

Center for Neuroscience

Shop Safety Plan

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1.0 STATEMENT OF PURPOSE

This Shop Safety Plan documents the commitment of this department to comply with the requirements of PPM 290-58. It has been developed by the Shop Manager and it will be reviewed annually or when new or modified equipment is introduced into the shop. A complete list of Authorized Users will be kept current.

Documentation including shop policies, inventories of equipment, standard operating procedures, training materials and training records will be kept in a central location and readily available for review.



Signature, Department Chair

Date 1/2/17

2.0 GENERAL SHOP INFORMATION

Shop Name: Center for Neuroscience Machine Shop

Machine Shop Wood Shop Combination Hot Work Operations

Department: Center for Neuroscience

Lab: NA

Building : 1544 Newton Ct.

Location: Room 129

Supervisor: NA

Phone: NA

Email Address: NA

Shop Manager: Lisa Laughlin

Phone: 530-757-8905

Email Address: Isaughlin@ucdavis.edu

Primary Use: Maintenance Hobby Research
 Teaching Other _____

Student Access Yes No

Undergraduate Students

Graduate Students

Interns (Seasonal/Term)

Post-Doctoral/Fellows

Access Controls Yes No

Card Key Access

Energy Isolating

Other

Keys Maintained By: Access entry
maintained by Shop Manager

3.0 SHOP POLICIES AND PROCEDURES

HOURS OF OPERATION:

Day	Hours
Sunday	_____
Monday	_____
Tuesday	_____
Wednesday	_____
Thursday	_____
Friday	_____
Saturday	_____

General Policies and Procedures

- Tools and machines may only be used by Authorized Users.
- Only work with tools and machines that you have been authorized to use.
- Do not operate tools and machines when you are fatigued.
- Do not use equipment if you are using any medications with a warning to avoid driving or using equipment, unless a release is provided by a licensed physician.
- Do not use equipment if you are under the influence of alcohol or illicit substances.
- Do not use phones, headphones, ear-buds, or other electronic devices while operating machinery or tools.
- Safety glasses must be worn at all times while in a restricted area.
- Wear other PPE as required for each specific piece of equipment.
- Do not work alone in a shop unless you have written authorization by the Shop Manager.
- Open-toed footwear is not permitted in the shop.
- Wear non-slippery, thick, leather work shoes, preferably rubber-soled.
- Long pants (or equivalent) must be worn. (A shop apron cannot be worn in lieu of long pants.)
- Neck ties, necklaces, bracelets, jewelry, watches, long sleeves, etc. must be removed or rolled up before operating machinery.
- Long hair must be tied back to avoid entanglement in machinery.
- Safety guards must be in place at all times, ensure guides and fences are tight.
- Report damaged safety guards, machines and tools to the Shop Manager.
- Report unsafe issues to the Shop Manager.
- Keep your work area clean, do not place tools and materials on the machine table.
- Put tools away when you are done using them.
- Never leave tools unattended.
- Only one person may work on a machine at a time.
- Keep blades covered as much as possible.

- Never make heavy cuts with planers, jointers and routers.
- Plywood and particleboard must **NOT** be worked with the jointer or planer.
- Do not work small pieces with power machinery. Instead, use hand tools.
- Always secure the work piece with clamps or a vise.
- Never remove metal chips, turnings or shavings with your hands.
- Never use compressed air to clean clothing.
- Compressed air used for cleaning equipment must be regulated to 30psig and be equipped with a safety nozzle.
- No running or horseplay.
- No eating in the shop area.
- Always follow the Shop Manager's directions.
- Report all injuries (even small ones) to the Shop Manager.
- The First Aid Kit is located_____
- The Eyewash Station/Flush is located_____

Additional Policies and Procedures

- CNS Shop Safety Agreement_____
- CNS Safety Website- Shop Safety Page_____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____


4.0 INVENTORY OF SHOP EQUIPMENT

Machine	Manufacturer	Model Number	UCD ASSET #
Arc Welder			
Abrasive Cut Off Saw			
Band Saw			
Belt Sander			
Belt Disc			
Bench Grinder	Dayton	4Z909B 8" Bench Grinder	NA
Chop Saw			
CNC Machine			
Drill Press	EMCO	FB2 Vertical Mill/Press	933005593
Horizontal Mill			
Jointer			
Metal Lathe	EMCO	Maximat Super 11	933005592
Mig Welder			
Miter Saw			
Oxy-Acetylene Torch			
Planer			
Radial Arm			
Robotic Liquid Dispenser			
Router			
Shear			
Table Saw			
Vertical Mill			
Wood Lathe			
Other:			
Other:			

5.0 SHOP INSPECTION FORM

- € Documented self-inspections of machine shops must be conducted on a periodic basis.
- € Machine shops should be well organized and housekeeping closely monitored.
- € Equipment should be periodically inspected to ensure safe operations and proper guarding.
- € Unsafe equipment should be removed or locked out / tagged out until repaired.
- € Never use damaged equipment or equipment that is missing its machine guard(s).

Machine Shop Self-Inspection Checklist.

 UC DAVIS SAFETY SERVICES <small>Environmental Health and Safety</small> http://safetyservices.ucdavis.edu	Shop Safety Review Checklist One Shields Ave • Davis, CA 95616 Phone: (530)752-1493 Fax: (530)752-4527 E-mail: healthandsafety@ucdavis.edu					
U C Davis Environmental Health and Safety Shop Safety Review Checklist						
Reviewer:	Date:					
Shop Manager:	Phone:					
Building:	Room Number(s):					
Department:	Shop Name/Function:					
Please check Yes, No, Serious Violation or Not Applicable for each item. All No responses require follow-up within 30 days, unless otherwise noted and all Serious Violations require 3 day follow-up.						
#	Y	N	S	NA	ITEM	REFERENCE
DOCUMENTATION						
1					Shop Safety Plan is current and has been reviewed.	PPM 290.xx
2					Building Emergency Evacuation Route posted in buildings more than one story high.	CCR Title 19 §3.09, SN19, SN111
3					Emergency contacts posted at entrance to shop.	PPM 290.xx
4					Department illness and Injury Prevention Plan available and up-to-date.	CCR Title 8 §3203, PP290-56
5					Emergency Action Plan available and up-to-date.	CCR Title 8 §3220, PP290-56, SN19
6					Emergency assistance information posted.	CCR Title 8 §3400(f)
7					All Shop Hazard Assessment deficiencies corrected.	UCOP Policy, PP290.xx
8					Readily accessible Safety Data Sheets (SDS- hard copy or online).	CCR Title 8 §5194(g), PP290-27, SN33
9					Annual self-inspection complete.	CCR Title 8 §3203
10					Staff aware of procedure to report exposures or concerns.	CCR Title 8 §3203
11					Staff aware of procedure to report incidents and near misses.	CCR Title 8 §3203
12					Written Standard Operating Procedures available and current.	PPM 290-xx
ELECTRICAL						
13					All equipment power cord attachment plugs are equipped with a dedicated ground conductor (3-prongs).	CCR Title 8 §2360.2
Last updated 8/25/2015				Shop Safety Review DRAFT		

NOTE: The form is located on EH&S website. If you currently use your own inspection form, please insert it here.

6.0 STANDARD OPERATING PROCEDURES







Standard Operating Procedures (SOPs) for the CNS machine shop equipment is located on the CNS website: <http://neuroscience.ucdavis.edu/healthandsafety/ShopSafety.html>.

Generic Standard Operating Procedures for various shop equipment are located on the External Reference section of the website. Information is provided by Lovegreen Safety. <http://www.lovegreen.com/risk/placard.html>

- € EH&S recommends that SOPs be posted at the machine if possible or readily available in the machine shop area.
- € The SOPs provide quick safety references/tips on safe equipment use. This information is not a substitute for manufacturer, OSHA or other equipment training materials.

SAFETY OPERATING PROCEDURES
Bridgeport Mill

DO NOT use this machine unless you have received instruction from EFL staff

 Safety glasses must be worn at all times.	 Long and loose hair must be contained.
 Sturdy footwear must be worn at all times in work areas.	 Close fitting/protective clothing must be worn.
 Rings and jewellery must not be worn.	 Gloves must not be worn when using this machine.

- ◆ Check that machine guards are in position.
- ◆ Ensure cutter is in good condition and securely mounted.
- ◆ Check for sufficient flow of coolant.
- ◆ Do not reach around tool when the spindle is spinning.
- ◆ Faulty equipment must not be used. Immediately report suspect machinery to the Student Machine Shop Supervisors.
- ◆ Keep clear of moving machine parts.
- ◆ Follow correct clamping procedures – check that work piece is secure.
- ◆ Set the correct speed to suit the cutter diameter, the depth of cut and the material.
- ◆ Before making adjustments and measurements or before cleaning chip/debris accumulations, switch off and bring the machine to a complete standstill.

POTENTIAL HAZARDS

- ⇒ Sharp cutters can cut fingers!
- ⇒ Moving components – hair/clothing entanglement in rotating machinery!
- ⇒ Eye injury from metal chips!
- ⇒ Skin irritation from coolant exposure!
- ⇒ Metal splinters and burns can cut skin!
- ⇒ Flying debris can injure you or a bystander!

7.0 TRAINING & RECORDKEEPING

7.1 Training Content

Each shop is responsible for training its users. Training content should include two components; 1. “**Classroom Training**” to discuss shop rules, policies and safety procedures; and 2. “**Practical Hands-On Training**” for each piece of equipment the user will have access to.

Please list in detail the subjects you will train each student on. **NOTE:** If you already have forms, factsheets or other documents used for training, simply insert the most updated version here. These forms must include (but not limited to):

- Employees’ names (or other identifier)
- Training dates
- Subject matter covered: All training material is listed on the shop safety webpage on the CNS Safety website. <http://neuroscience.ucdavis.edu/healthandsafety/ShopSafety.html>
- Training providers

Bench Grinder (example)

Classroom Training Outline:

- Grinder operation- turning on/off, adjusting work rest and tongue guards.
- Nomenclature- parts of the grinder.
- Approved work materials – i.e. no Aluminum.
- Abrasive wheel types and their limitations.
- Proper PPE.
- Hands-on.

Practical (Hands On) Training Outline:

- Perform proper lock out before changing wheel.
- Remove and replace wheel- use of blotters, proper flanges, torque mounting nut.
- Perform ring test of wheel.
- Verify rpm rating of wheel is greater than motor rpm.
- Adjust work rest and tongue guard to proper clearances.
- Demonstrate proper dressing of wheel.
- Demonstrate proper grinding techniques.

7.2 Record Keeping

A. Record Keeping

The following documents must be maintained by the Shop Manager:

- a. A completed User Authorization Form ([Attachment 2 example](#)) for each Authorized User. This document must be kept for the duration of employment, tenure or work-study term plus 3 years.
- b. All training rosters ([Attachment 3 example](#)) and training content must be kept for 3 years.
- c. All procedures or protocols developed for shop safety must be kept for as long as they are current.
- d. All shop Hazard Assessments must be kept on file. ([Attachment 4 example](#)).
- e. Annual Shop Safety inspection checklists must be kept on file. ([Attachment 5 example](#)).
- f. Crane and hoist inspection reports and proof load tests, if applicable.

Please list any shop specific requirements for authorized users.

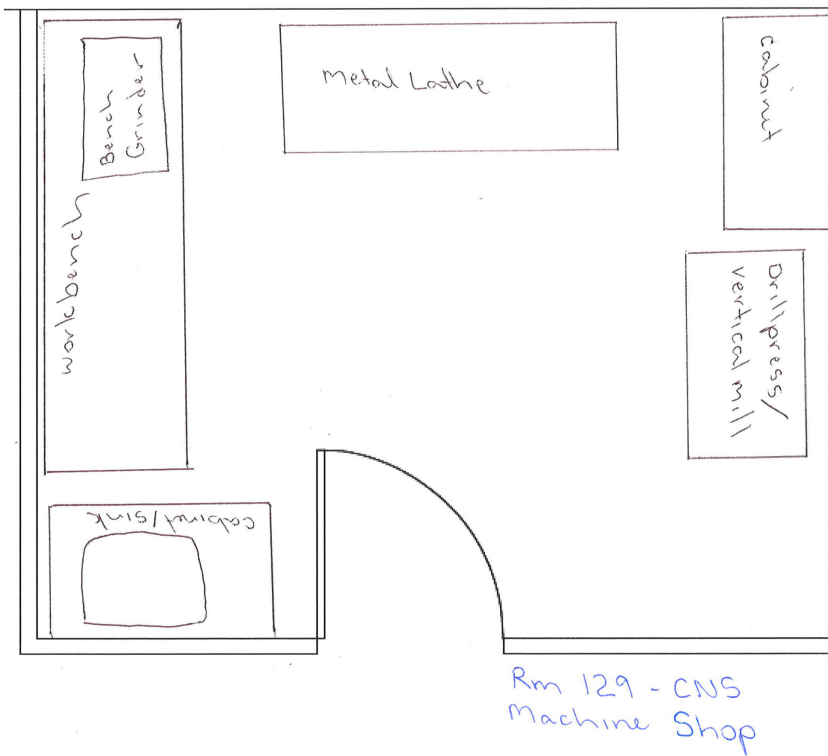
8.0 LIST OF AUTHORIZED USERS

Name	UC Davis Student ID	Phone	Training Completed	Date Authorization Given	Shop Manager's Initials
*			Yes / No		
			Yes / No		
			Yes / No		
			Yes / No		
			Yes / No		
			Yes / No		
			Yes / No		
			Yes / No		
			Yes / No		
			Yes / No		
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			Yes / No		
			Yes / No		
			Yes / No		
			Yes / No		
			Yes / No		
			Yes / No		
			Yes / No		
			Yes / No		

*The list of authorized users and their training documents and agreement forms are kept with the CNS Safety Manager.

9.0 RESTRICTED AREAS

Please insert a floorplan drawing below showing the restricted areas of the shop. A restricted area may be the entire shop or a portion thereof. If a restricted area is only the area surrounding a machine or process, the floor around that tool or process should be marked with a high visibility paint (or equivalent).



9.1 SIGNAGE

Entrances to all restricted shop areas must be posted with notices stating that entry is only allowed by Authorized Users. Visitors should be directed to the Shop Manager and telephone contact information should be provided.

