

Name: <b>Safety Training</b>	Effective: 4/22/98
Areas Affected: All	Reviewed/Revised: 6/28/2013

## **1.0 Purpose, Applicability, and Scope**

1.1 **Purpose**- To establish a program to provide guidance for required safety and health training.

1.2 **Applicability** – This program shall apply primarily to all employees and secondarily to students of the University of Tennessee, Knoxville campus.

1.3 **Scope** –This procedure covers all employees and students on the Knoxville campus. University employees and students engaged in off-site, university-sponsored activities are also covered.

This procedure shall apply to visiting professors who are here more than 30 days.

Contractors performing work on university property or university leased property are not covered by this procedure.

## **2.0 Abbreviations, Acronyms, and Definitions**

2.1 Abbreviations

2.2 Acronyms and Definitions

DOT – Department of Transportation

EHS – Environmental Health and Safety

EPA – Environmental Protection Agency

HR128 – Human Resources standard 128

OSHA- Occupational Safety and Health Administration

Safety – for the purposes of this document it shall include safety, industrial hygiene, environmental compliance and safety standard addressed under DOT

## **3.0 Roles and Responsibilities**

### **Employee's role:**

1. Participate in training, including asking questions to clarify subject matter when necessary
2. Follow the processes and procedures that were communicated during training
3. Report any problem to their immediate supervisor where training was deficient or incorrect
4. Complete all required training

### **Supervisor's role:**

1. Ensure staff attend training programs and complete required training annually
2. *Identify training requirements for their employees*
3. Contact EHS if there are any questions regarding safety training
4. Provide job-specific training
5. Maintain records of department training

### **Environmental Health and Safety's role:**

1. Develop and promote safety training on campus
2. Delivery training to the extent feasible
3. Review training content upon request from departments
4. Answer questions regarding training and interpret regulations related to training
5. *Maintain records of training conducted by or coordinated by EHS department*

## **4.0 Program Elements**

### **General Requirements**

Each college or administrative division head shall establish a suitable health and safety training program designed to instruct all employees and students in the techniques for recognition and avoidance of unsafe conditions.

EHS is available to assist departments identify training needs, review content and present programs.

Appendix A contains a list of required training programs *and refresher frequency*.

Note that safety training may be necessary when:

- a. New tasks are assigned (which include new or different hazards)
- b. An employee transfers to a different job
- c. New hazards are recognized.
- d. New regulations or standards are developed that have a training component
- e. *The employee demonstrates a lack of understanding of applicable safety policies, procedures, guidance documents or alike*

### **New Employee Orientation**

New employees shall receive appropriate safety training, which is generally required before the individual undertakes a task covered the by that standard.

Departments are encouraged to address safety subjects (*tasks, chemicals, process, equipment, procedures, hazards, etc.*) specific to their employees before the employee starts work. *Note that in many cases safety regulations require training specific to the hazard.*

## **Sources of Training**

Training can be provided by any one of the following:

- a. Department
- b. Traditional classroom from EHS upon request
- c. Skillsoft
- d. Self-study format available from EHS online
- e. DVD from EHS
- f. Self-study modules (paper copy) available from EHS
- g. Outside vendors

Note that EHS is available to review the content of training to determine if it meets regulatory requirements.

## **Refresher Training**

Most safety training requires an annual refresher. In programs where there is no specified frequency for retraining it is suggested that a three-year interval be observed.

Note that refresher training may be necessary when the following occurs;

- a. The employee demonstrates a lack of knowledge in the subject
- b. Equipment, processes or procedures related to this subject change
- c. New or revised regulations are promulgated

## **Verification of Employee Knowledge**

It is imperative that the person receiving the training fully understands the information presented relative to his or her activities. Departments shall make provisions for employees who have limited reading skills or where English is not the employee's primary language.

One suggested approach to document that the employee understands the training is by a quiz or test. These tools also offer an opportunity to reinforce key points of the subject. A minimum score of 70% is deemed acceptable to pass a safety quiz or test.

## **Specificity of Training**

Training provided by EHS to departments on campus is by its nature somewhat general. These programs fulfill most regulatory requirements. However, some safety standards require additional training that is specific to the department, equipment, building, substance, process, procedure or other circumstance. Training to this degree is the responsibility of the employee's supervisor and department.

## **Qualification of Instructions**

In some cases regulations specify a certain level of training or certification for instructors. *Contact EHS if there are questions about instructor certification or qualifications.*

## **Laboratories and Shop**

Laboratories and shops (wood shops, machine shops, etc.) have a unique set of hazards and are heavily regulated by OSHA. EHS *may* make available a classroom program for employees who work in shops during the summer. The following programs are applicable to shops:

- a. Fire Safety
- b. Fire Extinguishers
- c. Emergency Action Plans
- d. Hazardous Waste Minimization
- e. Electrical Safety including Lockout/Tagout
- f. Hazard Communication
- g. Personal Protective Equipment
- h. Respiratory Protection (may be applicable depending on risk)
- i. Hearing Conservation (may be applicable depending on risk)
- j. Welding, Cutting and Brazing (may be applicable depending on risk)

Training applicable to teaching and research laboratories generally includes the following:

- a. Fire Safety
- b. Fire Extinguishers
- c. Emergency Action Plans
- d. Hazardous Waste Minimization
- e. Electrical Safety
- f. Chemical Hygiene Plan
- g. Personal Protective Equipment
- h. Respiratory Protection (may be applicable depending on risk)
- i. Substances found in 29 CFR 1910.1003 through 1910.1052 – where applicable

## **5.0 Recordkeeping**

A record of all training activities will be maintained in the department files, except for records kept in IRIS. Note that safety training taken through Skillsoft entered as part of HR 128 will be maintained in IRIS. All departments are encouraged to use IRIS as a central means of recordkeeping. Departments who provide safety training for university staff and students should retain the following records:

1. Training topic
2. Agenda
3. Name of instructor(s)
4. Names and affiliation of all trainees
5. Length of the session
6. Any quizzes or tests

Note that record keeping in IRIS may be different and requires *employee ID number*.

Records must be kept for at least three years. *Consult the Records Retention for Safety, Health & Environmental Protection found in the Safety Manual for additional details.*

## **6.0 Reference Standards**

OSHA 29 CFR 1910 General Industry

OSHA 29 CFR 1926 Construction

EPA 40 CFR

DOT 49 CFR

## **7.0 Forms and Attachments**

Appendix A - Required Training Programs

*Appendix B - Topics for New Employee Orientation*

## Appendix A – List of Required Training Programs

The following table contains a list of required training programs for OSHA, EPA and DOT. Standards that have the following notation **(Construction)** indicate there is a similar standard in the OSHA construction Standard (29 CFR 1926). In some cases the construction standard may be a different name and have different training requirements. Contact EHS for custom safety programs.

A – Skillsoft

B1 – EHS (classroom)

B2 – EHS (self study- DVD)

B3- EHS (self-study- paper copy)

B4- EHS (self study –Blackboard)

C- Offsite

General Industry Program	Applicability	Source of Training	Refresher Training
1910.38 Emergency Action Plans	All	A, B1	triennial
1910.39 Fire Prevention Plans <b>(Construction)</b>	All	B1	triennial
1910.66 Powered platforms for Building Maintenance	Employee who operate powered platforms	C	triennial
1910.95 Occupational noise exposure <b>(Construction)</b>	Employees exposed to more than 85dBA averaged over 8 hours	A, B1, C	Annual
1910.110 Storage and handling of liquefied petroleum gases	Researchers and maintenance personnel who handle LP gas	C	triennial
1910.120 Hazardous waste operations and emergency response <b>(Construction)</b>	Employees who manage hazardous material spills	C	Annual
1910.134 Respiratory protection <b>(Construction)</b>	Employees who use a respirator	A,B1	Annual

<b>General Industry Program</b>	<b>Applicability</b>	<b>Source of Training</b>	<b>Refresher Training</b>
1910.146 Permit-required confined spaces	Telephone Services, Facilities Services	A,B1	triennial
1910.147 The control of hazardous energy (lockout/tagout)	Employees who service or repair	A,B1,B	Annual
1910.157 Portable fire extinguishers	All	A,B1	Annual
1910.160 Fixed extinguishing systems, general	Employees who may be exposed to the extinguishing agent	C	Annual
1910.165 Employee alarm systems	All	A,B1	triennial
1910.177 Servicing multi-piece and single piece rim wheels	Motor Pool	C	triennial
1910.178 Powered industrial trucks	Employees who operate forklifts and other powered industrial trucks	A,B,C	Annual
1910.252 Welding, cutting and brazing--General Requirements	Employees who conduct welding, brazing, cutting (torch or arc)	A, C	triennial
1910.253 Oxygen-fuel gas welding and cutting <b>(Construction)</b>	Employees who conduct oxy-acetylene, -propane, MAPP or other fuel gas cutting or welding	C	triennial
1910.255 Resistance welding	Maintenance, Engineering Shop, Art Shop	C	triennial
1910.264 Laundry machinery and operations	Athletic Department	C	triennial
1910.268 Telecommunications	Telephone Services	C	triennial

<b>General Industry Program</b>	<b>Applicability</b>	<b>Source of Training</b>	<b>Refresher Training</b>
1910.332 Electrical—safety-related work practices	Employees who work maintain electrical systems	A, C	Triennial
1910.1001 Asbestos ( <b>Construction</b> )	Maintenance personnel, Telephone Services	A,B1,C	Annual
1910.1003 4-Nitrobiphenyl	Research involving this chemical	None currently	Annual
1910.1004 alpha-Naphthylamine	Research involving this chemical	None currently	Annual
1910.1006 Methyl chloromethyl ether	Research involving this chemical	None currently	Annual
1910.1007 3,3'-Dichlorobenzidine (and its salts)	Research involving this chemical	None currently	Annual
1910.1008 bis-Chloromethyl ether	Research involving this chemical	None currently	Annual
1910.1009 beta-Naphthylamine	Research involving this chemical	None currently	Annual
1910.1010 Benzidine	Research involving this chemical	None currently	Annual
1910.1011 4-Aminodiphenyl	Research involving this chemical	None currently	Annual
1910.1013 beta-Propiolactone	Research involving this chemical	None currently	Annual
1910.1014 2-Acetylaminofluorene	Research involving this chemical	None currently	Annual
1910.1015 4-Dimethylaminoazobenzene	Research involving this chemical	None currently	Annual
1910.1016 N-Nitrosodimethylamine	Research involving this chemical	None currently	Annual



<b>General Industry Program</b>	<b>Applicability</b>	<b>Source of Training</b>	<b>Refresher Training</b>
1910.1018 Inorganic arsenic ( <b>Construction</b> )	Research involving this chemical, Steam Plant personnel who enter the boilers	B1	Annual
1910.1025 Lead ( <b>Construction</b> )	Maintenance personnel	B1	Annual
1910.1026 Hexavalent chromium (VI) ( <b>Construction</b> )	Employees who weld or cut (torch or arc) stainless steel. Researcher who work with this substance	None currently	Triennial
1910.1027 Cadmium ( <b>Construction</b> )	Research involving this substance. Also Art Dept and welders	None currently	Annual
1910.1028 Benzene ( <b>Construction</b> )	Research involving this chemical	None currently	Annual
1910.1030 Bloodborne pathogens	Employees who come in contact with human blood and other bodily fluids	A, B1,B2, C	Annual
1910.1044 1,2-dibromo-3-chloropropane ( <b>Construction</b> )	Research involving this chemical	None currently	Triennial
1910.1045 Acrylonitrile ( <b>Construction</b> )	Research involving this chemical	None currently	Annual
1910.1047 Ethylene oxide ( <b>Construction</b> )	Research involving this chemical	None currently	Annual
1910.1048 Formaldehyde ( <b>Construction</b> )	Research involving this chemical	A, C	Annual
1910.1050 Methylenedianiline ( <b>Construction</b> )	Research involving this chemical	None currently	Annual

<b>General Industry Program</b>	<b>Applicability</b>	<b>Source of Training</b>	<b>Refresher Training</b>
1910.1052 Methylene chloride ( <b>Construction</b> )	Research involving this chemical	B1	Annual
1910.1096 Ionizing radiation	Employees who may be exposed to ionizing radiation	See Radiation Safety	Annual
1910.1200 Hazard communication ( <b>Construction</b> )	Employees who handle hazardous chemicals	A,B1,B2	Annual
1910.1450 Occupational exposure to hazardous chemicals in laboratories	Laboratory work involving chemicals	A,B1	Annual
<b>Construction</b>			
1926.404 Ground Fault Protection	Facilities Services	C	triennial
1926.454 Scaffolding	Facilities Services	A, B1	triennial
1926.503 Fall Protection	Facilities Services	A, B1	triennial
1926. 651 Excavations, Trenching and Shoring	Facilities Services	A	triennial
1926.701 Concrete and Masonry	Facilities Services	C	triennial
1926.703 Requirements for Cast-in-Place Concrete	Facilities Services	C	triennial
1926.803 Compressed Air	Facilities Services	C	triennial
1926.852 Chutes	Facilities Services	C	triennial
1926.1053 Ladders	Employees who use ladders in a construction setting	A	triennial

<b>Environmental Programs</b>			
40 CFR Spill Prevention Control and Countermeasures	Employee who have oil in their work area in quantities exceeding 55 gallons	A, B1,B2	Annual
40 CFR 261. Hazardous Waste	Individuals who produce or handle hazardous waste	A,B1,	Annual
40 CFR Storm Water Pollution Prevention Plan	Steam Plant employees	A,B1	Annual
40 CFR Universal Waste	Maintenance personnel and those who generate waste batteries, mercury containing devices including fluorescent lamps	A,B1,B2	Annual
<b>Transportation Standard</b>			
DOT Standard	Individuals who ship hazardous materials or sign hazardous waste manifests	C	Triennial
IATA	Individuals who ship hazardous material by air	C	Biennial
<b>Other</b>			
CPR/AED	Individuals who may use an AED and/or deliver CPR	B-1, C	Biennial



**Appendix B**  
**Topics for New Employee Orientation**

1. *Hazard Communication*
2. *Reporting Hazards*
3. *Reporting Accidents and Near Misses*
4. *Workers Compensation*
5. *Space Heaters*
6. *Electrical Appliances*
7. *Office Safety (if applicable)*
8. *Electrical Safety (cords, appliances, etc.)*
9. *Computer Use and Ergonomics (if applicable)*
10. *Health and Wellness*
11. *Drugs and Alcohol*
12. *Safety is Everyone's Responsibility*
13. *Safety Culture*
14. *Proper Lifting Techniques*
15. *No Smoking Policy*
16. *Portable Fire Extinguisher Use*
17. *Personal Protective Equipment*
18. *Vehicle Safety*
19. *Carts, 4-Wheelers, and ATVs (if applicable)*
20. *Safety Manual – Policies and Procedures*
21. *Access to Medical Records*

22. *Building Evacuation*
23. *Housekeeping – power cords, open file drawers, etc.*
24. *Emergency Management*
25. *AEDs, CPR and First Aid*
26. *Lockout/Tagout (if applicable)*