researcher is the principal subject matter expert on the exposure type. The course provides a foundation for workers to understand and apply ISM within the context of electrical work and specialized applications, associated drivers and resources available to ensure electrical safety in the workplace, including an introduction of the Lab's Electrical Safety Program from the QEWR perspective.

Course Objectives: Using ISM as the framework, upon completion of the course the student will be familiar with the following:

- QEWR requirements and limitations for the QEWR-R
- Resources available to the QEWR-R:
 - ESH Manual, Chapter 8, *Electrical Safety Program*
 - Electrical Safety Manual
 - Electrical Safety website
- Specific hazards related to electricity and how they cause injuries
- Hazard Classification System
- Performing an Electrical Hazard Analysis, including Shock Hazard Analysis
- Task-specific controls:
 - Modes of work
 - Two-person rules (standby person vs. safety watch)
 - Alerting techniques (barricades, signage, attendants)
 - Zero Voltage Verification (ZVV)
- Emergency Response process for electrical shocks and injuries.

Subject Matter Experts: Mark Scott, Stephanie Collins

Training Compliance Requirements: LBNL 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 ability to use the classroom resources provided to receive course credit.

Web Resource: <http://electricalsafety.lbl.gov/>, Field Guide 1