University of Delaware Engineering Student Machine Shop

General Shop Safety, Procedures and Policies

Safety Rule Number One

Safety glasses must be worn in the shop!
This is the most important Safety Rule!

Yale student killed when lab machine snags hair

By JOHN CHRISTOFFERSEN Associated Press
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NEW HAVEN, Conn. — A Yale University student nearing graduation was killed inside a school chemistry lab when her hair was pulled into a piece of machine-shop equipment, school officials said Wednesday.

Other Important Shop Safety Rules

- **Wear closed toe shoes – no sandals!**
- **Wear long pants – no shorts!**
- **Remove rings, watches, bracelets, necklaces etc.**
- **Long hair must be tied back.**
- **When using rotating machinery, make sure clothing (sleeves etc.) cannot become entangled in machine.**
- **Other rules apply to specific machines. It is your responsibility to obtain training before you use a machine!**

- **No horseplay!**
- **Dangerous materials such as carbon fiber, fiberglass, magnesium, etc. are not allowed to be machined in the shop.**
- **Always have proper welding eye protection when in the welding area to avoid eye damage.**

- **There is a 3 strikes and you're out policy for Safety and Housekeeping violations. Strike 1 is a verbal warning and your name will be added to the violation board in the shop. Strike 2 is a written warning signed by the supervisor and you. Strike 3 is that you are banned from the shop for a period of time depending on the severity of the violation.**

Basic Shop Policies

Project Requirements

- **Bring two copies of your drawing that have been signed by your advisor or professor. Drawings can be hand drawn or drawn using a drawing program (AutoCAD, SolidWorks etc.), but must have a title block similar to the standard template (available on the Student Shop website)**

- **If the project is not for a credit course or a club, you must bring a valid charge form to cover the cost of using the Lathes, Milling machines, and Welding Equipment. ($25/hr.). These forms are available at the Mechanical Engineering office, or from your Professor or Advisor. There is no charge for using other shop equipment.**

Basic Shop Policies

Machine Use

- **You must ask the machinist in charge every time you wish to use a machine.**
- **After setting up your job in a machine, contact the machinist in charge to check your setup, speeds and feeds.**
- **After using a machine, clean it up better than you found it. Report a dirty machine to the machinist when you begin using it. The next person to use that machine should not be able to tell which material was machined on it.**

Basic Shop Policies

Tool Storage

All tools, cutters and accessories should be returned to their proper place after use, however in some cases the student may not be aware where the tool belongs. Ask the machinist in charge where to put it. If the machinist is busy or unavailable, it is sometimes acceptable to put the tool on the end of the office desk near the door.

Basic Shop Policies

Borrowing Tools

It is permissible to borrow some tools for use outside the shop. Follow these three steps:

1. **Ask the machinist if you can borrow that tool.**
2. **Sign out the tool on the sign out sheet near the office door.**
3. **Tell the machinist that you have returned the tool, and sign the tool back in on the sign out sheet.**

Basic Shop Policies

Injuries

1. **Report all injuries, no matter how minor, to the machinist in charge.**
2. **The machinist will arrange for appropriate medical treatment.**
3. **If outside treatment is needed, an accident report will be filled out after the situation is resolved.**

Shop Resources

Steps to qualify to use the Student Machine Shop

1. **Register for F.O.M.**
2. **Sign in and select Machine Shop. You will receive an email to sign up for the training sessions.**

3. **Attend the General Shop Safety Training and The Hand and Power Tools Training in the Student Machine Shop (unless this presentation is delivered in class).**
4. **Once the training has been documented, you will be sent a link to the Quiz.**
5. **Take the Shop Safety Test and score 100%. You will receive confirmation that you passed. You can now access F.O.M. to reserve machines and sign up for additional training.**

Shop Resources

What tools and machines will you be allowed to use after completing this training?

1. **All common, non-power hand tools (wrenches, hammers, handsaws, measuring and layout tools, taps and dies etc.**
2. **Portable power tools like drill motors, jigsaws, circular saws etc.**

Shop Resources

What tools and machines will you be allowed to use after completing this training?

The Vertical Bandsaw

Shop Resources

What tools and machines will you be allowed to use after completing this training?

The Horizontal Bandsaw

Shop Resources

What tools and machines will you be allowed to use after completing this training?

The Pneumatic Shear

Shop Resources

What tools and machines will you be allowed to use after completing this training?

Drill Presses

Shop Resources

What tools and machines will you be allowed to use after completing this training?

Stationary Belt Sanders

Shop Resources

What tools and machines will you need further training to use?

Milling Machine

Shop Resources

What tools and machines will you need further training to use?

Lathe

Shop Resources

What tools and machines will you need further training to use?

Welding Machines

Shop Links

Where does one find more information?

Engineering Student Shop Webpage

or

E-mail:

snelson@udel.edu