

Manufacturing Technology Safety Policy

Trade and Industry

College of Southern Idaho

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**Prepared by Ben Hamlett of the Manufacturing Technology Program in the Trade and Industry Department at the College of Southern Idaho.
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The Basic Rules

1. Never work alone.

The instructor or lab assistant must be in the shop when any tools are being used.

2. Never work when you are impaired.

This includes when you are too tired, stressed or hurried to work carefully.

3. If you cannot do a job safely in this shop, don't do it.

There are limits to what we can build here.

4. Always wear closed-toe shoes in the shop.

Tools, chips and fixtures are sharp, and often hot. Shoes will help protect your feet from injury. Leather shoes are preferred when welding.

5. Eye protection is essential. Always wear safety glasses when working or cleaning tools.

Lenses must meet ANSI Standard Z87.1 or equivalent for safety.

6. Remove or secure anything that might get caught in moving machinery.

Rings, necklaces, long hair and loose clothes that get caught in tools can drag you along.

7. Keep your hands away from sharp tools.

Make sure that nothing that you do will cause you to be cut.

8. Dust, chemicals and smoke can be dangerous – work in well-ventilated areas, minimize contamination and use appropriate protective equipment.

The proper safety equipment must be worn for appropriate conditions.

9. If you're unsure about the safe operation of a tool or any aspect of a job – ask for help! Have the instructor or lab assistant check you out on a tool the first time you use one with which you are unfamiliar.

10. Clean up after yourself.

Before you leave the shop each day all tools must be returned to the toolroom or proper location, the machine must be cleaned and wiped down and the floor swept. Leave 10-15 minutes for cleanup.

Information about the Shop

The Student Machine Shop is available to all Manufacturing Technology Students working on College projects. Everyone must read this safety handout and pass a safety test before using the tools in the shop.

The goal of this handout is to summarize the risks that are inherent in metalworking and to provide some guidelines for working safely. It is **not** intended to be a machining training manual. There are several good books in the library and references on the web. The first step in preventing personal injury or machine damage is to make sure that you know how to operate the equipment you will be using correctly. **If you are unsure – ask!**

Because it is a communal area, used by so many people, it is important to keep the shop clean and orderly. This means that every user must clean the machines and work areas they use, and put away all tools and material before leaving the shop.

Inattention, hurried work, horseplay, bad judgment, fatigue, improper clothing, defective tools, and poorly secured workpieces cause most accidents. Avoid accidents by following all of the rules in this handout and asking for help if you are unsure about the safest approach.

Disregarding shop rules, working unsafely or leaving a mess will result in suspension of shop privileges.

These rules apply to the entire shop area including the classrooms and Robotics room

In an Emergency:

For extreme personal injury or danger call 911 from the shop or classroom phone

Call campus security at 732-6605

The shop is in at Canyon Ridge High School on the West side of the facility in rooms 313 and 315 at the school bus loop.

Shop Hours:

Regular hours: M-Th 3:30-8:30 or F 3:30-6:30.

By special permission the shop may be opened by the instructor or other manufacturing staff at other times of the day or weekends. Contact instructor for additional information.

Sign-up Sheet:

All users must sign in the daily sign in sheet and initial the individual machine sheet before beginning work! The daily sign in sheet is typically located in the classroom. Machine sign up sheets are located in the lab in designated areas.

General Safety Guidelines

1. Do not attempt to remove foreign objects from the eye or body. Report to the instructor or lab assistant for direction for medical treatment. If chemicals get in the eye(s), wash eye(s) for 15 minutes in an open flow of water before proceeding for medical treatment. **Notify instructor or lab assistant.**
2. Avoid use of compressed air to blow dirt or chips from machinery to avoid scattering chips. Never use compressed air guns to clean clothing, hair, or aim the gun at another person.
3. Machines **must be shut off** when cleaning, repairing, or oiling.
4. Do not wear ties, loose clothing, jewelry, gloves, etc. around moving or rotating machinery. Long hair must be tied back or covered to keep it away from moving machinery. Hand protection in the form of suitable gloves should be used for handling hot objects, glass or sharp-edged items. **Never** wear gloves around moving equipment.
5. Wear appropriate clothing for the job (i.e. do not wear short sleeve shirts or short pants when welding or long sleeve shirts without rolling up sleeves while machining).
6. Do not work in the shop if you are tired or in a hurry – this almost always ruins the work, and often results in injury.
7. Never indulge in horseplay in the shop areas.
8. All machines must be operated with all required guards and shields in place.
9. A brush, hook, or special tool is preferred for removal of chips, shavings, etc. from the work area. **Never** use your hands to clean cuttings – they are sharp!
10. Keep your fingers clear of the point of operation of machines by using special tools or devices, such as, push sticks, hooks, pliers, etc. **Never use a rag near moving machinery.**
11. A hard hammer should not be used to strike a hardened tool or any machine part. Use a softfaced hammer.
12. Keep the floor around machines clean, dry and free from trip hazards. Do not allow chips to accumulate.
13. **Think through the entire job before starting.** Ask for help if you have questions.
14. Before starting a machine, always check it for correct setup and always check to see if machine is clear by operating it manually, if possible.

15. Do not drink alcoholic beverages before or during work in the machine shop area. Do not bring food or snacks into the shop.
16. If you have not worked with a particular material before, check the hazardous materials data sheets book for any specific precautions to be taken while working with the material. Also, ask the instructor or lab assistant before cutting any unusual material.
17. Heavy sanding and grinding should only be done in well-ventilated areas. Painting outside on cardboard only – **make sure that the doors to the shop are closed.**
18. Follow all appropriate precautions when working with solvents, paints, adhesives or other chemicals. Use appropriate protective equipment.
19. Check the power cords and plugs on portable tools for before using them.
20. Always store oily rags in an approved metal container.

Guidelines for Cleaning

1. Turn off power to the machine before cleaning. This will avoid accidentally starting the machine and injuring yourself.
2. Remove cutting tools. Take out drill bits, mills and remove lathe tools to reduce the chances of getting cut. On the table saw lower the blade completely.
3. Put away all hand tools and other items around the tool so that you don't make them dirtier.
4. Clean chips from the tool, the chip pans. Recycle clean chips where possible.
5. Put a light coat of way oil on the machine ways. Ask staff to show you where this oil is kept (Blue oil).
6. Sweep the floor in the area where you have been working.
7. Do not use compressed air. Do not blow air into the bearing surfaces, and do not scatter chips all over the shop. Shop vacuum work great as well.
8. Report missing, broken or damaged tools.
9. Spend five minutes on general cleaning around the shop. We're all in this together.