

# DLC Shop Training

The purpose of the Discovery Learning Center (DLC) is for the development and manufacturing of items as needed for student projects. The DLC shall always be used in a safe and orderly manner. You are not authorized to use the Center or any equipment in it unless PROFESSIONAL STAFF supervision is present.

The DLC hours are posted each semester and you must plan your time accordingly. You are to comply with all direction given by supervisory staff. Failure to comply with the DLC directives will have consequences.

## SAFETY RULES

I, \_\_\_\_\_, agree to strictly adhere to the following safety rules:  
(Print your name clearly)

- **Proper Clothing:** Students shall wear jeans, a short sleeve shirt, closed toed shoes and protective eyewear in the Discovery Learning Center at all times. All fabrics shall be made of a natural fiber (cotton, wool, flax...).
- **Safety Glasses:** I will wear safety glasses at all times while in the DLC. If I wear regular prescription glasses, I will wear safety goggles over them.
- **Jewelry:** I will remove all rings, necklaces, bracelets and dangling earrings before operating any machinery or tools.
- **Loose Hair or Clothing:** I understand that loose hair and clothing are extremely dangerous. While in the DLC, I will tuck in my shirt, roll up long sleeves and tie back my hair.
- **NO hooded sweatshirts:** I will not wear a hooded sweatshirt.
- **NO sandals:** I will not wear open-toe shoes.
- **NO Shorts:** I will not wear shorts in the DLC.
- **NO Cell phones:** I will not use a cell phone in the machine shop.
- **Clean Up:** I will clean the machinery and any mess (sawdust, metal chips, spills, etc.) that I produced before leaving the DLC. Clean means the next machine user is unable to determine the material(s) I was using.
- **Return of Tools and Parts:** I will promptly return any tools, parts, bits, etc. to their proper place in the DLC.
- **Alcohol or Drugs:** No one under the influence of alcohol or drugs is allowed in the DLC. No alcohol or drugs are allowed in the DLC.

## Commitment

I declare that I have read and agree to comply with all **SAFETY RULES** and **SAFETY GUIDELINES** for using the Discovery Learning Center. I understand that failure to follow the guidelines may result in the privilege of using the DLC being withdrawn as well as facing disciplinary actions.

Signature \_\_\_\_\_ e-mail \_\_\_\_\_ MUID \_\_\_\_\_  
(Signed) (print)

## Training Completed

I have trained the above student and have followed the guide during the training session.

Basic / Mill / Lathe    Trainer \_\_\_\_\_    Date \_\_\_\_\_  
(Circle One)

## **Basic Safety and Processes**

Where is the first aid kit?

Describe proper clothing requirements.

Explain the prohibition of Alcohol or Drugs.

Describe the procedure for dealing with injury.

What is the procedure for dealing with health issues such as heart attack, stroke or latex allergy?

Where are the fire extinguishers?

Describe chemical or hazmat material spill containment.

Describe how to deal with a spill of a selected material.

What are the proper chemical storage procedures of flammables and oils?

What are the shop hours of operations?

What is the two person rule?

What materials may be worked within the machine shop?

What are the hazards of any machining process?

## **Mill Operations**

Name and describe the parts of a mill.

What are some of the hazards of using the mill?

Observe use of the mill.

What are the three axis of table movement?

How may the table be locked down?

Show the methods of adjusting the speed of the mill.

Demonstrate how to properly adjust the speed of the mill for a selected metal.

Show how to install a tool.

Show a proper setup of a work piece in a vise.

Describe how to change a tool.

What is a datum?

Show how to use an edge finder.

Show how to use the DRO. (Digital Read-Out)

Show how to square a block.

What is Surface Finish?

What is the purpose of lubrication?

What are the differences between each of the mills in the shop?

Where is all of the mill tooling kept?

## **NOTES:**

## **Lathe Operations**

Observe operation of the Lathe

Be able to name all the parts of a lathe.

Where is lathe tooling kept?

Describe the different types of chucks and where they are stored

Show how to install a chuck.

Demonstrate how to install a taper drill.

What is a live center?

What is a center drill?

What is a boring bar?

Demonstrate the proper selection of feed and speed.

Demonstrate the installation of a tool in the tool post.

Show how to change the speed of the chuck.

Show how to change the speed of the carriage.

## **NOTES:**