



# **EDUCATION HANDBOOK:**

## **Community, Studio, and Safety Guidelines for Teaching Staff, Volunteer Monitors, and Students**

Updated October 2024

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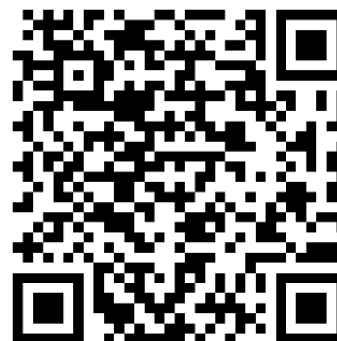
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## Fleisher Studio Handbook Acknowledgment Form

Students and Volunteer Monitors enrolled in a class or working in the following specialized studios are required to complete the Education Handbook Acknowledgment Form:

- Ceramics
- Darkroom
- Jewelry
- Printmaking (Etching/Lithography)
- Mosaics & Stained Glass

All teaching staff, regardless of studio or medium, are required to complete the form. The form only needs to be completed once, unless there are major updates to the handbook communicated via staff. Please use QR code below or use [this link](#). All relevant information is included within this handbook and will be reviewed during the first session of class.



## Community Guidelines

The mission of Fleisher Art Memorial is to make art accessible to all, regardless of economic means, background or artistic experience. Our core values include the recognition that everyone can be an artist, promoting art as a pathway to fulfillment; and building communities enriched by art. Since 1898, Fleisher has fostered a safe, encouraging, and inclusive creative community. Our Community Guidelines were collaboratively written and agreed upon by members of Fleisher's adult student body and staff. These guidelines were designed to ensure a safe, encouraging, and joyful environment for our entire community, including students, faculty, models, and staff. We expect all participants in the adult program to abide by our guidelines and to report any incidents that violate them to our Manager of Adult Education, Suzanne Seesman, at [Iseesman@fleisher.org](mailto:Iseesman@fleisher.org). We will proactively enforce these guidelines and determine appropriate consequences based on the severity of the incident. These guidelines may be updated over time.

At the end of each class term, students will have an opportunity to share feedback through evaluation surveys.

As part of the Fleisher community, we expect and encourage the following behaviors and actions:

- Fleisher is a safe place that honors each individual's experience and background, where our diverse experiences are seen and celebrated - not just accepted or tolerated.
- Fleisher's community is accepting, open, thoughtful, kind, and willing to speak out and take a stand against harmful behaviors, language, and comments.
- Faculty and students encourage each other to express their individual artistic vision and to evolve as artists, to embrace "failure" and overcome the fear of making mistakes.
- Our students and faculty are curious about diverse ways to create and experience art. They stay present, open to feedback, and are willing to listen to each other.

Everyone should be treated with respect, including staff, faculty and students. Fleisher will not accept or tolerate the following behaviors:

- Dehumanizing, mean, aggressive, violent, or destructive behavior.
- Excluding, disrespecting, or bullying people based on race, gender identity, ability, religion, sexual preference, political stance, language ability, immigration status, artistic experience, or economic status.
- Being dismissive of other people's opinions, elitist, judgmental or criticizing others harshly.
- Being destructive and harmful to studio spaces, other people's artwork or materials and equipment.

*Students who behave in a disruptive or inappropriate manner are subject to removal from the classroom at the instructor's request, and depending upon the severity may be asked not to return to Fleisher.*

## General Studio Policies

To help ensure that Fleisher Art Memorial remains a safe, inclusive, respectful, supportive, and fun environment for all, students, volunteer monitors, faculty, and staff are asked to follow these guidelines while in studios:

- Fleisher strives to welcome students of all backgrounds and experiences. If you require accommodation or have circumstances that will be helpful to the instructor to make your time a good learning experience, we invite you to share those with the instructor, or the Manager of Adult Education.
- Be mindful of others' artwork, personal space, and belongings. Make sure to ask permission before touching others' artwork or belongings—this includes students, faculty, and models.
- Make every effort to attend class and to be on time. Irregular class attendance is disruptive and can slow progress for other students. Those who are unavoidably late should enter quietly, so as not to interrupt others. The instructor may choose to or not to review missed information at their discretion.
- Students may not enter the studio space or classroom more than 15 minutes before the class's official start time. Students must leave the classroom at the scheduled end time of the class.
- Allow time to clean up and exit the studios at the end of class. Students must leave Fleisher's building by 9:40 p.m. The alarm system is activated, and the parking lot gates are locked by 9:50 p.m. (4 p.m. on Saturdays.) All remaining vehicles will be locked in and/or towed at the owner's expense.
- Actively participate in clean-up after each class. Respect your communal studios, and leave your work area in the same, or better condition, than you found it. Make an effort to work cleanly and to keep paint, ink, and solvents off furniture, easels, equipment, model stands and props. If spills do occur, clean them up.
- Do not store dirty paint rags, mediums and/or solvents in lockers. All used solvents, materials and rags should be taken home. Do not discard solvents in the sinks. If you have questions about proper material cleanup and disposal, please ask the instructor to review best practices.
- Fleisher is not responsible for students' artwork, tools, or equipment left on the premises. Rental lockers are available for a term/yearly fee for the storage of students' belongings. Make sure to pick up your artwork on the day of your last class session. Any work left in the classrooms past the last class session may be discarded in preparation for the new term.
- Hazardous materials are prohibited in the Fleisher studios. This includes fixative, spray paint, epoxy, and varnishes. New potential Hazardous Materials must be cleared with the Director of Facilities.
- New processes and techniques should be attempted only under the supervision of the instructor. If you don't know how to use a piece of studio equipment, stop and ask the instructor or monitor for direction—they can help you learn how to safely use the equipment.
- Fire exits are marked—make sure to familiarize yourself with exit locations. Do not block fire exits with easels, props, or chairs.
- Smoking and vaping are not permitted anywhere in the Fleisher buildings, including fire escapes or in the Children's Garden. Cigarette receptacles are located in designated areas outside the Catharine and Christian Street buildings.
- Please silence phones during class time and do not make calls. Camera phones may be used to take photographs for documentation or for note-taking at the discretion of the instructor; however, the use of cell phones while figure models are posing is not permitted at any time
- Alcohol consumption during class sessions is not allowed.

# Emergency Procedures

## Fire and Evacuation

### **Building occupants are required by law to evacuate a building when the fire alarm sounds.**

1. When the fire alarm sounds everyone is required by law to evacuate the building.
2. Do not use the elevator.
3. Exit routes and fire extinguisher maps are posted on each floor and in each classroom. Take a moment to review them.
4. If teaching: Faculty are responsible for counting students, taking their roster, escorting students to an outdoor meeting place, keeping students together, and recounting.
5. Faculty members are responsible for being aware and attentive to students requiring special assistance. Report persons with mobility impairment who were unable to evacuate to emergency personnel or Fleisher staff.
6. If you discover a fire, pull the fire alarm.

## Assisting People with Disabilities During an Emergency

If you observe a person with a disability having difficulty evacuating, remember to ask if assistance is needed before taking action. Inquire how best to assist the individual and whether any precautionary measures need to be taken or items need to accompany the person.

## For Staff, Teaching Staff and Volunteer Open Studio Monitors

Individuals With Mobility Limitations – (non-wheelchair user) If there is imminent danger, ask if assistance is needed and inquire if they can evacuate using the stairs themselves or with minor assistance. Ensure a clear path of travel and if debris is present, it may be necessary to clear a path to the exit route. If there is no imminent danger, they may choose to remain in the building or wish to be directed to an Area of Refuge or stairwell until emergency personnel arrives.

Individuals with Mobility Limitations – (wheelchair user) If there is no imminent danger, they may choose to remain in the building or wish to be directed to an Area of Refuge or stairwell until emergency personnel arrive. If danger is imminent and the individual does not wish to be removed from their wheelchair, direct them to the nearest Area of Refuge or stairwell and notify emergency personnel immediately. If danger is imminent, use a sturdy chair (or one with wheels) to move the person or help carry them to safety using a carry technique.

### **Teaching staff should notify Fleisher staff or emergency personnel immediately about any individuals remaining in the building and their locations.**

## Medical

1. Remain calm. If there is a serious injury or sudden illness, ask for assistance.
2. For serious injuries or sudden illness (e.g. seizure, heart attack etc.), call 911 then notify the front desk at ext. 300 (or 215.922.3456 ext. 300 if calling from a cell phone).
3. Do not move the victim unless necessary.
4. Avoid hazards and bodily fluids.

All classrooms are equipped with a First Aid Kit for minor cuts and bruises. Teaching staff providing first aid to children must complete an incident report.

## If you smell gas

### **Notify the front desk immediately. A member of the Facilities team will determine if the situation is an emergency.**

## Chemical Exposures

An assortment of chemicals are used in the Darkroom, Printmaking, and Jewelry Studios. The following procedures should be followed in the event of chemical exposure. In all cases, the incident should be reported to a Program Manager and Studio Tech regardless of severity.

### Chemicals on Skin

1. Immediately flush with water for no less than fifteen minutes. Remove any jewelry or clothing that has become contaminated to facilitate the removal of any residual material. For pullover shirts and sweaters, it may be beneficial to cut garments off to prevent contamination of eyes.
2. If immediate medical attention is needed, call 911 and explain carefully what chemicals were involved.
3. Review the MSDS to determine if any delayed effects should be expected.

### Chemicals in Eyes

1. Seek medical attention regardless of the severity or apparent lack of severity. If an ambulance or transportation is needed, contact Public Safety at 911. Explain carefully what chemicals were involved.
2. Flush eye(s) with water for at least fifteen minutes. The eyes must be forcibly held open to wash, and the eyeballs must be rotated so all surface area is rinsed. The use of an eye wash fountain is desirable, so hands are free to hold the eyes open. Remove contact lenses while rinsing. Do not attempt to rinse and reinsert contact lenses. Close containers, open windows, or otherwise increase ventilation and move to fresh air.
3. Review the MSDS to determine if any delayed effects are expected.

### Chemical Inhalation

1. Close containers, open windows, or otherwise increase ventilation and move to fresh air.
2. If symptoms, such as headaches, nose or throat irritation, dizziness, or drowsiness persist, seek medical attention by calling Public Safety at 911. Explain carefully what chemicals were involved.
3. Review the MSDS to determine what health effects are expected, including delayed effects.

### Accidental Ingestion of Chemicals

1. Immediately contact the Poison Control Center for instructions.
2. Do not induce vomiting unless directed to do so by a health care provider. Explain what chemicals were involved.
3. Review the MSDS to determine what health effects are expected, including delayed effects.

## Open Studio Policies

Open studios for intermediate and advanced students are an opportunity to use the Fleisher facilities to help expand your body of artwork, without the cost of renting your studio. For students taking courses in a specific medium, there is also a drop-in option for those interested in taking advantage of open studio hours to work on their projects. The drop-in fee for students is \$10; check in with the front desk for details.

- Work independently in the studio without instruction.
- Attend an orientation if you are a new student or have not received an orientation through a recent class. Orientations are offered on the evening of the first open studio session of the term, or by appointment with the studio technician for the area.

Darkroom, Printmaking, and Screenprinting: Studio Technician Jackson Kramer, [jkramer@fleisher.org](mailto:jkramer@fleisher.org) ext. 301

Ceramics: Studio Technician Scott Cooper, [scooper@fleisher.org](mailto:scooper@fleisher.org) ext. 339

Jewelry: Studio Technician Scott Cooper [scooper@fleisher.org](mailto:scooper@fleisher.org) ext. 339

All other Open Studios (Painting and Drawing, and Mosaics & Stained Glass): Manager of Adult Education Suzanne L. Seesman at [lseesman@fleisher.org](mailto:lseesman@fleisher.org) 215-922-3456 ext. 324

- Respect everyone's working space, noise levels, and the use of shared equipment.
- Check-in with the Studio Monitor when you arrive and before leaving the space.
- Contact the Open Studio Monitor or Manager of Adult Education about any concerns, broken equipment, or special needs you may have.
- Begin cleaning up 30 minutes before the end of Open Studio hours.
- Exit the studio space at the end of Open Studio hours.
- Do not act in a disruptive or inappropriate manner, as this may result in having your Open Studio privileges suspended or removed. Failing to follow the Open Studio Guidelines may result in the loss of privileges.

## Model Procedures

Models are important members of our community. We celebrate models as full people deserving of the same level of respect, courtesy, and consideration as everyone else in our community. Please be thoughtful in your language and behavior when working with models and remember that students, monitors, and faculty are expected to act in ways that align with our community guidelines.

- The door to the studio should remain closed during class, with the "model in progress" sign placed on the outside for the duration of the class.
- Make sure curtains are properly covering windows within the studio at all times.
- Instructors/monitors are responsible for asking the model their pronouns and kindly correcting and encouraging students to use correct pronouns when referring to the model.
- Students are not allowed to communicate with the model during the session. Students and models should share all comments discreetly with the faculty member or monitor in the studio.
- Models have the same choice to mask as everyone on site at Fleisher. Students and faculty are not permitted to ask models to remove their masks while posing. Instructors must make sure students are aware of this and all other policies, as well as supporting students in respecting models.

# Open Studio Monitor Guidelines

## Application Process

Open Studio Monitors are valued Fleisher volunteers who make the Open Studio program possible. To increase equity and access to monitor positions, volunteers must apply for the position and hold one-year terms.

- Applicants are required to complete an application which will be reviewed by Fleisher staff with select candidates being invited to interview for the volunteer position.
- Monitor applications will open in advance of the fall term. Studio Techs and the Manager of Adult Education will share the application with past monitors, Open Studio participants and select adult classes.
- Monitors remain in their role for the fall, winter, spring, and summer terms. However, if a monitor should step away from their role, staff will look to the initial applicant pool for an alternate volunteer.

## Orientation and Acknowledgment Form

All monitors must participate in an orientation. Orientation can be scheduled with the following staff members:

**Darkroom, Printmaking, and Screenprinting:** Studio Technician Jackson Kramer, [jkramer@fleisher.org](mailto:jkramer@fleisher.org) ext. 301

**Ceramics:** Studio Technician Scott Cooper, [scooper@fleisher.org](mailto:scooper@fleisher.org) ext. 339

**Jewelry:** Studio Technician Scott Cooper [scooper@fleisher.org](mailto:scooper@fleisher.org) ext. 339

**All other Open Studios:** Manager of Adult Education Suzanne L. Seesman at [lseesman@fleisher.org](mailto:lseesman@fleisher.org) ext. 324

## Attendance Policy

We ask that Open Studio Monitors be able to commit to at least one scheduled shift per week and attend the majority of their scheduled shifts throughout the year. If you are unable to make a shift, communicate as early as possible with your staff point person. If you must call out day of, contact your staff point person and communicate with our Visitor Services team via phone at 215-922-3456 or email [info@fleisher.org](mailto:info@fleisher.org). If we are not able to find a sub, some Open Studios will have limited access to tools or equipment for the safety of participants.

## Digital Communication Amongst Participants

Fleisher does not share student emails. If you have updates to share amongst participants, contact your staff point person. Participants are welcome to share their contact information one-on-one with fellow monitors and students.

## Monitor Shift Procedures

1. Open Studio Folder: Pick up folder at the front desk in the main building before each session.
2. Take Roll: Check in participants of Open Studios by taking attendance on the attendance roster. Checking in helps Open Studio participants to get to know you as a monitor.
3. Review Open Studio Policies: Take a moment to review the Open Studio Policies with participants. Students not currently enrolled in a corresponding class are required to review and sign the Adult Student Acknowledgment Form. Completed forms are kept in the Open Studio Folder.
4. Help Open Studio Participants: Answer basic studio questions and help participants find the necessary supplies/equipment for their work.
5. Safety: Regularly check on participants to make sure that the studio equipment is being used safely, and that the participants are being respectful to their colleagues and to the studio space. If an incident occurs, Monitors will be asked to fill out a Fleisher Incident Report. If an incident occurs that requires the removal of a student from the classroom, please first contact the appropriate staff person.
6. Closing Up: Ask students to start cleaning up 30 minutes prior to the end of Open Studio. Use studio specific clean up check-lists. Make sure all students leave the space before you. Return the folder to the front desk.



## Adult Education: Accessibility and Accommodations

Fleisher is committed to creating a learning environment that is inclusive of people of all ages, abilities and skill levels. To do so we seek to provide reasonable and appropriate accommodation in a supportive community. If you believe that you will require accommodation to enable you to participate meaningfully in a class or program, contact Suzanne L. Seesman, Manager of Adult Education: (215) 922-3456 ext 324, [lseesman@fleisher.org](mailto:lseesman@fleisher.org).

### Accessibility on Campus

While most class settings are wheelchair accessible, the campus is made up of several historic buildings that pose accessibility challenges.

<u>719 Catharine St.</u>	<u>Works on Paper Center, 705 Christian St</u>
Wheelchair accessible	
<ul style="list-style-type: none"> <li>• The Sanctuary</li> <li>• 2 Rear, 2 Front, Mosaics, and Mixed Media</li> <li>• 3R and 3F</li> <li>• 4R and 4F</li> <li>• Ceramics (the glaze room has stairs)</li> <li>• 709 1F</li> </ul>	<ul style="list-style-type: none"> <li>• Screenprint</li> <li>• Lithography and Etching</li> </ul>
Not wheelchair accessible	
<ul style="list-style-type: none"> <li>• Jewelry Studio</li> <li>• Digital Lab</li> <li>• 709 3F and 709 3R</li> </ul>	<ul style="list-style-type: none"> <li>• Darkroom</li> </ul>
<i>For more details about specific classrooms, please contact the Manager of Adult Education</i>	

### Information Relating to Mobility Disabilities

#### Access to the Building

The Fleisher Art Memorial is made up of several different historic buildings. Fleisher encompasses 717 – 709 Catharine St., and curb ramps are located on 7<sup>th</sup> and 8<sup>th</sup> street. The main entrance at 719 Catharine St. has a lift for those using mobility devices and is available during operating hours. The building is also serviced by an elevator. The Works on Paper Center is located at 705 Christian Street. The entrance is accessible via the Fleisher Parking Lot and has an entrance at street level that requires visitors to use the front door buzzer for entry. There is a lift in the building that provides access to the second floor, which requires staff assistance. For assistance with lift access in either building, call the front desk at (215) 922-3456 x 300. There are disability parking spaces available in the Fleisher Parking Lot in addition to a single public parking spot at 719 Catharine St.

#### Accessible Seating

Most Fleisher class settings can be set up for individuals utilizing mobility devices (or whose disabilities otherwise require accessible seating). Students are encouraged to communicate with the Manager of Adult Education before registering for a class to discuss requests.

#### Accessible Elements Inside the Building

The 719 Catharine St. Lobby front desk has an accessible counter. Accessible restrooms are located in the lobby, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> floor and accessible water fountains are available in the lobby as well as 2<sup>nd</sup> and 3<sup>rd</sup> floor. In the Works on Paper Building there is an accessible restroom and water fountain. 709 Catharine St. does not have an accessible restroom or water fountain.

## Information Relating to Auxiliary Aids, Services, and Accommodation Requests

If you believe that you will require accommodation such as learning aids, in person supports, or changes to a room set up including, but not limited to the addition of an air purifier please contact Suzanne L. Seesman, Manager of Adult Education: (215) 922-3456 ext 324, [lseesman@fleisher.org](mailto:lseesman@fleisher.org).

### Learning Aids

Students who require class materials shared in a particular manner such as handouts in advance of class or in a larger print, should contact their faculty person and Manager of Adult Education via email at least 24 hours in advance of class for which you require the aide.

### In Person Support Aides

Students and caregivers may request that an individual's support aide join a class or workshop by contacting the Manager of Adult Education at least two weeks before the start of class. While Fleisher welcomes support aides in most class settings, aides should not participate in class unless approved by the Manager of Adult Education.

At this time, Fleisher cannot provide a support aide. For additional questions about individual students' needs contact the Manager of Adult Education.

### Online Class Tech and Support Aides

Fleisher uses Zoom for online classes. Zoom has built in capacity for closed captioning which students can activate independently of faculty. Students may request recordings of lessons if approved by the Manager of Adult Education as an auxiliary aid. Fleisher prohibits the denial of class recording as an accommodation. Recordings are the property of Fleisher Art Memorial and should not be distributed for non-access purposes.

If a student requires a tech and access support person to be present throughout an online class or workshop to attend to any emergent needs regarding Zoom or access, they should contact the Manager of Adult Education before registering for a class. At this time, Fleisher cannot guarantee such support will be secured.

# Ceramics

## General Studio Guidelines

Fleisher's Ceramics Studio is a shared space, designed for beginners. Production work is prohibited.

## Tools and Storage

Fleisher does not provide personal tools. Each student will receive one storage shelf for each class. Please take your work, tools, and leftover clay home with you on your last day of class. All items left behind on your shelf will be discarded before the next term begins unless you are registered for the upcoming term and have labeled your shelf accordingly.

## Firing Guidelines and Schedule

If the glaze is too close to or on the bottom of a pot, it will be placed on the "Needs help" shelf. If you find one of your pots there, clean up the bottom and put it back on the glazeware shelf.

For students enrolled in a class or Open Studio, you may make new work up until the third to last week of the term. Three weeks out from the end of term, students should leave work to be bisque fired. Two weeks out from the end of term, leave work to be glaze-fired. By the last week of term, students will be able to take their work home with them. All other work will be fired on a rolling basis and may not be ready by the end of the term.

## Open Studio Wheel Usage

Wheels in the Ceramics Studio are first-come, first-served. If students are waiting to use a wheel, Volunteer Open Studio Monitors should hop off to make space for students. In addition, if individuals are waiting, wheel users should limit their session to 30 to 45 minutes to make room for other participants.

## Clean Up Procedures

It is essential to keep the studio and glaze room clean. Clay and glaze left on the floor will dry and become a fine, nearly invisible silica dust, which is circulated and suspended indefinitely in the air. This dust can cause health problems for people who spend a lot of time working in the studios. Please make sure you clean up your trimmings and spills before they become dust.

- NEVER discard clay in the sink. Pour off water and put heavy slip and clay chunks in the reclaim bin found near the lockers/windows.
- Thoroughly clean wheels, pans, benches, stools, tables, the floor, the wall behind you, and bats.
- After the wheel is clean make sure it is turned off. Put the stool upside down on the wheel.
- Use the dustpan and brush to clean up your clay scraps at your work area, ware boards, and the floor.
- Scrape and clean wedging and plaster tables after using them.
- Use newspaper in the glaze room.
- Return glazes to their proper place, always cleaning lids and rims of containers

## Clay

Clays are minerals composed of hydrated aluminum silicates, often containing large amounts of crystalline silica. Other impurities may include organic matter or sulfur compounds. Sometimes, grog (ground firebrick), sand, talc, vermiculite, perlite, and small amounts of minerals such as barium carbonate and metal oxides, are added to modify clay properties.

Students enrolled in a class or Open Studio are charged \$20 at the time of registration for a 25 lb. block of clay. Clay can be retrieved in the Ceramics Studio. To purchase additional clay, visit the front desk.

## Risks

- Bags of clay and glaze materials can be very heavy, and lifting can cause back problems.
- Hypersensitivity pneumonia, asthma, or other respiratory problems may occur with exposure to molds growing in wet clay that is being soured or aged in a damp place, in slips that stand for months, or with inhalation of dry-aged clay.
- Throwing on a potter's wheel for long periods of time can result in carpal tunnel syndrome because of the awkward position of the wrists. Pain, numbness, and/or pins and needles in the thumb and first three fingers are common symptoms. Back problems can occur from bending over the potter's wheel for long periods of time.
- Hand contact with wet clay can result in abrasion and dryness of fingertips and hands.
- Clay scraps on the floor, bench, and other surfaces can dry and pulverize, producing an inhalation hazard due to the presence of free silica. Similarly, reconditioning clay by pulverization and sanding finished greenware can create very high concentrations of hazardous silica dust.

## Safety Rules

1. Wear separate work clothes while in the studio. Choose clothes of material and design that don't trap dust. Wash these clothes weekly and separately from other laundry.
2. Avoid contact of clay with broken skin.
3. To prevent back problems, always lift with your knees bent.
4. Keep wrists in an unflexed position as much as possible to prevent carpal tunnel syndrome. Take frequent work breaks.
5. Recondition clay by cutting still-wet clay into small pieces, letting them air-dry, and soak in water.

## Glazes

Glazes used to color or finish clay pieces are a mixture of silica, fluxes and colorants. Common fluxes include lead, barium, lithium, calcium and sodium, and are used to lower the melting point of silica. The actual colorants, which are an assortment of metal oxides usually account for less than 5% of the glaze by weight. Glaze components are weighed, sorted and mixed with water. These materials are often in fine powdered form, and result in high dust exposures.

Glazes are part of each student's studio fee. Check test tiles for firing results.

## Risks

- Soda ash, potassium carbonate, alkaline feldspars, and fluorspar used in glazes are skin irritants.
- Spray application of glazes is very hazardous because of the potential inhalation of glaze mists.
- Dipping, pouring, and brushing certain glazes may cause skin irritation and accidental ingestion due to careless personal hygiene habits.
- Glazes containing solvents are both flammable and hazardous.

## Safety Rules

1. **Recommended PPE:** Gloves, Respirator (when working with dry materials)
2. Only approved glazes may be used in the Fleisher Ceramics Studio. Specific questions can be addressed to Chris Archer, Senior Technician.
3. Ventilation fan must be on when applying solvent-containing glazes.

# Darkroom

## General Darkroom Safety Overview

To avoid accidents, the following operational safety rules must be observed by everyone working in Fleisher's Darkroom. Failure to follow the safety rules will result in a loss of studio privileges.

- Review Chemical Exposure Guidelines
- Always Add Acid to water...Never add water to acid **Remember "AAA"**
- Never store chemicals on the floor
- Do not eat or drink in the Darkroom
- Always turn on ventilation while working in the Darkroom
- Always wear appropriate personal protective equipment (PPE) such as gloves and goggles
- Always wash hands with soap and warm water after working with chemicals to avoid possible chemical exposure
- Know how to use emergency equipment before an actual emergency
- Do not use paper towels to clean up acid spills as this may cause a fire
- Clean up all spills immediately to prevent slipping and falling and to reduce inhalation of chemical vapors
- Keep all containers and trays closed or covered when not in use to prevent the release of toxic gases/vapors
- Never wash any chemicals down the sink
- Notify faculty, monitor, or studio tech immediately of any accidents or injuries, no matter how slight

## Open Studio Set Up and Tear Down

### Preparations

1. Turn on incandescent lights, red lights, and safety lights
2. Turn on fan
3. Open safe light barn doors

### Clean Trough and Trays

1. Turn on the front water valve and allow a gentle flow from the hose mouth
2. Set trays up on an angle and clean trough (including edges), wiping by hand
3. Set each tray in position
4. Ensure the fix remover tray has a spout pointing away from the fix tray
5. Rinse each set of tongs and place them in their appropriate tray
6. Turn on the rise water valve: *hose should be connected to the receptacle at the bottom of the print washer*
7. Make sure the flow is minimal

### Mixing Chemistry

1. **Print Developer:** 300 ml developer/2700 ml water
  - Pour developer gently into the first tray and rinse graduates
2. **Stop:** Pour full strength from the stop tub. 3000 ml.
  - Pour Stop gently into the second tray and rinse the graduates
3. **Fix:** Carefully pour out 300 ml and mix with 2700 ml water
  - Wipe the floor where any chemical may have dripped
  - Gently pour into the third tray and rinse the graduates
  - Place graduates in the drying rack
4. **Fix Remover:** Pour approx. ½ of jug, full strength, directly from the jug
  - Make sure that the water flowing out of the print washer is not spilling into the fix remover tray
  - Make sure the spout of the fix remover tray points away from the fix tray
5. **Final Setup**
  - Check print stations: each print station should have a timer, easel, and focus finder

- Reset the fan and reset regularly throughout the remainder of the studio session
- Start GraLab darkroom timer
- Turn off incandescent lights

## Tear Down

1. Confirm all light-sensitive paper is put away and nothing is in dev or stop trays
2. Turn on incandescent lights and turn off safety lights
3. Close safe light barn doors
4. Turn off water to rinse tray, unplug the hose, and let the tray drain
5. Dump the developer and stop down the drain
6. Test the fix with a couple of drops of fix test: if the drops are clear, the fix is good. If drops are cloudy, pour them in to fix recycle bucket
7. Pour the fix remover back into the fix remover jug
8. Clean trough and trays and ensure each print station has timers, an easel, and a focus finder
9. Remove all trash
10. Check that all water is off
11. Turn off fan and incandescent lights.
12. In the outer room confirm that the water is off, the trays are clean and drying, the dryer and light table are off, and all other tools have been returned

## Black-and-White Photographic Processing

A wide variety of chemicals are used in black-and-white photographic processing. Film development is usually done in closed canisters. Print processing uses tray processing, with successive developing baths, stop baths, fixing baths, and rinse steps. Other treatments include the use of hardeners, intensifiers, reducers, toners, and hypo eliminators.

## Mixing Photo Chemicals

### Risks

- Developer solutions and powders are often highly alkaline, and glacial acetic acid, used in making the stop bath, is also corrosive by skin contact, inhalation and ingestion.
- Developer powders are highly toxic by inhalation, and moderately toxic by skin contact, due to the alkali and developers themselves.

### Safety Rules

1. **Required PPE:** Gloves, safety goggles and protective apron when mixing concentrated photo chemicals. Always add any acid to water, never the reverse.
2. Use liquid chemistry whenever possible, rather than mixing developing powders. Pregnant people in particular should not be exposed to powdered developers.
3. When mixing powdered developers, use a glove box (a cardboard box with glass or Plexiglas top, and two holes in the sides for hands and arms), local exhaust ventilation, or wear a dust respirator.
4. In case of skin contact, rinse with lots of water. In case of eye contact, rinse for at least 15-20 minutes, preferably using an eyewash station, and seek medical attention.
5. Store concentrated acids and other corrosive chemicals on low shelves so as to reduce the chance of face or eye damage in case of breakage and splashing.
6. Do not store photographic solutions in glass containers.

## Developing Baths

### Risk

- Developers are skin and eye irritants and, in many cases, strong sensitizers. Monomethyl-p-aminophenol sulfate creates many skin problems, and allergies to it are frequent (although this is thought to be due to the presence of para-phenylene diamine as a contaminant). Hydroquinone can cause depigmentation and eye injury after five or

more years of repeated exposure and is a mutagen. Some developers also can be absorbed through the skin to cause severe poisoning (e.g., catechol, pyrogallol acid). Phenidone is only slightly toxic by skin contact.

- Most developers are moderately to highly toxic by ingestion, with ingestion of less than one tablespoon of compounds such as monomethyl-p-aminophenol sulfate, hydroquinone, or pyrocatechol being possibly fatal for adults. Symptoms include ringing in the ears, nausea, dizziness, muscular twitching, increased respiration, headache, cyanosis, delirium, and coma.
- Sodium hydroxide, sodium carbonate, and other alkalis used as accelerators are highly corrosive by skin contact or ingestion. This is a particular problem with pure alkali or with concentrated stock solutions.
- Potassium bromide is moderately toxic by inhalation or ingestion and slightly toxic by skin contact. Symptoms of systemic poisoning include lack of coordination, mental confusion, and skin rashes.
- Sodium sulfite is moderately toxic by ingestion or inhalation, causing gastric upset, colic, diarrhea, circulatory problems, and central nervous system depression.

## Safety Rules

1. See the section on Mixing Photo Chemicals for mixing precautions.
2. Do not put your bare hands in developer baths. Use tongs instead. If the developer solution splashes on your skin or eyes, immediately rinse with lots of water. For eye splashes, continue rinsing for 15-20 minutes and seek medical attention.

## Stop Baths and Fixer

Stop baths are usually weak solutions of acetic acid. Acetic acid is commonly available as pure glacial acetic acid or 28% acetic acid. Some stop baths contain potassium chrome alum as a hardener.

Fixing baths contain sodium thiosulfate ("hypo") as the fixing agent, and sodium sulfite and sodium bisulfite as a preservative. Fixing baths also may also contain alum (potassium aluminum sulfate) as a hardener and boric acid as a buffer.

## Risks

1. Acetic acid, in concentrated solutions, is highly toxic by inhalation, skin contact, and ingestion. It can cause dermatitis and ulcers and can strongly irritate the mucous membranes. The final stop bath is only slightly hazardous by skin contact. Continual inhalation of acetic acid vapors, even from the stop bath, may cause chronic bronchitis.
2. Potassium chrome alum or chrome alum (potassium chromium sulfate) is moderately toxic by skin contact and inhalation, causing dermatitis and allergies.
3. In powder form, sodium thiosulfate is not significantly toxic by skin contact. By ingestion it has a purging effect on the bowels. Upon heating or long standing in solution, it can decompose to form highly toxic sulfur dioxide, which can cause chronic lung problems. Many asthmatics are particularly sensitive to sulfur dioxide.
4. Sodium bisulfite decomposes to form sulfur dioxide if the fixing bath contains boric acid, or if acetic acid is transferred to the fixing bath on the surface of the print.
5. Alum (potassium aluminum sulfate) is only slightly toxic. It may cause skin allergies or irritation.
6. Boric acid is moderately toxic by ingestion or inhalation and slightly toxic by skin contact (unless the skin is abraded or burned, in which case it can be highly toxic).

## Safety Rules

1. **Required PPE:** Gloves and safety goggles.
2. All darkrooms require good ventilation to control the level of acetic acid vapors and sulfur dioxide gas produced in photography.
3. Cover all baths when not in use to prevent evaporation or release of toxic vapors and gases.

## Color Processing

Color processing is much more complicated than black-and-white processing, and there is a wide variation in processes used by different companies. Color processing can be either done in trays or in automatic processors.

In general, color developers are more hazardous than black-and-white developers. Para-phenylene diamine, and its dimethyl and diethyl derivatives, are known to be highly toxic by skin contact and absorption, inhalation, and ingestion. They can cause very severe skin irritation, allergies and poisoning.

Although many of the solvents are not very volatile at room temperature, the elevated temperatures used in color processing can increase the amount of solvent vapors in the air. The solvents are usually skin and eye irritants.

Color processing needs more ventilation than black-and-white processing due to solvents and other toxic components at elevated temperatures.



# Jewelry

## Shared Equipment and Tools

- No Jewelry Studio supplies should leave the studio.
- Students are responsible for cleaning up all areas of the Jewelry Studio they are working in.
- Studios should be kept as clean as possible. Dust tables and ensure trash is thrown away in the appropriate bins.
- All tools and materials need to be put back in their designated places at the end of class sessions.

## General Jewelry Safety Overview

To avoid accidents, the following operational safety rules must be observed by everyone working in Fleisher's Jewelry Studio. Failure to follow the safety rules will result in a loss of studio privileges.

- **Follow all safety rules and regulations.**
- Review Chemical Exposure Guidelines.
- Before beginning a procedure, think through the steps and have a plan for what to do in an emergency.
- Know where the fire extinguishers, first aid kit, eye wash station and MSDS (Material Safety Data Sheets) sheets are kept and how to use them.
- Know where the exit and fire alarm are located.
- Never use any tool or machine without proper training or machine you are unsure of.
- Nonferrous metals **INCLUDING STEEL** are not permitted in the studio. They destroy equipment.
- Wear proper shoes and apparel, tie up long hair and loose clothing. Do not wear jewelry while working in the shop.
- Proper eye protection must be worn at all times while in the shop.
- Use all available ventilation equipment.
- Be aware of other students. Notify the supervisor when someone is using the shop in an unsafe manner.
- Notify faculty immediately of defective, dull, broken, or unsafe equipment. **DO NOT USE** if any of these are present.
- No food or drink in the shop.
- Complete a Safety Incident Report if there is any accident or injury.

## If You Smell Gas

If you smell gas, turn off the tank, exit the studio, and inform the front desk immediately.

## Gas Tanks

Tanks and torches are checked Monday through Thursday and Saturday during term by a member of the Facilities team. A log is kept on the outside of the door and stored in a log folder inside the studio.

## Risks

- The jewelry studio uses acetylene and propane gases. They are flammable and an explosion hazard.  
*Currently the propane oxygen tank should only be used by Faculty member Maureen Duffy.*
- Oxygen is a potent fire risk if it comes in contact with oils, greases or flammable materials.

## Safety Rules

1. Only Jewelry Studio Teaching Staff and Open Studio Monitors who have completed a studio orientation are permitted to turn on gas. **Students may not turn on the gas or use the gas without supervision.**
2. In addition, all faculty and/or Open Studio Monitors should check tanks at the beginning and end of every class. Any safety concerns should be brought to the attention of the on-duty Facilities staff person.
3. To check the tanks and torches, open and close the tank and bleed the line. Test for valve and fitting leaks using soapy water. Dip your hose in a bucket of water with the gas pressure on to check for hose leaks. Test after changing tanks and other times as well. **Never use a flame to test for leaking gas.**
4. The ventilation system must be turned on and, weather permitting, windows should be open.
5. Keep work area tidy and cleaned up. Do not have flammable or combustible materials near the work area.

6. Always handle cylinders carefully. Do not drop them, bump them, or use as supports.
7. Never position cylinders near any electrical equipment or process.
8. Do not use torch equipment near flammables or combustibles.
9. Wear fire-resistant clothing. Tie your hair back, wear no jewelry, etc. - most standard rules for using tools count here as well. Foot protection is necessary with much torch work.
10. Keep cylinders and valves clean at all times to avoid leaks. When attaching the regulator, blow out any dirt in the opening by opening and closing the valve for a brief instant (use eye protection). Inspect the filter in the inlet nipple of an oxygen regulator to see that it is in position and clean. If it is missing, inform staff.
11. If you smell gas, turn off the tank, exit the studio, and inform the front desk immediately.

## Torches

Torches use a combustible gas fuel mixed with oxygen or air to create intense flame for soldering and annealing. In our shop, we have two kinds of gases: acetylene/air and oxy/acetylene.

### Risks

- Thermal burns from handling metal that has been recently soldered, or from flame.
- Respiratory trauma from exposure to flux and flow-inhibiting agents (white-out, yellow ochre).
- Exposure to metal and torch fumes.
- Exposure to mild acids in the pickling process.

### Safety Rules

1. **Required PPE:** Safety glasses, closed-toe shoes, and a protective apron.
2. Wear appropriate clothing at all times (avoid sandals, bare legs, bare midribs, or excessively baggy clothing).
3. Tie back long hair and dangling jewelry when working.
4. Wear appropriate eye protection against particles and glare. Welding glasses are a must if working with the oxy/acetylene torch.
5. Keep the area clear of flammable objects such as paper towels and flux pots.
6. Heated metal remains hot for a long time. Use caution and proper equipment when handling equipment, substances or materials that have been heated.
7. Do not use torch tips designed for other fuel gases (i.e. the gas air torch tips).
8. Do not lay an ignited torch down on the tabletop; always be aware of where your flame is.
9. Do not solder or heat any pressurized container or vessel.
10. Turn on the ventilation prior to use.
11. Turn off torches when not in use.
12. Bleed all lines when finished. Compressed acetylene is potentially explosive.

## Flex-Shaft (Polishing)

Flex-shafts are rotary tools used for small-scale drilling, carving, grinding, sanding and polishing. Depending on the type of bit or burr, they can be used on wood, wax, metal, stone, plastic, bone, horn, and more.

### Risks

- Eye and skin damage from flying debris.
- Cuts and abrasions on your fingers and hands.
- Burns from overheated materials or tools.
- Hair, clothing, or jewelry become entangled with the spinning parts of the tool.
- Inhalation of dusts/vapors.

### Safety Rules

1. **Required PPE:** Safety glasses.

2. Loose hair must be tied back.
3. Lubricate the bit or burr as appropriate.
4. Never change the motor direction while the motor is running.
5. Use forward motor direction ONLY for fluted burrs, drills, and cutters.
6. Many mandrels have right-hand threaded arbor screws that will unscrew in the reverse direction.
7. Insert the shank of the accessory as far as possible into the chuck to give it maximum support.
8. Always securely tighten the chuck jaws of handpiece with a chuck key so that it won't come loose.
9. Do not bend the shaft and sheath at a tight angle.
10. Always wait until the motor, shaft, and accessory have come to a complete stop before changing the accessory.
11. Always use an accessory with the same or higher speed rating than the tool.

## Bench Shear

A bench shear, also known as a lever shear, is a bench-mounted shear with a compound mechanism to increase the mechanical advantage. It is usually used for cutting rough shapes but cannot do delicate work.

### Risks

- Sharp edges on cutters, work pieces can cause cuts.
- Squash/crush and pinch points.

### Safety Rules

1. **Required PPE:** Closed-toe shoes.
2. Bench shears must be securely fastened to a bench or purpose designed stand. If the bench shear is not secure, inform faculty or monitor immediately.
3. Guards or safety devices must never be removed or adjusted
4. Working parts should be well lubricated and the blades free of rust and dirt.
5. Ensure no slip/trip hazards are present in workspaces and walkways.
6. Familiarize yourself with and check all machine operations and controls.
7. Never use bench shears for cutting metal that is beyond the machine's abilities.
8. Material should be properly supported during cutting and industrial-type gloves should be worn.
9. Hold material securely to prevent it tilting during the cut.
10. Ensure fingers and limbs are clear before operating the bench shears.

## Pickle Pot

A pickle pot is essentially just a mini crock pot with a lid. It is important to only use your pickle pot for pickle solution, as it's a toxic compound that can contaminate any other substance.

### Risks

- The pickle contains warmed acid solution (sparex); splashes can cause burns.

### Safety Rules

1. **Required PPE:** Closed-toe shoes are required.
2. The pot has 10% Sodium Bisulphate (to remove the oxidation layer) - a) mix this with the water in the pot using safe handling precautions. b) Allowing for the volume of the jewelry and solution, fill the pot with the solution. c) Add the solution to the pot, filling slowly to prevent overflow and splash back.
3. Allow the solution to heat but NOT to boil. Do not set the pot on high as it will boil dry.
4. Use copper tongs to gently set the jewelry into the pot.
5. Never use your hands to dip the jewelry into the pot; don't drop your material into the pot as it could splash back.
6. Do not use the pot without the cover.
7. Slowly remove material from the pot using steel-free tongs, hold jewelry above the pot to allow solution to drain.

8. Neutralize the jewelry by placing it in baking soda.
9. Rinse the jewelry and tongs and allow it to dry.
10. After using the pickle pot, turn off the pot. Clean and discard the spent pickle if required; add baking soda to it and let it bubble and then follow proper disposal procedures as the used pickle is a contaminated solution.
11. Clean the inside and the outside of the pot to remove contaminants and dry; do not immerse in water! NEVER clean while the pot is running.

## Buffing Lathe

A buffing lathe is a powerful table-mounted electrical motor that is used to spin a variety of polishing wheels or “mops”.

### Risks

- Eye and skin damage from flying debris.
- Cuts and abrasions on your fingers and hands.
- Burns from overheated materials or tools.
- Hair, clothing, or jewelry becoming entangled with the spinning parts of the tool.
- Inhalation of dusts/vapors.

### Safety Rules

1. **Required PPE:** Safety Glasses, dust mask, protective apron, and closed-toe shoes.
2. **Turn on dust collector and open blast gate before beginning work.**
3. Do not make adjustments to the machine or change accessories unless you have been trained to do so.
4. Always operate the machine one person at a time with the Plexi shield in place.
5. Always hold work firmly and be sure the accessory is not torn or loose before using.
6. If the material begins to feel warm, stop and cool it immediately. Never wear gloves, or hold work with a rag, when buffing, as they can become tangled in the mechanism and trap your hand.
7. Do not polish pieces of material that are too small to be safely supported or held.
8. Never leave the machine work area when the power is on or before the machine has come to a complete stop.
9. There are two distinct areas on a buffing wheel: The UNSAFE area rotating towards the workpiece and the SAFE area, rotating away from it. The workpiece must only be applied to the area of the buff that is rotating AWAY from the workpiece.
10. When buffing parts have sharp corners, edges or hooks, they should be offered to the wheel with the edge flowing away from the buff, so the part does not catch.

## Precision Drill Press

The Drill Press is a tool for boring clean, accurate, perpendicular holes in metal, wax, plastic, wood, bone and other materials. Unlike large-scale drill presses, the work piece is held by hand on a movable plate and raised to meet the bit.

### Risks

- Damage to eyes, hands and/or fingers from losing control of material during drilling operations.
- Hair, clothing, or jewelry becoming entangled with the spinning parts of the tool.
- Thermal burns from friction.
- Eye/skin trauma from flying debris.

### Safety Rules

1. **Required PPE:** Safety glasses, ear plugs, and closed-toe shoes.
2. Make all drill press adjustments with the power shut off.
3. Only use twist drills of 1/8” or less and “step up” to any hole larger than 1/16”
4. Insert the shank of the bit as far as possible into the chuck to give it maximum support.
5. Always securely tighten the chuck jaws with a chuck key.

6. Always lubricate your bit when drilling metal. Long stock should be drilled with the excess to the left of the operator. If the stock rotates it will hit the post and not the operator.
7. Support the underside of the stock to be drilled with a backer board.
8. Use light pressure only. Excessive pressure will cause the bit to bend while spinning.
9. If a drill bit binds, turn off the drill press and carefully turn the chuck backwards by hand to free the drill bit.
10. Never reach around or under a rotating drill bit or grab the chuck to stop a drill press.
11. Do not touch the drill bit immediately after drilling a hole as the bit may be very hot and could burn your hands.

# Mosaics & Stained Glass

## Safety Overview

- Know the hazards associated with any tools, materials, adhesives etc. you are using, and take appropriate care.
- You must wear safety goggles whenever you are breaking up mosaic materials. A dust mask will protect you from breathing in dust from broken ceramics, etc., or when mixing cement grout.
- No food or drink in the studio.
- Never place a hot soldering iron on your work surface or leave flammable items near by: **you can start a fire!**
- Use a brush and dustpan to clean work and workstations of small glass particles.
- Wear nonflammable or 100% cotton clothing that covers your arms and legs to help prevent burns.
- No saws or grinders without an instructor or Open Studio Monitor.
- Use ladder and/or ask for assistance when accessing stored materials on higher shelves

## First Aid

- Immediately cool the affected area under cold water. Do not apply any creams or ointments. Cover with a band-aid.
- Seek medical attention if the burn covers an area bigger than 3 inches across.
- Complete an incident report.

## Grout and Thin Set

### Risks

- Thin set contains silica dust. Inhaling silica dust is bad for your lungs, and long-term exposure can result in silicosis.

### Safety Rules

1. **Required PPE:** Gloves and dust mask or respirator.
2. Work at designated work station.
3. Add the powder to the water, not the other way around.
4. Pour water into your bucket, and then pour in your powdered thinset mix.
5. Make small batches; don't try to mix the whole bag all at once.

## Soldering Iron

### Risks

- The temperature of the heated tip can reach 400°C and will cause severe burns.
- The joints that you solder are also very hot – allow them time to cool before handling.
- Touching a hot iron to power cords can melt through the insulation and cause electric shock.

### Safety Rules

1. **Required PPE:** Wear eye protection. Solder can “spit” and send bits of solder flying.
2. Use lead free solder.
3. Keep cleaning solvents in dispensing bottle to reduce inhalation hazards.
4. Never touch the element or tip of the soldering iron. They will burn. The solder itself also gets hot.
5. Hold wires to be heated with tweezers or clamps.
6. Keep the cleaning sponge wet during use.
7. Always return the soldering iron to its stand when not in use. Never put it down on your workbench.
8. Turn unit off or unplug it when not in use.
9. Soldering irons come in models that use different wattages. Use the right size soldering iron for your projects.
10. Give any soldered surface a minute or two to cool down before you touch it.
11. Always wash your hands with soap and water after soldering.

# Printmaking (Etching and Lithography)

## Shared Supplies and Equipment

- Any Printmaking Studio materials, such as furniture, tools, projects taken out of the studio, must be returned to the studio when you are done working. Materials left out might be considered shared supplies and projects are in jeopardy of being damaged accidentally by other users of the studio.
- Students are responsible for cleaning up all areas of the Printmaking studio they are working in. Store your project(s), portfolios or materials on the provided shelves, in flat files, or in your locker.
- Studios should be kept as clean as possible. Trash should be thrown away in the appropriate bins.
- All tools and materials need to be put back in their designated places at the end of class sessions.
- At the end of each term, due to the limited amount of space, no projects or materials are to be left in the studio.

## General Safety Overview

Failure to follow the safety rules will result in a loss of studio privileges.

1. Review Chemical Exposure Guidelines.
2. Be aware of ignition sources such as hot plates, lamps, extension cords, etc.
3. DO NOT ATTEMPT TO REPAIR ANY TOOLS. Any missing, malfunctioning, or broken equipment should be labeled as such, removed from public use, and reported to your instructor or the technician.
4. Clamp lights must be unplugged when not in use.
5. NO FOOD OR DRINK is allowed in any part of the printmaking studios.
6. Long hair must be tied back to avoid entanglement with moving press parts.
7. Remove any scarves, long necklaces, or other dangling clothing while working on the presses.
8. Keep your tools sharp as dull tools can be more dangerous to use.
9. Use a bench hook while chiseling wood or linoleum blocks or other relief plates.
10. No open-toed shoes are allowed in the printmaking studios.

## Printing Press Safety Rules

1. The presses are all handset and operated.
2. Tie back any long hair and remove any hanging, jewelry, scarves, ties, headphones, etc. that might get caught.
3. Be aware of who is around you and where the press is going to end up.
4. When operating the press be aware of your posture and adopt a position comfortable for you.
5. Never twist, lift, or hold heavy objects when operating the presses.
6. Do not raise rollers too high to avoid the bed sliding out.
7. Always set up and remove blankets, with the bed central to the press.

## General Chemicals

The main chemicals used in lithography and relief printing are inks, pigments, and acids.

### Inks

Intaglio, lithography, and relief inks are made of a vehicle (either linseed oil or water) that suspends pigments. Additional hazardous binders, preservatives, etc. may also be included.

### Risks

- Oil-based inks contain treated linseed oils. Ingestion of treated linseed oil in large amounts may be hazardous due to the small amounts of heavy metals present.
- Rags soaked in oil vehicles may spontaneously combust if heated.

## Safety Rules

1. Know the materials you plan to work with. Always review the SDSs for all chemicals used in a process so that you are fully aware of the hazards and how to mitigate those hazards. Use the least hazardous materials possible.

2. Avoid using lead pigments and concentrated acids whenever possible.
3. Do not use an open flame or open heating element to heat linseed oil, varnishes, or burnt plate oil.
4. Place oil-soaked rags in self-closing disposal cans.

*Chemicals are stored in flammable lockers and should be put away in said lockers at the end of Open Studio and classes.*

## Solvents

Organic solvents are used in printmaking to dissolve and mix with oils, resins, varnishes, and inks. They also clean plates, rollers, tools, and even hands.

## Risks

- Inhalation is the main route of solvent exposure. High concentrations of solvent vapors can cause dizziness, nausea, fatigue, loss of coordination, or coma.
- Repeated or prolonged skin contact with solvents can cause defatting of the skin and resultant dermatitis.
- Many solvents are toxic if ingested (for instance, swallowing 1 ounce of turpentine can be fatal).
- Most solvents are either flammable or combustible.

## Safety Rules

1. **Recommended PPE:** Dust mask and gloves.
2. Have adequate ventilation in place when using solvents.
3. Only keep the minimum amount of solvents necessary. Large amounts of solvents must be stored in a flammable storage cabinet.
4. Never store solvents or solvent-containing materials in food or drink containers. Always label the contents of a container with the full name written out.
5. Wear gloves when handling solvents to avoid skin contact. Select gloves appropriate for the solvent you are using. Use baby oil rather than solvents to clean ink off your extremities.

## Acids

Acid etching is used in intaglio and lithography. Nitric acid, hydrochloric acid, and phosphoric acid are examples of common etching acids used in printmaking. If you use hydrofluoric acid, review MSDSs for handling and emergency procedures before commencing work.

## Risks

- Chemical etching requires very strong, concentrated acids. These are very corrosive to the skin, eyes, respiratory system, and gastrointestinal system. Even diluted acids can cause skin irritation on repeated or prolonged contact.
- Chromic acid is a dermal sensitizer, suspect carcinogen, and oxidizer.
- Phenol is highly toxic by skin absorption and ingestion. Exposure may cause severe kidney damage, central nervous system effects, and even death if exposed to large quantities. Exposure to phenol can also cause deep and painful skin burns.
- Concentrated nitric acid is a strong oxidizing agent and can react explosively with other concentrated acids, solvents, and the like. Nitric acid emits various nitrogen oxide gases, including nitrogen dioxide, which is a strong lung irritant and can cause emphysema, pulmonary edema, bronchitis, methemoglobinemia, pneumonitis, and more.

## Safety Rules

1. **Required PPE:** Splash goggles, protective apron, and thick gloves.
2. Know the materials you plan to work with. Always review the MSDSs for all chemicals used in a process so that you are fully aware of the hazards and how to mitigate those hazards and use the least hazardous materials possible.
3. Store concentrated nitric and chromic acids away from organic materials to prevent fires.
4. Only Studio Techs or Teaching Staff may dilute concentrated acids, never the reverse. Always add the acid to the water when diluting.
5. Make sure there is adequate ventilation when doing acid etching.



6. Use of corrosive materials should only occur in locations where there is immediate access (i.e., within 50 ft.) to eyewashes and drench showers.

## Screenprinting

### Shared Supplies and Equipment

- Any Screenprinting Studio materials, such as furniture, tools, or projects taken out of the studio, must be returned to the studio when you are done working. Materials left out might be considered shared supplies and projects are in jeopardy of being damaged accidentally by other users of the studio.
- Students are responsible for cleaning up all areas of the studio they are working in. Store your project(s), portfolios or materials on the provided shelves, in flat files, or in your locker.
- Studios should be kept as clean as possible. Trash should be thrown away in the appropriate bins.
- All tools and materials need to be put back in their designated places at the end of class sessions.
- At the end of each term, due to the limited amount of space, no projects or materials are to be left in the studio unless students are enrolled in the upcoming term.

### General Safety Overview

To avoid accidents, the following operational safety rules must be observed by everyone working in Fleisher's Printmaking Studios. Failure to follow the safety rules will result in a loss of studio privileges

### Printing Safety Rules

1. Be aware of your surroundings and the materials you are using
2. Give yourself enough time to set up and clean up. Do not rush.

### Coating and Cleaning Screen Safety Rules

1. When coating your screen with light-sensitive emulsion, always wear gloves to avoid skin contact. Wash skin with water and soap.
2. When degreasing or decorating a screen make sure the door is shut and the ventilation and light are turned on. Both chemicals are classed as non-hazardous, however, gloves, masks, and eye protection are provided and are advised especially if you have a respiratory problem, sensitive skin, or dermatitis. More information is available in MSDS binder in the studio.
3. Any water spillage needs to be mopped up and caution is taken until dry.
4. Wear all appropriate PPE when reclaiming and washing screens (face shield, apron, gloves, ear protection, etc.).
5. When using chemicals for washout, reclaiming, or degreasing, make sure to use only the correlating labeled scrubbers and brushes.
6. When exposing the screen, make sure that the curtain is closed and that no one will enter the room until the unit has cut itself off. Ultraviolet light can damage your eyes; do not look directly into the light.

### Acrylic Inks

Acrylic inks are classed as non-hazardous and can be cleaned up with water. Simple Green and household cleaners for cleaning the print bed, worktop, and sink area are available in the studio. Do not eat or drink while handling inks and wash hands thoroughly before doing so.

### Using the pressure washer

1. Wash off any chemicals with the hand spray gun before blasting screens to avoid them becoming airborne.
2. Always wear ear protection, a face shield, gloves, and a protective apron, especially when chemicals are used.
3. Turn on the water valve, and switch on the unit where indicated.
4. Pick up the lance carefully and do not press the trigger until the lance is pointing at the washout booth.

5. Turn off the unit when finished and spray into the washout booth to release pressure. Turn off the water valve and unplug the unit to ensure the washer is off.