



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

**EHS 0543 QEW1 Practical Training
Course Syllabus**

Subject Category: Electrical Safety

Course Length: 4 hours

Delivery Mode: Classroom with practical demonstration

Course Prerequisite: EHS: 0539, 0370, 0540-0542

Medical Approval: None

Frequency: minimum every 3 years

Course Purpose: This is the fourth course in a series required for QEW1. The course builds upon the work in the QEW1 series classroom training by providing a demonstration of the practical skills a QEW1 would be expected to possess in order to prove their knowledge and application of electrical safe work practices per the Lab's Electrical Safety Program. This course is the last preparatory step for the QEW1 student prior to Practical Certification and AHJ Approval as a QEW1.

Course Objectives: Upon completion of the course the student should be able to demonstrate how to:

- Identify the practical skills a QEW1 is expected to possess.
- Describe the expectations for "Skill of the Craft" as it pertains to their work authorization.
- Differentiate between safe and unsafe work practices in a safe environment.
- Explain acceptable PPE and tool inspection for the QEW1.
- Prepare to demonstrate proper use of PPE, tools and possible work site necessities including barriers, barricades, insulating blankets, etc.
- Interpret Arc Flash labels, calculations and the implications with regards to QEW safety.
- Outline knowledge of emergency rescue techniques for electrical accidents/incidents at LBNL.
- Associate practical demonstration with QEW qualification.
- Integrate the Electrical Safety Manual into everyday work practices.
- Explain and perform the safety aspects of Zero Voltage Verification and LOTO.

Subject Matter Expert: 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, video, various electrical equipment, tools, PPE, meters

Performance Criteria: Course credit will be given upon completion of the class. Once the student has completed this course and is ready to demonstrate the practical application of electrical safe work practices, they will need to contact the Electrical Safety Group to schedule their one-on-one Practical Certification (EHS 0544) in accordance with the Lab's Electrical Safety Program.

Web Resource: <http://electricalsafety.lbl.gov/>