Personal Protective Equipment Program

Responsible Administrator: Belinda Manalac
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1. Program Description

In order to protect the health and welfare of each employee and to achieve compliance with state, federal and local regulations, and 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 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 hazards specific to

- Radioactive Use Authorization (RUA)
- Institutional Biological Committee (IBC)
- Chemical Hygiene Plan (CHP)
- Laboratory Hazard Assessment (LHAT)
- Job Safety Analysis (JSA) or Job Hazard Analysis (JHA)

Program exceptions:

- 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.

- Laboratories/technical areas which have been designated and posted as free of physical or chemical hazards. Examples: Laboratories/technical areas that house only operations with no inherent physical or chemical hazards during normal conditions, or routine maintenance activities. Areas where this may occur include some electron microscope rooms, md precision measurement rooms.

Written approval from EH&S for the following areas and work:

- The establishment of a level of personal protective equipment below the minimum specified in sections III.B.1-2 to a laboratory/technical area that uses hazardous materials or includes a physical hazard.
- The establishment of non-PPE required corridors that may be delineated within technical areas provided that the corridor does not pass near any potential exposure hazard.
- Non-hazardous work areas (e.g., offices, work stations) that are within laboratory/technical areas but are clearly delineated by distance or physical barrier (e.g., walls, doors, or cubicle dividers). It must be clear that the area is intended to be a self-contained, dedicated area. Readily movable furniture does not constitute a physical barrier. Exceptions for individual desks or work spaces within a technical area are discouraged.

This program does not apply to College of American Pathologists (CAP) accredited laboratories, which meet equivalent safety standards through CAP accreditation requirements.

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** - A potential for harm. The term is often associated with an agent, condition, or activity (a natural phenomenon, chemical, mixture of substances, process involving substances, source of energy or a situation or event) that if left uncontrolled, could result in an injury, illness, loss of property or damage to the environment. Hazards are intrinsic properties of agents, conditions or activities.

- Hazard Analysis: A term used to express the complete process of hazard identification, evaluation and control.
- Hazard Control: A barrier; such as a device, measure or limit; used to minimize the potential consequences associated with a hazard.
- Hazard Evaluation: The qualitative and, whenever possible, quantitative description of the inherent properties of an agent or situation having the potential to cause adverse effects.

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

**Hazardous Materials** - Chemical or biological agents that have been generally accepted as a health or physical hazard. Unsealed radioactive materials are also included as “hazardous materials.” Additional guidance is included in the UCOP PPE policy.

**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.

**Job Safety or Hazard Analysis** - A systematic approach to address hazards by looking at a task and focusing on the relationship between the laboratory worker, the task, the tools and the work environment to identify the hazards and reduce the risks.

**Laboratory/Technical Areas:** For the purposes of this policy, a laboratory/technical area is a location where the use or storage of hazardous materials occurs or where equipment may present a physical or chemical hazard. It includes, but is not limited to:

- Research laboratories
- Waste accumulation areas/locations
- Teaching laboratories
- Cold rooms
- QA/QC and analytical laboratories
• Machine and other Workshops
• Stock rooms
• Vivaria
• Storage rooms
• Visual/performing arts studios and shops

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.

Physical Hazards: Physical hazards are identified as substances, equipment, or activities that can threaten physical safety. Physical hazards can include but are not limited to: impact (falling objects), fall hazards, extreme pressures, temperature extremes (heat/cold), radiation (ionizing and non-ionizing), noise, vibration, electrical, light (optical), welding, cutting, brazing.

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

4. Responsibilities

Has overall responsibility for compliance with health and safety requirements at all facilities and programs under her/his control.

4.1 Vice Chancellors/Directors/Deans/Departments Chairs: and are responsible for communicating and promoting this program within their unit and enforcing the Policy in areas under their control.

• Department Requirements: Each department may disseminate and enforce more stringent PPE requirements than those identified by the laboratory or unit’s work area through conducting the hazard assessment or Standard Operating Procedures (SOP’s) (e.g., requiring lab members to don lab coats and safety eyewear at the threshold of labs).
• Departmental Support: Supporting the Supervisor/Principal Investigator (PI)/Lab Supervisor/Faculty/ Lecturer/TA, or his/her designee by implementing department-wide programs and/or services (e.g., acquisition of lab coat laundering services, requiring safety data sheets for academic courses as part of the syllabi).

4.3 Campus, Academic Schools, Laboratories and/or Chemical Safety Committee: is responsible for promoting a safe working environment in all skilled trades, auxiliary services, and research and teaching laboratories on campus.
4.4 **Supervisors and Principal Investigators (PI):** are responsible for complying with this policy and ensuring their staff complies with this policy. Supervisors are also responsible for ensuring their staff receives both the required PPE identified in the hazard assessment, and documents their training on the proper use of their PPE. Noncompliance with the policy is handled in accordance with Personnel Policies for Staff Members (PPSM) policies 62-65 pertaining to disciplinary actions and Academic Personnel Manual (APM) policies 015-016 pertaining to the Faculty Code of Conduct and administration of discipline; and APM 140 and 150 pertaining to Non-Senate Academic Appointees.

- Each supervisor to complete a [Workplace Hazard Assessment and Corrections Tool](#) or each PI to complete and certify the [Laboratory Hazard Assessment 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 Safety Representatives (SR's) do the hazard assessment.
- The supervisor or PI must determine, based on the Workplace Hazard Assessment, the correct PPE necessary to perform work activities in a safe manner.
- Each Supervisor PR or PI is responsible for ensuring that employees wear the required PPE.
- Each Supervisor or PI must train his/her employees regarding

4.5 **Employees:** are responsible for knowing the PPE requirements for areas in which they work or enter, and for properly wearing PPE as established in this policy and in the hazard assessment. All workers are responsible for completing training, for knowing how to use PPE, for knowing how to properly put on and take off required PPE, and for knowing how to care for and maintain PPE. They are responsible for informing others in the area of these requirements and reporting unsafe conditions to their supervisor, or EH&S. Employees are NOT responsible for purchasing their own PPE, however is responsible to ensure that their PPE is in good operating condition and to report to the supervisor or P.I. any defective PPE or need for replacement. As applicable, a staff employee may address issues of noncompliance with this Policy through the complaint resolution processes described in PPSM 70 and II-70 (Complaint Resolution) and PPSM 71 and II-70 (Resolution of Concerns) or Collective Bargaining Agreement. Avoid altering the PPE as this may compromise the effectiveness of the PPE.
4.6 Teaching Assistants (TAs): as assistants to supervising faculties and PI’s, TAs may be placed in the position of authority for a classroom and conduct instruction for a course. The TA is responsible for ensuring that students are familiar with and properly using required protective devices. For each academic course, the TA is responsible for coordinating with their supervisor or PI regarding the following:

- 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

4.7 Students: are responsible wearing it as directed by the Teaching Assistant or Instructor. All academic courses on campus as part of their course syllabus which include laboratory, shop or field work are required to indicate PPE requirements including specifications of the type of PPE, as well as wearing proper attire when occupying a Laboratory/Technical Area. These PPE items shall be the responsibility of the student to obtain and wear as part of the class. Common communal PPE such as thermal protective, welding aprons, face shields, etc., will be provided by the sponsoring department. A student not wearing PPE in a laboratory/technical area as required in their course syllabus may not participate in class or lab activities until such PPE is worn. Maintaining, replacing and disposing of PPE as trained is the responsibility of each student, as is informing his/her Supervisor (e.g. TA) when PPE is damaged, contaminated or worn out. Avoid altering the PPE as this may compromise the effectiveness of the PPE.

4.8 Environmental Health and Safety (EH&S): is responsible for maintain the PPE program, of which Research Laboratory PPE program is part of. This includes:

- Implementation Tools: Developing and distributing PPE assessment and evaluating job hazards, or selection of appropriate PPE using the:
  - Guidelines for Selection of Personal Protective Equipment
  - Laboratory Hazard Assessment Tool
- Technical Assistance: When requested, assist Supervisors, PI/Lab Supervisors or his/her designees with PPE assessments and training.
- Quality Assurance Checks: Conducting periodic quality assurance checks of PPE compliance in work areas which includes:
  (a) Review PPE assessment/training records for completion; (b) evaluate PPE use; and (c) communicate those findings, as appropriate, to Supervisor, PI/Lab Supervisor, Department Chair and/or School Dean.

In cases where work activities pose an immediate danger to life or health, designated
EH&S staff have the responsibility and authority to order the temporary cessation of the activity until the hazardous condition is abated. For assistance, contact EH&S at 949-824-6200 or email safety@uci.edu.

4.8 Academic Personnel or Staff Human Resources Offices: are responsible for all employee and labor relations issues, including interpretation and clarification of Personnel Policies and Collective Bargaining Agreements related to this Program.

5. 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 includes 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 Job Hazard Analysis

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 Safety Data Sheets (SDS). 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 those who wear prescription glasses, side shields must be permanently affixed to the frames to protect eyes from flying particles. Side shields and 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). Employees are responsible for any additional professional fees associated with the eye examination, fitting and dispensing. For non-academic employees, this may be subject to change based on union contract agreements. Check with the campus Human Resources Officer for details.

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 EH&S at 949-824-6200 or email safety@uci.edu.

5.3.1 As of July 1, 2019, Laboratory PPE Distribution Program implemented a first come, first serve Prescription Safety Eyewear Program. To be eligible for prescription safety eyewear funded through EH&S, the individual must meet the following criteria:

- Completion of LHAT training
- Having been fitted for and received all recommended PPE
- Completion of a questionnaire to gather additional information about hazards in the laboratory
- Having a copy of current eyeglass prescription (within the last 18 months)

If an individual is selected for prescription safety eyewear to be funded by EH&S, the Laboratory PPE Coordinator will issue a referral and provide instructions for fitting. Referrals have an expiration date of 30-60 days, depending on date of issue. If referrals are not used and have expired, referrals may be reissued if funding is still available.

For more information about the EH&S-funded Prescription Safety Eyewear Program, please contact the Laboratory PPE Coordinator at ehs-ppe@uci.edu or 949-824-6200.

5.4 Body Protection

Protective clothing, such as lab coats, should be worn when handling or working adjacent to 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.

The Office of the President, Office of Risk Services (OPRS) provides oversight and funding for the University of California (UC) Slip-Resistant Footwear (SRF) Program. The goal of the UC SRF Program is to reduce the frequency and severity of slip-and-fall incidents throughout the UC system by providing high-quality, slip-resistant footwear to employees whose job duties routinely expose them to significant slip-and-fall hazards (e.g., dining/nutrition services, custodial/environmental services, patient care, and animal care employees). For complete program information, view the UC Slip-Resistant Footwear Program Document. For assistance, contact EH&S at 949-824-6200 or email safety@uci.edu.

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 contact the EH&S Industrial Hygiene Division 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, smokes, sprays, or vapors. All respirator usage, which includes disposable respirators, air purifying respirators, and air supplied respirators, require medical clearance, annual fit testing and training prior to use. For complete program information, visit https://www.ehs.uci.edu/programs/ih/respiratory.html or contact the EH&S Industrial Hygiene Division at (949) 824-6200.

6. Reporting Requirements

In the event of an incident when PPE is damaged or contaminated, or a potential exposure occurs, this will need to be reported to EH&S to ensure the employee or student receives proper medical treatment.

7. References

State Regulations:
- 8 CCR 3203 Injury Illness Prevention Program: http://www.dir.ca.gov/title8/3203.html
- 8 CCR 3380 Personal Protective Devices: http://www.dir.ca.gov/title8/3380.html
- 8 CCR 3381 Head Protection: http://www.dir.ca.gov/title8/3381.html
- 8 CCR 3382 Eye and Face Protection: http://www.dir.ca.gov/title8/3382.html
- 8 CCR 3383 Body Protection: http://www.dir.ca.gov/title8/3383.html
- 8 CCR 3384 Hand Protection: http://www.dir.ca.gov/title8/3384.html
- 8 CCR 3385 Foot Protection: http://www.dir.ca.gov/title8/3385.html
- 8 CCR 5098 Hearing Protection http://www.dir.ca.gov/title8/5098.html
- 8 CCR 5144 Respiratory Protective Equipment: http://www.dir.ca.gov/title8/5144.html
- 8 CCR 5191 Occupational Exposure to Hazardous Chemicals in Laboratories: http://www.dir.ca.gov/title8/5191.html
- 8 CCR 5193 Bloodborne Pathogens: https://www.dir.ca.gov/title8/5193.html
- 8 CCR 5194 Hazard Communication: https://www.dir.ca.gov/title8/5194.html
- 8 CCR 5200 –5220 Regulated Carcinogens: http://www.dir.ca.gov/title8/ab7g16a110.html

Other resources:

UCOP:
- PPE Policy: http://policy.ucop.edu/doc/3500597/PersonalProtectiveEquip

UC Irvine:
- Laboratory Hazard Assessment Tool - https://ehs.ucop.edu/
Chemical Hygiene Plan (CHP) - https://www.ehs.uci.edu/programs/lsg/UCI_CHP.pdf  