

## Machine shop general rules

### Basic rules of entry

1. NO unauthorized personnel are permitted to operate machinery.
2. ONLY students on the entry list (i.e. those who have passed the basic safety training) are allowed unescorted in the shop. These students (and faculty) may:
  - Use unpowered hand tools
  - Escort visitors
  - Use the collaborative spaceThey may NOT
  - Operate equipment on which they are not trained
  - Be a “buddy” on equipment for which they are not yet qualified
2. Rings, watches, necklaces, neckties, and large earrings are not to be worn in the shop.
3. Long and/or loose hairstyles must be secured in a cap or bonnet to no longer than chin length, and bangs must be restrained to the forehead.
4. Facial hair that might become entangled must be securely restrained
5. Long sleeves must be rolled up to the elbow (exception: welding area) and garments should be close fitting to prevent them accidentally being caught in machinery
6. Never distract someone operating equipment. If you need to speak with them wait until they have reached a stopping point in their work.
7. Everyone is required to wear safety glasses with side shields (ANSI 287.1 approved)
8. Everyone must have access to hearing protection and must don it when instructed by machine operators
9. Fabric shoes, sandals, and open-toed footwear of any kind do not provide adequate protection and are not permitted in the shop.
10. Food and drink are not permitted in the machine shop. If you want to take a break, first tidy up your area and then wash your hands.
11. Use of headphones is prohibited.
12. In case of injury, no matter how slight, IMMEDIATELY call campus security and report the injury to the shop administrator or faculty.
13. If you see a hazardous situation, loudly call out “ALL STOP” immediately. Upon hearing an “ALL STOP” everyone is required to shut down equipment as quickly as practicable (i.e. as soon as it is safe to do so, not as soon as it is convenient to do so) and step away from tools and equipment until the situation is called “all clear” by an authority. A false alarm is better than a real injury!
14. When someone calls “PREPARING TO WELD” or “HEARING PROTECTION”, don hearing protection, and when “WELDING” is called look away from welding area
15. Used rags are to be placed in the “Oily Rags” bin, and other flammables including wood scraps are to be kept in the appropriate metal containers.
16. Prior to ANY project in the shop you should have a plan – what tools you will need, what machines you will use, necessary drawings and procedures, etc. It’s much easier to keep cool outside the shop than inside.

### Emergency?

**Call Campus Security at 206-281-2911**

**You are in Otto Miller Hall in the Machine Shop located in room 143  
on the First Floor on the North side of the building**

## Machine Shop Safety for Equipment Use

17. Read equipment placards prior to use.
18. The only materials authorized to be worked on metalworking machines are ABS, nylon, and Delrin plastics, uncoated mild or stainless steels, and aluminum alloys. Any other plastics or exotic metals must have prior authorization.
19. Shop users must always work in a “buddy system”, with both buddies trained and authorized to use the equipment. Only one person however may operate the equipment at a time.
20. Never walk away from running machinery
21. Never stop machinery with your hands
22. Never remove sawdust or metal chips with fingers – use cleaners, sticks, or chip brushes
23. Never remove or deactivate safety equipment and never operate equipment that is missing its safety equipment
24. Never bypass lockouts
25. Shop users are expected to follow all general safe machining and clean housekeeping practices and standards including cleaning the workspace, returning equipment to its original condition, putting away tools, and removing temporary projects (unless otherwise authorized)
26. Report any unsafe conditions to the shop supervisor or faculty
27. Raw materials or liquids brought to the shop for machining must be accompanied by a copy of the P.O. or packing slip and the Material Safety Data Sheet (MSDS). NO EXCEPTIONS.
28. If machine is on lockout tag or has a temporary out of order tag, only authorized persons may remove the tag.
29. Use sand on metal fires (bucket in welding area). All other fires may be extinguished with the ABC extinguishers placed around the shop.
30. A first aid kit is readily available in the shop and will be properly stocked.
31. Shop users may only use equipment on which they have been trained
32. If equipment is found to be broken, hazardous, or defective, tag it as “out of order” with a date and name, remove it if possible, and report it to the shop supervisor or faculty.
33. If the shop loses power, turn off power to all equipment. If in doubt, unplug it.
34. Use tools in the appropriate manner. Scribes are not center punches, wrenches are not hammers.
35. Wash hands after using the shop
36. Woodwork requires proper woodworking procedures and training including securing and covering all metalworking machines, isolating the woodworking area, and exhausting sawdust out the door.
37. After welding and machining material will be hot. If in doubt, test with a few drops of water or quench the part to prevent a burn.

Failure to comply with the above rules, failure to maintain appropriate cleanliness and order of the shop, or other violations of safety or security may result in required retraining, community service to the shop or department, or temporary or permanent loss of privileges in the shop.

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