

Public 3D Printing Policy & Procedure

The Beaumont Library District is invested in providing our community with access to essential technology that would otherwise be prohibitively expensive or otherwise unavailable to some of our patrons. In the interest of keeping our community up to date with such technology, the library is now offering 3D printing services to the public.

1. Eligible Users

1.1 Those with a library card in good standing may use the 3D Printing services provided by the Beaumont Library District.

2. Forbidden Items

2.1 The following items are forbidden to print:

- 2.1.1 Weapons, or items that are explicitly designed to do harm, or items designed to aid in the construction of weapons or items that are designed to do harm,
- 2.1.2 Copyrighted material, unless the patron is or has the explicit written permission of the copyright holder,
- 2.1.3 And items printed with the intent to be sold commercially or used in products sold commercially.

2.2 Items must otherwise comply with all local, county, state, and federal laws.

3. Payment and Pick Up Policy

3.1 The cost for a printed item is \$1.00 + \$0.05/gram in weight.

3.1.1 Total weight will be rounded to the nearest gram.

3.1.2 Cura, the slicing software used by the Beaumont Library District, includes an estimate of the total weight of the final print in grams. In the event that a scale cannot be used, this estimate will substitute for the object's billable weight.

3.2 The cost is to be billed when the item is picked up by the patron.

3.3 Only cash will be accepted for item payment, or card if an object's cost is over five dollars.

3.4 The item may only be picked up by the patron who submitted the request.

3.4.1 Guardians may substitute for minors they are responsible for.

3.5 Patrons must physically come to the library to pick up their prints – completed prints will not be delivered or mailed.

3.5.1 In the event that visiting the library would be an undue burden on the patron, patrons may contact the librarian in charge of the 3D printing program for alternative arrangements.

- 3.6 Printed items will be held for up to two weeks, at which point they will become library property.
- 3.7 Items will be presented to the patron as they were printed. Any post-processing is the responsibility of the patron (e.g. removing supports, sanding the plastic to a smooth finish, assembly of multiple parts, etc.).
- 3.8 Money obtained from 3D printing fees will be used to replenish stocks of 3D printing filament. Excess will be put into the supply budget.
- 3.9 In the event the 3D printer requires repair or maintenance, money to do so will be drawn from the supply budget.

4. Model Properties and Restrictions

- 4.1 Only PLA plastic will be used in prints made by the library's 3D printer.
- 4.2 All objects submitted to print must fit within the physical bounds of the library's printer (170mm x 170mm x 157mm, or roughly 6.7in x 6.7in x 6.2in).
- 4.3 Objects must not take over eight (8) hours to print.
 - 4.3.1 Cura, the slicing software used by the library, includes an estimated print time prior to printing, which will be the value used for this assessment.
- 4.4 Files will be printed with supports turned on, a 25% infill, and a 1mm outer shell unless the patron requests otherwise.
- 4.5 The patron is solely responsible for the object file as it is given to the library. Staff will not make changes other than rotating an object to fit on the bed of the printer if needed.
- 4.6 The Library reserves the right to deny any request prior to printing if, in the library's judgment, the object violates any of the stated guidelines or is otherwise unfit to 3D print (e.g., a minor has requested inappropriate material, model is too large for the printer, two-dimensional objects not possible in the real world are included, multiple objects' topology are intersecting, etc.).
- 4.7 If the library determines a file to be unprintable prior to printing, the patron will be notified via email and will relinquish queue position. The patron is, at that point, welcome to adjust the item and resubmit.

5. In the Event of a Print Failure

- 5.1 If a print fails due to librarian error or hardware failure, the library will attempt to reprint the object one additional time for the patron, free of charge. After a second failed attempt, the patron will be contacted via email and asked to either accept the print as-is or relinquish queue position without charge. The patron will, at that point, be free to resubmit a print request.
- 5.2 If a print fails due to a model error or other unforeseen error related to software, the patron will be notified via email that the object cannot print, and that the queue

position will be relinquished without charge. The patron will, at that point, be free to resubmit a print request.

6. Other Restrictions and Disclaimers

6.1 Patrons may only submit one STL file per print request, and may only have one print request active at a time.

6.1.1 Multiple objects can be contained in the STL file, provided the STL file as a whole meets the requirements listed above.

6.2 Patrons may make a maximum of one print request per patron per week, unless under circumstances noted as otherwise in the policy.

6.3 The library makes no guarantee as to when the print will be completed. While the library will attempt to print models in the order they are received and in a timely fashion, the library reserves the right to print patrons' models and models needed by the library in any order and at any pace the library deems appropriate. Patrons will not be billed until their item is printed and picked up.

6.4 Patrons may request a color for their print, but the library makes no guarantee of any color in particular being used for their print.

6.5 Unless the patron requests otherwise, the library reserves the right to post pictures of printed objects on social media.

6.6 The library cannot guarantee and is not responsible for the quality, stability, or confidentiality of designs. The library is not liable for objects which prove to be functionally faulty, defective, or unsafe in their use.

7. Submission Process

7.1 Print requests must be submitted via email to 3D.printer@bld.lib.ca.us with the appropriate STL file included as an attachment.

7.2 Only one print request will be accepted per email.

7.3 The request email will be deleted after the print is picked-up, or after the two-week grace period for item pick-up has elapsed after printing.

7.4 The subject line must contain the model's filename and the library card number of the requester

7.5 The body of the email must contain the estimated dimensions of the print and the expected budget, as well as any additional requests (e.g. color, if possible). If there are obvious incongruencies (e.g., the patron expects a model to be six inches tall, but the model appears as only one centimeter inside the slicing program, or the cost of the print will be higher than their budget), the patron will be contacted via email and given the chance to either resubmit an amended version of the file or retract the request.

7.6 The librarian in charge of printing reserves the right to clarify details with the patron via email before printing.

7.7 If the patron is unable to submit via email, they may speak in-person with a librarian and provide a flash drive holding the appropriate STL file for their print request. The librarian will submit an emailed request to 3D.printer@bld.lib.ca.us on the patron's behalf.