



TEXAS TECH UNIVERSITY
J.T. & Margaret Talkington College of Visual & Performing Arts
School of Art™

CERAMICS STUDIO GUIDE & SAFETY PLAN

Rooms covered – Art 3D Annex 101, 101A, 101B, 101C, 101D, 101E, 101F, 101G, 101H, 101Ha, 101I, 101Ia, 101M and the outdoor spaces including the Kiln Shed, Kiln Yard and storage buildings.

Responsible Individual - Von Venhuizen 834-4478, office Art 3D Annex 101K

Department Safety Officer – Mark Bond 834-1559, office Art 101

November 2, 2017

Emergencies

In case of fire exit the building through the front doors. If that direction is blocked exit through the woodshop or the back door near the vending machines. You can exit out the door to the kiln yard if you know that the gate in the parking lot is open. Meet out in front of the Physical Plant, next door towards the Rec Center. There are fire alarm pull stations near the exit doors, if you pull it also call 911 to inform them of the situation.

In case of an Active Shooter lock the hallway door, turn off the lights, hide out of sight and remain quiet. If you know the shooter is in your immediate area barricade the door with anything you can to prevent or slow entry and call 911. Silence your phone but check it or your email for instructions from TechAlert! Wait until there is an “all clear” announcement from TechAlert! before leaving, do not rely on social media for information.

In case of a medical or security emergency call 911 or use the blue emergency call box located near room 105.

In case of a tornado or severe weather, go to the center hallway or the restrooms.

Chemical Spills

Small chemical spills can generally be handled in the studio with the spill containment kit. The spill containment kit is clearly marked and is in room 101. Spills should be handled in the following manner:

1. Assess the need to evacuate the lab /studio. 2. If you don't know what the chemical is, call Environmental Health and Safety (EH&S) **(806) 742-3876** (during regular business hours) or **(806) 742-3328** (after hours).
3. Look up the chemical in Safety Data Sheet (SDS)
4. If you feel confident following cleanup instructions on the SDS proceed with cleanup.

5. If you don't feel confident or don't have the materials on hand for cleanup, because the spill is too large, call EH&S.
6. Report all spills that need more than paper towels cleanup to the SOA DCHO mark.bond@ttu.edu. He will arrange for waste pickup.

First Aid

1. There are eyewash stations in rooms 101, 101H & 101M. If you get irritating chemicals in your eye immediately splash water in your affected eye(s) for fifteen (15) minutes unless otherwise instructed. If you get foreign matter lodged in your eye (metal, wood, etc.) do NOT rub your eye! The eyewash station may not dislodge something stuck in your eye; you will need to go to the emergency room in that case.
2. The First Aid kits are located throughout the studios and are clearly marked.
3. There are two kinds of burns that need attention:
 - a. **Minor cuts / burns** – can be attended to in the lab/studio. (examples – cuts that are not deep and stop bleeding and burns without large blisters) Minor cuts should be cleaned with antiseptic spray, alcohol wipes, or triple ointment. Cover them with a sterile Band-aid. Minor burns should be immersed in cool (not cold) running water for 15 minutes. Then apply a sterile bandage. Do not apply ice or ointments. If the wound does not heal properly seek medical attention.
 - b. **Major cuts / burns** - these are deep cuts or burns that will need IMMEDIATE medical attention. (examples – cuts pulsing blood or will not stop bleeding, or more than ¼” deep or with jagged edges. Major burns develop large blisters or char the skin) Major cuts should have pressure applied with a clean compress. Major burns should NOT be immersed in cool water, but covered with a clean compress and held above heart level if possible. In both cases, seek immediate medical attention.

When in doubt, always seek professional medical attention – use the blue emergency box or dial 911.

The complete Texas Tech University Chemical Hygiene Plan and other helpful documents can be found online at <http://www.depts.ttu.edu/ehs/Web/Default.aspx>

Records of Employee / Student training are located in the School of Art main office.

Introduction

We at the School of Art endeavor to create a safe, healthy environment for all to work in so they can have a long and productive creative life. The following information will help you achieve these goals. Failure to follow the safety policies and procedures may lead to disciplinary action.

Be aware that words such as “water based”, “all natural”, and “organic” or “green” do not indicate the safety of a material. There are many items in nature that are hazardous to humans. Art supplies and

materials may be “non-toxic” when “used as directed” but can become hazardous when not used as directed, such as heating, sanding or spraying the material.

Personal safety is usually more of an issue when fewer people are around in the evenings and weekends. Always be aware of your surroundings, know who is around you or not, keep your ears open by keeping music low and not using headphones. When working with machinery or hazardous processes always have more than one person present. Do not work when impaired by lack of sleep, illness, drugs or alcohol. All the buildings have combination locks on at least one door, so never prop open exterior doors to help keep unauthorized people out. Classroom doors can remain open during class time and when the room is occupied by an authorized person. Doors must be kept locked when the room is not occupied.

General rules

All students must have signed the Student Safety Training Form BEFORE they can participate in any hands on studio / lab activities.

The Safety Data Sheets for Ceramics are located in rooms 101H, 101Ia and 101M.

Chemicals and materials not listed in the Safety Data Sheet yellow binder cannot be stored or used in this lab without the consent of the Responsible Individual and the Safety Data Sheets being added to the SDS binder.

Any container other than the original container a chemical comes in is considered a “secondary container.” This includes open containers such as trays. Food or drink containers cannot be reused as secondary containers. All secondary containers (including water) **must be** labeled according to the OSHA GHS standard. The safety coordinator can answer GHS labeling questions. The RI will provide appropriate secondary containers.

No spraying may be done in these rooms. For approved locations contact your instructor.

All flammable and combustible liquids and gasses must be stored in the yellow flammable cabinet when not in use. After class, or any work sessions all flammables and combustibles **must be** returned to flammable cabinets. Lockers or open shelves are not acceptable storage for flammable or combustible liquids or gasses. NO EXCEPTIONS!

All solvents and corrosives must be barcoded into the inventory system by Environmental Health and Safety, including any that are student purchased. For details contact the SOA Safety Coordinator.

Procedures that are not listed in the Standard Operating Procedures section cannot be used without consent of the Responsible Individual and until the new procedures **have been added** to this Safety Plan.

Food and drink are not allowed to be stored or consumed in these rooms. Food and drinks are allowed in room 101D since chemicals and hazardous processes are not used in the room.

No tobacco use is allowed in the studio, including smoking, vaping and smokeless tobacco.

Long pants are not required and closed toe shoes are not required in these studio / labs unless stated in the Standard Operating Procedures.

Housekeeping is to be kept up with to provide a safe work space. Aisles and exits are to be kept free of slip, trip and fall hazards. Bench tops are to be free of excess storage and clutter. Extension cords can only be used temporarily and must be picked up at the end of class or work periods.

Sharp objects, such as xacto knife blades, utility knife blades and saw blades must be disposed of in an approved “Sharps” container, never the regular trash.

Art Installations must be pre-approved by the Safety Coordinator if they involve public spaces. If in doubt, ask first.

Never stand on anything other than a ladder or stepstool to increase your reach. Climbing on chairs, stools and tables frequently leads to falls and injuries.

Nothing can be hung or stacked closer than 18” (in the vertical dimension) to a fire sprinkler.

Do not hang anything from any pipes, sprinkler heads or conduit. You may hang objects of less than one pound from suspended ceilings. If you need to hang multiple objects get approval from the Building Manager first.

No bicycles, skates, roller blades, skateboards, scooters, etc., are allowed in buildings.

Pets and animals are not allowed in buildings. Service animals for persons with disabilities are permitted as long as they are in compliance with section 7 of TTU OP 34.22.

Children are not allowed in Studios / Labs without Minors in Laboratory forms filled out and approved in advance.

No smoking inside the building, including e-cigarettes or vaping, or within 20 feet of any doorway. No alcohol or illegal drugs in any studios / labs.

Wash hands upon leaving the studio.

Standard Operating Procedures

General

1. No eating, or smoking in Ceramics studios
2. No children allowed
3. No pets allowed
4. No bicycles, skateboards or roller blades
5. All personal containers must be labeled
6. Caution and common sense should be exercised when working around kilns, machines, and chemicals:
 - a. Where needed in unventilated areas, wear dust masks or respirators when working with dry, powdered materials – must pass respirator testing.
 - b. Wear eye and ear protection when appropriate.

- c. Sleeves must be buttoned or rolled up.
- d. Long hair must be tied back or covered.
7. Keep all areas clean. Good housekeeping clean and orderly work areas and equipment are fundamental to accident and fire prevention. Housekeeping is an ongoing process.
8. All accidents and incidents including minor injuries and all hazardous conditions are to be reported immediately to the instructor and to the safety coordinator.
9. Any equipment, including both gas and electric kilns, cannot be used without instruction in proper procedures, authorization and supervision.
10. DO NOT empty any clay into the sinks, or leave clay in the sinks – EVER!
11. All tables are to be sponged down, NOT SWEPT, to clean all clay and materials off the surface.
12. In case of a spill use SDS suggestions for clean-up. Any dry ceramic materials may be cleaned up with a sponge and water – NOT a dust broom!
13. Eye wash stations are located near the sinks in the main classrooms and glaze room – use them if anything gets in your eyes.

Mixing Clay

1. Permission must be obtained to make clay outside of class. Clay mixers and pug mills may be locked when not in use.
2. Clay must be made during your class period, or when the Clay Mixing room is not being used by another class.
3. The Exhaust System should always be turned on before making clay. Be certain that the door to the “Cart Parking Area” and the garage door are closed, to make sure the exhaust system works as designed.
4. A respirator may be worn if you are tested and cleared by EH&S.
5. Hair must be tied back or covered.
6. Sleeves must be buttoned or rolled up.
7. Do Not wear loose clothing.
8. First add water to the mixer, close lid and turn on power.
9. Bags of clay should be emptied into mixer carefully and not shaken. When mixing clay try to generate the least amount of dust.
10. Do not add any materials or place any objects (scrapers, sticks) or your hands into the mixer or pugger until the power is off and the blades have stopped.
11. In a beginning class no less than two people will mix clay at any time. 12. Mixers should be cleaned to as “good as new” after each use.
13. Area around mixers and pug mills must be hosed down and cleaned. Empty clay bags are to be taken to the dumpster.
14. Return partially used bags of clay to proper area, and turn off exhaust system when finished.

Pottery Wheels

1. Do not plug or unplug electric wheel with wet hands.
2. Turn off switch and unplug after use.
3. When using kick wheels, the fly wheel must be stopped before getting on or off.
4. Your wheel must be cleaned after use.
5. Area around wheel must be clean and all trimming scraps picked up.
6. Splash pans should be cleaned and put back on the wheel when finished.

Glazing

1. The Exhaust system must be turned on when using the Glaze Mixing room to make glazes or weigh out dry materials.
2. All class glaze materials must be kept in glaze area. Keep containers covered.
3. Masks must be worn when handling potentially toxic dry materials in the Glaze Material Storage room. Keep dust to a minimum.
4. Gloves must be used if cuts or scrapes are apparent on hands.
5. Use stir sticks, or blender in wet glaze buckets.
6. Do not pour glaze down the sink.
7. The spray booth must be turned on and used when spraying glazes. It is not to be used, EVER, for any paint materials.
8. The test kilns must be used with the proper exhaust hoods during their firing cycles.
9. Keep glaze area/room clean.
10. Clean the glaze mixer and the area around the mixer before leaving the room.
11. Turn off the Exhaust system when finished.

Kilns 1. **Keep all exterior doors closed at all times during the firing of any and all kilns!**

2. No undergraduate students can fire a kiln, gas or electric, without first getting loading and firing instructions, and then only with the supervision of the instructor or graduate assistant.
3. No less than two undergraduate students will fire the kilns.
4. One person from the firing group must be in attendance during the firing.
5. When pulling spy hole plug:
 - a. Tie hair back.
 - b. No loose or nylon clothing.
 - c. Use gloves to pull plug.
 - d. Wear goggles.
6. No combustible materials or burnout materials are allowed to be fired in ANY electric kiln.
7. When firing Electric kilns without computers – when the kiln is on “High” the timer must be set to 5 hours to ensure it will not over fire.
8. Raku firing must be done with a partner.
9. When moving Raku ware in and out of the smoking barrels do not put your face too close to the opening.
10. When cleaning of sawdust and other debris use a pail, not the sink. (This can plug the drain!)
11. NEVER!!! Empty a Raku can into the dumpster without soaking it first with water – NO MATTER WHAT!
12. Avoid contact with the kiln’s exterior which gets extremely hot during firing.
13. Never use the emergency gas shut-off except during and emergency!!!
14. If in case of catastrophic kiln failure – pull fire alarm and evacuate the area.
15. If you sustain a bad burn, do not but burn gel on it. Immediately tell instructor and/or go to the emergency room at UMC.

Slab Roller

1. Do not use large or dry clay “chunks”.
2. Lay out small pieces of clay over the surface in the desired form before rolling.

3. Do not force the roller, which could snap the cables.
4. Do not sit or stand on the slab roller.

Extruder

1. Place dies properly into the device.
2. Do not place hard or stiff clay into the device.
3. Use consistent pressure to extrude the clay.
4. When finished clean everything inside and out, and place dies back into the proper storage container. Do Not leave any clay in the extruder!
5. Place handle back in proper storage area – Not hanging out of the extruder!
6. Clean floor around the extruder

ABRASIVE WHEEL CUT-OFF

1. Only properly trained and authorized users are permitted to do abrasive cut-off/grinding.
2. Read and follow manufacturers recommendations.
3. Always wear protective eye glasses or face shield.
4. Keep working area clean.
5. Never use cut-off tools around flammable liquids or gases.
6. Do not wear loose clothing or jewelry with cut-off tools.
7. Always secure work place.
8. Do not over reach, keep footing and balance at all times.
9. Always unplug tool before servicing or when not in use.
10. Inspect before use: for damaged parts, cut-off discs, and cords for cracks or damage, all guards and shields in place.
11. Always cut so sparks do not contact you or someone else.
12. Always work with proper lighting.

CHOP SAW

1. Read and understand the Operator's Manual.
2. Users will be properly and thoroughly trained before attempting to do any work with or on any chop saw.
3. It is the duty of each operator to immediately eliminate or report any changes occurring on the machine or in the material being processed which changes may effect the machine's safe operation.
4. HAVE the power disconnected when making any adjustment or changing blades.
5. DO NOT wear loose clothing.
6. ALWAYS WEAR safety glasses or a face shield.
7. ALWAYS HOLD the work firmly against the fence or firmly secured in supports.
8. GUARDS must be in place and used at all times. DO NOT switch on the machine until all safety devices and guards are in proper position and adjustment and are fully operational.
9. REMOVE CHIPS and pieces of scrap from table before using machine.
10. BE SURE blade is free cutting, secured, free from chips, cracks, and vibration. NEVER use a defective blade.
11. Allow the motor to come up to full speed before starting cut.

12. Use extreme caution when using the saw near flammable materials. The blade may “throw” sparks when it contacts the item you are cutting and may ignite nearby materials

CHAIN SAWS

1. User will be properly and thoroughly trained before attempting to do any work with or on any chain saw.
2. Anyone using the chain saw will also read and understand the Operators Manual before doing any work with the chainsaw.
3. Thoroughly inspect the chain saw before each use for a defective chain, chain tension, fluid levels, and proper lubrication.
4. ALWAYS use both hands when starting a chain saw, one to hold the saw and the other to pull the starter rope. Grip the top handle of the saw firmly and pull the starter rope quickly. It is not a safe practice to start a chain saw while holding it in mid-air with one hand.
5. ALWAYS start it on the ground on a stable surface.
6. ALWAYS use both hands to control the chain saw.
7. NEVER force a chain saw through a cut. If it is properly sharpened and adjusted it will cut, almost by itself (Keep in mind that the hardness of the wood will have a major effect on how quickly it cuts).
8. ALWAYS be watchful for blade-pinching situations and plan accordingly. Cut branches at the base of the blade. Do not saw with the tip of the blade.
9. USE a high chain speed when reinserting the blade in a cut or removing it from a cut.
10. KEEP the saw teeth sharp so they will cut; dull teeth are more likely to cause a kickback.
11. ALWAYS cut below shoulder height, otherwise the saw is difficult to control and is too close to your face.
12. ALWAYS avoid making cuts with the saw between your legs, always cut with the saw to the outside of your legs.
13. DON'T stand on a log and saw between your feet.
14. ALWAYS stand to one side of the limb you are to cut, never straddle it.
15. ALWAYS keep in mind where the chain will go if it breaks. Never position yourself or other people in line with the chain.
16. Keep the chain out of the dirt, debris will fly, the teeth will be dulled, and the chain life shortened considerably.
17. ALWAYS WEAR PERSONAL PROTECTIVE EQUIPMENT (Safety goggles, hearing protection, steel-toed shoes, gloves & tight fitting clothes. Wear a hard hat if it is a job requirement).

ELECTRIC GRINDERS

Portable grinders are difficult to handle because of their size and weight. Extra care is needed to avoid injury and to protect the grinding wheel from damage. When using portable grinders, observe these precautions:

1. Always read and understand the instructions contained in the operator's manual before using the machine.
2. Wear appropriate clothing such as, safety glasses or a face shield and gloves.
3. Guard against electric shock. Make sure that the cord is in good shape. Do not use the grinder in the rain or in damp conditions.
4. Make sure that any guards are in place before turning the machine on.
5. Inspect the grinding wheel or other attachments for chips, cracks, or loose parts.

6. Do not use damaged wheels or attachments. Make sure that the attachments are rated for the RPM that the grinder will produce.
7. Make sure that adjusting keys or wrenches are removed before turning the grinder on.
8. Warn other people in your work area before you start grinding. Make sure that everyone within range is wearing eye protection. Visitors or anyone who does not have business in your work area will not be allowed.
9. Secure the item you are working on in a vice if at all possible. Avoid holding small items in your hands.
10. Do not force the tool into the work it may “kick back” violently.
11. Make sure that the grinder is unplugged before changing wheels or attachments.
12. Let the grinder come to a complete stop before laying it down.

ELECTRIC POWER TOOLS

When working with electric tools, basic safety precautions must always be followed to reduce the risk of fire, electric shock, and personal injury including the following:

- Users will be properly and thoroughly trained before attempting to do any work with any woodworking tools. Read all instructions thoroughly and learn the applications, operating limitations, and potential hazards of each and every tool before attempting to operate it. • Keep work area clean. Cluttered areas and benches invited injuries.
- Avoid dangerous environment. Do not expose power tools to rain. Don't use power tools in damp or wet locations. Keep area well lit. Avoid chemical or corrosive environment. Do not use tool in presence of flammable liquids or gases.
- Guard against electric shock. Prevent body contact with grounded surfaces. For example: pipes, radiators, ranges, refrigerator enclosures.
- Do not let visitors contact tool or extension cord. All visitors should be kept away from work area. • Store idle tools. When not in use, tools will be stored in dry, and high or locked-up place – out of reach of children if the possibility of exposure is there.
- Do not force the tool. It will do the job better and safer at the rate for which it was intended.
- Use right tool. Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose not intended - for example - do not use a circular saw for cutting tree limbs or logs.
- Dress properly. Do not wear loose clothing or jewelry. Loose clothing, drawstrings and jewelry can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
- Use safety glasses. Wear safety glasses or goggles while operating power tools. Also face or dust mask if operation creates dust. All persons in the area where power tools are being operated must also wear safety glasses and face or dust mask.
- Don't abuse cord. Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges. Have damaged or worn power cord and strain reliever replaced immediately. Do not attempt to repair power cord.
- Secure work. Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
- Don't overreach. Keep proper footing and balance at all times.
- Maintain tools with care. Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if

damaged. Have all worn, broken, or lost parts replaced immediately. Keep handles dry, clean, and free from oil and grease.

- Disconnect tools when not in use, before servicing, and when changing accessories such as blades, bits, cutters, and etc.
- Remove adjusting keys and wrenches. Form habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.
- Avoid unintentional starting. Do not carry a plugged-in tool with finger on switch. Be sure switch is off when plugging in. Keep hands, body, and clothing clear of blades, bits, cutters, etc. when plugging in the tool.
- Outdoor use extension cords. When a tool is used outdoors, use only extension cords marked “Suitable for use with outdoor appliances - store indoors when not in use.”
- Stay alert. Watch what you are doing. Use common sense. Do not operate a tool when you are tired or while under the influence of medication, alcohol, or drugs.
- Check damaged parts. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged must be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere. Have defective switches replaced by authorized service center. Do not use tool if switch does not turn it on and off.
- Wear ear protection to safeguard against possible hearing loss.

If you are unsure how to use any of the equipment, just ask!