ERNEST ORLANDO LAWRENCE
BERKELEY NATIONAL LABORATORY

Environment, Health, & Safety
Training Program

EHS 400 ~ Radiation Protection Fundamentals

Course Syllabus

Subject Category:	Radiation Protection	**Course Prerequisite:**	No
Course Length:	3 hours	**Medical Approval:**	No
Delivery Mode:	Class		
Schedule:	Monthly or by special request		
Location/Time:	Bldg. 70A-3377		

Course Purpose: This course is designed to inform employees of the health and safety risks of radiation exposure, and to enable them to work safely with radiation sources and radioactive materials at Berkeley Lab. This introductory course is mandatory prior to commencing work with radiation under most Radiation Work Authorizations (RWAs) and Sealed Source Authorizations (SSAs) and some Radiation Work Permits (RWPs). Other radiation protection courses may also be required and will be specified in the RWA, SSA or RWP covering the work.

Performance Objectives: At the end of the course, the learner will:

- Define radiological terms and identify radiological hazards
- Identify radiological exposures and its health hazards
- Identify controls to reduce radiological exposure levels
- Identify radiation waste reduction methods
- Describe LBNL radiological worker procedure for radiological emergencies

Course Instructional Materials:
- Overhead Projector
- VCR for Video "*Working Safely with Radiation*"
- Paper flip chart and white board
- Consumer Products containing radioactive materials
- Geiger Counter Beta-Gamma Survey Meter
- Air Proportional Alpha Survey Meter
- Radiation safety postings and signs

Instructors:
Christine Donahue (7736)
David Kestell (x7157)
Robert Fairchild (2278)
Jeff Bramble (6242)

Training Compliance Requirements: This course is designed to meet, in part, the requirements of 10CFR835 section 901 (b), which states that each individual shall demonstrate knowledge of radiation safety topics:
1. before being permitted unescorted access to radiological areas, and
2. before performing unescorted assignments as a radiological worker.

Other training, such as EH&S 432 or 402 may also be required depending on the work assignment.

Course Hand-outs:
- Outline of slides
- Course Manual

Participant Evaluation: Written evaluations regarding the effectiveness of the trainer, the training, and the visual aids.

Written Exam: Yes. Students must score at least 80% on a multiple choice exam to pass the course.

Practical Exam: No

Retraining/Recertification: 2 years. Retraining is normally accomplished as part of the annual renewal of radiation work authorizations (RWA, SSA or RWP).

Challenge exam: A challenge exam may be taken, in lieu of attending the class, by individuals with adequate prior training and experience in radiation protection. Contact the Radiation Control Manager (x7736) for information on taking the challenge exam.

WEB Resource: EH&S Training Program website: www.lbl.gov/ehs/training/index.shtml
LBNL Pub. 3000. Chapter 21: www.lbl.gov/ehs/pub3000/CH21.html