

3D Printer Job Order Form

5 easy steps!

1. Open a remote printer account. Forms are at http://www.cnf.cornell.edu/cnf5_steps.html.
2. Put your CAD file(s) into .STL format. Make note of a critical dimension (like the length).
3. Deliver your .STL file(s) and this printing instructions sheet by email (3dprinter@cnf.cornell.edu) or to the reception desk in the CNF lobby (250 Duffield Hall).
4. Reply to an email estimate and acknowledge the cost for the print job.
5. Pick up your uncleaned device(s) or have them mailed. *Cleaning suggestions will be attached.*

This information must be filled out completely before a job is printed.

CNF User ID _____ email _____ phone _____
Date needed _____

Delivery method (circle one):

-pickup

- FedEx: address _____
FedEx acct. # _____

- We'll print devices to the specifications on this sheet. Please review it carefully, and contact Beth (rhoades@cnf.cornell.edu or 254-4918) with any questions. By submitting this form and replying to the estimate of cost email, you are consenting to pay for the work that is ordered. If there are mistakes on your part, we must still charge you.
- We'll try to keep your cost to a minimum by orienting devices for the quickest print run unless you specify otherwise. We'll also try to spare you the cost of changing materials on the printer by scheduling jobs that use same materials for the same day. This means we could wait up to a week to start your job. If you specify that your job must be printed as soon as possible, there may be material change fees of \$78.00 (light-colored materials) or \$300.00 (dark colored materials).
- We will NOT clean the support material from your devices. It is simple, but we'd prefer not to damage your devices. Instructions on cleaning are on the second page of this form.

Device #1 STL file name _____ Number of copies to print _____
Units (circle one): inches cm mm
Critical dimension to scale the device (longest length or z height) _____

Material (circle one): VeroClear DurusWhite High-Temp/RGD 525 VeroBlackPlus
VeroWhitePlus VeroBlue Vero Gray

Which side faces up? _____ Top finish (circle one): Matte Glossy

Orientation to print heads (circle one): parallel perpendicular doesn't matter
Special instructions: _____

(Have more files? Turn this sheet over!)

Device #2 .STL file name _____ Number of copies to print _____
Units (circle one): inches cm mm
Critical dimension to scale the device (longest length or z height) _____

Material (circle one): VeroClear DurusWhite High-Temp/RGD 525 VeroBlackPlus
VeroWhitePlus VeroBlue Vero Gray

Which side faces up? _____ Top finish (circle one): Matte Glossy

Orientation to print heads (circle one): parallel perpendicular doesn't matter

Special instructions: _____

Device #3 .STL file name _____ Number of copies to print _____
Units (circle one): inches cm mm
Critical dimension to scale the device (longest length or z height) _____

Material (circle one): VeroClear DurusWhite High-Temp/RGD 525 VeroBlackPlus
VeroWhitePlus VeroBlue Vero Gray

Which side faces up? _____ Top finish (circle one): Matte Glossy

Orientation to print heads (circle one): parallel perpendicular doesn't matter

Special instructions: _____

Suggestions for cleaning away the support material

Cleaning involves several rounds of soaking and picking away the support. Soaking (soapy or plain water) makes the support material swell and loosen from the device. Soak times depend on features. Thin walls or small features (< 4 mm) can easily be distorted or cracked by the swelled support. Soak delicate features for 5-10 minutes at a time. Thick or large features can soak hours or overnight. Soaking devices too long will soften the model material and/or lead to warping of features.

Work off the loosened support using a combination of sprayed water, physical picking (probes, forceps, toothpicks, etc.) and brushing with brushes, wipes or sponges. Be warned that the model material seems softer for the first day or after prolonged soaking, and strong water sprays will wear it away. We can also offer suggestions surface preparations such as parylene coating and antistiction treatment.

A typical device will require several rounds of cleaning.

1. Soak.
2. Pick and rinse away the outer support.
3. Repeat soaking.
4. Repeat picking and rinsing away the support. (repeat these steps until support is gone)
5. Wipe away support residue with a wipe, gentle sponge or paper towel.
(OPTIONAL) To remove support residue, soak 10 - 30 minutes in 2% NaOH. Rinse and wipe well.