



ERNEST ORLANDO LAWRENCE  
BERKELEY NATIONAL LABORATORY

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

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**EHS 348 Chemical Hygiene and Safety Training  
Course Syllabus**

**Subject Category:** Chemical Safety

**Course Length:** 1 hour

**Delivery Mode:** Web-based Training

**Course Prerequisite:** None

**Medical Approval:** None

**Frequency:** Refreshed every 3 Years by EHS0353

**Course Purpose:** This course provides information to Lab employees on the hazards and controls associated with chemicals that may be encountered in a research laboratory setting. Such information will include methods and observations that may be used to detect the presence or release of a hazardous chemical in a work area. It will also include the physical and health hazards associated with chemicals in a work area, along with the steps employees can take to protect themselves from such hazards.

**Course Objectives:**

1. Identify who to contact to discuss safety concerns
2. Recall how to obtain and use information resources to help keep you safe while performing work with chemicals.
3. Recognize the two most important routes of exposure when working with chemicals
4. Recall the physical hazards associated with flammables, combustibles and reactives
5. Recall the health hazards associated with work involving corrosives and toxic chemicals
6. Identify alternative ways to reduce chemical exposure
7. Recognize when to use fume hoods and glove boxes
8. Identify how to properly select, dispose, and store personal protective equipment
9. Recall the laboratory requirements for eating and storing food
10. Identify good housekeeping practices
11. Recall the posting requirements for work areas containing hazardous chemicals
12. Identify how to properly label, safely store, and transport chemicals
13. Recall the chemical inventory responsibilities of PIs
14. Recall the chemical exposure detection methods
15. Recognize the warning properties of chemical exposure
16. Recognize what to do when a spill occurs
17. Identify what to do in personal exposure emergencies
18. Recall the fire extinguishers requirements when working with chemicals

**Subject Matter Expert:** EHS Chemical Safety Officer

**Training Compliance Requirements:** OSHA Occupational Exposure to Hazardous Chemicals in Laboratories 29 CFR 1910.1450,

**Course Instructional Materials:** Web-based course and a PDF downloadable version of the course is available within the course.

**Performance Criteria:** Employees will be asked to demonstrate what they have learned from the web-based training by taking a quiz at the end of the course. Employees must pass the quiz with a 80% score to receive course credit.

**Web Resource:** Chemical Hygiene and Safety Plan - <https://www2.lbl.gov/ehs/pub3000/CH45/CH45c.html>