School of Art & Art History

# UNIVERSITY OF IOWA SCHOOL OF ART & ART HISTORY
# Wood Shop Safety Procedures

## Wood Shop General Rules

***The wood shop is a facility offered by the School of Art and Art History to be used by enrolled students and the woodshop staff. It is considered a privilege to use the shop and is expected that it will be used in accordance with all safety rules and restrictions as determined by the School of Art and Art History and the University of Iowa. Any willful misuse of the shop or deviation from the safety rules will result in suspension of the student's shop privileges. This suspension will last for two weeks the first offence and six weeks for the second offence and a permanent suspension for a third offence.***

## General Safety

1. All persons must wear safety glasses upon entering the wood shop. Please note that a face shield is not a substitute for safety glasses; it is only added protection.
2. Working with wood is dusty. You must provide your own particle mask! If you have dust allergies or asthma please consider using a good particle mask.
3. Appropriate attire must be worn to work in the wood shop. No jewelry or baggy clothes may be worn when working with power tools. Long hair must be tied back. No open toed shoes. **Never wear gloves.**
4. No student is allowed to work with power tools while alone in the shop.
5. No one is permitted to remove a safety guard from any tool.
6. No adjustments are to be made to any equipment except by the Shop Coordinator or the Shop Monitor. **No exceptions.**
7. Never speak to anyone using a power tool. Wait until they are done.
8. If you find any tool in need of repair, turn it off immediately and tell the Shop Monitor. Under no circumstances make repairs to the equipment yourself. Please note that broken tools will take up to two weeks to get back online.
9. Shop users are responsible for immediately cleaning up their work area and the tools when done. This must be done before another person uses the area. Brooms, hand brooms, a Shop-Vac, dustpans, and an air hose are provided. Failure to clean up can result in suspension from the shop.
10. Wood and supplies must not be stored in the shop. Projects in process may only be left with permission of the Shop Coordinator.
11. Only new lumber may be used in the shop. All bark must be removed from wood and wood must be properly dry. Any recycled or found materials must be inspected by Shop Coordinator before being machined.
12. Nothing wet is to be placed on any of the tools. No Pop Cans, towels, food, etc.
13. No other material, like metal or plaster, is to be used in the wood shop without permission of the Shop Monitor.
14. Students may only use the Lathe, Planer, Jointer, Shaping Table and CNC Router when Shop Coordinator is present. Students May only get instruction on these pieces of equipment from the Shop Coordinator.
15. **No open flame in the wood shop.**

16. Immediately report any and all accidents or incidents to the Shop Monitor, no matter how small.
17. If you notice that a specialty tool (Usually a small and portable one.) is missing from shop inventory talk to the Shop Coordinator or the Shop Monitor and arrangements may be made to order the tool. Replacement will take at least two weeks.

***If you are unsure of how to do something ask the Shop Monitor. Any damage done to equipment due to negligence will be billed to the U-Bill of the individual responsible.***

***Please notify the Shop Coordinator and/or the Shop Monitor if you have any disabilities that may require some modifications in the Shop so that appropriate arrangements may be made.***

The Wood Shop Coordinator, the Sculpture Labs Coordinator and the School of Art and Art History make the final decision on how this shop and equipment will be used.

## Wood Shop Safety

### TOOLS & MACHINERY

### MITER SAWS

1. MAINTAIN A SIX-INCH MARGIN OF SAFETY FROM THE BLADE. This means that you must keep your hands six inches away from the path of the saw blade.
2. Wear safety glasses.
3. Keep the blade guard in position at all times.
4. Hold stock firmly on the table and against the fence.
5. After making the cut but before raising the saw make sure that the blade has come to a complete stop.
6. When making multiple cuts of various angles do not move hands under the blade whether it is moving or not.
7. When you complete your work at the saw lower the saw and lock it in place. Sweep the workstation and the floor. All scrap goes in the scrap bin.

### TABLE SAW

1. Safety glasses required for this tool. Face shield is optional but recommended.
2. Turn on the dust extractor before turning on the table saw.
3. The saw is equipped with a blade guard. The device is the most important safety feature for this piece and may not be removed or circumvented. If there is a cut to be made on the table saw that must circumvent the guard the MONITOR must perform the cut.
4. Be certain that the blade is sharp and that it is the right blade for your work. The shop has a dedicated blade for cutting Plexiglas.
5. Set the blade so that it extends no more that 1/4-inch above the stock to be cut.
6. Stand to one side of the operation blade. Do not reach across it.
7. Make sure that the stock is fully past the blade before turning the saw off.
8. MAINTAIN A SIX-INCH MARGIN OF SAFETY FROM THE BLADE. A variety of push sticks are provided and must be used when cutting closer than six inches.
9. Rough stock must be surfaced and at least one side jointed before being cut on the table saw.
10. NEVER CUT STOCK FREE HAND.
11. Use only new stock that is free of knots, splits and warp.
12. Do not let small scrap cuttings accumulate around the saw blade. Use a push stick to push them away.

13. Students helping to “tail off” stock from the saw should not push or pull the stock. They should support it as necessary. The operator must control the feed and direction of the cut.
14. Cross cutting on the table saw is dangerous. Cross cuts 12” or under can be made on the BOSCH sliding compound miter saw.
15. Cut down full sheets of plywood on the panel saw.
16. As you complete your work, turn off the saw and remain until the blade has stopped.
17. Clear the saw of dust and waste. Return the saw blade to zero settings. SWEEP THE WORK AREA!

**DRILL PRESS**

1. Wear safety glasses.
2. Secure work properly.
3. Never stand on tool.
4. Do not wear gloves or loose clothing.
5. Never start the drill press with the drill bit or cutting tool in contact with the work piece.
6. Do not attempt to drill material that does not have a flat surface. No round stock.
7. Stop the drill press before removing scrap pieces from the worktable.
8. Clean the tool and the work area when done.

**BELT AND SPINDLE SANDER**

1. When using the Sander, turn on the dust extractor.
2. Wear safety glasses. Dust mask (supplied by you) recommended.
3. Do not use worn out or loaded up sanding tubes or belts. There is a rubber sanding belt cleaner next to the sander to use on loaded up sanding surfaces. Use of the cleaner will make the sanding surfaces last longer.
4. Always hold work securely.
5. Move your work across the surface of the abrasive. DO NOT sand in one place, this clogs, burns and ruins the abrasive surface.
6. The sanding belt should track in the middle of the plate. Do not use the machine if the belt is rolling off one side of the other . Report any tears or holes or flaws to the Monitor. Do not attempt to re-adjust the machine yourself.
7. Clean up when done.

**PANEL SAW**

1. Cut down full sheets of plywood on the panel saw. Do not use the table saw for full sheets!
2. When cross cutting stock let the saw blade come to a full stop before raising it up for the next cut. When cross cutting cut from the top only.
3. Do not drop plywood on guide wheels, this might throw them out of alignment.
4. Support large sheets of plywood properly.
5. When ripping on the panel saw you will need help from the Shop Monitor to tail off the material. The Monitor will finish the cut by pulling both the stock and the off cut through the saw.
6. Clean tool and work area when done.

**BAND SAW**

1. Wheel guard doors must be closed and the blade properly adjusted before turning on the machine.
2. Adjust the upper guide assembly so it is no more than1/4” above the work.

3. Allow the saw to reach full speed before starting to feed the work.
4. The stock must be held flat on the table.
5. Feed the saw only as fast as the teeth will remove the wood easily.
6. MAINTAIN AT LEAST A FOUR-INCH MARGIN OF SAFTEY. (This means that the hands should always be at least four inches away from the blade when the saw is running.)
7. Plan cuts to avoid backing out of curves, whenever possible. Stop the machine before backing out of a long curved cut.
8. Make turns carefully and do not cut radii so small that the blade is twisted then broken.
9. Round stock should not be cut unless mounted firmly in a jig.
10. Do not let small pieces of wood accumulate around the blade. Move them out of the way with a push stick or turn off the saw, wait till the blade stops, and then clear the table.
11. If you hear a clicking noise, turn off the machine at once. This sound indicates a crack in the blade. If the blade breaks, shut off the power and move away from the machine until both wheels stop.
12. Turn off the machine as soon as you finish working. Sweep the table and the floor. All scrap in the scrap bin. Lower the upper guide assembly.

**BRAD NAILER AND THE NARROW CROWN STAPLER**

1. You must wear safety glasses when using either of these tools.
2. Add a drop of tool oil into air supply connector before connecting air supply hose.
3. Disconnect tool from air hose before clearing a jammed fastener.
4. Connect tool to air supply before loading fasteners. Always assume that the tool contains fasteners.
5. Never point the tool at yourself or any one else.
6. Remove finger from trigger when not driving fasteners. Never carry a tool with your finger on the trigger.
7. Do not drive fasteners into a surface that is too hard.
8. Do not drive fasteners on top of other fasteners or drive fasteners at too steep of an angle.
9. Keep hands and fingers away from the nailing area. You could nail through the material and into your finger.
10. Do not fasten too close to the edge of the material. The material could split and the fastener could fly free or ricochet, causing personal injury to you or someone in the work area.
11. When done blow out tool and return to the tool case. Roll up air hose.

**HAND TOOLS**

1. Safety glasses required.
2. When using the carving chisels DO NOT FORCE THEM, do not hog out too much wood, approach knots with caution. Take care of the mallet when striking the chisels. DO NOT DROP THE CHISELS.
3. Secure stock when working. If you don't know how, ASK!
4. Put them back in their proper place.
5. When cutting with a knife or razor, cut away from yourself.
6. If the tool is broken or compromised please tell the Shop Monitor.
7. Do not drill yourself, stab yourself, or hit yourself. If you get something in your eye wash it out

**THE FOLLOWING TOOLS ARE NOT INCLUDED IN THE SAFETY ORIENTATION.**

*In order to use these tools you must get a demonstration of how they are too be properly used.* ***It is important to discuss your construction plans with the woodshop staff and consider how you will use the tools and the shop to best complete your project.***

## 4" ANGLE GRINDER

1. Wear a face shield and safety glasses. A face shield is not a substitute for safety glasses.
2. When using the tool for sanding move the tool around the stock, do not leave it in one place.
3. Do not grind metal in the wood shop.
4. Never remove the guard. It can be rotated for optimum positioning.
5. Always use the auxiliary handle for maximum control over torque reaction and kickback.
6. Secure the work properly on the workbench. Adjust your work to a comfortable height. There is a portable step to stand on if you need to be higher. IF YOU DON'T KNOW HOW TO SECURE YOUR WORK—ASK!
7. When carving with the carving attachment for the angle grinder, be very careful!
8. Grip the tool with both hands at all times.
9. No loose clothing.
10. Be very aware of people around you, ask them to give you space if you need it.
11. Blow off the tool, put it away and sweep the work area.

## DIE GRINDER

1. Keep away from rotating spindle and accessory.
2. Do not wear jewelry or loose clothing. Keep hair away from tool.
3. Use accessories that are rated for the Die Grinder only.
4. Keep hands clear of spindle and tool end.
5. Use both hands to hold tool
6. Be aware of excess hose on the floor, tripping is a hazard.
7. Clean tool and work area when done.

## JOINTER

1. Be sure that you have the Shop Coordinator's approval to operate this machine. If you are familiar with jointer operation but have never used the jointer in the wood shop you still need a demonstration from the Shop Coordinator.
2. Safety glasses and face shield required when using this machine.
3. Before turning on the machine, make adjustments for depth of cut and position of fence.
4. Do not remove the guard. Do not adjust the out feed table without Shop Coordinator's permission.
5. Maximum cut depth for jointing an edge is 1/16th".
6. Stock must be at least 12 inches long.
7. Feed the work so that the knives will cut "with the grain". Use only new stock that is free of knots, splits and checks.
8. Keep your hands away from the cutterhead, even though the guard is in position. MAINTAIN AT LEAST A SIX-INCH MARGIN OF SAFETY. (This means that the hands should always be at least six inches from the cutterhead.)
9. Use a push block when planing a flat surface. Never apply pressure directly over the knives with your hand.
10. Do not plane end grain.

11. The jointer knives must be sharp. Dull knives will vibrate the stock and may cause a kickback.
12. Material cannot be less than 1/4 inch thick.
13. Clean tool and work area when done.

**THICKNESS PLANER**

1. You must have permission of the Shop Coordinator to use the Thickness planer.
2. New wood only in the planer.
3. The Shop Coordinator must inspect all wood before using the Thickness Planer. Under no circumstances can recycled material be used.
4. Do not plane the maximum amount off of stock when planing. Two passes through the planer can be better than one. Be aware that some woods are harder than the others are; hard woods will need more passes through the planer.
5. Keep hands and fingers away from cutter head when machine is running.
6. When planning thin pieces of wood, be sure to stand to one side in case the wood breaks and kicks back.
7. Plane near the door or outside to make the cleanup easier.
8. Check planer table before turning it on, a tool might have slipped under the cutter head.
9. Make all adjustments with the power off.
10. Support the work properly at the in feed and at the out feed.
11. Do not perform planing operations on material shorter that 10", narrower than 3/4" wider than 121/2", or thinner than 3/16"
12. Clean tool and work area when done

**LATHE**

1. Be sure that you have the Shop Coordinator's approval to operate this machine. If you are familiar with lathe operation but have never used the lathe in the wood shop you still need a demonstration from the Shop Coordinator.
2. Before starting the machine, be sure that spindle work has the cup center properly imbedded, tail stock and tool rest are securely clamped and there is proper clearance for the rotating stock.
3. Before starting the machine for faceplate work, disengage the spindle lock and check to see that the faceplate is tight against the spindle shoulder and the tool support has proper clearance.
4. Wear safety glasses and a face shield to protect your eyes and face, especially when roughing out work.
5. Select turning speed carefully. Large diameters must be turned at the lowest speed. Always use the lowest speed to rough out work.
6. Wood with knots and splits should not be turned. Glued up stock should cure at least 24 hours.
7. Keep the tool rest close to the work.
8. Remove the tool rest for sanding and polishing operations.
9. Use a scraping cut for all face plate work.
10. Remove both the spur and cup centers when they are not in use.
11. When you stop the lathe to check your work also check and lubricate the cup center.
12. Keep the lathe tools sharp; hold them firmly and in the proper position.
13. Keep your sleeves rolled up and other loose clothing away from the moving parts of the lathe and work.
14. Clean up debris and dust.

**CIRCULAR SAW**

1. Wear safety glasses.
2. Cut down full sheets of plywood on the panel saw.
3. Check to see that blade guard is working properly.
4. Set blade depth !/4” below material you are cutting.
5. Arrange the material so that the saw will not bind as you are cutting the material.
6. Unplug cord before changing the blade or working on the tool.
7. Clean tool and work area when done.

# APPENDIX F

## Voluntary Use Respirator Maintenance Procedures

*Cleaning and Sanitizing*

Disposable Dust Mask:

Do not attempt to clean respirator, discard when necessary and replace with a new respirator.

Elastomeric Reusable Face Piece Respirators:

Respirator users must clean their respirator after each use with respirator wipes paying particular attention to the face sealing surfaces. If a more thorough cleaning becomes necessary, using the following procedure:

1. Remove cartridges/filters, do not wash or disinfect used cartridges.
2. Disassemble respirator, including valves, face-piece yoke, and cartridge holders.
3. Clean respirator parts:
    a. Immerse them in warm soap and water solution.
    b. gently scrub face-piece and parts with a cloth or soft brush.
    c. Remove foreign matter from surfaces of exhalation valve and seats.
4. Sanitize parts by immersing for two minutes in a water solution containing:
    a. commercial cleaner/sanitizer, or
    b. two tablespoons of bleach per gallon of water, or one teaspoon of tincture of iodine per gallon of water.
5. Thoroughly rinse parts with warm water.
6. Allow parts to air-dry in a clean location.
7. Reassemble respirator by reversing steps used to disassemble. Install new cartridges if needed.

*Respirator Storage*

1. Store respirator in clean sealed container or plastic bag while not in use.
2. Stored in a clean dry place. Do not distort rubber face-piece during storage

**THE UNIVERSITY OF IOWA**
**SCHOOL OF ART AND ART HISTORY**
**WOODSHOP RELEASE FORM**

I, (print name) _____acknowledge that I have read the proceeding woodshop rules for use of safety and understand my responsibilities in the safe operation of the tools and machinery including the use of personal protective equipment of the woodshop studio. I understand that working with woodshop tools is a dangerous activity, and in consideration of the School of Art and Art History of The University of Iowa granting me permission to participate in the woodshop Studio, recognize that there are certain risks involved in such activities, and hereby assume all risk of personal injury which may result from ordinary woodshop activity; and acting for myself, my heirs, personal representatives, and assigns do hereby release the State of Iowa, The University of Iowa, its officers, agents, and employees from all liability, including claims and suits at law or in equity, for and injury, fatal or otherwise, which may result from my deviation from the woodshop studio rules for use and safety.

Signature _____

Date _____

**STATEMENT OF RESPONSIBILITY – PERSONAL/PUBLIC PROPERTY**

I, (print name)_____recognize that the instructors/staff will exercise great care and attention while handling/storing my work. I understand that I will be assigned a shared locker space to store my tools/equipment. I am responsible for providing a lock to secure this space. All personal possessions must be removed from the studio at the close of each grading period. There will be no long term storage of work beyond the end of the grading period. All items will be considered abandoned/discarded after the last day of exams of that semester. Any arrangements by any department must be made in writing with current appropriate, acceptable, accompanying insurance documentation. In consideration of The School of Art and Art History of the University of Iowa granting me the privilege of storing my tools/materials/work, I recognize that there are certain risks of loss, theft or damage to my tools/materials/work. I understand that I am ultimately responsible for all of my artwork/materials and am accepting the risk of loss by leaving my work in the studio, and; acting for myself, my heirs, personal representatives, and assigns do hereby release the State of Iowa, The University of Iowa, its officers, agents, and employees from all liability, including claims and suits at law or in equity. Please take responsibility for your materials/work.

Signature _____

Date _____

## APPENDIX D

Voluntary Use Respirator Training / Documentation Sheet

Information for Employees Using Respirators Not Required Under the Standard

**(Appendix D to 29 CFR 1910.134)**

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, of if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

- Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
- Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U. S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
- Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
- Keep track of your respirator so that you do not mistakenly use someone else's respirator.

By signing this record, I indicate I have read and been provided a copy of Appendix D of the OSHA regulation 20 CFR 1910.134. I understand that any voluntary use respirator provided to me by the department, or that I bring into the workplace, cannot be used where respirator use is required because of hazardous air contaminant concentrations.

**PRINT NAME**

_____

**SIGN NAME** **DATE**

_____ _____