

SHOP SAFETY PLAN

Mechanical Engineering

UNIVERSITY OF WASHINGTON

Mechanical Engineering Building and Engineering Annex

5/20/15

I. Purpose

This Shop Health and Safety Plan addresses the potential hazards associated with shops and serves as a supplemental to the departmental Health and Safety Plan.

II. Scope

This plan applies to any space which meets the definition of a shop as defined herein at all locations that serve as assigned workplaces and educational settings for University of Washington faculty, staff, and students.

A. Shop

A shop is defined as a designated room or area where fabrication and repair activities occur, using tools and machinery that present physical hazards to occupants. Shops at the university include a broad range of uses that support teaching, research and facility maintenance and repair where physical hazards from tools and machinery are more prominent and would be considered hazardous to an untrained person.

III. Responsibilities

A. Shop Safety Coordinator

Eamon McQuaide, Bill Kuykendall, & Michelle Hickner have been appointed as the shop safety coordinators and have authority and responsibility to maintain and implement this plan and the following:

- Limiting shop access to authorized personnel
- Orientation and training of employees and students
- Maintaining a safe environment and restricting access to unsafe facilities, equipment and tools.
- Enforcing safety rules and procedures
- Ensuring employees access to safety information (MSDSs/ SDSs)
- Maintaining safety records (safety plan, training documentation, MSDSs/SDSs, and SOP's)
- Ensuring PPE is maintained, readily available, and in use when needed
- Review and report accidents and incidents using the Online Accident Reporting System (OARS)
- Performing shop self-audits and follow-up on corrective actions
- Coordinating with Environmental Health & Safety for safety surveys and accident investigations
- Ensure safety of visitors

B. Employees/students

Employees and students with access to the shop have a responsibility to:

- Know and comply with safety guidelines and policies required for all assigned tasks.
- Report unsafe conditions to your shop's safety coordinator, your immediate supervisor, the Departmental Safety Officer, or to EH&S (206-543-7262). If you identify a procedure or assigned task as being exceptionally risky, you can perform it only after you believe the risk has been reduced to an acceptable level.
- Report accidents and incidents to your supervisor, and to the university using the OARS (<http://www.ehs.washington.edu/ohsoars/index.shtm>).
- Select, maintain and use PPE appropriately, consistent with your training and shop rules. Students may be required to provide their own PPE for use in shops.

IV. Shop Protocols

A. Controlling access

Limiting and controlling access is critical to preventing untrained or unauthorized persons from incurring injury. This is particularly true in an academic setting where a shop may be part of a group of rooms in a large building with hundreds of occupants.

1. Access will be controlled by keeping doors closed and locked when administrative controls are not in place (i.e., shop safety coordinator or designated shopmaster not present), proactive inquiry by the shop safety coordinator and other authorized users, posting signs indicating the shop is a space requiring authorization to enter, and floor marking.
2. Users will sign in and out of shops when indicated. This is applicable in the ME machine shop and composite shop.
3. Shopmasters will keep designated equipment locked out will check out keys to only trained users.

B. Access to safety information

1. This plan and associated materials will be electronic, paper, or a combination, but all information must be accessible at all times to all personnel who work in shop areas. If the shop safety program is all electronic, personnel must know where the files are located and how to access them. If multiple rooms are included in the shop, the plan must be available without having to get a key from another person. It must also be available on request to EH&S staff and Washington State Department of Labor and Industries representatives.

C. Housekeeping

All employees and students have a responsibility to maintain a clean, uncluttered environment. Specific expectations are provided here.

1. All tools and materials will be stored neatly and in their place when not in use.
2. Establish and maintain clear access to safety equipment, exits, and electrical panels.
3. Counter tops and tables will have adequate work space, free of clutter.
4. Floors will be clear to minimize trip hazards.
5. Garbage and debris will be removed regularly to prevent clutter and reduce combustible loading.
6. Chemical containers must be closed and properly stored.
7. Odor producing processes will be carried out only in areas with adequate ventilation.

D. Hazard communication

All those who work in areas with hazardous chemicals must have access to essential safety information while they are at work.

1. A complete and accurate list of chemicals will be maintained in the MyChem inventory management system.
2. MSDSs/SDSs must be available for each chemical either electronically or in paper form in the location where the materials is stored or used.

E. Working alone

Working alone is not allowed for high risk activities such use of rotating and cutting powered machinery, lifting heavy loads overhead, working with hazardous materials that present acute physical or health hazard, working from heights, hot works, energized high-voltage electrical work and working in confined spaces.

In addition to the general criteria above, the following specific activities are not allowed:

Exceptions:

The CNC fabric cutter in MEB G032A may be used alone with express permission of one of the shop coordinators.

F. Safety training

Employees, students and visitors authorized to use the shop will be appropriately trained before they are granted access to the shop, equipment and tools. Access may be granted to visitors under direct supervision if proper personal protective equipment is issued. Training will include the following:

Shop-specific training is required to access the shops, which includes the following:

1. Training on how to select and use PPE.
2. Training associated with a specific procedure, machine or equipment.
3. Chemical hazards training, if applicable.

Shopmasters will complete required training recommended by the UW EH&S Shop Safety Training Matrix.

[Guidelines for Orientation and Training](#)

Retraining will be conducted whenever there is a change in job assignment, a change in machinery or equipment or process change that presents a new hazard.

Records will be kept for at least one year for training, and assessments.

Training records including new employee/student orientation will be maintained in the shop safety manuals or on a computer accessible by all shop users.

G. Personal protective equipment (PPE)

A PPE Hazard Assessment will document the hazards and PPE required for the shop. All employees shall be trained on PPE requirements and documented.

[Shop PPE Assessment Guide](#)

H. Standard operating procedures (SOP's)

The shop will develop and maintain standard operating procedures for work that involves the use of hazardous equipment or substances. The shop safety coordinator or designee will observe workplace operations, identify hazards, and develop written procedures to prevent injury. When procedures or equipment change a new assessment will be conducted.

One option for SOP's is provided for reference at <http://www.ehs.washington.edu/fsophyssafe/shops.shtm#e>.

The shop's responsible person must ensure all shop staff understand that new and changed procedures must be assessed for hazards. The Shop Safety Coordinator or another person familiar with the shop's procedures must assess those procedures and determine controls to adequately minimize risks.

I. Reporting accidents

1. Report any work-related accidents and near misses using the EH&S OARS system. Also report accidents and near misses for students and visitors.

OARS: <https://www.ehs.washington.edu/ohsoars/index.shtm>

J. Safety inspections

1. At least annually, the Shop Safety Coordinator will perform an inspection of the shop to identify hazards and follow up to mitigate the hazards identified. These inspections are to ensure that the shop equipment is being properly used and to provide a check on the continued adherence to the procedures.
2. EH&S maintains a general checklist to assist departments in performing shop safety inspections. The checklist is available here <http://www.ehs.washington.edu/forms/fso/shopsselfauditcklst.docx>.