

## Type of Printer

The Library owns an Ultimaker 2+. You can learn more about the printer at the Ultimaker website, <https://ultimaker.com/en/products/ultimaker-2-plus/specifications>.

## Design

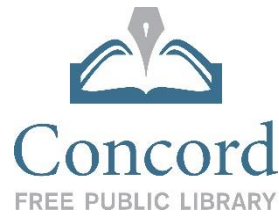
- There are many websites where you can make your design vision a virtual reality. Tinkercad, <https://www.tinkercad.com>, is a great, free place to start.

## Prepare Project for Print

- Once you have completed your design, you will need to import it into the Ultimaker's Cura software to prepare it for printing. You can download that free software here, <https://ultimaker.com/en/resources/20406-installation-cura-2-1>, or use the software on a library computer.
- The Cura software will allow you to modify some printer settings, including the density of your project. It can be hollow, or have a range of infill densities. You might choose to make your project hollow in order to reduce PLA use and speed the print time. You might want it to be very strong, in which case, you might choose a dense build or even a solid build. This sort of build would require much more PLA and take longer, but might be appropriate if you were, for instance, printing a screw or a hinge that you intended to use on a door. You can enable supports and create a float for the project. You can research all these features online and learn by experimenting.
- Once you have uploaded your project to Cura and chosen the print settings, the Cura software will give you an estimate of the time and filament that your project will require. You might choose to modify the settings or even the size of your project in order to reduce the print time or filament use.
- Please note that we cannot run the printer outside library hours, so we may need to reject your print request if it will take too long.

## Deliver the File to the Library for Printing

- There are two ways you can get your file to the Library.
  1. Save your project in .gcode format from the Cura software to a removable drive and bring it to the Library.
  2. Attach your .gcode file in an email to: [3DPrint@concordlibrary.org](mailto:3DPrint@concordlibrary.org) and include:
    - your name
    - email
    - best phone number to reach you
    - preferred color of print job



## Some things you should know:

- The Ultimaker has a maximum print size of 8.8 x 8.8 x 8.1 inches, but in reality, you'll want to try a project much smaller than that so that your print won't take too long to print. Printing even a very small project can take an hour or two.
- Often, a project can look fantastic on-screen but fail during the printing process. You are responsible for the quality of your prints and will be charged for the filament used even if the project fails. Cost of filament is .25 cents per gram.
- Our Ultimaker 2+ is currently stocked with PLA filament.
- We have a number of filament colors, including black, white, red, blue, silver and transparent. You can view the colors at the Ultimaker website.
- If you would like, you can choose a preferred color, but we cannot guarantee that it will be available at the time of your print. You will be charged for the PLA use even if we are unable to print in your preferred color.