



### Creative Commons

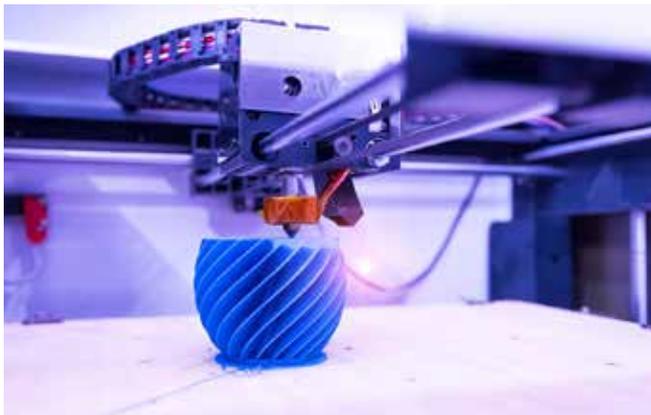
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### Printing Cost

3D printing costs 20¢ per meter of PLA. When you submit your file, we will let you know the estimated cost.

### Requesting a 3D Print Job

1. Bring the completed request form as well as a digital file on a thumb drive to the library. The request form is available on the library page at [www.35fss.com](http://www.35fss.com).
2. You will receive a confirmation email after the library staff review your request. If you don't receive an email from the library in five days, please call us at 226-4083.
3. Jobs are printed in the order they are received and there are many factors that can effect the time it takes to have your job printed. Please allow 5-7 days for your job to be completed.



## Library Hours

### Monday–Thursday

10 a.m.–8 p.m.

### Friday–Sunday

Noon–6 p.m.

### Federal holidays

Noon–5 p.m.

Closed 4th of July, Thanksgiving, Christmas and New Year's Day

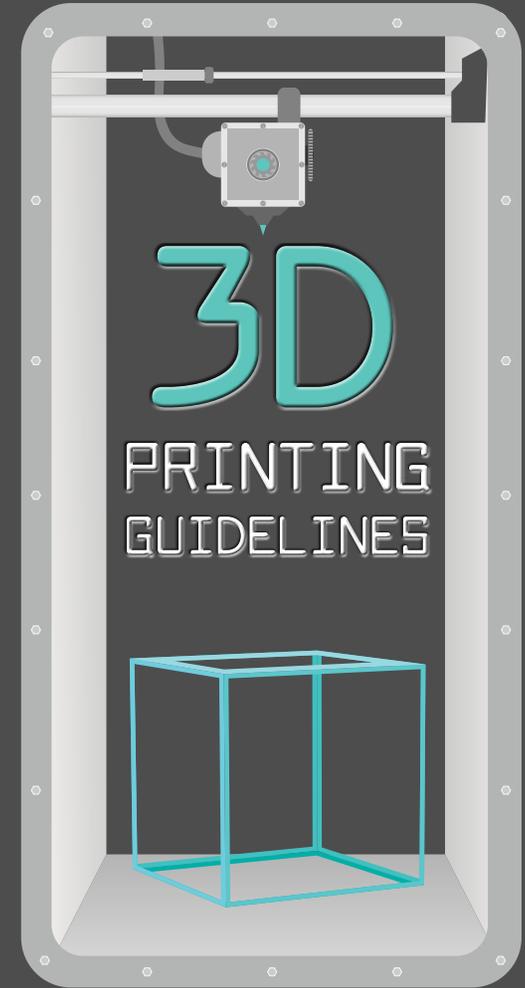
Misawa Air Base  
Bldg. 629

35 FSS / FSDL  
Unit 5019  
APO AP  
96319-5019

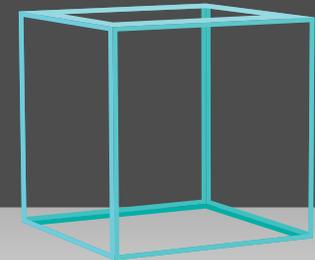
Phone:  
0176-77-3068  
DSN (315)-226-4083

Fax:  
0176-77-2410  
DSN (315)-77-2410

Overstreet Memorial Library



# 3D PRINTING GUIDELINES





### What is 3D printing?

3D printers use digital models to fabricate three-dimensional objects, successively printing or forming layers of material, one at a time, until an object is fully rendered.

### What kind of 3D printer do you have?

We have a MakerBot Replicator+ 3D printer.

### Is there a charge for using the 3D printer?

Yes, the cost for printing is 20¢ per meter of PLA (US cash only)

### How long does it take to print a project?

It can take anywhere from 25 minutes to several hours or more depending on the project.

### Can I print in multiple colors?

Our printer can only print in one solid color.

### What can I print?

Whatever you can print in five hours and meets the 3D printing guidelines.

### Can I bring filament that I have to use your 3D printer?

No. You must use only the filaments the library has.

### How large can I print something?

The largest size that we can print in one piece is 6 inches wide by 10 inches high and 6 inches in depth.

### What kind of material is used for printing?

We only use PLA—a corn based, biodegradable, environmentally friendly plastic filament.

### Why is the Library offering this service?

A 3D printer is a powerful tool for creativity, innovation and STEM education for people of all ages. Libraries are in unique positions to make this cutting-edge technology available to the public.

### Do you offer classes?

No, not at this time.



## 3D Printing Guidelines

1. The Library's 3D printer may be used only for lawful, non-commercial purposes. All designs must comply with the Library's Acceptable Use Policy. Designs must not:
  - Create materials prohibited by local, state or federal law
  - Be in violation of intellectual property rights, including copyright, patent or trademark protection.

The library reserves the right to refuse any 3D print request.
2. Printing cost is 20¢ per meter of PLA. Payment, in the form of cash, must be made when the job is picked up.
3. The Library assumes no fault if the design does not print as expected. Library staff will attempt one reprint if a job fails to print.
4. Please allow 5–7 days for your job to be completed.
5. Items printed by the Library's 3D printer that are not picked up within seven days will become property of the Library. Items must be picked up by the patron who ordered them or an alternate designated by that person.
6. The file must be submitted in .STL format and not be larger than 25 MB.
7. The item must not exceed 6 inches wide by 10 inches high and 6 inches in depth, with a printing time of five hours or less.
8. Only one job may be submitted at a time
9. The user must acknowledge that prints that do not meet expectations due to design, sizing, color, etc. will be paid for.
10. Only trained Library staff will have hands on access to the 3D printer.
11. All files will be deleted from the 3D printer's computer after items have been printed.



## Designing in 3D

If you want to give 3D printing a try, you can either start with your own design or use someone else's (as long as it is meant to be shared—see Creative Commons below). These are all free to use or offer free options.

- Thingiverse ([thingiverse.com](http://thingiverse.com)) is the official design community of MakerBot, where people share 3D models for others to download.
- 3D Warehouse ([3dwarehouse.sketchup.com](http://3dwarehouse.sketchup.com)) is also a sharing community where you can look for designs and learn from others. It's hosted by SketchUp, a 3D modeling software.
- Tinkercad ([tinkercad.com](http://tinkercad.com)) is a great choice for beginners looking to create original designs. You can sign up for an account to access tutorials or just experiment
- SketchUp (free version: SketchUp Make, [sketchup.com](http://sketchup.com)) and Blender ([blender.org](http://blender.org)) are more advanced modeling options.

