

3D Printer Stratasys and Specialty Printer Submission Guide

The Digital Fabrication Lab houses several different types of 3D printers for various needs. A summary of the available equipment is listed below, with access levels subject to change as new equipment continues to be integrated into the program:

#	Printer	Build Size	Filament	Access Level
2	Stratasys UPrint SE	8 x 6 x 6"	ABS plastic, soluble support	Student email request sent to staff with faculty member CC'd
3	Stratasys UPrint SE Plus	8 x 8 x 6"	ABS plastic, soluble support	Student email request sent to staff with faculty member CC'd
10	Creality CR – 20	8.7 x 8.7 x 9.8"	PLA plastic	Pre-assigned class section only
4	Ultimaker S3	9.1 x 7.4 x 7.9"	PLA plastic, soluble support, open	Pre-assigned class section only
1	Modix 120x	24 x 48 x 24"	PLA plastic	Faculty special request only
1	Stratasys F170	10 x 10 x 10"	ABS plastic, PLA plastic, carbon fiber composite, TPU elastomer, soluble support	Faculty special request only

Stratasys UPrint SE (and Plus) 3D Print File Submission:



(8 x 6 x 6") and (8 x 8 x 6")
 ABS plastic, soluble support

The UPrint machines work best for printing final-draft complex and interlocking objects.

Students must do the following to submit finalized models to the UPrint machines:

1. Review the "3D Printer Policy and File Prep Guide" PDF on the Digital Fabrication Lab website to prepare file
2. Submit email to Digital Fabrication Staff and CC faculty member the following:
 - a. Your name
 - b. STL File attachment
 - c. Estimated size of object (ex. 2 x 3 x 6")
 - d. Any additional necessary details
3. Staff will respond within 1 work day to the submission request

Stratasys F170 3D Print File Submission:



The F170 machine works best for printing final-draft complex and interlocking objects in high resolution and has the capability of printing special and difficult filament types with ease.

The F170 is not available upon student request. Projects that may benefit from carbon fiber composite or TPU elastomer filament must be planned with faculty for department approval in advance. Faculty must reach out to the Digital Operations Manager and to the Department Chair for project planning.

(10 x 10 x 10")

ABS plastic, PLA plastic, carbon fiber composite, TPU elastomer, soluble support

Students that are given authorization to print research projects and final models on the F170 are highly encouraged to print test models on the other available machines first.

Modix 120x File Submission:



The large-format Modix 3D printer is best for printing simple oversized objects. The machine operates in one of two modes with both using breakaway support filament: course low-resolution draft mode, and slow high-resolution mode.

The Modix is not available upon student request due to slow printing times and lower reliability of the machine. Students are advised to cut down their models to fit the other machines that are more readily available to them.

(24 x 48 x 24")

PLA plastic

Projects that may benefit from the large-format 3D printer must be planned between both faculty and the Digital Operations Manager in advance, upon which staff will work with the user to test the model on the machine prior to printing.

Creality CR – 20 Printer Farm File Submission:



(8.7 x 8.7 x 9.8")
PLA plastic

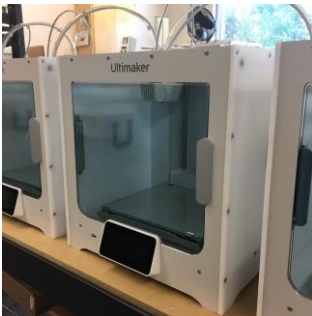
The Creality machines work best for rapid-prototyping plastic parts for iterative design, however the printers are also capable of printing final-draft high-resolution objects with break-away support.

The 10 Creality machines allow students to remotely submit files from college lab PCs and from their student laptops using 3DPrinterOS.com and Cura slicer software.

At this time, only pre-approved class sections and their students will be given access to the new print farm on a semester-by-semester basis as the college continues to further integrate the new equipment into the curriculum.

Faculty and section coordinators that are interested in utilizing the 3D printer farm for an upcoming project must reach out to the Department Chair and to the Digital Operations Manager in advance for training and for further information.

Ultimaker S3 Printer Farm File Submission:



(9.1 x 7.4 x 7.9")
PLA plastic, soluble support,
open*

The Ultimaker machines work best for rapid-prototyping parts for iterative design, however the printers are also capable of printing final-draft high-resolution objects with either breakaway or water-soluble support.

The machines can also readily accommodate open filament, providing opportunities to print any filament that fits within the machine's parameters. Faculty interested in additional filament options must contact the Digital Operations Manager in advance for further details.

The machines share access level with the Creality CR – 20 print farm machines listed above, and submission instructions are identical.