

# DESIGN

## WHEN DESIGNING OBJECTS TO BE 3D PRINTED YOU SHOULD:

- Make sure that your object is a watertight solid object
- Keep thickness above 2 mm for all parts to ensure printability
- Be mindful of which material you want to print in that caters best to your design

For more info on 3D Printing check out our guide online:



## PROS & CONS OF FDM, SLA, AND SLS PRINTING

	PROS	CONS
<b>FDM</b>	<ul style="list-style-type: none"> <li>- Fastest and cheapest</li> <li>- Good for rapid prototyping</li> <li>- Comes in many colours</li> </ul>	<ul style="list-style-type: none"> <li>- Lowest resolution</li> <li>- Limited by layer height printing method</li> <li>- Prone to breaking along print layers</li> </ul>
<b>SLA</b>	<ul style="list-style-type: none"> <li>- Higher quality and resolution</li> <li>- Available in clear and white</li> <li>- Prints as solid object</li> </ul>	<ul style="list-style-type: none"> <li>- Pricier than FDM</li> <li>- Longer printing time</li> <li>- Smallest build volume</li> <li>- Supports can be invasive and affect print surface</li> </ul>
<b>SLS</b>	<ul style="list-style-type: none"> <li>- Stronger than FDM or SLA prints</li> <li>- Does not require any supports</li> </ul>	<ul style="list-style-type: none"> <li>- Longest and priciest</li> <li>- Additional service fee</li> <li>- Only one colour</li> </ul>

# 3D PRINTING

# PRINTER & MATERIALS

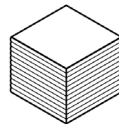
## FDM - FUSED DEPOSITION MODELING

### BAMBU LAB P1P PRINTER

- Build volume: 256 x 256 x 256 mm
- Default settings: 0.2 mm layer height & 15% infill

### PLA FILAMENT

- Available in black, white, red, blue, and random (unspecified)



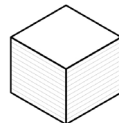
## SLA - STEREOLITHOGRAPHY

### FORMLABS 3 PRINTER

- Build volume: 145 x 145 x 185 mm
- Prints objects as solids

### STANDARD RESIN

- Available in clear and white



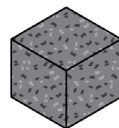
## SLS - SELECTIVE LASER SINTERING

### FORMLABS FUSE 1 PRINTER

- Build volume: 159 x 159 x 295 mm
- Prints objects as solids

### NYLON POWDER

- Only available in dark grey



**NONE OF OUR 3D PRINTING MATERIALS CAN BE RECYCLED IN MUNICIPAL WASTE MANAGEMENT SYSTEMS AND SHOULD BE DISPOSED OF IN YOUR HOUSEHOLD GARBAGE!**

# PRICING

## 3D PRINTING COSTS ARE CALCULATED BY MATERIAL:

(including any support material)

### FDM

PLA Filament  
\$0.15 per gram

### SLA

Standard Resin  
\$0.45 per gram

### SLS

Nylon Powder  
\$0.50 per gram  
+  
\$7.00 clean up fee

\*Weight estimates can be seen by importing your .STL into 3D slicing software

## AT THE D+TL WE USE THESE 3D SLICING APPLICATIONS:

### FDM - BAMBU STUDIO

Select your printer as the "Bambu Lab P1P 0.4 nozzle" and make sure that supports are enabled in the "Support" tab. The LAB's Bambu Studio presets are available on our website for you to download!

### SLA / SLS - PREFORM

- For SLA prints in standard resin, select "Form 3+"
  - For SLS prints select "Fuse 1" as your printer
- (both available for free for Windows and Mac)

## THE LAB ONLY ACCEPTS ONECARD AS PAYMENT

we recommend loading your OneCard beforehand which can be done in-person @ the OneCard office, @ the campus PHIL machines, or online. Link with this QR code:



# SUBMISSION & PICKUP

SERVICE BUREAU SUBMISSIONS ARE COLLECTED VIA GOOGLE FORM. FIND THE LINK ON OUR WEBSITE OR SCAN THIS QR CODE



## SUBMIT YOUR FILE AT LEAST 1 WEEK IN ADVANCE TO ENSURE YOUR JOB IS PROCESSED IN TIME

### WHEN SUBMITTING

- Submit your files at the correct scale in **mm as an .STL** and provide us with the measurements in mm of your 3D object.
- Double check that your object looks correct in the appropriate slicing software before submitting it to us.

### ONCE YOU SUBMIT

Your file gets added to the Service Bureau queue which staff tackle on a first-come, first-served basis.

**NO RUSH JOBS**  
**NO QUEUE HOPPING**

### AFTER SUBMITTING

Keep an eye on your email as staff may reach out with questions, concerns, or any issues.

**MINOR ISSUES:** can be troubleshot by LAB staff

**MAJOR ISSUES:** may result in your submission being cancelled

**WE WILL EMAIL YOU WHEN YOUR PIECE(S) ARE READY WITH YOUR TOTAL** You will have two weeks to pick up your piece(s)-get in touch if that doesn't work for you!