

Digital Fabrication Overview

Digital Fabrication covers the machines that turn a computer design into a physical part: **3D printers**, the **laser cutter** and **CNC**. The 3D printers live in the print lab; the laser and CNC are in the laser/CNC shop.

3D printing and laser cutting are **self-serve once you have been trained**.

Equipment at a glance

The current list of equipment, with locations and which machines need training, is in **Atlas**: <https://atlas.waukeshamakers.com>.

The 3D printers with maintenance pages in this book are:

- Original Prusa MK4
- Original Prusa i3 MK3S+
- Bambu Lab X1 Carbon with AMS 2 Pro and AMS
- Anycubic Kobra 2 Max

Pages in this book

- **Digital Fabrication: Fusion 360 Cheat Sheet**: the basics of designing parts in Fusion 360
- **Digital Fabrication: Laser Cutter**
- **Digital Fabrication: Laser-Safe and Prohibited Materials**
- Maintenance checklists for each 3D printer in the **Maintenance** chapter

Before you work here

- **Get trained** on each machine before you use it. See **Training and Certification: How Certification Works**, and check your certifications in Journeyman at <https://journeyman.waukeshamakers.com>.
- **Never leave the laser unattended** while it is running.
- **Only cut approved materials** on the laser. See **Digital Fabrication: Laser-Safe and Prohibited Materials**.

- **Fumes.** See **Shop Safety: Air Quality**.
- **Inspect before use.** See **Training and Certification: Pre-Use Inspection**. If a printer or the laser is not working right, tag it and report it: see **Shop Safety: Tagging a Tool Out of Service and Reporting It**.

To be confirmed: whether members supply their own filament and laser stock or the shop provides some, and how members send jobs to the printers. See also ****Facility Operations: Consumables****.

Learning to design

New to 3D design? The **Fusion 360 Basics** class walks you through your first model. The class outline and handout are in **Classes and Instructors: Fusion 360 Basics**, and the cheat sheet is in this book.

Area Champion

To be confirmed: who the Digital Fabrication Area Champion is and how to reach them. See ****Volunteer Runbooks: Area Champions**** for what Area Champions do.

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