

University of Maryland Baltimore County



UMBC

SHOP SAFETY PROGRAM

Shop and Makerspace Safety Plan

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Purpose Statement

The purpose of this plan is to demonstrate the commitment of this Shop towards the safe completion of work and the safety of its employees, students, and the UMBC Community.

This plan has been prepared by Shop Supervision or the Shop Instructor in a collaboration with Department Leaders, employees, and other key stakeholders. Employees and students who use the Shop are required to review this plan prior to Shop authorization.

This plan is retained in the Shop and available for review. The plan will additionally be reviewed on an annual basis and updated when new or modified equipment, tools, machinery, or processes are introduced into the Shop.

Signature of Shop Supervisor or Instructor

Signature of Department Manager/Chair

Date of Last Review

Shop Information

Name of Shop:

Shop Type:

Machine Shop
Painting

Wood Shop
Glass

Hot Work
Other (describe):

Printing/Printmaking

Location Information:

Responsible Department:

Building:

Room Number:

Shop or Makerspace Supervisor Name:

Contact Phone:

Email Address:

Shop or Makerspace Use (select most appropriate)

Teaching

Research

Visual or Performing Arts

Facilities/Trade/Maintenance

Other (describe)

Emergency Information

Emergency Contacts:

Police, Fire, Medical Emergency: Campus Police - (410) 455-5555 or call 911 (call 911 if at an off campus location)

Chemical/Hazardous Material Incidents, Large Spills, etc.: Env Safety and Health – (410) 455-2918/after hours notify Campus Police (410-455-5555)

Radiation Safety Incidents: UMB Radiation Safety Officer - (410) 706-7055

Locations:

Nearest Fire Alarm Pull Station:

Nearest Emergency Exits:

Nearest Fire Extinguisher:

Nearest Spill Clean Up Kit):

Nearest First Aid Kit:

Nearest Automated External Defibrillator (AED):

Nearest Eyewash Station/Emergency Shower:

In the event of building evacuation, meet at:

Injuries and Near-Misses:

Report all injuries and near-misses to ESH at esh@umbc.edu or at 5-2918 as soon as possible.

Serious Injuries:

Contact Campus Police or 911 immediately for all injuries requiring emergency medical attention (uncontrollable bleed, amputations, head injuries, loss of consciousness, etc.).

Render aid to the victim if possible and if you are comfortable with doing so until emergency medical response arrives.

Chemical or Hazardous Material Spills

If a large or uncontrolled spill involving a spilled chemical or hazardous substance occurs, or if you're unsure what actions to take, call ESH at 410-455-2918.

For after-hours emergencies, contact Campus Police (410-455-5555) or 911. Do not attempt to clean up or contain a large spill or if you are uncertain how to proceed. For additional information, refer to [UMBC Campus Spill Response Guide](#).

Waste Management

Always handle and store all lab-generated hazardous waste according to applicable OSHA and EPA regulations, as well as UMBC and lab-specific protocols. To request a hazardous waste pickup, contact ESH at esh@umbc.edu.

All hazardous waste containers must be appropriately labeled and secured prior to pick up. ESH may refuse any inappropriately labeled or secured hazardous waste until corrected. For more information, please consult the [UMBC Waste Disposal Guide](#).

Shop and Makerspace Code of Conduct

- Always ask if you are unsure about the safe operation of a tool or piece of equipment or need refresher training.
- All shop users have the authority to stop work if an unsafe condition or act occurs. If something is unsafe or doesn't seem right, stop work and report it to your supervisor.
- Do not operate Shop machinery, tools, or equipment without training. Review the operator's or owner's manual before operating any tool, machine, or equipment for the first time.
- Never work without proper eye protection. Safety glasses with side shields must be always worn. Eye protection must be ANSI Z87-rated.
 - Individuals that wear prescription glasses must use goggles or safety eyewear that can fit appropriately over corrective lenses, or wear safety prescription eyeglasses.
- Protect your feet. At a minimum, closed-toed shoes that cover the entire foot must be worn. Do not wear thin fabric shoes, sandals, open toed shoes, or high heeled shoes. Tools, equipment, fixtures, and chips/sparks can be heavy, sharp, or hot. Always follow your department's uniform, dress code, or footwear procedures.
- Remove or secure anything you are wearing that might get caught in moving machinery. Do not wear loose clothing, loose neckwear, lanyards, or exposed jewelry while operating machinery. Long sleeves on shirts must have snug-fitting sleeves and cuffs, or must be rolled back or otherwise secured at the elbow.
- Pull back and secure long hair or wear a hat that keeps hair secured but will not obstruct vision.
- Never wear gloves when using rotating equipment. Gloves can become entangled in rotating machine parts and cause serious injury.
- Avoid working alone whenever possible in the Shop.
- Never use a machine or equipment while fatigued, or while under the influence of drugs, alcohol, or while taking prescription drugs that may impair your ability to safely operate the equipment.

- If you are taking medication that may impair your ability to safely perform work in the Shop, notify your supervisor so that an alternative task can be arranged. You do not need to disclose what medication you are taking.
- Loose objects can become flying particles. Remove all loose items (wrenches, chucks, rags, etc.) from machinery before starting.
- Keep your work area clean and dry. Dispose of all debris and waste materials by placing them in the appropriate containers (e.g. oily rags in approved metal containers, trash in trash can). Remove chips, oil and obstacles that can cause someone to slip or trip. Shop equipment and/or materials must be placed in the proper storage location.
- Machines must be turned off when cleaning debris.
- Never lean on your machine. Stand away when the machine is running.
- Never remove safety guards from equipment. You must ensure that all safety guards are in place before using equipment.
- Always keep hands and other body parts a safe distance away from moving machine parts, work pieces, and cutters.
- Report broken, damaged, or improperly functioning tools, machinery, or equipment to the Shop Supervisor.
- Foods and drinks are only allowed in designated areas.
- Read and understand the Safety Data Sheets (SDS) for all of the chemicals you will use prior to using them for the first time.

Training

Shop or makerspace users shall receive proper training and familiarization of shop tools, machinery, and equipment operation as well as any additional training required to ensure safe and appropriate use of the space.

Additional required training for this shop or makerspace can be checked or listed below. Contact your supervisor or ESH if you are unsure about training requirements.

- ☐ Hazard Communication
- ☐ Fire Extinguisher
- ☐ Hot Work Safety
- ☐ Hand and Power Tool Safety
- ☐ Machine Guarding
- ☐ Personal Protective Equipment
- ☐ Cut and Puncture Prevention
- ☐ Other (describe)
- ☐ Other (describe)
- ☐ Other (describe)
- ☐ Other (describe)
- ☐ Other (describe)
- ☐ Other (describe)

Appendix A: Inventory of Shop Equipment

This section provides a current inventory of all machinery and equipment in this Shop. Small hand tools do not need to be listed.

Type of Equipment (Saw, Press, Bench Grinder, etc)	Make and Model	UMBC Asset Tag (or S/N)

Appendix B: Authorized Users

Only the persons listed below have authorization to use the Shop and operate Shop equipment, tools, and machinery.

User Name	UMBC Email

Appendix C: Shop and Makerspace Inspection Form

Use this form to document a comprehensive periodic shop safety inspection. Inspections can be performed at any level of frequency, but should be conducted on at least an annual basis. Inspections may be done by supervision or faculty or by an experienced designee. Report any concerns or deficiencies to supervision or ESH if additional consultation is needed on corrective actions.

Inspection Date:	Inspected By:
Department	Shop Name:

Section A - Housekeeping		Yes	No	N/A
1.	Does the shop area have a clean and orderly appearance?			
2.	Is the shop free from any apparent slip/trip/fall hazards?			
Section B - Chemical Safety		Yes	No	N/A
1.	Do chemical containers and cylinders have their contents clearly labeled?			
2.	Are chemical containers and cylinders in good condition?			
3.	Are incompatible materials segregated?			
Section C - Personal Protective Equipment		Yes	No	N/A
1.	Is appropriate PPE available for use and being used where required?			
1a.	Eye protection			
1b.	Hand Protection (Gloves)			
1c.	Hearing Protection			
1d.	Appropriate footwear (No open toed shoes, safety/steel-toes where required - refer to your department's uniform/dress code/footwear requirements)			
2.	Are emergency showers and eyewash stations readily accessible?			
3.	Do emergency showers and eyewash stations have a current inspection record/tag?			

Section D - Fire and Life Safety		Yes	No	N/A
1.	Are emergency exits visible and free from obstructions?			
2.	Are fire extinguishers available and readily accessible?			
3.	Are fire extinguishers mounted to the wall?			
4.	Do fire extinguishers have a current inspection tag (serviced within the past 12 months)?			
5.	Are fire pull stations visible and readily accessible?			
6.	Are oily rags and combustible wastes kept in the appropriate safety containers?			
7.	Are flammable/combustible liquids stored in an appropriate storage cabinet?			
8.	Do sprinkler heads have at least 18 inches of clearance?			
Section E - Electrical Safety		Yes	No	N/A
1.	Are all electrical cords free from any exposed wiring or damaged/fraying cords?			
2.	Are all electrical panels unobstructed (36 inches of clearance)?			
3.	Are all electrical junction boxes, panels, switches, and outlets appropriately covered/enclosed?			
4.	Are all extension cords grounded?			
5.	Are portable tools grounded or double-insulated?			
Section F - Equipment and Machinery		Yes	No	N/A
1.	Is machine guarding in place where required and properly functioning?			
2.	Are equipment controls clearly labeled?			
3.	Are warning and hazard stickers and labels legible?			
4.	Are emergency stops in good condition and clearly visible on machinery?			
5.	Is equipment appropriately secured to prevent walking/moving?			
6.	Are hand tools in good condition (free of broken parts, chips, cracks,			

	etc.)			
7.	Are bench and pedestal grinders adequately guarded and equipped with a work rest (adjusted to within 1/8 " of the grinding wheel)?			
8.	Are adjustable tongues on grinders adjusted to within 1/4 " of the wheel?			
9.	Is compressed air appropriately controlled (safety air nozzle - below 30 psi if dead-ended, chip guarding in place)			
Section G - Safe Material Storage and Handling		Yes	No	N/A
1.	Is material stacked in a safe and stable manner?			
2.	Are compressed gas cylinders appropriately secured with valve caps on cylinders not in use?			
3.	Are assistive/mechanical devices in place for heavy materials (such as carts, dollies, hand trucks, etc.)			
4.	Are load ratings clearly marked on cranes and hoisting equipment?			
Section H - Occupational Safety and Health		Yes	No	N/A
1.	Is ventilation adequate with good flow (no excessive fumes or dust accumulation)?			
2.	Are exhaust fans and ducts in good condition?			
3.	Is localized ventilation used where necessary?			
4.	Is lighting in the shop adequate?			
5.	Are noise levels at an acceptable level, and not excessive?			
6.	Are there any ergonomic hazards that aren't being addressed (repetitive motion, awkward postures, heavy lifting, vibration from equipment)?			
Section I - Hazardous Waste Management		Yes	No	N/A
1.	Are all waste materials placed in proper receptacles?			
2.	Are waste containers appropriately labeled?			
3.	Is a spill clean up kit available for use?			
4.	Is there an excessive accumulation of hazardous waste?			

Appendix D: Shop User Acknowledgement

By signing this acknowledgement, I attest that I have been given the opportunity to read and have read this Shop Safety Plan and have completed all required training and orientation prior to performing work in the Shop.

I will report any unsafe or unsanitary conditions promptly to supervision, as well as all injuries, incidents, or near-misses.

If I am unsure how to proceed with a task, or if I am uncertain with any aspect of work in the Shop, I will stop and consult with supervision before proceeding.

I understand that failure to follow these directives may result in disciplinary action or removal of Shop authorization.

Signature of Shop User

Date Signed