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maker space

Student Spaces for Art and Collaboration

Equipment Guide



Welcome to the Makerspace!

We're so glad that you're here. The Makerspace is a student-centered arts, crafts and fabrication studio that encourages and supports student creativity outside of the classroom. The Makerspace exists to promote hands-on skill development and foster a sense of community among makers. The Makerspace is open to ALL students, regardless of major or experience-level. We encourage you to experiment and try something new.

If this is your first time in the Makerspace, please take a moment to familiarize yourself with our usage guidelines. These help ensure that the space remains safe and accessible to all.

Individual Students

Individual students may use the space to work on class projects, independent projects and hobbies and attend workshops and events.

Host Events

Student organizations, campus groups and departments are welcome to host events at the Makerspace. Email makerspace@colum.edu to reserve the space. Space should be reserved 10 days in advance.

Makerspace can provide tools and equipment for events including: scissors, rulers, cutting boards, carving tools, paint brushes, paint pallets and maker equipment. If specialty materials are required for an event, organizations and departments are encouraged to supply their own materials. Student organizations can request funding for supplies through the Office of Student Leadership and Engagement.

Host Workshops

Students, staff and faculty are able to host workshops at the Makerspace. Workshop proposals can be submitted online: <https://tinyurl.com/submitmakerworkshop>

Quick Overview

- Have your ID ready. Each time you visit the Makerspace, an employee will ask you for your ID number to sign in. If you choose to borrow any tools from behind the counter, an employee will hold your ID while you have the items checked out.
- Use of free resources is intended for class projects, hobbies, prototyping, and band/club/team/student organization marketing. If you plan to sell any items you make in the Makerspace, you are welcome to use the Makerspace tools and equipment but you must provide your own materials.
- Specialty materials are not guaranteed. The Makerspace strives to offer a variety of options to students but there are limitations to what we can provide. You can always expect to find basic supplies like markers, paper, and tape in the space. The availability of other materials is subject to change. Keep an eye on our social media for workshops or pop-ups featuring specific supplies.
- Weapons, including realistic props and reproductions, are not allowed in the Makerspace.
- Follow instructions from Makerspace staff. If you consistently behave in ways that create safety concerns after being warned, you may be asked to leave the space.
- Respect the space and your fellow students.
- Clean up after yourself. Ask staff for cleaning supplies.
- Have fun, and don't hesitate to ask for help!

Equipment Not Requiring Training

Awls: Useful for leather-work or creating small holes in material. Should be used with a cutting mat, found in the flat-files.

Bone folders: Useful for turning corners on cloth and leather, scoring paper, folding, smoothing out surfaces, and burnishing surfaces.

Box cutters: Should be used with a cutting mat, found in the flat-files. If blades are dull, discard used blades in sharps disposal jar.

Dremels: If a dremel bit breaks, please inform Makerspace staff

Drills: return screw and drill bits to cases

Hammers:

Heat guns: Should be used on the metal table and not over the wood tables. Do not use near flammable materials. Do not heat anything that releases toxic fumes. Allow to heat gun to cool before placing on wood tables or stored in cabinets.

Hole punches

Levels

Lino cutting tools: Should be used with a cutting mat.

Mallets

Pliers

Rotary cutters: Should be used with a cutting mat.

Rulers

Scissors

Screwdrivers

Sculpting tools

Shears

Staple guns

Tape measures

Wrenches

X-ACTO knives: If X-ACTO blade is dull, dispose blade in sharps disposal jar.

These items are kept behind the counter and are able to be used in the Makerspace area. Makerspace staff will hold on to your ID until items are returned.

Equipment Requiring Special Guidelines

Button maker
Coil and Comb binding machine
Die cutter
Glitter, Glue, Paint and Paint Brushes
LED Light pad
Mat cutter
Paint
Paintbrushes
Paper cutter
Sinks

Button Makers

- Individual students can make up to 50 buttons per semester.
- Recognized student organizations can make up to 150 buttons per semester.
- If you want to sell your buttons, you may use the Makerspace button makers, but you must provide your own button supplies.
- ShopColumbia sells 50-pack button supplies in all three sizes: 1", 1.5", and 2.25".

Coil and Comb Binding Machines

- Do punch and bind copy paper, card stock, and thin plastic transparencies only.
- The binding machines punch up to 12 sheets of copy paper at a time.

Die Cutters

- The wood die cut letters and shapes are for paper, construction paper, and light card stock only.
- Don't die cut fabric, plastic, metal, wood, or other thick materials. These materials will dull and bend the metal blades.
- Place paper on gray plastic bed.
- Place wood die cut letter or shape wood side up/black foam side down on top of paper.
- Slide gray plastic bed with paper and die cut to the left and under the heavy silver metal plate.
- Pump the lever to the right a few times to get a clean cut.

- Slide the gray plastic bed with paper and die cut to the right and out from under the heavy silver metal plate.

Glitter, Glue, Paint and Paint Brushes

- Use the metal top tables for painting, gluing, and glittering.
- When finished painting, rinse all brushes, cups, and palettes in the slop sink with soap and water.
- Before glittering, lay down brown craft paper on metal top tables to catch excess glitter.
- Conserve clean (not lumpy or gunky) glitter when possible by using scrap paper to funnel clean glitter back into the glitter container.

LED Light Pad

- Do use the light pad for tracing and sketching with dry media.
- Don't use markers, paint, X-ACTO knives, or any media near the light pad that will bleed onto or cut the glass surface.
- The light pad can be adjusted to sit at an angle with stackable rubber feet.

Mat Cutter

- The mat cutter is for cutting standard 4-ply mat board only.
- The mat cutter can accommodate mat board up to 32"

Paper Cutters

- The paper cutters are for paper, construction paper, light card stock, and poster board only.
- Don't use the paper cutters to cut fabric, plastic, metal, wood, foam board, mat board, or other thick materials –these materials will dull the blades.

Sinks

- Don't wash excessive amounts of paint, glue, or glitter sinks.
- Wipe excess paint, glue, or glitter into the garbage with paper towels before rinsing brushes, cups, or palettes in the sink.
- Clean out the sink area when finished rinsing and make sure drain is free of any blockages.

Equipment Requiring Training

3D printers: Creality K1 3D printer
Cricut Maker
Glowforge laser
Laminators
Large stack paper cutter
Large vinyl cutter
Sergger
Sewing machine (Brother and Singer brand)

Talk to a Makerspace employee about using these pieces of equipment, even if you've used them before.

3D Printers

- The Makerspace does not permit printing of guns, knives, or anything that looks like a weapon, functions as a weapon, could be a weapon or is a weapon
- Make sure to conduct quality checks on your print before printing – your print must be a closed solid in order to print correctly.
- Consult with a Makerspace employee before attempting to 3D print.
- 3D prints are limited to 8 hours per print.

Cricut Maker

- The Cricut Maker can cut, score, and draw on a variety of materials including paper, stickers, vinyl, cardstock, fabric, and more.
- Let an employee know what material you'll be working with, and they will help you check out the correct blade, cutting mat, and other tools you may need for your project.
- Before cutting, determine whether your image or text should be mirrored.
- Single-color graphics without a lot of intricate detail cut best.

Glowforge Laser

- The Glowforge will cut and engrave wood, leather, paper, and Plexiglas (acrylic).
- Materials must be no thicker than 1/4" and no larger than 12" x 20".
- All materials to be cut or engraved MUST be approved by the Makerspace prior to cutting.
- You are required to monitor the Glowforge for the duration of your cut and a Makerspace employee MUST supervise the operation of the Glowforge.
- The air filter must be turned on during your cut and left on after your cut for the same amount of time. For example, if your cut takes 2 minutes, the filter needs to run for those 2 minutes and another 2 minutes after, for a total of 4 minutes.
- Never Open the Glowforge lid during operation.
- Never stack materials in the Glowforge. Cut only one piece of material at a time. Attempting to cut two or more sheets of material at a time is more likely result in starting a fire.
- Do not place anything on top of the Glowforge.
- Always allow materials to cool and properly vent before removing form the Glowforge.
- If there is a fire, unplug the Glowforge immediately.

Laminators

- Plug laminator directly into an outlet (not into an extension cord or surge protector).
- Consult a Makerspace employee before attempting to adjust heat settings.
- When a solid green light appears on the front of the machine, you are ready to laminate.
- Insert your paper evenly into the front of the machine using the paper guide on the left-hand side.
- Press the feed switch to the forward position to automatically feed your paper through the machine.
- Watch for the paper to completely exit through the back side and press the feed switch back to the neutral position.
- Press down and slide the cutter on the back of the machine to cut the laminated plastic and remove your laminated paper.

- Turn off the heat power button AND main power switch.
- Unplug the machine and replace the cover when cool (about 5-10 minutes).

Large Stack Paper Cutter

- The large stack paper cutter is for cutting large stacks of copy paper and light card stock only.
- The large stack paper cutter can cut up to one ream (500 sheets) of copy paper at a time.
- Do not use the large stack paper cutter to cut mat board, poster board, fabric, plastic, metal, wood, or other thick materials – these materials will dull the blade.
- Raise cutter blade and stack press to accommodate height of paper stack.
- Adjust and lock black plastic arm to desired finished size and place paper stack onto bed of cutter flush against black plastic arm.
- Lower stack press tightly against top of paper stack.
- Release and pull lever downward to cut paper stack.
- After cutting, raise lever into locked position.
- Raise stack press to remove cut paper stack.

Large Vinyl Cutter

- The vinyl cutter is used to cut indoor and outdoor adhesive vinyl and heat transfer vinyl only.
- Tape smaller vinyl pieces to a carrier sheet (a sheet of poster board) before loading into the machine.
- Make sure you are cutting with the vinyl side up.
- Before cutting, determine whether your image or text should be mirrored.
- Single-color graphics without a lot of intricate detail cut best.

Serger

- Do not attempt to change the thread color or re-thread loose threads.
- Before you begin, make sure a long 4" tail of overlocked thread is sticking out the back of the presser foot/feed dogs on the machine.
- Make sure you leave a long 4" tail of overlocked thread when you

are finished using the machine.

- Let a Makerspace employee know immediately if you are having a problem with the machine.

Sewing Machines

- Do not sew leather or extra thick fabrics.
- Do not sew over pins – pull out pins as you sew before they approach the presser foot.
- Do not pull or push fabric while sewing – the fabric will automatically feed through the presser foot and feed dogs.
- Ask a Makerspace employee for help threading the machine.
- Consult with a Makerspace employee before changing any of the settings on the machine.
- Let a Makerspace employee know immediately if you are having a problem with the machine.

We want to hear from you!

Do you have suggestions on tools, equipment, supplies or books that the Makerspace should stock? Do you have ideas for programming or workshops that the Makerspace should host?

Email: makerspace@colum.edu