FISH @ UVA

Slicing Guide: Getting Your Print in the Queue

Medical Device Make-A-Thon | November 5–8, 2026 | University of Virginia

Any time you feel unsure or unsafe, please call over a Mentor or Exec Member. We're more than happy to help!

Here's the deal: **you design and slice, our volunteers print.** This guide walks you through getting a design from your screen into the print queue and back into your hands.

> **Important**
>
> **PARTICIPANTS DO NOT TOUCH THE PRINTERS.**
>
> **MAKE-A-THON VOLUNTEERS START ALL PRINTS. YOU ONLY SLICE AND SUBMIT FILES.**

Quick Overview: Slice to Pickup

1. **Slice** your design in Bambu Studio. Choose your filament and make sure your part fits.
2. **Check time and supports.** Look at the estimated print time, and cut supports wherever you can.
3. **Export the .3mf.** Export your sliced file from Bambu Studio as a .3mf.
4. **Submit** your files at **www.frugal-innovations.com/queue**.
5. **Watch your status.** You'll get an email every time it changes.
6. **Pick up** your print at Davis Commons during breakfast once it says Ready for Pickup.

Tool Guides

Bambu Studio (the slicer)

Basic Info:

A slicer turns your 3D design into the layer-by-layer instructions a printer follows. We use **Bambu Studio**, and it's a free download: **bambulab.com/en-us/download/studio**.

Always **slice before you submit**. The queue reads your print time and filament straight from the sliced file.

Our printers have a **256 x 256 x 256 mm** build volume, so your part has to fit inside it. If it doesn't, split it into smaller parts.

Safety Info:

YOU NEVER NEED TO TOUCH A PRINTER. VOLUNTEERS START EVERY PRINT, SO LEAVE THE PRINTERS ALONE.

Filament

Basic Info:

You'll pick your filament in the slicer. **Most prints should be PLA** unless you have a good reason to use something else.

Filament	Good to know
PLA Basic	The default. Use this for most prints.
PLA Pure	Food safe in certain applications.
PETG Basic	Stronger and less brittle than PLA.
TPU 85A	Flexible and rubbery, but only simple shapes.

Using TPU? It's allowed. Select TPU as your filament in the slicer. TPU prints are routed to a different location than regular prints, so watch your status emails.

Your Finished Print

Basic Info:

Once you've picked up your print, you may need to snip or trim it before it goes into your prototype.

Safety Info:

WEAR SAFETY GOGGLES WHEN SNIPPING OR CUTTING 3D PRINTS. THE PLASTIC IS BRITTLE AND CAN SHOOT OFF SMALL PIECES.

Each team's kit has 2 pairs of safety goggles, and there are more in the prototyping rooms.

Slice Efficiently

Faster prints mean a shorter line for everyone, including you.

- **Avoid supports.** Orient parts flat and design them so supports aren't needed. Supports add a lot of print time.
- **Use the lowest infill that still works** for your part.
- **Check the estimated time before you submit.**
- **Split big parts.** Long prints hold up the queue.
- **Put several small parts on one plate.**

Submitting to the Queue

Go to **www.frugal-innovations.com/queue**. The queue asks for two files:

File	Details
Sliced .3mf	Exported from Bambu Studio. 300 MB max.
Original design file	Your unsliced design, as an .stl or .3mf. 300 MB max.

It will also ask for your **name, computing ID, team name, team number and email**. There's no group number.

Print Timeline

When	What happens
Friday, 9:30 AM	3D printing starts.
Friday, 10:00 PM	Final prints for Friday are due.
Saturday, midnight	Final prints for Saturday are due.
Overnight	Overnight prints are picked up at breakfast.

Tracking and Picking Up

Your print moves through these statuses in the queue. **Your team gets an email every time the status changes.**

In Queue → Printing → Complete → Ready for Pickup → Picked Up

When it says **Ready for Pickup**, come collect it. Print pickup happens at **Davis Commons during breakfast**.

Need Help?

Stuck on slicing or not sure how to use a tool safely? Call over a **Mentor or Exec Member**. Happy printing!