LAFAYETTE COLLEGE

Personal Protective Equipment Program

Department of Public Safety - Environmental, Health and Safety

Standard Operating Procedure (SOP) #27

Introduction

Lafayette College is committed to providing a safe and healthy place of employment, education, and research. In the course of College activities, individuals may encounter a potentially hazardous material, condition, or process. When engineering and administrative controls are not sufficient to fully protect from a hazard, personal protective equipment (PPE) may be required. Department Heads and Supervisors are responsible for the establishment and maintenance of good health and safety practices.

This program addresses eye, face, head, foot, and hand protection. Separate programs exist for electrical safety, fall protection, hearing conservation, respiratory protection.

The Occupational Safety and Health Administration (OSHA) standard 29 CFR 1910.132 requires that employers perform a hazard assessment of the workplace to determine the nature of the hazards and ensure that appropriate personal protective equipment (PPE) is available to employees. The standard requires that employees be trained in the proper use, care, and limitations of PPE.

Responsibilities

Department Heads

- Hold appropriate supervisors accountable for their responsibilities of this program.
- Ensure adequate funding is available to support this program.
- Monitor implementation of this program.

Supervisors

Supervisors have the primary responsibility for implementation of the PPE Program in their work area and are responsible for the following:

- Conduct workplace hazard assessments using the “Certification of Hazard Assessment and Personal Protective Equipment Evaluation” form to determine the presence of hazards which necessitate the use of PPE.
- Provide and make available appropriate PPE to employees.
- Ensure employees are trained on the proper use, care, and cleaning of PPE.
- Maintain records on PPE assignments and training.
- Supervise staff to ensure that the PPE Program elements are followed and that employees properly use and care for PPE.
- Seek assistance from Environmental, Health and Safety (EHS) to evaluate hazards.
- Complete these tasks whenever new hazards are introduced or when processes are added or changed.

Employees

The PPE user is responsible for the following requirements of the PPE program:

- Wear PPE as required.
- Attend required training sessions.
- Care for, clean, and maintain PPE as required.
- Inform the appropriate supervisor of the need to repair or replace PPE.
- Return old/used equipment for replacement.

Environmental, Health and Safety (EHS)

- Assist in conducting workplace hazard assessments as requested by Supervisors to determine the presence of hazards which necessitate the use of PPE.
- Assist in conducting periodic workplace reassessments as requested by Supervisors.
- Identify activities, work environments and potential exposures where a PPE hazard assessment is required.
- Address PPE exception requests.
- Maintain the completed certificates used for the hazard assessments.
- Provide training and technical assistance to Supervisors on the proper use, care, and cleaning of PPE.
- Provide guidance to the Supervisor for the selection and purchase of approved PPE.
- Review, update, and evaluate the overall effectiveness of the PPE Program.
- Ensure that the PPE Program elements are followed and that employees properly use and care for PPE.

Personal Protective Equipment (PPE)

OSHA requires the University to identify and evaluate potentially hazardous materials, conditions and processes that may require control measures, including the use of PPE. If an exposure to a hazardous material, condition or process exists that cannot be avoided or eliminated through administrative or engineering controls, the Supervisor must select, provide and make available proper PPE to the exposed individuals.

This table gives examples of different types of PPE and the hazards for which they offer protection

Body Part	PPE Example	Potential Hazard

Body (torso)	Lab coat, rubber apron, leather apron	Chemical splash, burn from sparks or metal work
Ears	Ear plugs or muffs	Loud noise from machinery
Eyes (ANSI Z87.1)	Safety glasses, goggles	Biological pathogens, human blood, flying particles, gases and vapors, chemical splashes, acid/caustic liquids, light radiation
Face	Face shield	Impact from flying particles
Feet (ANSI Z41.1)	Safety shoes	Crushing injury
Hands	Gloves (chemical resistant, cut resistant, or insulated)	Chemical contact, sharps, hot/cold, animal bites/scratches
Head (ANSI Z89.1)	Hardhat	Falling objects, overhead hazards
Respiratory system	Respirator	Particles, vapors, gases, or allergens

Care and Use of PPE

Individuals who use PPE must properly fit, inspect, use, clean, maintain and store their PPE. EHS can provide assistance for all of these steps.

Fitting: PPE is available in different sizes (or is adjustable) to accommodate different individuals and uses. Users must choose or adjust their PPE so that it is appropriately sized to provide maximum protection, and to facilitate their ability to safely perform the activity.

Inspection: Users must inspect PPE before and after each use, following the manufacturer's instructions. Any PPE that is damaged, worn out, defective or otherwise no longer provides effective protection must be removed from service for repair or replacement.

Use: Users must use appropriate PPE whenever it is required. Any PPE found to be worn out, defective, cut or otherwise damaged must be immediately replaced. Immediately discontinue using contaminated PPE. Contaminated uniforms and lab coats must be decontaminated prior to laundering. If contaminated, other re-usable PPE must be decontaminated prior to reuse. Disposable PPE must never be reused.

Maintenance and Storage: Users must keep their PPE clean and properly maintained. Cleaning is particularly important for eye and face protection because dirty or fogged lenses can impair vision. After each use, reusable PPE must be cleaned and maintained according to the manufacturers' instructions. Generally, reusable PPE can be cleaned with mild soap/detergent and water after use, and air dried. PPE should be stored in a cabinet, locker or other location away from sources of potential contamination or sharp/heavy objects that could deform or otherwise cause damage.

Training

Any worker required to wear PPE shall receive training in the proper use and care of PPE. Periodic retaining shall be offered to both the employees and the supervisors, as needed. The training shall include, but not necessarily be limited to, the following subjects:

- When PPE is necessary to be worn.
- What PPE is necessary.
- How to properly don, doff, adjust, and wear PPE.
- The limitations of the PPE.
- The proper care, maintenance, useful life and disposal of the PPE.
- Demonstration that the employee understands the training material and is able to use PPE properly.

After the training, the employees shall demonstrate that they understand the components of the PPE Program and how to use PPE properly, or they shall be re-trained.

Recordkeeping

Written records shall be kept of the names of persons trained, the type of training provided, and the dates when training occurred. Supervisors shall send copies of hazard assessments to EHS.

Hazard Assessment Procedure

A hazard assessment is the process of identifying the hazards associated with a given task and prescribing personal protective equipment which must be utilized to reduce the risk. A certification of hazard assessment is a written document such as the one below detailing the hazard assessment for a particular task.

The supervisor is responsible for ensuring that hazard assessments are performed and the certification(s) are recorded.

Certification of Hazard Assessment and Personal Protective Equipment Evaluation

Department : _____ **Process/Operation:** _____ **Building/Room:** _____

A hazard assessment has been performed for the workplace identified above. The hazard assessment was conducted according to the guidelines in Appendix B to Subpart I - 29 CFR 1910. The need for PPE has been communicated to affected employees.

Supervisor: _____ **Signature:** _____ **Date:** _____

	Present			**Likelihood of Injury**	**Seriousness of Injury**	**Engineering Controls in Place**	**Administrative Controls**	**PPE Required**			
Hazard Classification	Y	N	Hazard Codes (1)	High, Moderate, Low	High, Moderate, Low	Hoods, Guards, etc.		Hand	Eye & Face	Foot	Head
Impact											
Penetration											
Compression											
Chemical-airborne											
Chemical-liquid											
Chemical-gas											
Hot											
Cold											
Light (optical) Radiation											
Ionizing Radiation											
Electrical											
Dust											
Hazard Codes (1)											

CR – Carrying	C – Corrosives	CT – Cutting	CO – Contact	CS – Cold Surface	EV – Environment
GR – Grinding	HS – Hot Surface	IR – Infrared	I – Irritant	LA – Lasers	R - Rolling
SA – Sanding	SW – Sawing	S – Sensitizers	SH – Sharps	SV - Solvents	SP – Sparks
ST – Striking	TG – Toxic Gases	UV – Ultraviolet	W – Welding		

PPE Hazard Assessment Certification for Common Tasks and Work Areas

IMPORTANT NOTES:

- **Lafayette College EHS certifies this document as a PPE hazard assessment.**
- **Contact EHS in order to have work tasks added to this document.**

GENERAL PPE RULES:

- Basic rules for clothing:
    - Loose clothing must not be worn when entanglement hazards exist.
    - Shorts and open-toed shoes are not permitted in machine/maintenance shops.
- Basic rules for hearing protection:
    - Hearing protection must be worn when using the following:
        - Gas powered equipment such as mowers, chain saws, concrete saws, leaf blowers, vacuums, weed trimmers, etc.
        - Hilti-guns
        - Electric concrete hammer/impact drills, jack hammers, etc.
        - Pneumatic equipment (jack hammers, air guns, etc)
    - Hearing protection must be worn when in areas where it is difficult to hear or understand a “normal” tone of voice or conversation at a distance of about three feet. This is an indication that noise levels are probably exceeding safe exposure levels.
- Basic rules for respirators:
    - Must be worn when required in accordance with the Lafayette College Respiratory Protection Program.

Grounds Tasks		
*Grounds employees are required to wear reflective safety vests at all times per Director of Facilities Operations.		
Task(s) / Area(s)	**Potential Hazard(s)**	**PPE Required**
Backpack Blower Operation	Flying particles, noise, vehicular traffic	Safety glasses Hearing protection
Chainsaw Use	Flying particles, falling objects, cuts, noise, vehicular traffic	Hardhat Safety glasses Hearing protection Face shield (if needed) Work gloves Cut resistant leg protection Safety shoes
Chipper Operation	Flying particles, noise, entanglement, cuts, falling objects, vehicular traffic	Hardhat Safety glasses Hearing protection Work gloves Safety shoes
Cutting Hedges	Flying particles, noise, cuts, vehicular traffic	Safety glasses Hearing protection when using power tools Work gloves Work shoes
Dig holes, trenches, etc.	Flying particles, falling objects, noise, cuts, vehicular traffic	Hardhat if heavy equipment used or in trench Hearing protection if powered equipment is used Safety glasses Work gloves Work shoes
Fertilizer application (solid and liquid)	Chemical splash, flying particles, noise, inhalation	Safety glasses (solids) Goggles (liquids) Hearing protection if powered equipment Respiratory protection based on label/SDS Chemical resistant gloves Long sleeve shirt/pants

Garbage Truck Operation (entering/exiting, moving dumpsters, emptying garbage cans/dumpsters)	Slips/falls, falling objects, cuts, flying particles	Work shoes Safety glasses Work gloves
Task(s) / Area(s)	**Potential Hazard(s)**	**PPE Required**
Install remove snow blades, mover deck, etc.	Cuts, falling objects	Safety glasses Work gloves Safety shoes
Lawn Mowing - Riding	Flying particles, noise	Safety glasses Hearing protection Work shoes
Lawn Mowing - Walk Behind	Flying particles, noise	Safety glasses Hearing protection Work shoes
Load/unload trucks	Cuts, falling objects	Work gloves Safety shoes
Mulching	Cuts	Work gloves Work shoes
Operate loaders/backhoes/power equipment	Flying particles, falling objects	Hardhat (if not in cab) Hearing protection Safety glasses Safety shoes
Operating Z-Track/Gators	Noise	Work shoe Hearing protection (depending on noise level of the vehicle)
Pesticide Applicators	Chemical splash, flying particles, noise, inhalation	Refer to container label for PPE requirements
Planting trees	Cuts, falling objects	Hardhat if large trees Work gloves Work shoes
Rake/remove leaves	Cuts	Work gloves Work shoes
Removing fallen rock from Sullivan Road and Bushkill Drive	Vehicular traffic, falling rock	Traffic cones (or other warning device) Hardhat
Salting walks	Flying particles, slip, skin irritation	Safety glasses Work shoes
Shoveling snow	Slip	Work gloves Work shoes
Snow blower operation	Flying particles, slip	Safety glasses Hearing protection Work gloves Work shoes

Tree trimming/climbing with non-power tools	Eye hazard, falling object, bump hazard, cuts, fall	Hardhat Safety glasses Face shield if climbing tree Hearing protection if using power tool Work gloves Work shoes
Task(s) / Area(s)	**Potential Hazard(s)**	**PPE Required**
Weed trimming- String/Blade	Flying particles, noise	Safety glasses Hearing protection Long pants Work shoe
Maintenance work at oil/water separator on Bushkill Drive	Falling rock, vehicular traffic	Hardhat Work gloves Work shoes

Custodial Tasks		
Task(s) / Area(s)	**Potential Hazard(s)**	**PPE Required**
Clean bathrooms	Chemical contact, potentially infectious materials	Chemical/liquid resistant glove
Cleaning with chemicals	Chemical contact	Safety glasses as recommended by manufacturer on label and SDS
Cleaning bloodborne pathogens and other potentially infectious materials	Contact with infectious materials	Chemical/liquid resistant glove, safety glasses/goggles, universal precautions
Floor mopping	Chemicals contact	Chemical resistant gloves as label/SDS recommends
Mix chemical concentrates	Chemical contact	Safety glasses and chemical resistant gloves as label/SDS recommends
Move furniture and equipment	Falling objects, cuts	Work gloves recommended Safety shoes
Operate scrubbing, buffing, shampooing equipment	Contact hazard	Work gloves recommended Work shoes
Remove and replace light bulbs	Eye hazard	Safety glasses Work gloves
Removing/shoveling snow and ice, spreading salt	Slip	Work gloves Work shoes Reflective vest (if near vehicular

		traffic)
Set up, tear down indoor and outdoor equipment for special events	Falling object, cut	Gloves recommended Safety shoes
Trash collection	Cuts	Work gloves are recommended, chemical resistant gloves are acceptable
Vacuuming	Noise	Hearing protection *Refer to Hearing Protection SOP for more info
Wash and clean windows, mirrors, walls, chalkboards, ceilings, blinds, light fixtures	Chemical contact	Safety glasses (when working above shoulder level) Chemical resistant gloves as label/SDS recommends
Wash and polish furniture, etc.	Chemical contact	Safety glasses and chemical resistant gloves as label/SDS recommends

General Trades		
Task(s) / Area(s)	**Potential Hazard(s)**	**PPE Required**
Shop work – fixed and portable power tools (saws, drills, grinders, sanders, nailers, etc.)	Flying particles, noise, airborne dust, heavy objects	Safety glasses Safety shoes
Field work – portable power tools (saws, drills, grinders, sanders, nailers, etc.)	Flying particles, noise, airborne dust, heavy objects	Hardhat if overhead hazard Safety glasses Safety shoes
Installing insulation (sound / thermal) – fiberglass, rigid, etc.	Airborne dust	Safety glasses/goggles body cover (tyvek, etc)
Drywall installation	Flying particles, heavy objects	Safety glasses Safety shoes
Paint / Coatings / Caulking applications (water, oil, and epoxy based)	Chemical contact	Safety glasses
Glass cutting	Cuts, flying particles	Safety glasses Cut resistant gloves Work shoe

Ceiling tile installation (grid and adhesive)	Flying particles	Safety glasses or goggles
Paint scraping, cleaning, sanding	Flying particles, respiratory hazard (Lead, Cadmium, Chromium, dust)	Safety glasses or goggles respirator may be required
Priming / Painting	Flying particles, respiratory hazard	Safety glasses or goggles, respirator may be required

Mechanical Trades - Plumbing Tasks		
Task(s) / Area(s)	**Potential Hazard(s)**	**PPE Required**
Cut, thread, bend, join metal pipe	Cut, flying objects	Safety glasses Work gloves Safety shoe
Cut and join plastic pipe	Cut, flying objects	Safety glasses Work gloves
Clear blocked drain lines (chemical, power snakes, plungers)	Splash, cut, contact with potentially infectious materials	Safety glasses Work gloves (using power tools) Chemical resistant gloves (using chemicals) Protective clothing, boots and/or masks (as needed)
Mechanical Trades - Electrical Tasks		
Electrical circuit work – testing; troubleshooting; ballast, switch, receptacle replacement, etc.	Shock, noise, light, shrapnel, fire	See Lafayette College Energized Electrical Safety Procedures
Electronics repair / maintenance	Shock, flying particles	See Lafayette College Energized Electrical Safety Procedures
Mechanical Trades - Heating, Ventilation, Air Conditioning (HVAC) Tasks		
Clean / replace filters (HVAC systems)	Cut	Safety glasses Work gloves

Boiler / Water Treatment chemical handling	Chemical contact	Safety glasses/goggles/face shield/chemical resistant gloves (as recommended by label/SDS)
Water softening systems – back-flushing, adding salt	Chemical contact	Safety glasses
Refrigerant gases handling	Chemical contact	Safety glasses

Steam Plant / Motor Vehicle Repair / Maintenance Tasks		
Task(s) / Area(s)	**Potential Hazard(s)**	**PPE Required**
Soldering, filing, grinding, sanding	Flying particles, cuts	Safety glasses or goggles Work gloves Work shoes
Welding	Burns, eye damage, electrical shock, cuts, and falling objects, respiratory	Welding hood with proper shading Welding clothing (FR) Work gloves Safety shoes
Torch Cutting and Brazing	Burns, flying particles, falling objects, cuts	Welding hood with proper shading Welding clothing (FR) Thermal/work gloves Safety shoes
Sheet metal work	Cuts, falling object, flying particles	Safety glasses Cut resistant gloves Safety shoes
Tire balancing	Falling object, abrasion	Safety glasses Safety shoes
Small engine repair / maintenance	Chemical release/contact, flying particles	Safety glasses
Vehicle body work (apply fillers, grind, sand, file, prime, paint, buff)	Flying particles, cut	Safety glasses or goggles Work gloves Respirator may be required

Miscellaneous Tasks		
Task(s) / Area(s)	**Potential Hazard(s)**	**PPE Required**

Cleaning with compressed air (less than 30 psi)	Flying particles	Safety glasses
Cut keys	Flying particles	Safety glasses
Snow removal (emergencies) – shoveling, plowing, blowing, etc.	Slip/fall, cut	Hearing protection (blower) Work gloves, work shoes
Working on/near roadway (i.e. landscaping tasks, utility work tasks, construction tasks, water services tasks, steam services tasks, custodial tasks, etc.)	Contact with motor vehicle	Reflective vest (minimum ANSI Class 2)
Directing parking (outside a booth)	Contact with motor vehicle	Reflective vest (minimum ANSI Class 2)
Directing traffic	Contact with motor vehicle	Reflective vest (minimum ANSI Class 2)
Material handling (equipment, furniture, material receipts)	Cuts, falling objects	Work gloves Work shoe or Safety shoe
Working in shops (metal, wood or maintenance shop)	Flying particles, falling objects, noise	Safety glasses Hearing protection (as needed) Safety shoes
Pouring, mixing, dispensing, and disposal of hazardous materials	Splash, chemical contact	Eye protection Face protection Hand protection Body protection (as recommended by label/SDS)
Transporting empty or full chemical cylinders	Falling object	Safety shoes
Installing or removing compressed gases	Chemical release	Safety glasses or goggles
Operating aerial lift, boom lift or bucket truck	Crush hazard, contact with objects, fall	Hardhat Safety shoes Harness
Operating forklift/powered hand truck	Crush hazard	Safety shoes
Operating scissor lift	Crush hazard, contact with objects, fall	Hardhat Safety shoes Harness if anchor point is available on scissor lift
Filling batteries with distilled water (Forklift, aerial lift, scissor lift or other types of powered industrial trucks)	Chemical contact	Safety glasses Face shield Chemical resistant apron Chemical resistant gloves Work shoes

Laser Equipment – operation and maintenance	Skin and eye damage	PPE requirements are different for each laser depending on the wavelength and power output.
Work at height (roof, scaffolds)	Fall	See Lafayette College Fall Protection Program
Blacksmithing	Cuts, falling object, thermal burns, flying particles	Safety glasses or goggles Thermal/work gloves Safety shoes
Check compressed gas/air systems	Chemical contact	Safety glasses Work gloves
Check cryogenic systems	Chemical contact	Safety glasses Cryogenic/work glove
Soldering, filing, grinding, sanding	Flying particles, cuts	Safety glasses or goggles Work gloves Work shoes
Welding	Burns, eye damage, electrical shock, cuts, and falling objects, respiratory	Welding hood with proper shading Welding clothing Work gloves Safety shoes
Torch Cutting and Brazing	Burns, flying particles, falling objects, cuts	Welding hood with proper shading Welding clothing (FR) Thermal/work gloves Safety shoes
Servicing Pool Chemical Pump(s)	Chemical Contact	Safety goggles, face shield, as label/SDS recommends Chemical resistant gloves