

tel: 207-333-6640

Auburn Public Library 3D printer Policies, Guidelines and Procedures

The Auburn Public Library desires to offer community access to new and emerging technologies such as 3D printers to inspire a new interest in design and to help the community to bring their creations to life. These guidelines establish how and under what circumstances the public may use the Library's 3D printers.

The **Design Spot** at the **Auburn Public Library** features a 3D printer and computers with design software. This equipment, books, and **Design Spot** programming (made available with funding provided by a grant from a Donor-Advised Fund of the Maine Community Foundation) are intended to inspire a new interest in design for people of all ages.

POLICIES

The Library's 3D printers are available to the public to make three-dimensional objects in plastic using a design that is uploaded from a digital computer file.

- I. The Library's 3D printers may be used only for lawful purposes. The public will not be permitted to use the Library's 3D printers to create material that is:
 - a. Prohibited by local, state or federal law.
 - b. Unsafe, harmful, dangerous or poses an immediate threat to the well-being of others. (Such use may violate the terms of use of the manufacturer.)
 - c. Obscene or otherwise inappropriate for the library environment.
 - d. In violation of another's intellectual property rights. For example, the printers will not be used to reproduce material that is subject to copyright, patent or trademark protection.
- II. The Library reserves the right to refuse any 3D print request.
- III. Customers are expected to take a free 3D printing orientation prior to use.
- IV. Cost: There is no charge to use the *equipment* in the **Design Spot**. However, users are responsible for the costs of consumable materials (eg. 3-D printing filament). Except in cases of mechanical failure, objects failing to fully print, errors in the print process, or other factors not in a customer's control, customers are expected to pay for completed objects and may not demand a new print in place of the original due to dissatisfaction with color, scale, quality, design, required support material, or other options preselected by the customer. *The Auburn Public Library reserves the right to change fees at any time.*
- V. Printing priority is based on a first-come, first served basis, and is limited to one item per customer per visit. Priority will be given to library programs or activities.
- VI. No printing will be scheduled one-hour prior to closing.





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- VII. Items printed from Library 3D printers that are not picked up within 7 days will become property of the Library. Items must be picked up by the individual who printed them.
- VIII. Only designated Library staff will have hands-on access to the 3D printer.
 - IX. Users must hold a valid Auburn Public Library card or Lewiston Public Library card *in good standing*, and sign the 3D Printer Agreement before any item is accepted for printing. A Library card from a friend or family member will not be accepted. Children under age 14 must be accompanied by an adult.
 - X. Only materials provided by or specifically approved by the Library are to be used in printing.
 - XI. Definitions:
 - 3D printing: the process of making a physical object from a digital model.
 - 3D Printer: A 3D printer uses melted plastic to produce objects designed on a computer.
 - CAD: Computer Assisted Drawing

Approved by Auburn Public Library Board of Trustees:

Date: August 17, 2016



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3D PRINTER PROCEDURES

The procedures for printing from the Library's 3D printers are as follows:

I. Design creation:

- a. The 3D printer can be used with basic knowledge of Computer Assisted Drawing (CAD). Creating a new design requires an advanced knowledge of 3D modeling software products. Video tutorials that accompany CAD programs can be of assistance.
- b. Any 3D drafting software may be used to create a design as long as the file can be saved in .stl file format.
- c. The Library has computers with design software that may be used to create a design. Use of these computers will comply with general library computer-access guidelines.
- d. Digital designs also are available from various file-sharing databases such as Thingiverse.com.

II. Submitting a design for printing:

- a. Persons wanting to use the 3D printer shall bring their file (in .stl file format) (no larger than 25MB) to the **Design Spot** during open hours. Staff will add the model to the printing queue.
- b. If there is high demand, the Library will schedule only one print per visit per person or entity.
- c. The files will be readied for printing in Cura or other authorized software. The Library will view all files in Cura or other authorized software before printing.
- d. Wait/pickup time: Items may be picked up at the **Design Spot**. It is sometimes difficult to estimate exact print times. Library staff will make an educated guess about the length of a job upon request. 3D printer builds can take hours so patrons must leave their email address and phone number.
- e. If a build is too large or complex we suggest a commercial service.
- III. The Auburn Public Library does not accept responsibility if a project is destroyed, does not print correctly, or does not work. Supervision of the use of the 3D printer by Library staff does not constitute knowledge, or acknowledgment, of any unapparent final use of the 3D product, and the Library specifically disclaims any knowledge thereof.
- IV. Please note that the policies and procedures governing the use of the Library's 3D printers are subject to change without notice.
- V. Definitions





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The **Design Spot** hours at the Library:

For more information please contact Adult Services at 207-333-6640 x 4.

Monday & Thursday 12 – 7 (Labor Day through Memorial Day)

Monday 12 – 7 (Memorial Day to Labor Day)

Tues - Wed - Fri 10 - 5

Saturdays – By appointment only.

The Auburn Public Library **Design Spot** will be closed on all library holidays.

See the Auburn Public Library 3D Printer policies above.

DESIGN SPOT FREQUENTLY ASKED QUESTIONS

What kind of 3D printer is in the lab?

Sindoh DP 200

What kind of filament does the 3D printer use?

ABS and PLA filament, available in red, green, blue, yellow, grey, black, and white.

Is there a fee to print?

Yes. Currently, the cost of the print will be a charge of 20 cents per gram of filament used in the printing process with a \$1.00 minimum. A digital scale is on site to weigh your printer item. This includes rafts and support structures. Payments must be paid in cash when you pick up your print. The Auburn Public Library reserves the right to change these fees at any time.

Are there limits to what I can print?

Yes, please see the 3D Printing Policy. Also, some designs simply won't work with our printers, and we do restrict prints based on the length of time the item will take to print. Please visit in person to find out more, as print time varies greatly depending on the printer settings and individual design.

For your first print, we highly recommend that you start small. Smaller than 75mm is a good size to start with. The maximum dimensions for our printer are $21 \times 20 \times 19.5$ cm (8.3" x 7.9" x 7.7"). Remember that 3D printed object may have bumps, holes, and/or rough edges. These can be cleaned up by using fine sand paper.



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Can I send you my file to print?

No, you'll need to visit the **Design Spot** in person. A staff member will look at your design to see if it is ready for printing and assess how long it will take. You'll have a good visit, though--the **Design Spot** is a fun place.

How long is the wait time to print?

Printing is first come, first served—and wait times can vary greatly depending on the items being printed. Some items may have to be picked up at a later date. We suggest that you call 207-333-6640 x. 4 to make sure your item has been printed and is ready to take home.

What file format is best for my design?

Files must be submitted in STL (Stereo Lithography) format. Nearly every 3D modeling program can save a file in this format. Some, like Sketchup, require a free add-on. 3D printers use metric coordinates. For consistency, it is recommended that you design in millimeters and export your STL in millimeters.

What kinds of CAD (Computer Aided Design) software do you have in the Design Spot/recommend?

We have free design software such as Blender and SketchUp. TinkerCAD is a great tool for getting started with 3D design at home.

Do you offer design classes?

Yes, classes are offered throughout the year and frequency is determined by demand. All classes can be found at www.auburnpubliclibrary.org or by inquiring at the second floor desk for times and dates. You may register by contacting staff on the second floor. **Customers are expected to take a free 3D printing orientation prior to use**.





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3D Printer Agreement

If you are interested in printing on the SindohDP200 3D Printer at the Auburn Public Library, please read and understand the following:

- 1. We expect you to have knowledge of 3D Printer Technology and to have participated in one of our classes. We offer 3D Printer classes to the public; please inquire at the second floor desk.
- 2. We hope you understand that we cannot monitor your print job, and if the job fails (which is a real possibility) all you can do is try again. Prints are handed over **AS IS**. If your print requires rafts or support structures, you will be responsible for removing these. The Auburn Public Library cannot guarantee model quality or stability, confidentiality of designs, or specific delivery times. Refunds and re-prints will only be available in the event of machine malfunction.
- 3. 3D Files must be saved as **.stl** files. (Try TinkerCad or Thingiverse, both are great places to design or find shared files to print.)
- 4. Once you have an .stl file you must import it into Cura
- 5. Cura is available on the public computers. If you are saving file at home you can acquire Cura here http://software.ultimaker.com/
- 6. We expect you to come in with a file saved on an SD Card or a flash drive which we will transfer to the SD Card. All jobs will be deleted from all library devices and computers once the item is printed.
- 7. You must limit your print jobs to less than 6 hours.
- 8. You must schedule your time on the printer with a staff member.
- 9. You must hold a valid Auburn Public Library card or Lewiston Public Library card in good standing, meaning *no fines, fees, or outstanding charges*.
- 9. You must sign our waiver; if under 18, a parent/guardian signature is required.

By signing this Agreement, I indicate that I have read and understand the terms of these Policies and Procedures and agree to abide by them.

Signed:	
Printed Name	
Address	Phone