

# Maker Space/Workshop Safety Program and Policies

The PAST Innovation Lab and Metro High School Workshop  
1003 Kinnear Road, Columbus, Ohio 43212

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## Overview

### Introduction

The PAST Innovation Lab and Metro High School Maker Space and Workshop (i.e., Shop) is a collaborative space and capability located at 1003 Kinnear Rd., Columbus, Ohio 43212 utilized for the advancement of student learning through collaboration, mentorship, training, internship, and other related programs.

It is the policy of The PAST Innovation Lab and Metro High School to take precautions to eliminate hazards associated with the use of equipment, facilities, and tools and to ensure Shop patrons are properly trained to utilize equipment, facilities, and tools in a safe manner to minimize injuries. This Workshop Safety Program and Policies provides an overview of shop safety to minimize injury and/or accidents associated with machine shop activities.

### Scope

Creating a safe environment in the Shop is of the highest priority. A safe environment includes operation, maintenance, cleaning, training, inspection, record-keeping, access control, and hazard management (i.e., identification and resolution) across all areas, equipment, and tools within the Shop. The purpose of the following Safety Policies and Procedures is to mitigate or eliminate Shop related injuries. Shop Safety Policies and Procedures establishes the minimum requirements for utilization of Shop capabilities while located in areas designated Shop space.

### Definitions

- **Designated Trained Mentor:** An individual identified as a student mentor having passed all required background checks and Shop specific training.
- **Dock:** An area of the Shop located on the East side of the building that includes an overhead door, elevated platform, and staging area extending approximately 10 feet into the Shop.

- **Flammable Material Storage:** Yellow Cabinets designed specifically for mitigating the spread of fire. All flammable materials, of appropriate size, are stored in the flammable cabinet.
- **General Purpose Equipment:** Equipment that requires general purpose equipment training to operate (see Appendix B).
- **Hazardous Materials:** Any materials that are deemed hazardous by the EPA or as designated by the Shop Supervisor. Hazardous materials may include, but are not limited to, flammable materials, chemicals, fuels, solvents, certain types of dust, etc.
- **Material Storage:** Area(s) within the Shop designated for storage of various materials available for use by Shop patrons. Materials may include, but are not limited to, wood, plastic, metal, tubing, hardware, cloth, etc.
- **Shop Supervisor(s):** The designated authority in the Shop area responsible for Shop safety, equipment maintenance, equipment scheduling, training, mentorship, and any other activities deemed necessary for the safe operation of the Shop. Shop Supervisor(s) are professional staff and have final authority in determining what is and is not safe use of the Shop area.
- **Specialty Equipment:** Equipment that requires specialized equipment training to operate (see Appendix B).
- **Workshop (i.e., Shop):** The space located in the south-east corner of 1003 Kinnear Rd., Columbus, Ohio and all contents thereof including, but not limited to equipment, tools, shelving, etc. A Shop layout with designated areas is further detailed in Appendix A.

## General Safety Policies

1. Only authorized and fully trained individuals are permitted to utilize Shop capabilities to include, but not limited to equipment, tools, and materials. General Shop policies apply to general shop duties and do not serve as adequate replacement for required shop training.
2. A Shop Supervisor(s) or Designated Trained Mentor must be present in the Shop when equipment or tools are in use.
3. Personal Protective Equipment
  - 3.1. Eye protection (i.e., certified safety glasses, goggles or face shields) are required to be worn at all times in designated areas of the Shop. Do not attempt to remove foreign objects from the eye or body. Seek medical attention immediately. If chemicals are splashed into the eyes, utilize an eyewash station to rinse the eyes for at least 15 minutes.
  - 3.2. Only closed toed shoes are permitted in the Shop. Open toed shoes and sandals are prohibited in all areas of the Shop.
  - 3.3. Hand protection (i.e., certified gloves) should be worn as directed by the Shop Supervisor(s) or as otherwise indicated by the activity lead.
  - 3.4. Loose fitting clothing, loose jewelry, ties, bracelets, necklaces, or other personal covers that present a work hazard are not permitted. Determination of what is appropriate clothing is at the discretion of the Shop Supervisor(s) or as otherwise indicated by the activity lead.
  - 3.5. Long hair must be tied back or covered and clear from moving equipment.
4. In the event of an injury or exposure to chemical, regardless of severity, the individual must immediately report to the Shop Supervisor(s) or Activity Lead. In the event of a serious, severe, or otherwise life-threatening injury or exposure call 9-1-1 immediately and then notify the Shop Supervisor(s) or Activity Lead.

5. Cleaning
  - 5.1. All individuals working in the Shop are required to maintain a clean and orderly working area. That includes, but is not limited to, workbenches, equipment areas, and material storage areas.
  - 5.2. When finishing an activity in the Shop individuals are required to clean and organize the working area prior to leaving.
  - 5.3. Keep the floor around equipment, workbenches, and material storage areas clear and free from hazards. Individuals that do not maintain a clean working area may have access to the Shop suspended or revoked at the discretion of the Shop Supervisor(s) or Activity Lead.
6. All equipment must be operated with all required and recommended guards, shields, speed control, power control, and other protective measures as directed by the Shop Supervisor(s) or Activity Lead.
7. Equipment or tools tagged, "OUT OF SERVICE" or "DO NOT USE" shall not be used until proper repair, servicing, or maintenance are complete.
8. Food and drink are prohibited in designated areas of the Shop.
9. Use of materials deemed flammable or hazardous (i.e., Flammable and Hazardous Materials) is prohibited without approval and oversight by a Shop Supervisor(s) or Designated Trained Mentor.
10. Request Safety Data Sheet (SDS) for use of all chemicals used and/or stored in the Shop.
11. Ensure power cords are not damaged and in good operating condition before connecting an electrical load.

## **Operations**

### Shop Access and Management

1. Shop Supervisor(s) shall be designated to manage all activities that occur in the Shop. This includes, but is not limited to, equipment use, hand tool use, material use, training, workbench use, group activities, cleaning, maintenance, etc.
2. Shop Supervisor(s) shall be available during open Shop hours or as needed for training, mentorship, equipment repair, or as activities require.
3. Only authorized and fully trained individuals are permitted to utilize Shop tools, equipment, and materials. The Shop is open for general use 9:00 AM – 3:00 PM EST Monday through Friday or as otherwise scheduled (i.e., Open Hours).
4. Shop visitors, not previously registered with the Shop Supervisor(s), are not permitted to use equipment and tools unless prior approval is given by the Shop Supervisor(s). Approval includes completion and verification of all required training. Shop visitors are only permitted in the Shop during Open Hours.

### Training

5. All individuals requesting access to the Shop must complete the General Shop Safety training prior to gaining access.
6. Individuals requesting use of general-purpose tools and equipment must complete the General Tools and Equipment Safety training prior to use.

7. Individuals requesting use of specialized tools and equipment must complete tool or equipment specific training prior to use.
8. Satisfactory completion of all training is at the discretion of the Shop Supervisor(s).
9. Upon satisfactory completion of training students will be required to wear PAST provided armband indicating level of training and which tools they are authorized to use.
10. A list of tools and equipment types subject to training requirements are detailed in Appendix B. This list is not comprehensive. Any tools or equipment not otherwise listed here are at the discretion of the Shop Supervisor(s).

#### Cleaning and Maintenance

11. Cleaning and maintenance of the Shop is a responsibility of everyone that uses the Shop.
12. The Shop Supervisor(s) manages all maintenance schedules for equipment, tools, and materials.
13. Cleaning supplies to include brooms, brushes, dust pans, and trash bins are located throughout the Shop.
14. All equipment shall maintain an Equipment Log within reach of a user operating the equipment. The log shall include date, time, name, and maintenance activity.
15. Equipment maintenance checks shall occur no less than once per month. The maintenance check is recorded in the Equipment Log. The maintenance check includes details on overall condition, operational status, maintenance due, and other information as directed by the Shop Supervisor(s).
16. Regular cleaning of material storage areas will occur monthly.

#### Equipment and Facilities

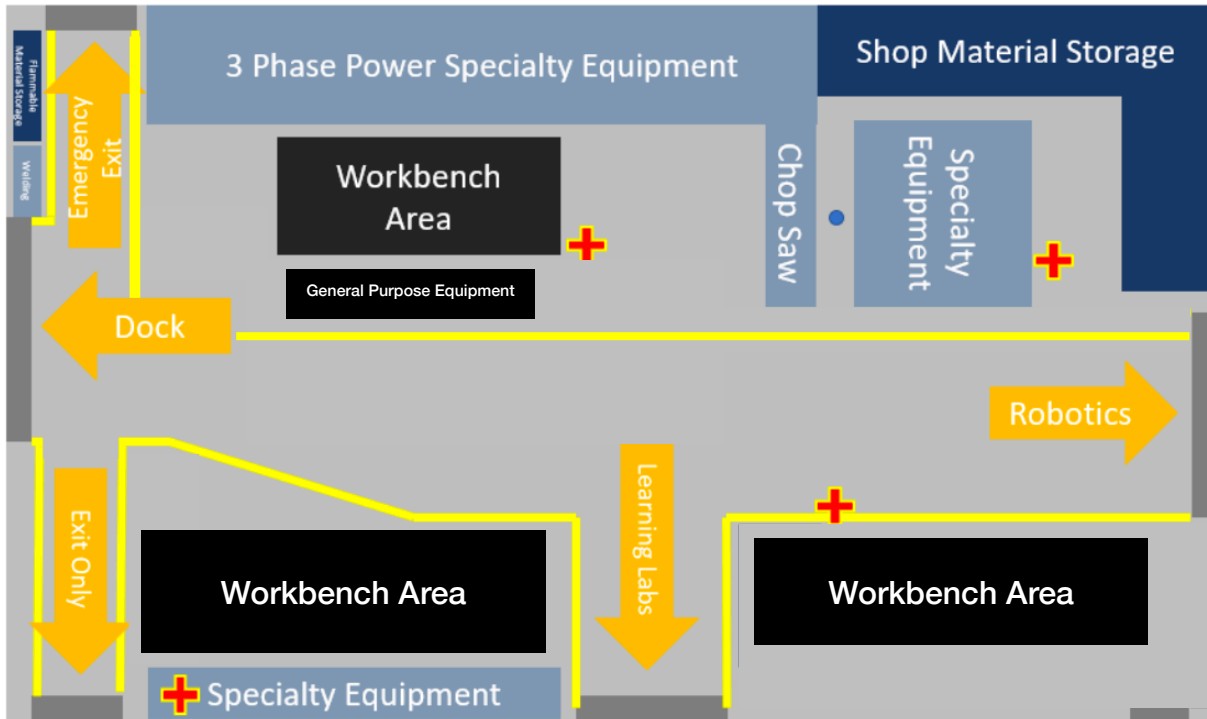
Shop equipment is maintained by Shop Supervisor(s) unless otherwise indicated on the Equipment Log. A list of Shop equipment and related information (e.g., maintenance logs, model numbers, serial numbers, etc.) can be found in the Maker Lab Space.

A Shop layout is shown in Appendix A to include designated areas. The Shop layout is subject to change based on ongoing projects, equipment availability, infrastructure needs, etc. Areas bounded by yellow lines indicate walkways and safety zones. Red crosses with yellow borders indicate location of first aid kits.

## Appendix A

The Shop layout is subject to change based on ongoing projects, equipment availability, infrastructure needs, etc.

**+** = First Aid Kit



## Appendix B

The following tools are categorized as General Purpose Equipment or Specialized Tools and Equipment and require training before operating. This list is not comprehensive. Any tools or equipment not otherwise listed here are at the discretion of the Shop Supervisor(s).

### General Purpose Equipment

- Powered hand drill
- Band saw
- Chop saw
- Powered hand sander
- Disk or bet sander
- Drill press
- Arbor press
- 3D Printers
- Vinyl Cutters
- DTG Printer
- Embroidery Machine

### Specialized Tools and Equipment

- CNC machining center(s)
- Plasma Cutter
- Mill
- Lathe
- Table saw
- Laser cutter
- Horizontal band saw