



BERKELEY LAB

Bringing Science Solutions to the World

Berkeley Lab Training

EHS 0353 Chemical Safety Refresher

Course Syllabus

Subject Category: EHS Chemical Safety Program

Medical Approval: None

Course Prerequisite: EHS 0348

Course Length: 40 minutes

Course Mode: e-learning

Course Purpose: This course is completed three years after completing EHS 0348 Chemical Hygiene and Safety. The purpose of this course is to highlight lessons learned specific to chemical safety that highlight areas of focus within the Chemical Safety Program. The topics in this training will change every few years in order to align to areas of interest brought forth by the chemical safety program and subcommittees, such as Chemical Safety Subcommittee, Lab Safety Subcommittee, etc. In short, the purpose is to have this training focus on areas of chemical safety deemed most pertinent.

NOTE: The course also includes a module on Fume Hood Safety. This is included in the course instead of a separate training. It meets the requirements for Cal OSHA title 8, Section 5154.1 (f)

Fume Hood Module Learning Objectives:

After completing the fume hood module, participants will be able to

- Explain the airflow characteristics of a fume hood
- Identify factors that affect or degrade airflow and increase likeliness that hazardous fumes will escape
- Take appropriate action if airflow monitor “alarms”
- Read a quantitative airflow monitor to determine if airflow is within operational range
- Determine date of performance testing and what to do if fume hood is “past date”
- Explain the protection purpose of the sash and how to set appropriate height
- Know who to contact if fume hood is not performing appropriately

Purchasing module Learning Objectives:

After completing the purchasing module, participants will be able to

- Identify whether the chemical they need is on the Lab’s Restricted Chemicals and Gases list (CHEMR)
- Understand the need to identify changes in work scope and chemical hazards through daily ISM
- Understand the required steps for work planning and control when changes to work scope and chemical hazards are identified
- Understand the need to enter chemicals into the Chemical Management System
- Consider institutional expectations prior to acquiring hazardous materials, including planning the work, purchasing only what is needed to minimize waste,

and purchasing less hazardous alternatives when available

- Recognize the need to notify EHS before bringing a restricted chemical onsite or receiving a restricted chemical

- Understand that highly hazardous materials may require additional controls/protections in accordance with DOE requirements

The Lessons Learned modules focus on Integrated Safety Management

After completing the lessons learned modules the learner will be able to

- Identify the value of indicating and communicating “pause work” triggers within the scope of work
- Use the “What-if” analysis framework to help identify potential hazards associated with a research task
- Understand how changes to the scope of work can affect the safety of that work and the importance of indicating “scope limits “ or thresholds
- Explain why it is important to apply the five steps of ISM when planning new work or changing existing work

Training Requirements:

- Fume Hood Module: Cal OSHA title 8, Section 5154.1 (f)
- PUB 300 Chapter 45

Mode: e-learning

Course Instructional Materials: e-learning, job aids that can be downloaded.

Practical or performance Assessment / Exam: No

Retraining/Recertification: Every three years

Course Evaluation: Feedback form at end of course to collect student feedback