



SUNY Oneonta Sculpture Studios Handbook

Your guide

to the safe and efficient usage of the sculpture studios at SUNY Oneonta

<http://employees.oneonta.edu/sakoult/sculpture/>

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About This Handbook

This handbook provides information about the Sculpture Studios of the Art Department at SUNY Oneonta, which consist of rooms FA 233, FA 234, and all the subdivisions within.

It is required reading for all who have been approved to use the studios.

An electronic version of this handbook with updates, and additional resources can be found at <http://employees.oneonta.edu/sakoult/sculpture/>

This handbook is not an exhaustive resource, but it is designed to provide basic information and policies that ensure the safe use of the facilities and tools.

This handbook is written and maintained by Professor and 3D Studio Coordinator, Thomás Sakoulas. Please send all comments and suggestions regarding the contents of this handbook to Thomas.Sakoulas@oneonta.edu

This copy was updated: Spring 2016

General Studio Policies and Procedures

Guidelines for Student Usage of the Studios

- Only authorized persons may use the sculpture studios.
- Read the studio Handbook and become familiar with the facilities.
- Memorize and observe all safety rules.
- Use the Sculpture studios only for class projects.
- Eye protection is required at all times inside the sculpture studios.
- Use only tools and materials that have been approved by your instructor.
- Return all tools to their proper storage place after use.
- Store your work safely out of the way when you are done.
- Clean up your area. Students, faculty and staff who use the studio must clean up their mess before leaving. Allow extra time at the end of each class for cleanup.
- No guests allowed in the sculpture studios. No horseplay! Students who are authorized to use the studios may not bring unauthorized persons into the studio at any time.
- Only students enrolled in a class that requires the use of the Sculpture studios are allowed in the facilities. Others may use the studios only with special permission of the 3D Studio Coordinator.
- Authorized students must attend an orientation regarding access, safety, security, studio maintenance, supplies usage, policies and practices. Each professor will provide the orientation in the first weeks of each semester.
- After-hours use of the studio will be granted to students who are enrolled in a course that requires the use of the 3D Studios, and only when a tech or an instructor is present. Tech hours are posted on the doors.
- Access to the sculpture studios may be revoked at any time. Reasons for revoking access to the studios include – but not limited to – violations that lead to safety, cleanliness, or security issues.

Safety

Don't compromise your personal safety, or the safety of those around you.

A momentary lapse of attention or reason can affect you or your classmates for life.

Pay attention, be alert, and follow instructions!

Memorize and follow these simple safety rules:

- Report all health/respiratory issues to your professor at the beginning of the semester.
- Wear eye protection at all times in the studios.
- Ensure that your tool can't fly out of control and hit you, that you don't fall into a working machine, and that your work does not get knocked into you.
- Always wear appropriate clothing and gear in the studios. Do not wear open-toe shoes, loose or dangling clothes, scarves, or neckties.
- Pull back long hair, and tuck in loose clothing, remove all jewelry that might constitute an obstruction (bulky rings, necklaces, long earrings etc.), and make sure that your sleeves are buttoned or rolled above the elbows.
- Do not use a particular tool without help if you are not sure what you are doing.
- Do not use tools if you are ill or under the influence of any substance or medication that might impair your abilities, or when you feel particularly tired.
- Do not use tools if you are frustrated with your work (take a break and continue your work when you feel calmer), or when you are in a hurry (plan ahead and do not leave the bulk of the work for last minute).
- Always maintain a comfortable posture and keep your workspace and floor free of debris.
- Ask for help if you need it or when you are uncertain whether or not you need it.
- Do not distract someone who is using a power tool.
- Use clamps to secure your work instead of your hands or body.
- Don't use lumber that is warped. No reclaimed lumber is allowed in the studio.
- Do not use any tool that does not appear to be in good working order.
- Use tools for the purpose for which they were designed. If you are not sure, ask.
- Unplug power tools or remove batteries before changing blades, disks, bits, etc.
- Do not remove machine guards and do not tamper with safety gear.
- Report all non-injury accidents and malfunctioning tools to your instructor.
- Do not attempt to repair any machines or tools yourself.
- No spray paint, or solvents of any kind are allowed in the studio.

Emergency Protocol

1. Move away from any danger.
2. Call 911. (For non-emergencies, call University Police: (607) 436-3550).
3. If possible, stay in a safe area nearby to provide information to emergency personnel.
4. Notify your professor as soon as possible.

In the event of an emergency requiring evacuation from the classroom **evacuate to IRC lobby** (across the quad) so that College officials can account for you. Please review the College's Emergency Evacuation Procedures and Shelter-in-Place procedures at the following web link: <http://www.oneonta.edu/security>

All students are also encouraged to register for NY Alert for immediate notification of campus emergencies on or near the campus.

Comfort

Appropriate clothing required for each process. Follow your professor's instructions. In general, dress for a mess. Even if your own work does not seem to be messy, other's mess might affect you.

- Open music in the studio is allowed as long as no one objects to it. Be respectful of others when playing your music in the open.
- Headphones and personal music players are allowed when power tools are not used make sure you can hear your surroundings.
- Pace your work. Most three-dimensional work is physical and can't be done in one sitting or in one night.

Cleanliness

There are over one hundred students using the sculpture studios each semester and some processes are messy. Please help keep the studios as clean as possible for everyone.

- Clean up your area from debris immediately after you finish working.
- Put all tools away in their proper storage place after you have cleaned them from all debris.
- Remove from the studio all materials not used for your immediate project., and remove all your personal belongings immediately after the final critique.
- Participate in the communal clean up at the end of the semester. Your professor will inform you of the date and time of the studio clean up.

Storage and Lockers

Storage in the studios is extremely limited. While some temporary storage is possible, keep in mind that there is no 24-hour guard in the studio and therefore no one can guarantee that items stored in the open are secure. Take home all valuable/irreplaceable personal artifacts.

- All stored materials must be labeled with the student's full name, class, semester, and year. Unlabeled projects and materials are subject to removal at any time.
- Students may store temporarily all the required materials for the completion of their class projects.
- Small items should be placed in the student's locker, and open shelves, while large materials may be stored temporarily around the studios for a limited time. Talk to your professor to find a suitable and safe area to store large personal items.
- All materials and artwork (personal items) must be removed at the end of the semester. Professors will provide specific deadlines for removing personal items from the studios, but if they don't, the final deadline to remove personal items is the end of your class' final meeting.
- The lockers in the sculpture studios are available for student use on a first-come, first-serve basis.
Students must label their locker with their full name, course number, and semester.
Locked lockers that are not labeled may be cut open at any time.
All lockers must be emptied and cleaned immediately after the conclusion of the class' final meeting. Items left behind will be recycled or discarded.
- Failure to remove personal items before the deadline can affect student grades and/or future access to the studios.

Sculpture Studios Information

Hours

During the semester, excluding breaks, the studio hours are:

Monday through Friday from 6am to 11pm, Saturday and Sunday 9am to 11pm

Class schedule for each semester is posted outside the door of the studios. The studios are available to authorized students whenever there is no class meeting. When a class is in session, it is possible for authorized students to use the studios by asking permission from the professor in advance.

The studios are closed during all official college recesses. Check the official college calendar to find out when the college is officially closed: <http://www.oneonta.edu/admin/registrar/>

Access

The doors to the sculpture studios are to remain locked at all times. Students who are enrolled in relevant classes can unlock the doors with their student ID. Do not prop the doors open. Please carry your student ID with you at all times and don't provide access to anyone who is not authorized to use the studios.

Students who use power tools may use the studios outside class time only if there is a Studio Assistant present (their hours are posted on the door).

Personnel

3D Studio Coordinator: Professor Thomás Sakoulas (sakoult@oneonta.edu)
Tel: 607 436-2687.

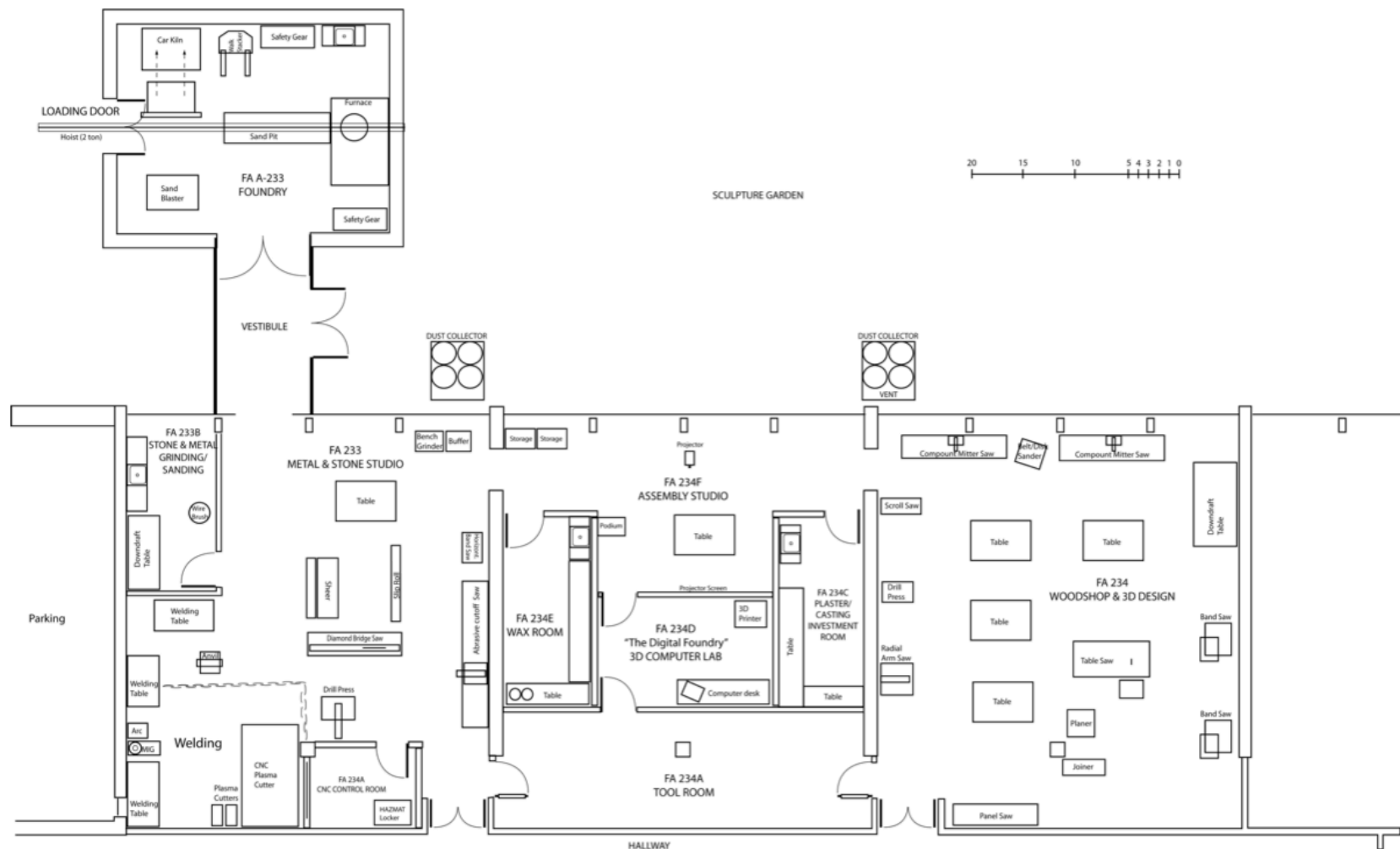
Professors: Several professors use the sculpture studios, including Professor Yolanda Sharpe and Adjunct Instructor Cooper Paulson.

Instructional Support Technician (ITS):

The Instructional Support Technicians supervise the sculpture studios and is available to assist professors and students with their projects. The hours when they are available in the studio are posted on the entrance.

Teaching Assistants: Certain classes have a "teaching assistant". Teaching Assistants are advanced students, chosen by professors to aid with all classroom tasks. They are usually present during the class meetings, but it is possible for professors to assign them off-class duty.

Floor Plan and Equipment Layout



Tool Room FA 234A

All hand tools, and portable power tools are stored here. Students may use only tools that has been approved for them to use by their professor, and for which they have had instruction on proper use.

Students involved in class projects may checkout tools to use in the studio areas. At the end of the day the tools must be returned to their proper storage place in a reasonably clean state.

The tools cannot be borrowed to use outside the sculpture studios.

If a tool has been damaged during use, students must inform one of the studio personnel immediately.

Woodshop FA 234



This studio is used for all woodwork, stone carving, and 3D Design classes. Equipment in this room include:

Air supply

There are multiple outlets for air tools around the walls and over the tables.

Power supply

There are numerous 110V outlets around the room and over the tables in retractable extension cords.

All extension cords must be retracted when not in use, and all other power cords must be unplugged and stored safely in the tool room.



Central dust collection

This system must be powered whenever dust-producing processes occur in the room.

Pull the “snorkel” close to your work and open the gate.

Make sure all the other snorkels in the room are closed so you get maximum extraction power to your station.

Because the dust collectors are very loud, everyone in the studio must use ear protection when it's used.



Downdraft table

This downdraft table must be used for cutting, grinding, and sanding of wood or stone.

Because the downdraft table is very loud, everyone in the studio must use ear protection when it's used.



Radial arm saw

This saw is fitted with a dado blade.

Not to be used for simple cutting of wood.

It is connected to its own dedicated portable dust collector which must be powered separately whenever the radial arm saw is in use.

Absolutely no ripping is allowed on this saw.

User Manual: <http://www.manualslib.com/manual/725794/Delta-33-830.html>

OSHA Safety Information: http://www.osha.gov/SLTC/etools/machineguarding/saws/cut_off_saws.html



Table saw

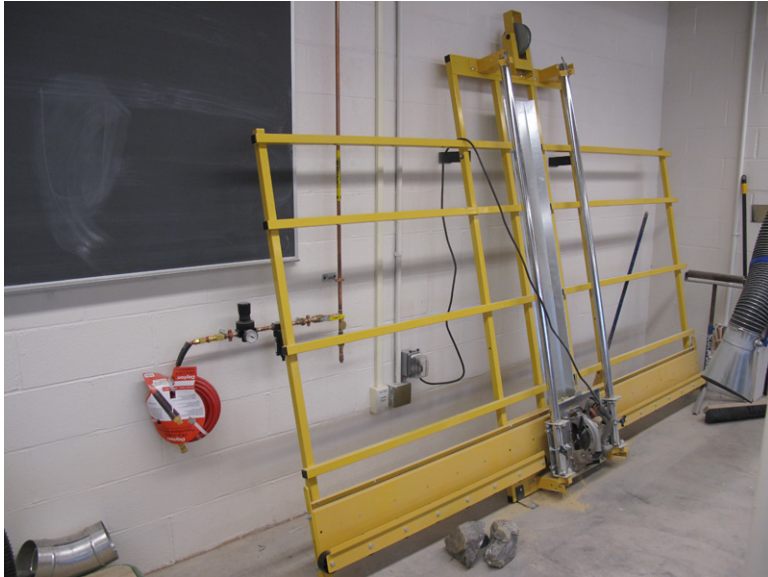
The table saw is outfitted with a blade guard, kick-back arrestor, an aluminum fence, and an out-feed roller table which must be unfolded when long stock is cut.

Tampering with the safety features of the table saw is a serious violation and can result in serious injury.

No cutting is allowed without the blade guard lowered over the blade. Ripping and cross-cutting is allowed, however large sheets of plywood can be cut on the panel saw more safely.

User Manual

OSHA Safety Information: http://www.osha.gov/SLTC/etools/machineguarding/saws/radialsaws_ww.html



Panel Saw

The panel saw is used to crosscut large pieces of plywood.

User Manual

OSHA Safety Information:

http://www.osha.gov/SLTC/etools/machineguarding/saws/cut_off_saws.html



Drill presses

This drill press is used for drilling holes in wood only.

Make sure your work is clamped before starting the drill press.

The drill bit must not be in contact with the drilling surface when you start the machine.

User Manual:

http://content.powermatic.com/assets/manuals/1792800B_man_EN.pdf

OSHA Safety Information:

https://www.osha.gov/SLTC/etools/woodworking/production_drillpress.html



20" Band saw

This band saw is for wood only.

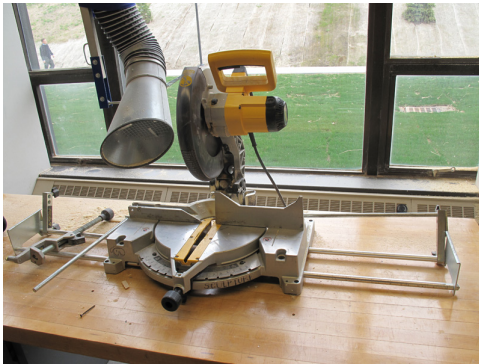
The blade must not be in contact with the work when the machine starts.

Adjust the guard to be about 1/8" above the work surface to ensure safe operation, and accuracy.

User Manual

OSHA safety information:

http://www.osha.gov/SLTC/etools/machineguarding/saws/band_saws.html



Compound miter saws

These compound miter saws are used to crosscut wood only.

Ensure that all guards are in place, and that the knobs and latches are locked before starting the machine.

Do not cut through screws or nails.

The blade must not be in contact with the work when the machine starts. Do not "chop" down hard on the wood. Instead, lower the saw softly and let the blade do the cutting.

User Manual: <http://www.homedepot.com/catalog/pdfimages/6a/6a77cb6f-8c59-41c9-8689-65bee7a5339e.pdf>

OSHA Safety Information: http://www.osha.gov/SLTC/etools/machineguarding/saws/miter_saws.html



Scroll saw

This machine is used to cut thin pieces of wood.

User Manual: <https://wiki.artisansasylum.com/images/b/bc/DW788.pdf>

OSHA Safety Information:

<http://www.osha.gov/SLTC/etools/machineguarding/saws/scrollsaw.html>



Disk/Belt sander

The disk/belt sander is attached to a portable dust collector that must be powered separately when the machine is in use.

Both the belt and the disk rotate simultaneously when the machine is on!

Ensure that the table is secured with the lock knob being tight, and that the gap between the table and the belt/disk is no larger than 3/32 inch.

User Manual: http://www.misgroupinc.com/partfiles/M_4200A.pdf

OSHA Safety Information:

https://www.osha.gov/SLTC/etools/woodworking/production_sanders.html



Planer

This machine may be used for wood only.

Make absolutely certain that lumber is free of nails or staples.

User Manual

OSHA Safety Information:

https://www.osha.gov/SLTC/etools/woodworking/planers_moulders.html



Jointer

This machine may be used for wood only.

Make absolutely certain that lumber is free of nails or staples.

User Manual

OSHA Safety Information:

<https://www.osha.gov/SLTC/etools/woodworking/jointers.html>

Assembly Room FA 234F

This is a “clean room” for lectures and slide demonstrations.

No dust-producing processes are allowed in this room.

The large table in the middle of the room is suited for “clean” processes such as drawing, model making, etc.

Equipment in this room includes:

Podium

The podium contains a computer, monitor, and DVD player.

It is reserved for professors, but students may use the computer with permission.

Brown Paper Dispenser

Brown paper is used extensively around the studio to lineup the workstations and to protect the machinery.

Storage Shelves

Temporary storage for small student projects.

Plaster Room FA 234C

This is the room where all plaster mixing, mold-making, casting, and investment for the metal foundry takes place.

No wet plaster is allowed outside this studio.

The studio is equipped with a large sink. Please never pour plaster down the sink, as it will clog the plumbing. If you have excess plaster to discard, wait until it hardens and then dispose of it in the trash.

Never allow plaster to come in contact with clay objects you intent to fire in a kiln. They will explode during fire if the slightest plaster is present.

Because plaster is messy, students are required to clean up their area thoroughly before leaving the studio.

“The Digital Foundry” Computer Lab FA 234D

This studio may be used by students only with special permission. It is used for creating digital sculpture and rapid prototyping. Equipment in this room includes:



Computer workstation

This computer is exclusively used for creating digital sculpture in the included software (Solidworks).

Students may use the computer with special permission.



3D Printer

This rapid prototyping machine can process three-dimensional digital objects in a special plastic material. Students are not allowed to use the machine on their own; rather, prototypes are processed by the studio personnel.

Since the material is expensive, students are allocated a specific amount through their class fee.

Consequently, only students who are enrolled in a Sculpture class may submit digital work for output on the 3D printer.

Wax Room FA 234E



The wax room is reserved for the creation of original wax artwork as well as wax casting, both for use in the lost wax process.

Wax is flammable, so pay extra attention to your process and never leave your work (molten, or melting wax) unattended even for a few minutes. Similarly, clean up your area thoroughly and scrape wax from the counters, tools, and containers, before leaving for the day.

Always wear protective clothing and goggles in case hot wax splashes on your person. Only use the studio's special wax double boilers to melt wax. Never melt wax in a single container placed on a hot plate or fire.

CNC Room FA 233A

The CNC room is used by the operator of the CNC plasma-cutting machine.

Grinding/Sanding Room FA 233B

The grinding room is used whenever heavy metal grinding or stone sanding is required. Equipment in this room includes:



Downdraft table

This downdraft table is used for steel grinding.

DO NOT GRIND ALUMINUM on this downdraft table, as it can be an explosion hazard.

Impact goggles AND a face shield is required when using grinders.

Metal & Stone Studio FA 233



This studio is reserved for work in steel and stone. No woodworking allowed.

There is a dedicated welding area separated from the rest of the studio with welding curtains, and a well-equipped metal fabrication shop.

Keep all flammable items out of the welding areas, and wear gear appropriate to each

process as specified by your professor.

The following pages provide basic information on the tools and machines in this studio.



Plasma cutter (with manual torch)

The plasma cutters with the manual torch are for cutting metal.

Make sure there is space under the metal to be cut, otherwise the flame will burn out the torch tip.

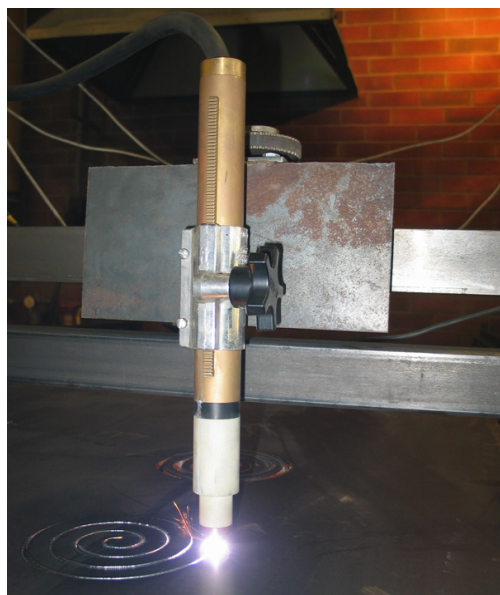
Air hose must be attached to the machine.

Operator must wear leather gloves, eye protection (lens shade AWS (USA) no. 8 / ISO 4850 no. 11) or a welding helmet, long denim pants, and leather jacket, when

operating this machine.

Metal must be approved by professor prior to cutting. Absolutely no galvanized steel, or stainless steel may be cut.

User Manual: <https://www.hypertherm.com/Xnet/library/library.jsp?file=HYP104433>



CNC plasma cutter

This machine may not be operated by students.

This machine is connected to a dedicated plasma cutter and a computer.

It is capable of cutting computer generated 2-D shapes out of steel.

The table accommodates a 4 x 10 ft. sheet and can cut steel or aluminum.

Metal must be approved by professor prior to cutting.

Absolutely no galvanized steel, or stainless steel may be cut.

Hypertherm Powermax 900 Plasma Cutter Manual:
<https://www.hypertherm.com/Xnet/library/library.jsp?file=HYP112515>





MIG welder

The MIG welder can weld steel or aluminum. Operator must wear leather welding/mig gloves, welding helmet, long denim pants, leather boots, and leather jacket, when operating this machine.

Make sure the ventilation is on and the work is grounded before starting to weld. The gas cylinder must be chained to the wall. Absolutely no galvanized steel, or stainless steel may be welded.

MIG Welding Protocol:

Start Welding

-  1. Turn main valve COUNTER-CLOCKWISE ¼ turn
-  2. Turn regulator (butterfly) valve CLOCKWISE slowly until it reads 20
3. Check that MIG is plugged in
4. Adjust Voltage according to chart
5. Adjust wire speed according to chart
6. Make sure wire extends ½ inch out of welding nozzle
7. Check that Ground is clamped to the work table or work
8. Turn on the MIG
9. Wear welding helmet, gloves, and complete welding gear

Shutting Down

1. Turn both voltage and wire speed knobs to “0”
2. Shut off main tank valve by turning the main valve CLOCKWISE
3. Pull nozzle trigger to bleed gas lines
4. When both gauges reach “0”, turn regulator (butterfly) knob COUNTER-CLOCKWISE until it turns freely
5. Turn MIG power off
6. Coil all wires and store off the floor
7. Clean up

User Manual: <http://www.manualslib.com/products/Miller-Millermatic-250x-3068807.html>

OSHA Safety Information: <https://www.osha.gov/Publications/OSHAfactsheet-eyeprotection-during-welding.pdf>

OSHA Safety Information: https://www.osha.gov/Publications/OSHA_FS-3647_Welding.pdf



Stick welder

The stick welder can weld steel only.

Operator must wear leather welding gloves, welding helmet, long denim pants, leather boots, and leather jacket, when operating this machine.

Make sure the ventilation is on and the work is grounded before starting to weld.

Absolutely no galvanized steel, or stainless steel may be cut.

User Manual: <https://www.gemplers.com/docs/manual/192006MANUAL.pdf>

OSHA Safety Information: <https://www.osha.gov/Publications/OSHAfactsheet-eyeprotection-during-welding.pdf>

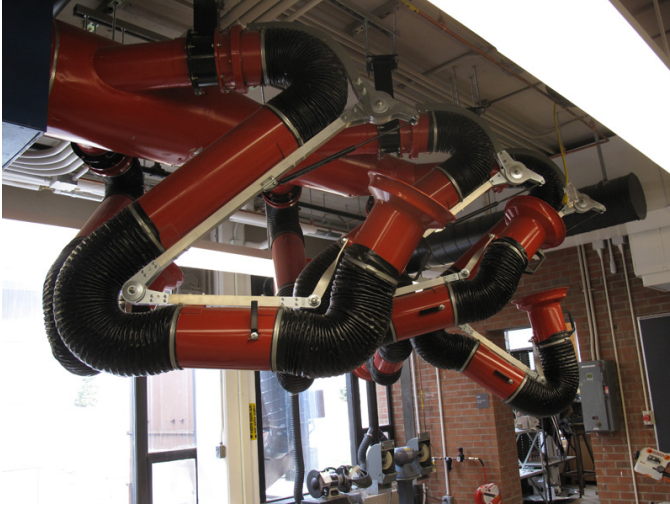
OSHA Safety Information: https://www.osha.gov/Publications/OSHA_FS-3647_Welding.pdf



Spot Welder

This welder is to be used for steel only.

User Manual: <http://www.millerwelds.com/pdf/Resistance.pdf>



Dust extraction over the worktable



Drill press

This drill press is reserved for metal drilling only.

Make sure your work is clamped before starting the drill press.

The drill bit must not be in contact with the drilling surface when you start the machine.

Lower the drill bit softly, and use cutting fluid to cool the bit while drilling.

User Manual

OSHA Safety Information:

https://www.osha.gov/SLTC/etools/woodworking/production_drillpress.html



Slip roller

The slip roller is used to create curves out of flat sheets of steel or aluminum. It is manually operated through a crank.

User Manual



Metal Sheer

The sheer is used to cut sheets of metal. It is a foot-operated sheer.

Steel must not be thicker than 16 gage.

Keep your balance, and do not put your fingers under the sheer.

User Manual



Bridge Saw

This “wet” saw is used for cutting stone. No other material is allowed on this bridge saw.

DO NOT CUT METAL OR WOOD.

It is outfitted with a diamond blade and a water pump for circulating water over the blade.

User Manual
OSHA Safety Information



14” Abrasive cutoff saw

The abrasive cutoff saw is used for chopping thin pieces of steel such as rebar, round stock, square stock, pipes, etc.

Do not use this machine to cut wood. Do not use this saw to cut aluminum.

A full-face shield must be worn when you use this machine, and the work must be secured with the clamp!

Inspect the blade to ensure it is free of defects, and the guard before using this machine.

User Manual: <http://www.selectequipmentrentals.com/GalleryUpload/WebDoc/Manuals/190/190-7426-05 Delta.pdf>

OSHA Safety Information: http://www.osha.gov/SLTC/etools/machineguarding/saws/chop_saws.html



Horizontal band saw

It is used for cutting thick pieces of steel or aluminum such as rebar, round stock, square stock, pipes, etc.

Do not use this machine to cut wood.

Check with our professor before cutting aluminum with the horizontal band saw.

User Manual: http://content.jettools.com/manuals/m_3400.pdf



Bench grinder

The grinder is to be used with metal only.

A full-face shield must be worn when you use this machine.

Do not wear gloves when using the bench grinder.

Inspect all guards and tool rests to ensure that they are secure before starting the machine.

Ensure that the gap between the tool rest and the grinding wheel face is no larger than 1/8". If it is, do not turn it on, and inform your instructor.

The tongue guard must not be farther than 1/4" from the face of the stone.

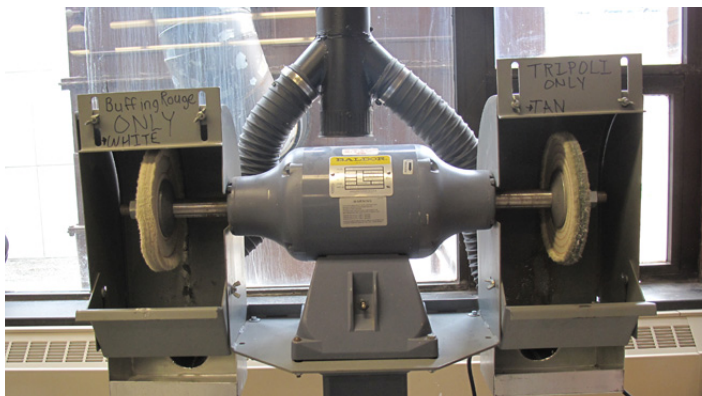
The work must not be touching the stones when starting the machine!

Let the grinder come to full speed before you begin grinding.

User Manual: http://media.ptg-online.com/media/dm/ownersmanuals/20050712090753_ena13267-07-12-05.pdf

OSHA Safety Information: <https://www.osha.gov/SLTC/machineguarding/new-grinder-checklist.html>

OSHA Safety Information: https://www.osha.gov/dts/hib/hib_data/hib19900410.html



Buffer

The buffer is used to polish small metal pieces of art.

Impact goggles AND a face shield are required using the buffer.

The ventilation system must be on when you use the buffer.

Do not force your work on the buffer wheels. Let the wheels do the cutting, and do not put too much compound on the wheels!

User Manual: <http://www.baldor.com/Shared/manuals/906-903.pdf>

Metal Foundry FA A-233

The metal foundry is used for casting bronze or aluminum. In our classes we use primarily the “lost wax” method. Only students with special permission may use the equipment in this studio. Equipment in this room include:



Speedy Melt furnace

It is used for melting bronze and aluminum.

Not for student use!

Only authorized personnel may use the furnace!



Burn-out Car Kiln

This kiln is used exclusively for the burn-out step in the lost wax process.

Not for student use!

Only approved personnel may use the kiln!

Hoist

The hoist is used to support the crucible of molten metal, and to bring heavy materials into the studios since the I-beam extends outside the doors.

Only authorized personnel may use the hoist.



Sand blaster

This self-contained unit is used to clean up metal after casting.

User Manual

Fact Sheet from OSHA:

<https://www.osha.gov/Publications/OSHA3697.pdf>



Walk stacker

This machine is used for transporting heavy materials around the studio.

Not for student use!

Only authorized personnel may use the walk stacker.



Crane

Not for student use!

Only authorized personnel may use the crane.