SAFETY RULES

Safety is the first concern. In a shop environment there exists the possibility of serious injury. This can include the loss of a finger, limb, eye, or even life. Safety training and adhering to safe practices will prevent injuries. By planning out work, keeping a clean work environment, and executing it safely, a job can be done better and faster.

1. EVERYONE MUST ALWAYS WEAR SAFETY GLASSES IN THE SHOP.
   You must wear safety glasses in MET 28, even when you're not working on a machine. A chip from a machine someone else is working on could fly into your eye. Students will be given one pair of safety glasses; you must have them with you to use the Machine Shop. If you lose them, you must buy your own. The department will sell you a pair of glasses at cost.

2. NEVER WORK IN THE SHOP ALONE.
   There must be two persons in the shop at all times for student use.

3. NEVER WORK IN THE SHOP IF YOU ARE TIRED.

4. OBEY THE SHOP RULES AT ALL TIMES.
   Be aware of the current list of shop rules. They are posted in the shop.

5. IF YOU DON'T KNOW HOW TO DO SOMETHING, ASK!

6. THERE IS A ZERO TOLERANCE FOR HORSEPLAY.
   Fooling around in the shop can be very dangerous and is grounds for immediate dismissal from the shop.

7. CHECK YOUR HAIR, CLOTHES AND JEWELRY.
   Before entering the shop, check the following:
   - If you have long hair or a long beard, please tie it up. If your hair is caught in spinning machinery, it will be pulled out if you're lucky. If you're unlucky, you will be pulled into the machine.
   - No loose or hanging clothing. Ties, scarves, loose sleeves, shirttails etc. are prohibited
   - Please remove your jewelry. A ring or bracelet can get caught or in some cases can be an electrical contact.
   - No gloves! Only use gloves for material handling not for machine operation.

8. WEAR APPROPRIATE SHOES.
   No open toed sandals. Wear shoes that give a sure footing. If you are working with heavy objects, steel toes are recommended. A pair of stiff leather work boots or hiking boots can be adequate.
DU-Engineering Student Machine Shop

9. NO PERSONAL MUSIC DEVICES.
   A cassette player, MP3 or other such device should not be worn. If you are listening
to music, you can’t hear the machine or someone trying to warn you.

10. BE AWARE OF MEDICATIONS
    If you are taking any medication with warnings of drowsiness or not operating
machinery, you may not work in the machine shop.

11. BE SAFE, USE COMMON SENSE AND HAVE FUN!!

IN CASE OF EMERGENCY: DIAL 1-3000

Notify the person who answers immediately if an ambulance is needed.

NEAREST HOSPITAL:

   Porter Adventist Hospital
   2525 S. Downing St.
   Denver, CO
   303-778-1955

Revised 3/2003
DU-Engineering Student Machine Shop

MACHINE SHOP RULES

1. GENERAL SHOP ACCESS
   General Shop Access is given to DU students, faculty and staff who need to use the shop to complete course projects, but have not completed the shop certification course. General access students are allowed to use the band saw, the drill press, hand-tools, and the mini-mills and mini-lathes, provided they have been instructed in their course.

   A schedule of open hours and course specific shop hours is posted. While in the shop, all students will obey the current safety rules (posted on the wall).

   Professional behavior is to be maintained at all times. This means treating others with respect and using appropriate language.

2. CERTIFIED SHOP ACCESS
   Certified shop access is limited to those students who have successfully completed the shop certification course. Shop access is a privilege.

   A schedule is posted to indicate the open hours. Be respectful of classes using the machine shop. While in the shop, all students will obey the current safety rules (posted on the wall).

   Professional behavior is to be maintained at all times. This means treating others with respect and using appropriate language.

3. SHOP CERTIFICATION COURSE
   The shop certification course is offered every quarter. Please contact Shop Supervisor Chris Thurner at the start of the quarter to enroll. Students have one additional quarter from the time they start the class to finish.

4. AFTER HOURS ACCESS
   After hours access is required for all times not designated as open hours. This includes: mornings, evenings, and weekends. The shop closes to everyone at Midnight. After hours access is available only to machine shop certified students with proper approval from the Shop Supervisor or an engineering faculty member.

   A reminder: There must be two persons in the shop at all times. At least one shop certified student must be present. 1 machine shop certified student can oversee a group of up to 5 people. Only shop certified students may use the machine tools and the welding area.

   All After-hours Users must sign-in to the AFTER-HOURS LOG. Failure to sign-in will result in an automatic loss of machine shop privileges for 1 week.
DU-Engineering Student Machine Shop

Please see the Shop Supervisor to have your card access programmed into the door lock. If keys are checked out, the individual student is responsible for the keys. A “Shop Check Out” form will be completed at the time of check-out. The student who checks out the keys is the responsible party until they are checked back in.

5. PERSONAL PROJECTS
The main purpose of the machine shop is to support the projects associated with courses and research. Personal projects can be performed with proper approval. The student must supply a brief project description and must get approval by the Shop Supervisor or an engineering faculty member.

6. EQUIPMENT
No tools, equipment, or raw materials may be taken out of the shop without proper permission. A “Shop Check Out” form will be completed at the time of check-out. Typical check out is for 1 day. You must ask for permission for a multi-day check out.

Students must ask the Shop Supervisor for permission to use raw materials, don’t just take something without asking. Never take anything from the Shop Supervisor’s toolbox.

US FIRST tools are considered the property of the DU Machine Shop. They are subject to the same rules and require proper check-out procedure. The exception is that designated team members can take the US-FIRST tools to practice and competition functions.

7. SAFETY AND/OR RULES VIOLATIONS
The use of the shop is a privilege. Violations of the safety and shop rules will not be tolerated.
First offense: you will receive a verbal warning.
Second offense: you will receive a written warning.
Third offense: your shop privileges will be suspended and you will have a meeting with the Faculty Shop Committee.
Subsequent violations will result in the loss of all shop privileges.

8. CLEAN UP MACHINES AFTER YOU USE THEM!
The shop must be returned to the condition that the student(s) found it. A dirty machine is unsafe and hazardous to work in. Leaving the shop a mess will leave you out of the machine shop!

CONTACTS:
Chris Thurner Peter Laz
Shop Supervisor Faculty Shop Committee
303-871-4782 303-871-3614
cthurner@du.edu plaz@du.edu

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IMPORTANT MACHINE SHOP PROCEDURES

Be aware of what is going on around you. For example, be careful not to bump into someone while they're cutting with the band-saw (they could lose a finger!). Concentrate on what you're doing. If you get tired, leave. Don't hurry. If you’re rushing, you will make mistakes. Don't push the speeds and feeds. You'll end up damaging your part, the tools, and maybe the machine itself. Listen to the machine, if something doesn't sound right, turn the machine off. Don't let someone else talk you into doing something dangerous. Don't attempt to measure a part that's moving. Use common sense.

1. BEFORE YOU START THE MACHINE:
   Study the machine. Know which parts move, which are stationary, and which are sharp. Double check that your work-piece and cutting tools are securely held, and tools are aligned to do the work you intend to do.

2. TURN ON THE LIGHT AND CHECK YOUR GUARDS
   Each machine has its own work light and those machines that need chip guards are supplied with them. Never remove a light or machine guard.

3. REMOVE ALL CHUCK WRENCHES AND KEYS IMMEDIATELY
   A chuck wrench left in place when a machine is started up can kill someone and/or severely damage the machine. This is a common mistake and everyone will do it once or twice. After two warnings, you can be asked to leave the course.

4. NEVER LEAVE A MACHINE RUNNING UNATTENDED!

5. LOOK AROUND YOU BEFORE YOU USE THE AIR GUN
   Be very careful when using compressed air to blow machines clean. The flying chips endanger people's eyes and can force dirt into machine bearings.