

# PERSONAL PROTECTIVE EQUIPMENT PROGRAM

## 1.0 PURPOSE

To comply with Cal/OSHA General Industry Safety Order, Title 8, Sections 3380, 3381, 3382, 3383, 3384, 3385, 5098, 5144; to establish uniform requirements when personal protective equipment is required; and to ensure personal protective equipment is provided, used, and maintained in a reliable condition.

## 2.0 SCOPE

This program applies to all CSUEB employees, interns, and volunteers who are subjected to the exposures stated herein.

## 3.0 RESPONSIBILITY

### 3.1 Department of Environmental Health & Safety

3.1.1 Develop, maintain, and update the Personal Protective Equipment (PPE) Program.

3.1.2 Work with departments to conduct hazard assessment of work tasks and determine when PPE is necessary. Document/certify the hazard assessment.

3.1.3 Assist departments in selection of proper PPE.

3.1.4 Review and approve personal protective equipment to ensure it meet or exceed standards for such equipment and clothing.

3.1.5 Provide applicable personal protective equipment to departments wherever there is reasonable probability that injury can be prevented by the usage.

3.1.6 Conduct training as needed.

### 3.2 Managers and Supervisors

3.2.1 Work with EHS to conduct hazard assessment of work tasks pertaining to their areas.

- 3.2.2 Work with EHS on selection of proper PPE based upon the hazards identified in the hazard assessment. Communicate selection decisions to each affected employees in the department.
- 3.2.3 Ensure employees wear required PPE and maintain the PPE in a safe and sanitary condition.
- 3.2.4 Ensure employees are properly trained in the care, maintenance, and use of the PPE prior to performing tasks requiring the use of PPE.
- 3.2.5 Conduct training and work with EHS to conduct training as needed.
- 3.2.6 Ensure PPE not issued to individual employee is properly serviced, maintained, and cleaned prior to issuing it for temporary or situational usage.
- 3.2.7 Designate additional PPE when necessary.
- 3.2.8 Provide appropriate storage area.
- 3.3 Employees, Interns and Volunteers
  - 3.3.1 Wear appropriate PPE when required.
  - 3.3.2 Use and/or wear PPE in accordance with the manufacturer's instructions or provided training.
  - 3.3.3 Inspect all PPE for defects and damages prior to usage. Replace PPE that is no longer in good operating condition.
  - 3.3.4 Maintain and store all PPE issued in a safe and sanitary condition.
  - 3.3.5 Consult with EHS or their manager/supervisor prior to using any personally-owned PPE to ensure the PPE does not create additional hazards, is appropriate for the tasks involved, and meet applicable standards for design and safety.
  - 3.3.6 Contact their supervisor/manager if they are unclear on a procedure.
  - 3.3.7 Communicate to their supervisor/manager of any hazards requiring additional PPE.

## 4.0 GENERAL APPLICATION

### 4.1 Face and Eye Protection

- 4.1.1 Definition: Face and eye protection includes goggles, face shields, glasses with side shields.
- 4.1.2 Eye protection is required when working in locations or performing tasks where there is a risk of eye injuries from flying particles, hazardous substances, or injurious light rays.
- 4.1.3 Face and/or eye protection shall be worn by employees when engaged in, but not limited to, the following work situations:
- During the presence of airborne dust, dirt, particles, or other debris, either driven by wind or propelled by machinery with such force that may cause injury.
  - When working around power tools, lawn mowers, or other machinery which may generate flying particles.
  - When working with grinding, cutting, or milling tools.
  - When using impact wrenches and compressed air tools.
  - When cutting or breaking concrete.
  - When using power actuated tools.
  - When cleaning dust, or dirt from under vehicles, machinery, etc.
  - When using or working in the immediate vicinity of those working with corrosive, reactive, or harmful chemicals.
  - When handling or moving hazardous materials.
  - When chipping, scraping, scaling paint, rust, or other materials.
  - When working on any overhead surface or object which requires the employee to face upward.
  - When operating a motor vehicle on the roadway or right of way without a windshield of the type approved by the Department of Highway Safety and Motor Vehicles.
  - When operating edgers, chipper, and chain saws, a full plastic face shield shall be worn.
  - When welding or working in the immediate area of a welder, employees shall wear either a face shield with the appropriate filter lens, welder's lens, or welder's goggles. The welder is required to utilize a portable welding screen to protect the eyes of other employee working nearby. When working in the vicinity of a welder, employees should wear tinted safety glasses if there is the possibility of an exposure.
  - In any other work situation(s) where the supervisor, due to the nature of the hazard(s), deems appropriate eye and/or face protection be worn.
- 4.1.4 Exception to the above requirements: when working at a microscope or similar operation within the Eye Protection area, the supervisor may determine that the eye protection need not be worn.

- 4.1.5 Eye and face protection uses shall provide suitable protection for the work environment and exposure and shall meet or exceed ANSI Z87.1-1989 standards.
- 4.1.6 Faceshield alone does not provide adequate protection against impact and must be used in conjunction with safety glasses or goggles.
- 4.1.7 Where exposed to radiant energy or for welding operation, filter lens shall be used. Tinted or shaded lens which are not rated, such as those used in sunglasses, do not provide sufficient protection and cannot be used in lieu of filter lens. Shade of filter lens selected shall be in accordance with Table 1 in Appendix A. Shade denser than those listed may be used.
- 4.1.8 Laser safety goggles shall provide protection for the specific wavelength of the laser and be of optical density adequate for the energy involved.
- 4.1.9 Contact lenses may not be worn in chemical handling, storage, or use area.
- 4.1.10 Where eye protection is required and the employee requires corrective vision, prescription safety glasses, safety glasses designed to fit over eyeglasses (over-the-glass safety glasses), or corrective lenses mounted behind protective lenses will be provided. Prescription safety glasses shall have permanent side shields.
- 4.1.11 Side shield protection shall be used whenever there is a hazard of flying objects from an angle.

## 4.2 Head Protection

- 4.2.1 Head protection will be worn when working in areas where there is a risk of head injuries from flying or falling objects and/or electrical shock or burn.
- 4.2.2 Where head protection is required, the appropriate class of ANSI designated protective helmets (hard hats) shall be used. The hard hats shall meet ANSI standards for impact resistance and/or electrical hazards.
  - 4.2.2.1 When there is a risk of head injury from contact with electrical conductors, the hard hats shall be appropriately rated for the voltage exposed (Class E or G for conductors less than 600 volts and Class E for conductors greater than 600 volts).
  - 4.2.2.2 Where there is no risk of head injury from contact with electrical conductors, the hard hats need only be rated for impact and penetration protection.

## 4.3 Foot Protection

- 4.3.1 Foot protection is required when there is potential foot injuries from exposure to electrical hazards, corrosive, hot substances, falling objects, crushing or penetrating actions, or when working in abnormally wet conditions and areas where slipping can occur. Refer to Safety Shoes Program.
- 4.3.2 Appropriate foot protection shall be worn when working in, but not limited to, the following situations:
- When working in construction areas or where there is exposure to abrasive, sharp, or piercing objects or where employee may step on objects which may puncture the foot.
  - When operating heavy industrial equipment.
  - When lifting heavy objects.
  - Where necessary to protect employees from slipping on slick surfaces or where liquid (water, oil, chemicals, grease, etc.) have spilled, or are regularly present on the floor.
  - Where traction or support is necessary such as working on inclined surfaces.
  - Any other situation, where due to the nature of the hazards, the supervisor deems it necessary that foot protection will be worn.
- 4.3.3 Protective footwear shall meet ASTM F 2412-05 and ASTM F 2413-05 standards for impact and compression protection (safety toes), and shall be laced and have slip resistant soles.
- 4.3.4 Protective footwear with puncture protection is required where there are sharp objects such as nails, screws, scrap metal, etc. that could be stepped on.
- 4.3.5 All leather protective footwear is required when performing energized electrical work, as described in CSUEB Electrical Safety Program.

#### 4.4 Body Protection

- 4.4.1 Protective clothing such as Tyvek suits, smocks, lab coats, or a long sleeved shirt may be required when there is exposure to parts of the body not otherwise protected by other articles.

#### 4.5 Hand Protection

- 4.5.1 Hand protection is required when there is potential hand injury from exposure to cuts, burns, harmful physical or chemical agents, or exposure to communicable diseases through contact with the skin.
- 4.5.2 Appropriate hand protection shall be worn when working in, but not limited to, the following situations:

- Handling hot, heavy, sharp, jagged, or rough materials and objects such as when welding and handling lumber, concrete, or debris.
- Handling trash or waste.
- Handling corrosive, toxic, or harmful chemicals that may be absorbed through the skin.
- Working as emergency responders where contact with body fluids of victims is possible.
- Loading or stacking heavy objects, or where a proper grip is necessary to safely do the task.
- Working around live electrical voltage.
- Any other situation where due to the hazards present, the supervisor deems it necessary that hand protection be worn.

4.5.3 Gloves shall not be worn where there is danger of the gloves becoming entangled in moving machinery or materials.

4.5.4 Gloves must be selected based upon the environment or (potential) hazards for which they will be exposed. There may be multiple and simultaneous exposure to a variety of hazards. There are no gloves that can provide protection against all potential hazards. Selection should be based upon protection against the highest level of hazards involved.

4.5.5 When selecting gloves for protection against chemical hazards, the chemical properties and breakthrough time shall be considered.

#### 4.6 Protective Traffic Vests

4.6.1 Refer to CSUEB Traffic Control Program.

4.6.2 All employees must wear approved safety vest or other approved clothing constructed of reflective high visibility materials when working in roadways, on/near curbsides, side of roads, or parking lots.

4.6.2.1 Class 2 safety vest/reflective clothing shall be worn when vehicle or approaching traffic speed exceeds 25 mph.

4.6.2.2 Class 3 safety vest/reflective clothing shall be worn when approaching traffic speed exceeds 50 mph.

4.6.3 Below are some tasks where safety vests/reflective clothing are required:

- When directing traffic in the roadway.
- When engaged in landscaping, construction, or maintenance activities in the roadway, side of roads, parking lots, or where there is approaching vehicles.
- Repairing equipment on the roadway or on the public right-of-way.

- During any other task where, due to limited visibility, the supervisor deems it necessary that such vests or clothing be worn.

#### 4.7 Respiratory Protection (Refer to CSUEB Respiratory Protection Program)

4.7.1 There are situations where employees may be exposed to dusts, fumes, gases, smokes, vapors, oxygen deficient atmosphere, etc, that are harmful to the respiratory system.

4.7.2 Where these hazards cannot be eliminated or reduced to a permissible level via engineering control, the department must ensure that appropriate personal protective equipment is provided to the employees prior to entering the area or performing the task.

4.7.3 The department manager and supervisor shall:

- Be knowledgeable of potentially hazardous situations, i.e., confined spaces, enclosed work areas, fire scenes, and those circumstances which may indicate the presence of any other hazard.
- Ensure that employees are trained in the proper use of respiratory protection, and ensure that the equipment is properly worn, maintained, and replaced as needed.
- Ensure that approved protective breathing apparatus be conspicuously placed near the work environment or carried with the employee where there is the possibility of exposure to harmful atmospheres or toxic/airborne substances.

4.7.4 It is the responsibility of the employee to wear the approved respiratory protection when working in, but not limited to, the following situations:

- When welding on brass, bronze, or galvanized iron in confined areas where ventilation is limited.
- When entering manholes, sewers, vaults, or other confined spaces, where tests indicate the presence of noxious, oxygen deficient, or toxic atmospheres, where purging and ventilation attempts have been unsuccessful.
- When handling pesticides, fertilizers, solvents or other toxic chemicals capable of causing damage to the human respiratory system.
- When working in environments where employees are subject to exposure to harmful dusts, mists, fumes, gases, smokes, or any otherwise contaminated atmosphere.
- Any other situation where, due to the nature of the hazards present, the supervisor deems it necessary that respiratory protection be used.

#### 4.8 Hearing Protection (Refer to CSUEB Hearing Conversation Program)

- 4.8.1 When employees are subjected to continuous noise levels exceeding those listed in the table below, attempts should be made to use engineering and/or administrative controls to reduce the noise levels. (Example: An employee works in an area for eight continuous hours and the time weighted average of the noise level exceeds 90dbA). If the noise exposure level cannot be reduced within the levels set forth in the table, hearing protectors will be provided.
- 4.8.2 Employees will not be exposed to impulsive or impact noise in excess of 140dbA peak sound pressure without the appropriate hearing protection.
- 4.8.3 Hearing protection may consist of ear muffs, ear plugs, or disposable ear plugs. Any of these are acceptable as long as they do not inhibit the employees work activities and are appropriately rated to reduce the noise exposure.
- 4.8.4 The following table is taken from existing standards showing the maximum permissible continuous noise exposure for a stated period.

**Permissible Noise Exposure**

Duration of Exposure, Hours	Sound Level dbA
8	90
6	92
4	95
3	97
2	100
1½	102
1	105
½	110
¼	115

4.9 Personal Clothing

- 4.9.1 In addition to protective clothing and equipment which are manufactured to minimize occupational hazards, an added measure of protection can be accomplished through an employees' everyday dress.
- 4.9.2 In general, employees should:
  - Wear clothing which fits properly and would protect them from cuts, scratches, insect bites, and sunburn.
  - Wear clothing suitable for the prevailing weather conditions.
  - When working around machinery, avoid wearing loose clothing, long ties, loose cuffs, rings, overcoats, or any other clothing which may get entangled in the machinery.
  - Wear approved flame resistant clothing as specified for jobs involving exposure to electrically energized circuits, or open flames.



## 5.0 Training

- 5.1 Training will be conducted by EHS or the department, depending on the tasks, potential hazards and/or PPE required.
- 5.2 Departments shall ensure that employees are properly trained in the care, maintenance, and utilization of all personal protective equipment as related to their work areas and will consult with EHS as needed.
- 5.3 Employees who are required to wear PPE shall be trained on the proper use of the PPE. The training will include the following topics:
  - When the PPE is required
  - What PPE is necessary
  - How to properly don, doff, and adjust the PPE
  - PPE limitations
  - Proper care, maintenance, useful life, and disposal of the PPE
- 5.4 Training shall be provided initially or prior to performing task requiring the use of the PPE.
- 5.5 Each affected employee shall demonstrate an understanding of the training and the ability to use the PPE properly.
- 5.6 Refresher training will be provided annually where required under Cal/OSHA standards. Otherwise, refresher training will be provided periodically or when there are changes in the types of PPE or workplace rendering the previous training obsolete, or there is inadequacy in the employee's use of the PPE.
- 5.7 Training will be documented. Training conducted by the department will be maintained by the department. Copies of the sign-in sheets and training contents will be forwarded to EHS. Training documents will be maintained for at least 3 years or until the next provided refresher training.

## 6.0 Proper Wearing and Maintenance

- 6.1 Personal protective equipment issued shall not be modified, painted, or altered in any manner, unless specifically authorized in writing by the manufacturer.
- 6.2 PPE will be worn or utilized in accordance with the manufacturer's instructions and guidelines.

- 6.3 All PPE (whether University issued or employee owned) shall meet applicable standards for design, strength and quality as to provide adequate protection for the hazards in which they are designed.
- 6.4 PPE shall properly fit each affected employee and should be reasonably comfortable.
- 6.5 The employee shall ensure that all personal protective equipment issued to him/her is properly maintained, serviced, and turned in for replacement as it becomes unserviceable or damaged.
- 6.6 Where personal protective clothing are not issued to individual employees, the department will ensure that any such clothing is properly serviced, maintained, and cleaned prior to issuing it for temporary or situational usage.

## **7.0 Service Life**

- 7.1 The following statement regarding service life will apply to all PPE at CSUEB:
  - 7.1.1 PPE is usually labeled by the manufacturer as reusable, for multiple wearings; or disposable, for one-time use. Follow the manufacturer's instructions.
  - 7.1.2 Service life of reusable PPE is dependent on many variables. It is the user's decision, with input from the supervisor and/or EHS, to determine when multi-use type PPE should be decontaminated, repaired, or disposed. If service life instructions are given by the manufacturer for the PPE, follow the instructions.

**Appendix A: Filter Lens Shade Numbers for Protection against Radiant Energy**

<b>Welding Operation</b>	<b>Shade Number</b>
Torch brazing	3 or 4
Light cutting, up to 1 inch	3 or 4
Medium cutting, 1 to 6 inches	4 or 5
Heavy cutting, over 6 inches	5 or 6
Gas welding (light), up to 1/8 inch	4 or 5
Gas welding (medium), 1/8-1/2 inch	5 or 6
Gas welding (heavy), over 1/2 inch	6 or 8