

**ASTU 2802-501**

**DIGITAL METHODS**

SPRING.2026

VERONICA IBARGÜENGOITIA

MON - WED 8 -11 AM

**ROOM ART 153**

Office Hours Mon 2 pm (by appointment)

**COURSE DESCRIPTION**

Three hours (0;6).

Introduction to the concepts and processes of producing sculptural objects, emphasizing basic digital fabrication tools and techniques such as 3D modeling, scanning and printing, CNC routing, and CNC plasma cutting. Prerequisite(s) : ART1440 and ART1450.

**CONTENT**

This course develops the visual, verbal, and technical skills essential for understanding the concerns of contemporary sculpture, along with its history and theories. While learning tools and techniques for adding new objects to the world, we will also heighten our awareness of the existing objects and materials, consider the actions and feelings we direct at them, and discuss how we determine their value. We will view sculpture through the lens of familiar objects we interact with daily and notice how our relationship to an object changes when it no longer serves us functionally. We will explore how form and material can convey meaning through personal narratives and universal associations. Assignments will explore the possibilities and limitations afforded by different media in combination with digital fabrication tools and techniques. In addition to teaching students how to use and operate CAD and CAM (Computer aided Machines) tools, this course will encourage the use of essential elements and principles of art & design, excellent craftsmanship, intentionality, experimentation through iteration, and conceptual motivation. Students will be encouraged to incorporate their interests and express their beliefs through the work they create in this course. You will also be challenged to make, view, and discuss sculpture in the context of current events and social, political, and environmental concerns. The schedule reflects expected class progress in course subject matter and is considered tentative. The schedule is subject to change in content and scope at the Instructor's discretion.

**Note:** The Beginning Sculpture: Traditional Methods course covers woodworking, welding, mold-making, and casting. Those tools/techniques will not be taught in this course, and you are not permitted to utilize them unless you have already taken Traditional Methods.

## COURSE REQUIREMENTS

- Attend all classes and take notes during technical demonstrations and or pictures.
- Complete quizzes before using any CAM.
- Complete four sculptures that utilize the following digital fabrication tools/techniques:
  1. 3D printer, 3D scanner
  2. Laser cutter,
  3. CNC plasma cutter
  4. CNC router
- Actively participate in group critiques with your classmates and Instructor.
- Document the artwork you create in this course. Submit 1-3 images/videos of each artwork, along with an image list. Include a process journal detailing the key fabrication steps, along with an artist statement explaining the concept and intent behind each piece.
- One reading response to the assigned chapters of Stephen Hoskins' book.
- Complete the SPOT Course evaluation

## OUTCOMES & OBJECTIVES & GOALS

Outcomes	Objectives
<b>Knowledge: What students should know</b>	
Understand the history, current issues, and direction of the artistic discipline	Beginning knowledge of the history and theory of sculpture, including the traditions, conceptual models, and evolutions of the discipline.
Place works in the historical, cultural, and stylistic contexts of the artistic discipline	
Use the technology and equipment of the artistic discipline	Knowledge and skills in the use of basic tools, techniques, and processes to work from concept to finished product. Beginning understanding of the possibilities and limitations of various materials.
<b>Skills: What students should be able to do</b>	
Use the elements and principles of art to create artworks in the artistic discipline	Understanding of basic design principles with an emphasis on three-dimensional design, and the ability to apply these principles to a specific aesthetic intent, including basic abilities in drawing sufficient to support work in sculpture
Create artwork that demonstrates perceptual acuity, conceptual understanding, and technical skill	

Analyze and evaluate works of art in the artistic discipline	Demonstrated beginning ability to analyze and evaluate works of sculpture.
Produce artworks demonstrating technical skill and disciplinary knowledge	Produce sculptures that demonstrate emerging technical skill and knowledge of the medium, beginning to develop solutions to aesthetic and design problems.
Use knowledge of art and disciplinary vocabulary to analyze artworks	Utilize basic knowledge of sculpture and the vocabulary of art and design to critique and analyze own works and the works of others.
Participate in critiques of own work and work of others	

## ASSIGNMENT & ASSESSMENTS

ASSIGNMENTS	WORTH
Syllabus agreement & Artwork Permission Forms	2 points
Reading Response	6 points
Quizzes	10 points
<b>Project 1</b> 3D Printer: artwork, documentation, and critique	20 points
<b>Project 2</b> Laser Cutter (artwork, documentation, and critique	20 points
<b>Project 3</b> CNC Router: Artwork, VCarve file + toolpath file artwork documentation, and critique	20 points
<b>Project 4</b> CNC Plasma Cutter: Artwork, VCarve file + toolpath file, and critique	20 points
SPOT Course Evaluation (email confirmation)	2 points
<b>Total</b>	<b>100 points</b>

## COURSE STRUCTURE

We will meet each Monday and Wednesday following the course schedule as much as possible. We will have lectures, demos, presentations, brainstorming sessions, individual check-ups, and critiques. I will give updates in advance in case some demo dates change. You should expect to devote 8-10 hours per week outside scheduled class time to complete those projects. That work will need to be done in the sculpture shop, not at home or in your dorm room, so please plan your schedule around the shop hours listed. ATTENDING DEMOS IS MANDATORY AND FOLLOWING THE SHOP RULES. The group will be divided into A and B. Group A will work on project 1, while Group B will work on project 2, and then they will switch. The same scenario will happen with projects 3 and 4 to maintain low traffic on the machines and in the FabLab. Everyone will make four projects.

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 SPRING 2026  
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**COURSE SCHEDULE**

The course schedule is tentative it may shift and change according to the progress and availability of the equipment.

<b>Week 1</b> Jan 12 and 14	Day 1. Safety rules walk through general safety for shops. Fab Lab visit. Safety quizzes due Jan 16 <sup>th</sup> . Fab Lab Quiz. Teams A and B Day 2. Laptops provided. Illustrator demo A and B, Ppractice on simple files, text, geometric and organic. (NO FORMS, USE LINES) Intro to Laser Fusion. (Material Charge slips due)
<b>Week 2</b> Jan 19 No class Jan 21	<b>Day 1. No class</b> Day 2. Laptops provided. Demo on .stl files 3D Scanning. Group A and B. Check concept group A
<b>Week 3</b> Jan 26 and 28	Day 1. Laptops provided. Demo on FabLab Laser Fusion Group A and B. Check concept Group B Day 2. Laptops provided. Demo on Thingiverse and 3D manipulation of files. Laser and 3D Print Quiz due.
<b>Week 4</b> Feb 2 and 4	Day 1. Laptops provided. Work day. Day 2. Laptops provided. Work day.
<b>Week 5</b> Feb 9 and 11	Day 1. Printing Day Laser Fusion and 3D Printing Day 2. Printing Day Laser Fusion and 3D Printing
<b>Week 6</b> Feb 16 and 18	Day 1. Printing Day Laser Fusion and 3D Printing Day 2. Printing Day Laser Fusion and 3D Printing
<b>Week 7</b> Feb 23 and 25	Day 1. Critique Project #1 and Project #2 Day 2. Intro to Thingiverse and meshmixer and Demo on Slicer Group A and B. Reading due March 1st
<b>Week 8</b> March 2 and 4	Day 1. Demo on CNC Router Group A Day 2. Demo on CNC Plasma Group B
<b>Week 9</b> March 9 and 11	<b>Sprinbreak / no class Quizes due this week</b>
<b>Week 10</b> March 16 and 18	Day 1. CNC Router / Plasma Sing up sheet. Routing day Day 2. CNC Router / Plasma Sing up sheet. Routing day
<b>Week 11</b> March 23 and 25	Day 1. CNC Router / Plasma Sing up sheet. Routing day Day 2. CNC Router / Plasma Sing up sheet. Routing day
<b>Week 12</b> April 30 and March 1	Day 1. Demo on CNC Router Group B. Riveting, Drilling, Bending. Day 2. Demo on CNC Plasma Group A.

<b>Week 13</b> April 6 and 8	Day 1. <b>Crit. Project 3 Group A</b> Day 2. <b>Crit. Project 4 Group B</b>
<b>Week 14</b> April 13 and 15	Day 1. CNC Router / Plasma Sing up sheet. Routing day Day 2. CNC Router / Plasma Sing up sheet. Routing day
<b>Week 15</b> April 20 and 22	Day 1. CNC Router / Plasma Sing up sheet. Routing day Day 2. CNC Router / Plasma Sing up sheet. Routing day
<b>Week 16</b> April 27 and 29	Day 1. CNC Router / Plasma Sing up sheet. Routing day Day 2. CNC Router / Plasma Sing up sheet. Routing day
<b>Week 17</b> May 4	Day 1. <b>Crit. Project 3 Group B</b> Day 2. <b>Crit. Project 4 Group A</b> Clean up day <b>MANDATORY</b>

## SCULPTURE MATERIALS CHARGE

In the UNT Sculpture program, we believe providing students with specific materials is sometimes necessary for certain projects. For example, we typically offer a 2'x2' piece of 18-gauge steel for the CNC plasma project in Beginning Sculpture: Digital Methods, which is cut from a larger 4'x8' sheet that we buy and transport to campus from a local supplier. This saves students the hassle of buying and transporting the materials to campus on their own. It also saves students money because the materials are often cheaper in bulk.

**We require all students taking this class to pay a \$30 materials charge.** The exact costs covered by that charge are outlined on the charge sheet provided. To pay this materials charge, please take the charge sheet provided by your instructor to the **Cashiers Services in the Eagle Student Services Building** (the Southwest part of the Union building). After paying, please return this sheet and your receipt to the Sculpture technician, Jacob Philips, and they will mark you off the list. All students must pay the materials charge within the first week of the semester. Please get in touch with Jacob Philips with questions or budgetary concerns. Material charge slips must be paid and receipts turned in by January 23<sup>rd</sup>.

## REQUIRED TOOLS & MATERIALS

Required tools/materials that students must acquire and bring to every class or keep in a locker:

Leather work gloves (you will be provided one pair from the tool cage. If you lose them, you must purchase your own.)

Sketchbook and drawing utensils

Xacto knife or boxcutter, we have some at the cage, but it is better to use your own

Gorilla Glue for the CNC Router project

## REQUIRED READINGS

There are required readings for this course. Students will conduct independent reading on the book *3D Printing For Artists, Designers and Makers* by Stephen Hoskins.

PDF found in this LINK

[https://drive.google.com/drive/folders/1LPYuVy1EJbQo-w4nCuynr47MeaQWKEvt?usp=drive\\_link](https://drive.google.com/drive/folders/1LPYuVy1EJbQo-w4nCuynr47MeaQWKEvt?usp=drive_link)

## CLASS PARTICIPATION EXPECTATIONS

- Come to class prepared & on time.
- Participate consistently in class discussions and critiques. *Think critically. Be honest.*
- Respect your peers' opinions, beliefs, orientations, and histories when discussing their work.
- Challenge your classmates and push each other to do your best.
- Share your skills, experiences, and energy to strengthen the community. Give more than you take.

Students are expected to attend every class. You are responsible for completing all of the required assignments. I expect all students to participate in class discussions, contributing ideas and perspectives on topics or art. All your work should incorporate aspects or issues addressed in class in relation to your personal or professional interests.

You are expected to assist in maintaining a classroom environment that is conducive to learning. In order to assure that everyone has an opportunity to gain from time spent in class, unless otherwise approved by the instructor, you are prohibited from using cellular phones or beepers, checking your email or surfing the internet, updating your social networking sites, eating or drinking in class, making offensive remarks, reading newspapers or magazines, sleeping or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in, minimally, a request to leave class, which will be counted as an unexcused absence.

## ATTENDANCE POLICY

- Regular and punctual attendance is mandatory to maximize use of in-class work time, instructor/ peer feedback, and facilities.
- Three absences will be tolerated.
- More than three absences will require a note from a doctor or a note from the art office excusing the absence for a reason covered under UNT policy 06.039 (Student Attendance and Authorized Absences) in order to be counted as excused.
- **More than three absences will lower your final grade by one letter grade per**

### **additional absence.**

- Most lectures, demonstrations, and assignments will occur at the beginning of class periods and will not be repeated for those who come in late. If you are late to class, you will need to notify me at the end of the class period to replace an absence with a tardy. Three tardies will constitute an absence.
- A tardy is considered to be an arrival of 10-30 minutes after the beginning of class. If you arrive more than 30 minutes after the class begins, you will be marked absent for the day.
- Assignments that are turned in late will receive one letter grade lower per day for each class day they are late.
- Examinations, quizzes, and in-class assignments missed may only be made up with an official doctor's excuse or note from the art office excusing the absence for a reason covered under UNT policy 06.039 (Student Attendance and Authorized Absences).



**Critiques missed may not be made up** and grades will reflect the student's failure to participate in the critique discussions.

### **LATE WORK / MAKE-UP POLICY**

Late work will receive a penalty of 10% deducted from the assignment's value per day the work is late, unless the student provides proof of an acceptable mitigating circumstance: serious illness, death of a family member, or other circumstance if approved by the instructor.

### **FINAL CLEAN-UP**

We will conduct a final clean-up of the sculpture facilities during our scheduled final exam period. Attendance and participation in final clean-up is mandatory. Absence from the final clean-up will result in lowering your final grade by one full letter. If you are unable to attend final clean-up, you must schedule an alternate date and time with your instructor.

### **GRADING**

Grades will be provided regularly throughout the semester (after assignments are submitted, critique, etc) and at mid-term. Note: There are no pluses and minuses given at UNT.

A = Excellent (100-90%)

B = Above Average (89-80%)

C = Average (79-70%)

D = Inferior (69-60%) [passing but not necessarily satisfying degree requirements]

F = Failure (59% or below)

## **ACADEMIC INTEGRITY**

According to UNT Policy 18.1.16, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

## **DISABILITY ACCOMMODATION**

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time, however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information, refer to the Office of Disability Access website at <http://www.unt.edu/oda>. You may also contact ODA by phone at (940) 565-4323.

## **ACCEPTABLE STUDENT BEHAVIOR**

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at [deanofstudents.unt.edu/conduct](http://deanofstudents.unt.edu/conduct).

## **STUDENT EVALUATION ADMINISTRATION DATES**

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13 and 14 [insert administration dates] of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will



receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the spot website at [www.spot.unt.edu](http://www.spot.unt.edu) or email [spot@unt.edu](mailto:spot@unt.edu).

## **INCOMPLETE GRADES**

An Incomplete Grade ("I") is a non-punitive grade given only during the last one-fourth of a term/ semester and only if a student (1) is passing the course and (2) has a justifiable and documented reason, beyond the control of the student (such as serious illness or military service), for not completing the work on schedule. In consultation with the instructor, complete a request for an Incomplete Grade. This form can be found on the department website and must be turned into the department chair prior to the last day of classes (not the exam date). Note: A grade of Incomplete is not automatically assigned to students.

## **SEXUAL DISCRIMINATION, HARASSMENT & ASSAULT**

UNT is committed to providing an environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic violence, dating violence, and stalking. If you (or someone you know) has experienced or experiences any of these acts of aggression, please know that you are not alone. The federal Title IX law makes it clear that violence and harassment based on sex and gender are Civil Rights offenses. UNT has staff members trained to support you in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, helping with legal protective orders, and more.

UNT's Dean of Students' website offers a range of on-campus and off-campus resources to help support survivors, depending on their unique needs: [http://deanofstudents.unt.edu/resources\\_0](http://deanofstudents.unt.edu/resources_0). UNT's Student Advocate she can be reached through e-mail at [SurvivorAdvocate@unt.edu](mailto:SurvivorAdvocate@unt.edu) or by calling the Dean of Students' office at 940-565-2648. You are not alone. We are here to help.

## **GENERAL BUILDING HOURS**

Monday: Friday 7 am - 10 pm

Saturday: 12 pm - 5 pm

Sunday: 12 pm - 5 pm

## **SCULPTURE SHOP ACCESS & POLICIES**

### **Sculpture Shop Hours**

Monday – Thursday: 8 am- 9 pm

Friday: 8 am - 5 pm

Saturday: 12 pm – 5 pm

Sunday: 12 pm – 5 pm

- open only to undergraduate students currently enrolled in a sculpture course
- open to all faculty (as long as their presence is not disruptive to a class)

## **DIGITAL FABRICATION EQUIPMENT**

Reserved for undergraduate and graduate students who are currently enrolled in a sculpture course (must reserve a time using the clip-board system in toolcage)

open to full-time faculty for walk-in appointments only Monday-Friday 8am-5pm

Full-time faculty can reserve the equipment after 5pm M-F and during shop hours Saturday and Sunday. In order for faculty to use the equipment at night and on weekends, they must attend a training session and know how to operate the software and the machine without supervision. Faculty are required to provide their own router bits for the CNC router, and they must not store their work and the materials in our area (our storage space is already very limited). Faculty must see a tool cage worker to make a reservation on the schedule.

## **SCULPTURE AREA FACULTY & STAFF**

*Associate Professor:* Alicia Eggert

*Senior Lecturer:* Jim Burton

*Adjunct Professors, Studio Art: Sculpture:* Veronica Ibargüengoitia, Jacob Phillips

*Teaching Fellows:* Nadin Nassar, Mina Forouzandah,

*Graduate Student Assistants:* Nadin Nassar

*Hourly Workers:* Lisa Brunet

*Area Technician and Shop Supervisor:* Jacob Phillips

## **TOOL CHECK-OUT SYSTEM**

1. Only students that are currently enrolled in a Sculpture course are allowed to check out tools from the tool cage.
2. Tool check-out is for one day (not overnight). Tools must be returned before the shop closes that day. Tools not returned by the time the shop closes and that haven't been checked out overnight will be considered a Shop Rule Violation.
3. Some tools may be checked out overnight but permission must be obtained from the Shop Supervisor or a faculty member. Tools checked out overnight must be returned by 9am the next morning unless permission has been granted in advance by a faculty member or the Shop Supervisor. Please plan accordingly. Tools returned after 9am will be considered a Shop Rule Violation.
4. All tools must remain in the building unless you have received advanced

permission to take them elsewhere from a faculty member or the Shop Supervisor.

5. Never leave your tools unattended. If you need to leave the area for a short time (for example, to use the restroom), please ask someone in the shop to look after your tools for you. Please check your tools back in if you need to leave the Sculpture area for more than 10 minutes. Tools found unattended will be checked back in by a Tool Cage Worker, and this will be considered a Shop Rule Violation.
6. You are financially responsible for all the tools you have checked out. If a tool is lost or stolen under your care, you will be charged for its replacement.
7. Report any broken or damaged tools to a Cage Worker or the Shop Supervisor. Tools break all the time, so you won't be punished if that happens, but we need to know about it so that we do not hand a damaged or broken tool to the next student who needs it.

## **PROJECT AND MATERIAL STORAGE**

1. Projects and materials may be stored in the Sculpture area only if they are labeled with a current Storage Tag. Tags can be acquired from the tool cage.
2. A Storage Tag will permit you to store that item on one of the shelves in the classroom for two weeks. If additional time is needed to store the same item(s), you must receive special permission for a new Storage Tag from a faculty member or the Shop Supervisor.
3. If your Storage Tag expires, a Cage Worker will replace it with a red Removal Tag. At that point, you will have one week to remove or renew your belongings. If the item is not removed or renewed by the date on the Removal Tag, it will be put in the dumpster or allocated as scrap material.  
This will be considered a Shop Rule Violation.
4. Emergency exits/paths must ALWAYS remain clear. Make sure artworks/materials are not blocking walkways, doorways, etc.

## **CONSEQUENCES FOR SHOP RULE VIOLATIONS**

The following consequences will be faced for health and safety, material storage, and/or tool-check-out violations.

1. First Violation: Warning from instructor and Shop Supervisor.
2. Second Violation: Meeting with the course instructor and shop supervisor, and loss of tool checkout privileges for 3 days.
3. Third violation: Meeting with program coordinator, course instructor and shop supervisor, and loss of tool checkout privileges for one week.

4. Fourth violation: Meeting with the studio art department chair, and indefinite loss of tool checkout privileges.

## **HEALTH & SAFETY INFORMATION (SCULPTURE SHOP)**

### **Health & Safety Program \***

Students are required to follow the Department of Studio Art Health and Safety guidelines and are required to complete training for each studio course. The goal of the Studio Art Health and Safety Program is to protect the health and welfare of all faculty, staff, and students and to cooperate with the University of North Texas' Office of Risk Management. Please visit the website for details and the departmental handbook: [https:// art.unt.edu/healthandsafety](https://art.unt.edu/healthandsafety).

## **Best Practices for Health & Safety / Studio Rules \***

### **1. Hazards (inherent)**

#### **Metal Shop and Wood Shop Equipment**

Most wood and metal shop equipment/hand tools involve high speed rotating or revolving blades or sanding disks that can be dangerous if not used properly. Lifting heavy materials, equipment, and tools can lead to strain injuries. Electric tools cause vibrations, which can also lead to strain on the muscles. Noise from percussive equipment and tools can damage hearing.

#### **Metals and Metal Compounds**

Metalworking produces toxic and/or irritating dust and fumes. Welding, heat cutting/bending and brazing produces toxic fumes and radiates UV light. Both electrical and structural soldering produces toxic fumes from flux (hydrochloric acid and phosphors). Solder may contain lead, which is toxic. Corrosion products used in patinas (oxides, carbonates, sulfides, or sulfates) produce toxic fumes and irritating dust.

#### **Metal Casting and Mold Techniques**

Metal casting produces toxic fumes. Cast mold techniques (resin bonded sand, traditional investment and ceramic shell) produces fumes and/or irritating dust and generates liquid hazardous waste. Silica sand generates toxic, irritating dust when mixing, and exposure can cause silicosis.

#### **Woodworking Sanding and Cutting**

Sanding and cutting wood produces toxic and/or irritating dust. The organic chemicals produced by trees (terpenes, paraffin, fatty acids, phenols, phthalic acid esters, sterols, stilbenes, flavonoids, and cyclic or acyclic tannins) can be toxic if absorbed through the skin, the respiratory tract, or orally. Lumber intended for use in contact with the outdoor elements is chemically treated with additives (fire retardants, pesticides, and preservatives) and produce highly toxic fumes and dust. Plywood and Composition Boards contain wood glues and adhesives (urea-formaldehyde, phenol-formaldehyde resins or urethane plastics) which cause toxic fumes and irritating dust when cutting or sanding.

#### **Spray Paint, Stains, Solvents, Paint Stripper and other Aerosol Sprays**

Spray paint, stains, Paint Strippers and other aerosol sprays produce toxic fumes, skin irritants and generates liquid hazardous waste in excess paint and solvents used in cleaning (acetone, mineral spirits).

## **Epoxy, Natural and Synthetic Polymers, Polyester Resins**

Epoxies, resins, glues, plastics/acrylics and body fillers produce toxic fumes, skin irritants and generate both toxic and liquid hazardous waste. All of these (including some stones) can contain silica causing toxic fumes when sanded. Some polyester resins, plastics, urethane rubbers, and silicon rubbers are used in mold making and can be even more toxic and irritating to the skin when in liquid form.

## **Stones, Plaster, Cement and other Dusts, Clays and Powders**

Minerals in stone, ceramics, glass, and abrasives (e.g. flint, steatite, dolomite, fluorspar stone, silica, garnet) produces toxic and irritating dust. Plaster is calcium sulfate, which produces toxic, irritating dust when mixing. Cement is a mixture of finely ground lime, alumina, and silica, which produces toxic, irritating dust and skin irritation when mixing. Cement is also highly alkaline and can burn then skin when exposed.

## **2. Best Practices**

- All students must attend an orientation before using the wood and metal shops. During the orientation all shop rules and policies are presented as well as a discussion of the proper and safe use of shop tools.
- If you have never before used a specific tool or machine, please ask an Instructor, Shop Technician, or Graduate Student Assistant for a hands-on demonstration of the equipment. You must demonstrate your ability to properly operate the equipment prior to using it without supervision.
- Work in a well-ventilated area (or outside) while working with any material or practice that produces toxic or irritating fumes or dust (Resins, chemicals, oil-based paints, and solvents may not be mixed indoors).
- Purchase a good half face respirator that fits snug on your face (3M is a good brand)
- Never share your respirator with another peer (exchanging germs can cause illness)
- It's best to get a respirator that has a filter for both vapors and particulates
- Shave facial hair so respirator fits face snug
- When not in use, store respirator in a plastic bag to prolong the longevity of the filters – the filters will continue to work if not properly sealed.
- Change filters often depending on use (see instruction manual of specific respirator)
- ALWAYS clean up all messes produced by any material or practice to prevent from exposing others to the hazards of that material and/or practice.
- Steel-toed boots or metatarsal covers are best for many practices in the sculpture area.
- Shield eyes with approved safety wear. Safety goggles and face shields are most commonly used for many different sculpture methods.
- Wash hands (including under fingernails) after using toxic materials and chemicals (even if you were wearing gloves). Pumice hand cleaners are available in the shop.
- Wear Nitrile gloves and use plastic drop cloth to contain chemicals, paints, and stains when applying.
- Make sure to wear the proper safety gear for each process.

- All spray painting must be done in spray booth and you must put wood, plastic, or cardboard down on the surface that you are spraying on as to prevent any permanent back spray.
- Welding, soldering, and brazing should be done in a well-ventilated area. Never produce metal sparks or fire near the wood shop. All hot metal working needs to be done in the designated area or outside.
- Always use common sense, avoid distractions and concentrate on the task at hand.
- To prevent hearing loss, use proper hearing protection when working with loud equipment/tools. Earplugs are available in the shop.
- Sculpture materials can sometimes get messy. Make sure to wear clothes that you are ok with getting dirty or you may want to purchase an apron (note: an apron cannot be used with all materials, it can sometimes be a danger when working with wood shop or metal shop equipment).

### **3. Links**

<http://www.uab.edu/ohs/>

[https://www.osha.gov/Publications/woodworking\\_hazard\\_s/osh3157.html](https://www.osha.gov/Publications/woodworking_hazard_s/osh3157.html)

<https://www.osha.gov/SLTC/metalworkingfluids/>

<https://www.osha.gov/doc/outreachtraining/htmlfiles/weldhlth.html>

[http://www.uic.edu/sph/glakes/harts1/HARTS\\_library/sculpturehazards.txt](http://www.uic.edu/sph/glakes/harts1/HARTS_library/sculpturehazards.txt)

<http://web.princeton.edu/sites/ehs/artsafety/sec14.htm>

### **4. Area Health & Safety Rules**

All users of the studio classrooms are expected to follow studio area rules at all times. If you have any questions, ask your instructor.

- Follow all CVAD Health and Safety handbook guidelines (the handbook should be reviewed by your instructor and can be found here: <https://art.unt.edu/healthandsafety>)
- Follow the CVAD Waste Management Chart in the classroom and other health & safety guidelines posted
- In case of emergency, call campus police at (940)565-3000 or call 911
- File an incident report (forms may be found in the CVAD H&S handbook and in the main office. Turn completed forms into the Studio Art Departmental Office within 48 hours of the event).
- Do not prop classroom doors. Doors are to remain closed to ensure the building HVAC and ventilation work properly.
- No food or drink in the studio.
- Report any safety issues IMMEDIATELY to your instructor or the shop technician.

- Use best practices for material handling. If you have questions about a material, ask an instructor for guidance or check the MSDS sheet.
- Familiarize yourself with the closest eyewash station and first aid kit. Notify your instructor if first aid supplies are low.
- Do not spray any aerosols in any CVAD classroom/studio/doorway or exterior wall/floor. Use the spray booth.
- No eating, consumption of alcohol or smoking is permitted in the studios.
- Wear close-toed shoes only – NO SANDALS!
- Tie up any long hair and remove any loose jewelry or clothing.
- ALWAYS clean up all messes produced by any material or practice to prevent from exposing others to the hazards of that material and/or practice.
- ALWAYS make sure that you are 100% sober and awake! Drugs, smoking and alcohol are not allowed in the studio and anyone under the influence should not attempt to use the facilities.
- Make sure to wear the proper personal protective equipment (PPE) for each process. The proper eye protection, hearing protection, clothing, shoes, and gloves must be worn when using any power tools/equipment. Earplugs, welding jackets, leathers, face shields, welding helmets and goggles, leather gloves, and Nitrile gloves are available in the shop. Students need to purchase their own dust masks, respirators and safety goggles (do not share – exchanging germs can cause illness).
- Students are prohibited from taking home any UNT property.
- Newspaper or plastic must be used to protect table and floor surfaces from paint, glue, stains and plaster.
- Any trash that does not fit in the trash can must be immediately taken to the dumpster. Broken glass must be packed inside paper and labeled on the outside as broken glass and walked to the dumpster.
- The trash guidelines are to ensure the safety of anyone encountering the trash. Liquids, medical waste, yard waste, appliances and pallets are prohibited from disposal in the dumpster.
- Students are prohibited from storing materials or projects in the wood or metal shops, please use the shelves & lockers provided.
- Do not use stationary equipment to cut painted, recycled or chemically treated lumber
- Never wear head phones when working with power tools/equipment (you need to hear the machine or other people if something goes wrong).
- Dust off tools and/or equipment, tables and sweep the floor when finished using any equipment and tools
- Do not block doorways or walkways with materials.
- Put back all tools, safety gear, and extension cords in their designated location.

- Scrap material must be relocated in the designated scrap wood bin or scrap metal bin. Please do not leave any materials out or on the shelves that you do not want. Properly discard any unwanted materials in the trash or the Satellite Waste Management area and properly labeled.
- No hazardous materials, cement or plaster down the sinks.
- Do not block doorways or block access to lights.
- Do not remove furniture from rooms or borrow furniture from rooms without permission from the area coordinators.
- Do not create “daisy chains” with multiple electric cords.
- No hazardous materials down sinks.
- Store all flammables in the flammable cabinet. Keep flammable cabinet closed at all times.
- All courses must engage in an end of the semester clean up.
- Follow the CVAD CONTAINER POLICY (**see below**)

There are 3 types of labels used in CVAD. All containers must have a label identifying the contents at all times.

#### **UNIVERSAL LABELS (while chemical is in use):**

All secondary/satellite containers for hazardous materials (or what might be perceived as hazardous -i.e. watered-down gesso, graphite solutions, satellite containers of solvents, powders, spray paints, fixatives, oils, solvents) must be marked with content, your name and the date opened. All unmarked containers will be disposed of with no notice. Labels can be found in the studios. All containers must be marked with your name, contents and date opened.

#### **UNIVERSAL WASTE LABELS (when material is designated as waste):**

All containers solely containing a universal waste must have a universal waste label identifying the contents as “Universal Waste - (type of universal waste)” that are designated as waste for proper disposal. The label must also include the date the first item of universal waste entered the container.

#### **HAZARDOUS WASTE LABELS**

All hazardous waste containers must have a label identifying the contents as hazardous.

Labels should include all constituents in the waste mixture as well as an approximate percentage of the total for that item. All constituents should equal 100%.

### **EMERGENCY NOTIFICATION & PROCEDURES**

UNT Emergency Guide: <https://emergency.unt.edu/emergency-guidelines-0>

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please



refer to the course management system for contingency plans for covering course materials.

## **PERMISSION TO USE STUDENT ARTWORK**

We would like to use your work to spread the news about the amazing art made at CVAD!  
Please help us put your talent on display by allowing us to photograph and exhibit your art on  
CVAD's social media, websites and paper advertising