Personal Protective Equipment Program

Summary: The use of appropriate personal protective safety equipment applies to faculty, staff, students, visitors and volunteers performing tasks or entering areas that require specific Personal Protective Equipment (PPE).

1. Program Description
In order to protect the health and welfare of each employee and to strive towards compliance with state, federal and local regulations, appropriate protective equipment is required in areas where there may be a risk of injury or exposure to hazardous substances or conditions. This program contains general requirements to protect University employees from various hazards encountered in their work area.

2. Scope
The use of appropriate personal protective safety equipment applies to faculty, staff, students, visitors and volunteers performing tasks or entering areas that require specific Personal Protective Equipment (PPE).

Other requirements for the use of PPE are defined for hazard specific to:
- Radioactive Use Authorization (RUA)
- Biological Use Authorization (BUA)
- Chemical Hygiene Plan (CHP)

Program exception:
- The program does not apply to uniforms (i.e., attire, excluding shoes, which are worn for the purpose of ready visual identification) worn by personnel in Police, Parking and Guard occupations. Please refer to Human Resources for specific requirements as defined in negotiated contracts.

3. Definitions
Eye/Face Protection - Equipment designed to provide protection to the face and eyes during exposure to such hazards as flying particles, molten metal or sparks, liquid chemicals, acids or caustic liquids, or potentially injurious light radiation (i.e., lasers, welding, etc.)

Foot Protection - Equipment designed to provide protection to the feet and toes during exposure to situations with the potential for foot injuries such as falling or rolling objects, chemical or liquid exposures, piercing objects through the sole or uppers, and/or where the employee's feet are exposed to electrical hazards.

Hand Protection - Equipment designed to provide protection to the hands during exposures to potential hazards such as sharp objects, abrasive surfaces, temperature extremes and chemical contact. Hand protection is selected based upon the hazard and performance characteristics of the gloves.

Hazard Assessment - The process utilized to identify hazards in the workplace and to select the appropriate Personal Protective Equipment to guard against potential hazards (see Guidelines for Selection of Personal Protective Equipment).

Head Protection - Equipment designed to provide protection to the head during exposure to potential hazards such as falling objects, striking against low hanging objects, or electrical hazards.

Hearing Protection - Equipment designed to provide protection to an individual's hearing during exposure to high noise levels.

Personal Protective Equipment (PPE) - Includes all equipment designed to provide protection to the wearer from potential hazards to the eyes, face, hands, head, feet, ears, and extremities.

Respiratory Protection - Equipment designed to provide protection to the wearer from potential inhalation hazards such as vapors, mists, particulates, and gases.

4. Responsibilities
Each supervisor has the responsibility to protect his/her employees from injury. Hazards should be evaluated, controlled or eliminated if possible, prior to the start of any work where hazards have been identified. If hazards may not be eliminated, then guards and protective equipment should be utilized to ensure the safety of employees.

4.1 Principal Investigators (P.I./) Supervisors/Safety Representatives (SR's)
- Each supervisor should complete a Workplace Hazard Assessment and Corrections Tool for the activities in his/her area to identify potential hazards and methods for their elimination. Hazard assessments will be conducted initially or when work practices change, reviewed annually, and maintained in the department.
- The supervisor or PI may have the Laboratory Safety Representatives (LSR's) or the Unit Safety Representatives (USR's), [LSR's and ULR's ] do the hazard assessment.
- The supervisor must determine, based on the Workplace Hazard Assessment, the correct PPE necessary to perform work activities in a safe manner.
- Each supervisor is responsible for ensuring that employees wear the required PPE.
- Each supervisor must train his/her employees regarding (contact EH&S at 949 824-6200 if you need assistance):
  - When PPE is necessary
  - What type to use
  - How to put on, take off, adjust, and wear appropriate PPE
  - The proper maintenance, storage, disposal and useful life of PPE

4.2 Faculty, Staff, Students, Visitors and Volunteers
- Each individual is responsible for wearing his/her required PPE as identified by the supervisor, as a result of conducting a PPE assessment.
- Each individual is responsible for maintaining and storing his/her PPE in a clean and sanitary condition.
Each individual must ensure that his/her PPE is in good operating condition before wearing it.
Each individual needs to communicate to his/her supervisor any unforeseen hazards requiring additional PPE.
Each individual needs to report to his/her supervisor any defective PPE or need for replacement.

4.3 EH&S

If requested, EH&S will assist supervisors, PI's, SR's in completing the PPE Assessment Tool, evaluating job hazards, or selection of appropriate PPE using the:
- Guidelines for Selection of Personal Protective Equipment
- Lab PPE Assessment Tool
- For assistance, contact EH&S at 949-824-6200 or email safety@uci.edu.
- EH&S may also assist in determining the type of PPE necessary based on the hazards involved in the job.

5. Specific Program Components

The purpose of personal protective equipment (PPE) is to protect individuals, exposed to health and safety hazards, from the risk of injury by creating a barrier against workplace hazards. PPE include devices for head protection, eye and face protection, protective clothing, hand protection, foot protection, hearing and respiratory protection. Using PPE requires hazard awareness and training on the part of the user. PPE is not a substitute for good engineering or administrative controls or good work practices, but should be used in conjunction with these controls.

5.1 PPE Assessment

In order to be able to choose the proper PPE, the individual must be aware of what hazards exist in the workplace. This involves obtaining information on the types of hazards present, the toxicity of the materials involved, and what other options are available to control exposure. General information about chemicals may be found in Material Safety Data Sheets (MSDS). The chronic and acute effect of chemicals, biological and radiological materials should also be assessed. The next step would be to implement the control measures necessary to prevent exposure into the operational procedures.

5.2 Head Protection

Head injuries are commonly caused by impact from falling or flying objects, and falling or walking into hard objects. PPE devices such as hard hats may protect you from objects falling on your head and, in a limited way, from electrical shock or burns. Hard hats should be worn in areas where there is potential for head injuries.

5.3 Eye and Face Protection

Eye protection must be worn where there is potential for injury to the eyes or face from small particles, toxic chemicals, flying objects or particles, large objects, thermal or radiation hazards, and lasers. According to the types of and extent of hazards, different PPE should be worn. PPE for the face and eyes includes devices such as safety glasses, goggles, and face shields. These must always remain clean and free of contaminants. Safety glasses or goggles must always be worn in laboratory areas.

For employees who wear prescription glasses, side shields must be permanently affixed to the frames to protect eyes from flying particles. Side shields on eyeglass frames must meet ANSI Z87.1 requirements and must not be removed. The employee’s home department is responsible for paying and covering the cost of prescription eyewear materials (frames and impact resistant lenses), up to a maximum of $150 per year. Employees are responsible for any additional professional fees associated with the eye examination, fitting and dispensing.

Currently, retail Lenscrafters stores carry up to 20 styles of eyeglass frames with permanently affixed side shields that meet Z87.1. Additionally, prescription eyeglass frames with side shields are available through a mail-order service, American Optical. Departments may use PalCard or the employee may reimburse for the cost of the frames and lenses. Contact EH&S for additional assistance.

Temporary or part-time employees should be provided temporary safety glasses that can be placed over their personal prescription glasses. “Over-the-glasses” safety glasses are available through Physical Sciences (PS) Stores and Chem Stores. Contact EH&S for additional assistance.

5.4 Body Protection

Protective clothing, such as lab coats, should be worn when handling hazardous materials. This will prevent the contamination of skin and clothing.

5.5 Hand Protection

Selecting the proper gloves is very important since it is our hands that are often used to handle hazardous materials. These materials usually consist of caustic or toxic chemicals, biological substances, electrical sources, or extremely cold or hot objects that may irritate or burn your hands. In addition, traumatic injuries such as cuts, sprains and punctures may also occur. With the wide range of hazards, there also exists a wide range of gloves that may be used as PPE. It is important to know that not all gloves are protective against all chemicals. To choose the proper chemical resistance gloves for a specific chemical, available Internet sources include the Glove Chemical Resistance and Barrier Guide (Kleenguard®).

5.6 Foot Protection

Injuries that may occur when the proper footwear is not worn are chemical and heat burns from spills and splashes of acids and caustics, compression injuries, electrical shocks, and slipping. Wearing the proper footwear is therefore, very important when working in areas where physical and chemical hazards are present. Close-toed, heeled shoes must always be worn in laboratory areas where chemicals are present.

5.7 Hearing Protection

Exposure to high levels of noise may result in hearing loss. PPE should be worn when the noise level is 85 decibels or greater averaged over an 8-hour period of time. Popular types of hearing protection devices include earmuffs and foam earplugs. EH&S Industrial Hygiene Division, maybe contacted at (949) 824-6200 for assistance to evaluate noise levels.

5.8 Respiratory Protection

Respirators are used to prevent the exposure to air contaminated with harmful dusts, fogs, fumes, mists, gases, smoke, sprays, or vapors. All respirator usage, which includes disposable respirators, air purifying respirators, and air supplied respirators, require annual fit testing and training prior to use. EH&S Industrial Hygiene Division, maybe contacted at (949) 824-6200.

6. Reporting Requirements

None

7. Competency Assessment and Training Requirements

Employees are initially trained in proper use and maintenance of any PPE required in accordance with the manufacturers’ instructions.

8. Information and external references
State Regulations

Title 8 California Code of Regulations, General Safety Orders:

Cal/OSHA Standard 3381, Head Protection
Cal/OSHA Standard 3382, Eye and Face Protection
Cal/OSHA Standard 3383, Body Protection
Cal/OSHA Standard 3384, Hand Protection
Cal/OSHA Standard 3385, Foot Protection
Cal/OSHA Standard 5098, Hearing Protectors
Cal/OSHA Standard 5144, Respiratory Protective Equipment
Personal Protective Equipment (Collection From OSHA)

Other resources:

Chemical Hygiene Plan (CHP)
Glove Chemical Resistance and Barrier Guide (Kleenguard)

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