

Stanford University Personal Protective Equipment (PPE) Program

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1.0 Purpose

Stanford University is committed to providing a safe and healthy workplace for all faculty, staff, and students.

Controls to eliminate or minimize personal exposure to [hazardous materials](#) or [physical hazards](#) in the workplace include engineering controls, administrative controls, and the use of [Personal Protective Equipment \(PPE\)](#). PPE is often required to augment engineering or administrative controls, or is used as a stand-alone control when engineering and administrative controls are not feasible. When properly selected and used, personal protective equipment can be effective in eliminating or minimizing individual exposures to hazardous materials and physical hazards encountered in many different work environments.

This PPE program is designed to:

1. Establish requirements for workplace PPE assessments, training, provision, use, and maintenance/replacement/disposal of PPE.
2. Assign responsibilities for program implementation to all stakeholders regarding PPE management.
3. Comply with California Occupational Safety and Health (Cal/OSHA), 8 CCR 3380, Personal Protective Devices, and other regulations see [Appendix B](#).

2.0 Scope

This program applies to faculty, staff, and students who perform tasks involving hazardous materials and/or physical hazards or are potentially exposed to hazardous materials and/or physical hazards in either [laboratory](#) or [general work areas](#).

3.0 Responsibilities

3.1 Department Chairs, Lab Directors, and Department Health & Safety Coordinators

Department Chairs, Lab Directors, and Department Health & Safety Coordinators, as appropriate for the unit, are responsible for:

- *Communication:* Communicating and promoting this Program within their units.
- *Department Requirements:* Each department may promulgate and enforce more stringent PPE requirements than those identified by the laboratory or unit's work area PPE assessment (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, or his/her designee by implementing department-wide programs and/or services (e.g., acquisition of lab coat laundering services).

3.2 Supervisors, Principal Investigators (PIs), Lab Supervisors

The Supervisor or PI/Lab Supervisor (as applicable) is responsible for:

- *Performing Hazard Assessments to Identify PPE:* See [Section 4.0](#) below.
- *Local PPE Requirements:* The Supervisor or PI/Lab Supervisor may establish more stringent PPE requirements than those as described in [Section 6.1](#) (e.g., requiring lab members to don lab coats and safety eyewear at the threshold of labs).
- *Providing site-specific PPE Training:* See [Section 5.0](#) below.
- *Provision, Maintenance, Replacement, and Disposal of PPE:* See [Section 6.0](#) below.
- *Enforcement:* Ensuring the PPE identified in the [Laboratory PPE Assessment Tool](#) or [General Work Area PPE Assessment Tool](#) is worn, maintained, replaced, and disposed of properly.
- *Recordkeeping:*
 - Maintain current written certification that the PPE assessment has been conducted in Section II of either the [Laboratory PPE Assessment Tool](#) or the [General Work Area PPE Assessment Tool](#) as appropriate.
 - Maintain training records for at least one year. See [Sections 5.3](#) for more details.

The Supervisor or PI/Lab Supervisor may assign a designee to perform or assist in the above duties, but must ensure they are carried out.

3.3 Personnel Required to Wear PPE

[Laboratory Personnel](#) and [General Work Area Personnel](#) are responsible for:

- *Training:* Completing site-specific PPE training provided by the Supervisor, PI/Lab Supervisor, or his/her designee, which includes demonstrating the ability to use PPE properly.
- *Use:* Using correct and properly fitted PPE under the conditions identified by the Supervisor, PI/Lab Supervisor, or his/her designee in the PPE Assessment Tool, as well as wearing [proper street clothing](#).
- *Maintenance, Replacement, and Disposal of PPE:* Maintaining, replacing, and disposing of PPE as trained. Informing Supervisor, PI/Lab Supervisor, or his/her designee when PPE is damaged or worn out.

3.4 Environmental Health & Safety

The Department of Environmental Health & Safety is responsible for the development and maintenance of the Stanford University PPE Program, including:

- *Implementation Tools:* Developing and distributing PPE assessment and training tools.
- *Technical Assistance:* When requested, assist Supervisors, PI/Lab Supervisors, or his/her designee 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, and Department Management.

4.0 Workplace PPE Assessment

4.1 Purpose

The *PPE Assessment Tool* is designed to: (a) determine if hazards are present or likely to be present in the workplace which may necessitate the use of PPE; and (b) select the correct PPE for the affected personnel based on the hazards identified.

4.2 Requirement to Conduct PPE Assessment

Each Supervisor, PI/Lab Supervisor, or his/her designee must assess PPE requirements for his/her work areas/activities:

- For *laboratory areas*:
 - Use Section II of the *Laboratory PPE Assessment Tool*.
- For *general work areas* (e.g., shops, kitchens, loading docks, janitorial storage areas):
 - Use Section II of the *General Work Area PPE Assessment Tool*.

4.3 Frequency

The *PPE Assessment Tool* is to be completed: (a) initially, and (b) when new hazards are introduced to the general work or laboratory area.

4.4 Recordkeeping

Maintain a written copy of the completed *PPE Assessment Tool* that reflects the current conditions of the general work or laboratory area.

5.0 PPE Communication and Training

5.1 Initial PPE Training

Each Supervisor, PI/Lab Supervisor, or his/her designee is required to ensure affected personnel are trained about site-specific PPE selection identified in the completed PPE assessment for that particular work area. Training must be done prior to performing work requiring the use of PPE and will include:

1. When PPE is necessary
2. What PPE is necessary
3. Properly donning, doffing, adjusting and wearing PPE
4. Limitations of PPE
5. Proper care, maintenance, useful life, and disposal of PPE

Each trainee must demonstrate an understanding of the training and the ability to use PPE properly before being allowed to perform work requiring the use of PPE. Refer to the [PPE Training Guidance](#).

5.2 Retraining

Retraining of personnel is required if there are:

1. Inadequacies in the personnel's knowledge or in the use of assigned PPE, indicating the lack of retention of the requisite understanding or skill;
2. Changes in the workplace or types of PPE to be used that render the previous training obsolete.

5.3 Recordkeeping

- Document PPE training using Section III of either the [Laboratory PPE Assessment Tool](#) or the [General Work Area PPE Assessment Tool](#), as applicable, which includes:
 - Name and signature of trainee, date(s) of training, name and signature of trainer and subject of training (as described in item 1 in Section III).
- Maintain training records for personnel for at least one year.
 - In the case of Radiation Safety training, the documentation is also maintained in the radioisotope journal within the laboratory for the duration of employment for each employee.

6.0 Provision and Maintenance of PPE

6.1 Provision of PPE

- For Employees: The Supervisor or PI/Lab Supervisor is responsible for the provision of PPE for employees.
- For Non-Employees: It is the discretion of the Supervisor or PI/Lab Supervisor to provide PPE for the non-employees. If not provided, the list of PPE required for the work assignments must be given to the individuals to acquire prior to their work assignment.
- For Students in Teaching Labs, Shops, or Field Work: It is at the discretion of the local department to provide lab coats and other PPE to students or to require them to supply their own. If not provided, the list of PPE required for the class must be given to the students prior to their class assignment.
- PPE Specifications: The PPE must meet the PPE specifications stated in applicable CAL/OSHA Title 8 standards, as well as properly fit the individual, be reasonably comfortable, and not unduly encumber the individual's movements necessary to perform his or her work.
- Respirators and Hearing Protectors: Required respirator and hearing protector use involves EH&S assessment to identify the need and type, additional training, and medical surveillance; contact EH&S at 723-0448.

- Safety Eyewear: Use ANSI-approved eyewear over prescription glasses or use prescription safety eyewear; prescription glasses do not constitute safety eyewear. See [Stanford University's Prescription Safety Eyewear Program](#).
- See Stanford University – [Where to Acquire Personal Protective Equipment](#).

6.2 Maintenance, Replacement, and Disposal of PPE

- The Supervisor, PI/Lab Supervisor, or his/her designee is responsible for overseeing and providing for the appropriate care (e.g., cleaning, storage, disposal and replacement) and inspection of PPE.
- Follow manufacturer's instructions for cleaning and maintenance of PPE. PPE must be maintained in a safe and sanitary condition. Defective or damaged PPE shall not be used.
- Laboratory coats must not be laundered in personal or public laundry facilities. The Supervisor, PI/Lab Supervisor or Department must provide for professional laundry service. See [Stanford University's campus-wide agreement on lab coat provision and laundry service](#).

Appendix A: Definitions

- **General Work Area:** Locations where hazardous materials and/or equipment are used and/or stored such as shops, kitchens, loading docks, visual/performing art studios, and janitorial storage areas; they are not laboratory areas.
- **General Work Area Personnel:** Employees and non-employees who perform activities whereby they may be exposed to hazardous materials and/or physical hazards in general work areas. In general, such personnel include but are not limited to: Lands Buildings & Real Estate (LBRE) personnel, Residential & Dining Enterprises (R&DE) personnel, Parking & Transportation Service (PT&S) personnel, Athletics Department personnel, IT Services personnel, EH&S personnel, and administrative, janitorial and human resources staff.
- **Hazard Assessment for PPE:** A process to identify hazards in the workplace and to select the appropriate Personal Protective Equipment to eliminate or minimize potential exposures to hazardous materials and physical hazards. See [Appendix C](#) for *PPE Assessment Tools*.
- **Hazardous Materials:** Chemical and biological materials/agents that pose a health or physical hazard and unsealed radioactive materials.
- **Laboratory Area:** Locations where hazardous materials and/or equipment are used and/or stored in research laboratories, teaching laboratories, and core facilities. This also includes chemical storage rooms, waste accumulation areas, warm/cold rooms, vivaria, and machine/workshop areas within laboratories.
- **Laboratory Personnel:** Employee and non-employee laboratory personnel who perform laboratory activities whereby they may be exposed to hazardous materials and/or physical hazards potentially encountered in the laboratory area. Employees include faculty and staff and may include research associates, undergraduate and graduate students, post-doctoral researchers, depending on their employment status. Non-employees include visiting scholars and may include research associates, undergraduate and graduate students, post-doctoral researchers, depending on their university affiliation and employment status.
- **Personal Protective Equipment (PPE):** Safety devices and safe guards worn to eliminate or minimize the hazard to an individual's head, eye, body, hand, foot, and extremities. Examples of PPE include laboratory coats, eye/face protection (e.g., safety glasses, goggles and face shield), gloves (e.g., chemical-resistant, thermal protection, cut-resistant), hearing protectors (e.g., earplugs, ear muffs), respirators (e.g., N95 disposable respirator, half-face negative-pressure respirator with appropriate filters/cartridges), hard hats, and steel toed shoes.
- **Physical Hazards:** Substances, equipment, or activities that pose potential threat to physical safety. Examples of physical hazards include, but are not limited to: extreme pressures, temperature extremes, radiation (ionizing and non-ionizing radiation), noise, and flying hazards due to machining equipment.
- **Proper Street Clothing:** Long pants (or equivalent) that cover the legs and ankles, and closed-toe, non-perforated shoes that completely cover the feet.

Appendix B: Applicable Regulations, Guidelines, and Programs

- 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/sb7g16a110.html>
- 10 CFR 19 *Notices, Instructions, and Reports to Workers: Inspections and Investigations*: <http://www.nrc.gov/reading-rm/doc-collections/cfr/part019/>
- 10 CFR 20 *Standards for Protection against Radiation*: <http://www.nrc.gov/reading-rm/doc-collections/cfr/part020/>
- California Labor Code Section 6400-6413.5: <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=lab&group=06001-07000&file=6400-6413.5>
- TITLE 17, *Public Health, Division 1, Chapter 5, Sanitation (Environmental), Subchapter 4, Radiation (commencing at section 30100)*: <http://ccr.oal.ca.gov/linkedslice/default.asp?SP=CCR-1000&Action=Welcome>
- *Prudent Practices in the Laboratory*, National Research Council, 2011 http://www.nap.edu/openbook.php?record_id=12654&page=1
- *Biosafety in Microbiological and Biomedical Laboratories (BMBL)* 5th Edition (December 2009): <http://www.cdc.gov/biosafety/publications/bmb15/>
- *Radiation Safety Manual – Stanford University*: <http://radmanual.stanford.edu>
- *Chemical Hygiene Plan – Stanford University*: <http://chemhygieneplan.stanford.edu/>
- *Biosafety Manual – Stanford University*: <http://web.stanford.edu/dept/EHS/prod/researchlab/bio/index.html>
- *Respiratory Protection Program – Stanford University*: http://web.stanford.edu/dept/EHS/prod/mainrencon/occhealth/respiratory_protection_program.pdf
- *Hearing Conservation Program – Stanford University*: http://web.stanford.edu/dept/EHS/prod/mainrencon/occhealth/hearing_conservation_program.pdf
- *Minors in the Workplace – Stanford University*:
 - *Exclusion of Minors in the Workplace*: <http://asg.stanford.edu/pages/forms/KidsAtWork.pdf>
 - *Health & Safety Requirements for Minors in Laboratories at Stanford University*: <http://web.stanford.edu/dept/EHS/prod/mainrencon/occhealth/11-038.pdf>

Appendix C: Laboratory and General Workplace PPE Tools

- *Laboratory PPE Assessment Tool*
http://web.stanford.edu/dept/EHS/prod/mainrencon/occhealth/Lab_Hazard_Assessment_Tool.pdf
- *General Work Area PPE Assessment Tool*
http://web.stanford.edu/dept/EHS/prod/mainrencon/occhealth/General_Hazard_Assessment_Tool.pdf
- *Stanford University's Personal Protective Equipment Program – Quick Guide for Supervisors and Principal Investigators/Lab Supervisors:*
http://web.stanford.edu/dept/EHS/prod/mainrencon/occhealth/Quick_Guide.pdf
- *Stanford University's Personal Protective Equipment (PPE) Program Frequently Asked Questions (FAQs):*
http://web.stanford.edu/dept/EHS/prod/mainrencon/occhealth/PPE_FAQ.pdf
- *Stanford University – Personal Protective Equipment Safety Training Guidance:*
http://web.stanford.edu/dept/EHS/prod/mainrencon/occhealth/Training_Guidance.pdf
- *Stanford University – Where to Acquire Personal Protective Equipment:*
http://web.stanford.edu/dept/EHS/prod/mainrencon/occhealth/Acquiring_PPE.pdf
- Stanford University's campus-wide agreement on lab coat provision and laundry service:
http://web.stanford.edu/dept/EHS/prod/researchlab/docs/Cintas_handout.pdf
- Stanford University's Prescription Safety Eyewear Program:
<https://web.stanford.edu/dept/EHS/prod/mainrencon/occhealth/PrescriptionSafetyGlasses.html>
- Stanford University's Laboratory Chemical Safety Toolkit: <http://chemtoolkit.stanford.edu/>
 - Selecting PPE
 - Standard Operating Procedures (SOP)
 - Stanford Lab Safety Sheets
- Stanford University's Laboratory PPE Poster:
 - Horizontal Poster:
<http://web.stanford.edu/dept/EHS/prod/mainrencon/occhealth/PPEHorizontalPoster.pdf>
 - Vertical Poster:
<http://web.stanford.edu/dept/EHS/prod/mainrencon/occhealth/PPEVerticalPoster.pdf>