

# Machine Shop Safety Training

The University of Texas at Austin



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## General Safety Training

- This training does not replace shop-specific safety training.
- You may need to take further training in order to be a qualified machine shop user.



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## Responsibilities

Users:

- Follow all safety rules.
- Complete all required training.
- Report any malfunctioning equipment or missing guards or safety devices immediately to the shop supervisor.
- Look out for the safety of yourself and others.




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## Responsibilities

Supervisor:

- Verify all personnel are trained prior to using equipment.
- Ensure personal protective equipment is used.
- Take out of service malfunctioning equipment.
- Ensure all emergency response & communication equipment is working.



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## Responsibilities (continued)

### Supervisor:

- Shut down work equipment for practices that are immediately dangerous.
- Ensure that injury report gets filled out:
  - University Health Services (students)
  - HealthPoint (staff)



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## Etiquette & Housekeeping

### Be considerate of others:

- Be aware of where your sparks, grindings, debris may fly.
- Clean up after your work is done. Debris may cause a slip hazard.
- No horseplay.
- No cell phone use, personal music devices.
- Keep exits, emergency equipment, and aisles clear.



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## Personal Safety

- Never operate machinery while alone.
- Never wear loose jewelry, clothing (medical alert bracelets & necklaces are exempt).
- Never work when you are tired.
- Never use equipment when impaired.
- Never distract the machine operator.
- Never place hands in the area of any cutting head, drill, or other rotating or cutting device/tool.



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## Personal Safety (continued)

- Never leave a machine while it is running.
- Check stock for imbedded objects prior to using.
- Secure all loose clothing (including religious and non-religious headgear), long hair, beards, jewelry, and lanyards.
- Tuck all medical alert necklaces and bracelets away.
- Report injuries to shop supervisor.
- Follow your shop's dress code.



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## Shop Access

- Your shop may have specific access requirements. Please follow these.
- Access should be limited to only trained personnel.
- Do not prop open the door.

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## Personal Protective Equipment



- You may be required to wear personal protective equipment when working on specific equipment.
- Some items you may need to wear are:
  - Safety glasses
  - Safety goggles
  - Welder's hood
  - Hearing protection (ear plugs or ear muffs)

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## Machine Guards Video

[Click to watch video](#)  
(01:57 min)

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## Machine Guards

- All belts, flywheels, chains, pulleys, spindles, & other moving parts should be guarded to prevent access or contact.
- Report missing guards to your supervisor.
- Never ever completely rely on a machine guard. No guard can protect you 100% of the time.

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## Types of Machine Guards

**Interlock** - part is connected to the machine controls that if the movable part is in the open the machine will not run.



**Fixed** - a fixed guard surrounds components and is not easily removed.



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## Types of Machine Guards

- **Adjustable** - guard that can move to accommodate stock or raw materials.



- **Self-adjusting** - similar to adjustable guard, it covers the hazardous area until stock is pushed into the point of operation and moves the guard.



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## Common Equipment

- The next slides are equipment found in many machine shops here at UT.
- They contain pictures and safety videos.
- Feel free to view as many of the safety videos as you or your shop supervisor prefer.

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## Lathe



[Click for video](#)  
(02:55 min)

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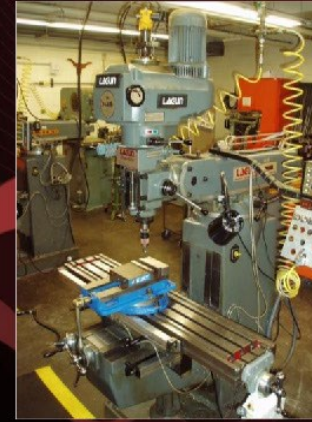
## Grinder Wheel



[Click for video](#)  
(03:01 min)

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## Mill



[Click for video](#)  
(50:33 min)

[More videos](#)

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## Band Saw



[Click for video](#)  
(05:36 min)

[Additional video](#)  
(09:02 min)

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## Drill Press



[Click for video](#)  
(06:02 min)

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## Sander



[Click for video](#)  
(07:44 min)

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## Circular Saw



[Click for video](#)  
(25:11 min)

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## Table Saw



[Click for video](#)  
(19:06 min)

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## Warning Signs & Labels

- In addition to parts of machine that should be guarded there are other hazards.
  - Pinch point
  - Hot equipment



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## Hand Tools



- There may be a variety of hand power tools in your shop such as:
  - Drills
  - Saws
  - Grinder
- These should be treated with the same care as fixed tools.
- Make sure their cords are in good working condition.



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## Medical Emergency

- In the event of a medical emergency first call 911.
- Immediately report the incident.
- Fill out appropriate paperwork with your supervisor.



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## Consequences

- Failure to follow rules may result in:
  - Loss of machine shop privileges.
  - Inability to complete project.
  - Reprimand or disciplinary action.



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## Almost Done!

You have completed the Machine Shop Safety Training module. Please click on the quiz button to take the quiz and receive credit for this course.

**QUIZ**

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