

WHⁱ IDEASTUDIO GUIDE

About the Studio

IDEAStudio is the West Houston Institute's makerspace and supports its mission by providing a place to explore, experiment, and experience using emerging technologies and creative design processes to take ideas from concept to launch.

This is currently accomplished through our membership program for students, faculty, and staff, support for instructional projects and industry collaborations, workshops and courses, and community events.

The success of these programs depends on a commitment to the following guiding principles that should inform all activities in the makerspace:

- Safety for all users and visitors in our spaces
- Stewardship of our facilities and equipment
- Respect for one another and each other's work

Location & Phone

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Online Information

Website

<http://hccs.edu/ideastudio>

Social Media

Twitter: @whi_ideastudio
Instagram: @whi_ideastudio

General Guidelines

The following are general guidelines that have been put into place to ensure that the makerspace provides a safe and positive experience for all users. Note that additional safety and usage rules may be in place for individual spaces and tools.

Access

IDEAStudio is not an open facility. All visitors should check in at the front desk when entering the space. Access will depend on the category of the visit.

Members will need to present a valid college ID and sign-in each time they use the makerspace. Access to specific spaces will be determined by the tool training and testing the member has successfully completed.

Minors are required to be accompanied by an authorized and responsible adult who will be present with them for the duration of their visit to the makerspace. This responsible adult will often be a faculty member teaching a course in which the minor is enrolled.

Students who are attending a workshop, speaker, club meeting or other scheduled activity in the makerspace will have access to the area designated for the activity.

Events are often open to the community, including non-members, and are usually held outside normal operating hours when tools will not be used. During these times, the makerspace will have looser rules around access to the space. This will be determined per event.

During normal operating hours, all other visitors will need to be accompanied by a staff member for the duration of their visit.

The makerspace is intended to be accessible to all members of our college community. If you are unable to access any of the tools or equipment, please talk to a staff member. We will work with you to make any reasonable accommodations that will help you to work more freely in the space, while complying with our safety and stewardship guidelines.

Membership

Current HCC credit students, faculty and staff are eligible to become members of the makerspace. Membership provides access and the use of tools and equipment during operating hours.

New users will be required to attend an orientation and pass a safety quiz before gaining membership. Check with a staff member or our website for more information.

Spaces & Tools

Members are required to complete training and testing for all powered tools in the makerspace. Do not attempt to check out or reserve tools you are not cleared to use.

Reservations are required to use some tools, including CNC machines such as the ShopBot and laser cutters, as well as most equipment in the metalworking space. Up to two consecutive 2-hour blocks can be reserved online or in-person.

Power tools can be checked out from a staff member. All power tools **MUST** be checked back in before the user leaves the space.

Leave ample time in your work schedule to clean-up after tool use. Follow the clean-up process expected for each tool and work area.

Although personal use of the makerspace is permitted for members, academic assignments and projects take priority. Access may be limited to certain tools during the semester to accommodate instructional needs.

It is important to understand that having access to the IDEASudio is a privilege and there are certain responsibilities tied to that privilege. As you gain access to more areas and tools in the IDEASudio, please remember there are other members around you that have not yet earned the ability to use a specific area or tool. With that understanding, the following rules apply:

You should never share a tool that has been checked out to you. For example, if a power drill has been checked out to you, do not allow anyone else to use it. They will need to check out a drill for themselves. Other data is tracked concerning tool usage so even if you know that someone has been cleared to use a tool that you've checked out, do not share it. The only exception to this rule is the use of hand tools, since everyone is cleared for hand tools at the time of their orientation and the tools are already available for general use.

You should never allow access to an area that you have earned access. For example, if you are entering the Woodshop, do not allow someone else in who has not swiped their own badge to enter. While normal wear and tear is inevitable, tools should be returned in the same condition as they were checked out to the member.

Housekeeping

All members are expected to participate in the upkeep of the makerspace. Work areas should be organized and pathways clear, tools should be returned when not in use, and waste should be properly disposed of before leaving.

Users will be asked to cease work and assist with clean-up of the space 15 minutes before closing time.

Light food and drink are allowed in the kitchen area. Make sure you pick up after yourself and dispose of all containers and trash when you are done.

The kitchen area, including the refrigerator, microwave, and sink area are all available to be used by members. Please clean up after yourself remove any personal items before leaving the makerspace. Any leftovers or other items will be disposed of at the end of each day.

Report any spills that you find or are unable to clean up on your own. If you are not sure what it is, leave it and get a staff member.

Project Storage

Members, including individuals and groups, may be able to use the storage area to keep materials and projects. Ask a staff member for more information.

Storage is limited and is based on availability. Always ask before assuming that storage can be provided for a particular project.

Limitations may exist for storage of certain kinds of materials based on the need for specialized containers and or safety concerns.

Materials

Members will need to provide their own materials for any projects created in the makerspace.

Use only approved materials as defined for each tool in the makerspace. This will be covered in the tool training and posted online and in work areas.

Scraps donated by members or by the makerspace can be found in designated areas. These are available on a first-come, first-serve basis. There is no guarantee as to the quantity or quality of any of these materials.

Restrictions

Use of the facilities, tools, or equipment to make, replicate, or alter objects, whether physical or digital, that violate copyright, patent, or trademark law is not allowed.

Likewise, it is prohibited to make weapons, drug paraphernalia, or other items using our facilities, tools, or equipment.

IDEAStudio reserves the rights of its staff to stop any project that is deemed unsafe for any reason or violates college policies or any local, state, or federal laws.

Safety Guidelines

Emergency Information

In case of POLICE emergency, CALL THE CAMPUS EMERGENCY NUMBER – 713-718-8888.

In case of FIRE or MEDICAL emergency, CALL 911.

In case of Facilities Emergency, CALL 713-718-2339.

All HCC emergency procedures should be followed while in the makerspace.

These can be found online at <http://www.hccs.edu/emergency/>.

There are three public telephones in the makerspace:

- Reception Desk located at the main entry
- Room 118 (Metal Works), located on the east wall
- Room 134 (Wood Shop), located on the north wall

Before beginning work, note the location of the nearest exit. Each room has a clearly designated evacuation route. Have a plan for evacuation if needed.

Know the location of first aid kits, automated external defibrillator (AED), and fire extinguishers. Make sure a situation is safe before attempting to provide help.

A first aid kit is located in the Kitchen on top of the counter. A smaller First Aid kit is at the reception desk. The First Aid kit is designed to provide immediate, lite medical assistance.

In case of a cardiac (heart-related) emergency, the automated external defibrillator (AED) can be found outside the makerspace by the information desk and main stairwell. This device can automatically diagnose cardiac problems and administer appropriate treatment.

Personal Safety

All HCC safety guidelines should be followed while using the makerspace. These can be accessed online at <http://www.hccs.edu/departments/environmental-safety>.

Do not attempt to work in the makerspace when you are tired, stressed or distracted.

Do not work alone. Always have another person, whether staff or member, in the space where you are working.

Members are required to dress appropriately while working in the makerspace.

- Loose fitting and baggy clothing is not allowed
- Close-toed shoes are required at all times
- Long hair should be kept tied back
- All loose jewelry should be removed. If in doubt, move on the side of caution and remove it.

Members are required to wear protective gear, such as safety glasses, ear plugs, face masks, and gloves in designated areas.

You should know the locations of the Personal Protection Equipment (PPE) stations. The PPE stations include safety glasses, smocks, gloves, ear protection, clothes pins & disposable hair ties and can be found throughout the IDEASudio. These may be found in bins at the Safety Stations throughout the IDEASudio.

Always ask for assistance before attempting to obtain any tools or materials from areas requiring ladders or other special equipment for access.

Use proper lifting techniques for heavy objects; bend at your knees not at your waist or ask for assistance. Any object over 75 lbs. is considered a two or more person lift, although you should be aware of your own limitations.

Tool Safety

Be aware of and follow any specific instructions and safety guidelines in place for each of the spaces and tools. These will be communicated verbally during training sessions and will be posted in each work area.

Members should use the tools provided in the makerspace. Outside tools are not allowed unless prior written consent is given by the makerspace manager.

Report any materials or debris left on or near tools or their associated work spaces. For any debris, especially liquids, found in tool work spaces, do not attempt to clean it up. Notify a staff member immediately so that they can determine how best way to proceed with cleanup.

All materials must be stored safely in your area during your work time. Do not lean large objects against a table or place pieces of wood, pipe, etc. so that they extend into the aisles around tables.

Use the appropriate tool for the job. Do not force a tool where a more appropriate tool can be used. Ask for assistance if you are unsure when choosing tools.

Ensure that tools are in working order before beginning any work. Do not use or attempt to fix damaged or malfunctioning tools. Immediately report any issues with tools or their associated work areas to a staff member.

Let others know when you are about to use power tools that may be loud or may create flying debris while in use. Give those nearby time to take any precautions.

Properly secure materials when doing any drilling, cutting or grinding. Holding materials while using tools is not acceptable. Use any of the clamps available on the mobile carts throughout the space.

Before starting any powered equipment, make sure that any safety features, such as guards, are in place. Check that there are no objects in the path of the tool.

For any powered equipment, know where the stop switch/button is located. This will be needed if something goes wrong and you need to immediately stop the machine.

Do not leave tools running unattended. Stop machines if you need to step away for any period of time. 3D printers are the only tools for which this does not apply.

Before leaving the makerspace, make sure that you have cleaned your work area and have returned any equipment or tools to the appropriate storage areas.

Electrical Safety

There are various ways of protecting yourself from the hazards caused by electricity, including insulation, guarding, grounding electrical devices. Members can significantly reduce electrical hazards by following some basic precautions.

Safety glasses and closed-toe shoes should be worn when working on electronics.

No eating or drinking while soldering. No exceptions.

Remove all jewelry, including earrings, necklaces, rings, and watches, before working on energized circuits or taking measurements. These items can provide a conductive path for electricity which may result in shock.

Voltage and current settings must be verified before applying power to any circuits, circuit boards, motors, etc.

Avoid contact with energized electrical circuits or use guarding around exposed circuits and sources of live electricity. (If using electrolytic capacitors, verify the polarity of the leads before installing into the circuit to avoid rupture of the component.)

Remember that with electric motors torque and current are directly proportional. If full power is applied to a motor at the start up, it will try to accelerate to full speed as quickly as possible.)

When it is necessary to handle equipment that is plugged in, be sure hands are dry and, when possible, wear nonconductive gloves and shoes with insulated soles.

Take electrical test measurements using the "one hand" rule. Attaching only one test lead at a time will reduce the risk of receiving an electrical shock.

Try to avoid making/breaking connections with power applied. Locate where and how to quickly remove power from a circuit in the event of an emergency, before starting any task. If water or a chemical is spilled onto equipment, shut off power as safely as possible and notify staff immediately.

Also, keep in mind if someone is receiving an electrical shock, **do not touch them**.

Do not attempt to put water on an electrical fire! Fire extinguishers available for use.

Soldering station must be cleaned after use and before checking in to staff! These stations are shared among all members and must be clean and organized for the next user. Please notify a staff member if you find that the soldering station was not cleaned by the previous user.

Wash your hands after soldering-this is very important as solder contains lead.

(Thanks to Rice University OEDK for permission to use the information in this section.)

Conclusion

Most of these rules are common sense while others are good habits that need to be adopted to ensure that the makerspace is a clean and safe place to work for all members. Members should adhere at all times to the guidelines laid out in this document. Please notify makerspace staff if you see a situation that needs attention.

Welcome to the IDEASstudio. It is our sincerest hope to help you level up your mindsets and skillsets to better achieve your creative goals!