



Environment, Health, & Safety
Training Program

**EHS 0552 QEW2 Arc Flash Protection
Course Syllabus**

Subject Category: Electrical Safety
Course Length: 4 hours
Delivery Mode: Classroom

Course Prerequisites: EHS: 0549, 0370, 0550, 0551
Medical Approval: None
Frequency: Every 3 years

Course Purpose:

This is the third course in a series required for QEW2. The course builds upon the work in EHS 0550 and 0551, applying ISM and addressing Electrical Hazard Analysis for Arc Flash Hazards including the selection, inspection and use of arc rated PPE and controls for the QEW2.

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

- Identify what is an Arc Flash hazard.
- Describe the injuries that an Arc Flash could cause to the human body.
- Differentiate Arc Flash hazards and exposure levels in LBNL *equipment*.
- Differentiate Arc Flash hazards and exposure levels in LBNL *activities*.
- Interpret Arc Flash labels and calculations
- Implement Arc Flash boundaries for personnel protection.
- Explain Arc Flash PPE levels necessary for personnel safety.
- Associate body positioning with Arc Flash exposure.
- Integrate ESM section 8 into everyday work practices
- Assist non-QEW and QEW1 personnel.

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 and video

Performance Criteria: Student must pass a written test to demonstrate their ability to use the classroom resources and prove understanding regarding when and how to conduct an arc flash hazard analysis; inspection, selection and use of appropriate equipment and PPE; interpreting arc flash labels and understanding the controls needed to prevent or minimize the personnel injuries as the result of an arc flash event in accordance with the Lab's Electrical Safety Program to receive course credit.

Web Resource: <http://electricalsafety.lbl.gov/>; Field Guides 2, 5, 11.