



Lowell Makes – Shops & Studios

This document provides detailed descriptions of every shop and workspace at Lowell Makes, summarising the information from each shop's web page. Members must complete orientation or checkout processes before using the tools; contact the shop captain(s) for training and questions.

3D Printing

The 3D Printing shop houses a variety of FDM printers along with resin printing capabilities. Members can use Prusa and Ender models, a custom large-format printer and a dedicated resin printing station. The shop recently received a donation of several Ender 3 Pro printers so members can experiment and upgrade components. To use any equipment, members must complete a checkout session with the shop captain ¹.

Bike Shop

In the Bike Shop, members can tune up or build bicycles. Tools are available for repairs, wheel truing and custom builds. All users must be checked out on shop procedures before independently using the equipment; the shop captain schedules checkouts ².

Brew Shop

The Brew Shop serves members interested in fermentation. Projects include beer, pickles, kombucha and vinegar. There are two checkout levels: **Level 1** covers the kegerator and pouring beer, while **Level 2** covers brewing and other equipment. Members are encouraged to bring their own ingredients; classes and group brew days may be held ³.

Caffeine Shop

The Caffeine Shop provides an espresso machine and supplies so members can craft specialty coffee drinks. Using the equipment requires a brief checkout session and members must clean up after use. Contact information for the shop captain is available on the shop page ⁴.

Ceramics Studio

This studio offers potter's wheels, a slab roller and a kiln. Members can purchase clay through the shop. A checkout is required before using any equipment, and beginners may take classes to learn wheel throwing, hand-building and glazing. The studio welcomes both new and experienced potters ⁵.

Chop Shop

The Chop Shop houses rotary tools, band saws, belt sanders and other equipment mainly used for cutting foam, plastic and other materials used in cosplay. Checkout is handled through the Cosplay Shop, since the two areas share tools ⁶ .

Computer Lab

Lowell Makes maintains a computer lab with multiple workstations and a server rack. Members can use the lab for CAD, 3D modelling, research or even gaming. No checkout is required; computers are available on a first-come, first-served basis ⁷ .

Cosplay Shop

This shop features large work tables and tools for creating costumes and props. Equipment includes heat guns, foam cutting tools, a die cutter, a foot-press rivet setter and sewing machines. Cosplayers can also use the Chop Shop's cutting tools. A single checkout covers both cosplay and chop equipment ⁸ .

Electronics Shop

The Electronics Shop contains components, soldering stations, power supplies and test equipment for building and debugging electronics projects. A single 15-minute checkout session qualifies members to use all tools. The shop provides common parts (resistors, capacitors, transistors, microcontrollers) and encourages members to bring or donate supplies ⁹ .

Fiber & Mixed Media (FAMM)

FAMM supports textile and mixed media arts. Tools include sewing machines, sergers, knitting and crochet supplies, vinyl cutters, heat presses, polymer-clay ovens and screen-printing equipment. Different tools have different requirements: sewing machines may be used after a short orientation, while the vinyl cutter and heat press require additional training. The studio is volunteer-run, so members should schedule time and respect the space ¹⁰ .

Jewelry and Glass Studio

This studio offers tools for metalsmithing, fused glass and stained glass. There are four workstations equipped with jewellers' benches, torches and rolling mills. Classes range from beginner to intermediate. Acetylene torches may be used only under supervision of a shop captain, and the kiln requires additional training. The studio sells limited supplies on site ¹¹ .

Lasers

The Laser Shop provides laser cutters and engravers that can etch and cut wood, acrylic, foam, leather and other materials. Each laser has its own training requirement; the shop runs short classes for the "small"

lasers and a more intensive training for the **BFL (Big Frikken Laser)**, which has higher power and more complex controls. Members must complete training before reserving time on any machine ¹² .

Machine Shop

This shop focuses on machining, welding and metal fabrication. Equipment includes a CNC vertical mill, a traditional knee mill, an engine lathe, MIG and TIG welders, a drill press and forging tools. Each piece of equipment requires a separate checkout. The shop emphasises safety and may require classes for certain tools ¹³ .

Media Studio

The Media Studio provides equipment for video production, photography and audio recording. Members can reserve cameras, lighting kits, microphones and backdrops. A checkout is required before using the studio, and reservations must be made for certain equipment. The shop encourages members to schedule time respectfully and return gear in good condition ¹⁴ .

Rapid Prototyping (CNC)

The Rapid Prototyping shop houses CNC routers and other computer-controlled machines that move in X, Y and Z axes. These machines are ideal for cutting wood, plastic and light metals with high precision. A checkout session teaches software setup, toolpath generation and safe operation ¹⁵ .

Scanning Electron Microscope

Lowell Makes maintains a scanning electron microscope capable of magnifying surfaces up to 175,000 ×. It allows members to view microstructures and is useful for material analysis and electronics inspection. Access requires training and is monitored closely ¹⁶ .

Spray Room

The Spray Room is a sealed, ventilated paint booth designed for spray painting and finishing projects. Checkout is required; users must wear appropriate protective gear and observe safety procedures. Contact the shop captain for training ¹⁷ .

Woodshop

The Woodshop occupies roughly 3,000 sq ft and is divided into a lathe room, bench room, finishing room and power-equipment room. It contains table saws, bandsaws, planers, sanders, routers and turning lathes. The shop uses a tiered checkout system: **Level 1** covers basic hand and power tools, **Level 2** covers advanced machinery like the table saw and jointer. Members must complete training classes and follow safety guidelines ¹⁸ .

Every shop at Lowell Makes is run by volunteers who maintain equipment and provide training. Members are encouraged to respect the spaces, clean up after themselves and support their fellow makers.

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