

# Refresher Guide: Ultimaker2 3D printer

This guide should remind you how to take an .stl file from a 3D modeling program and print it on the Ultimaker2 3D printer. To control the printer you need to install Cura at <https://ultimaker.com/en/products/cura-software>. We recommend Fusion 360 for the 3D modeling portion. For more info see our Fusion 360 Guide.

**Questions? Need help? Ask a mentor or e-mail [makerhelp@uconn.edu](mailto:makerhelp@uconn.edu)**

## Setting Up Cura

1. Go to <https://ultimaker.com/en/products/cura-software> and download Cura.
2. Open the program after installation
3. Choose "Ultimaker2" from the list of 3D printers.
4. If you have a printer attached, the software will have you select that printer, otherwise naming your printer is optional.

## Ultimaker's Quick Guide to Cura

A straight forward guide to Cura - <https://ultimaker.com/en/resources/20407-first-use>  
Navigation is on the right side of the web page

## Preparing Files to Print

1. Cura can print a whole array of file types. .stl and .obj will print without alteration. The software also accepts .jpeg .png .gif .bmp and .jpg files. Each of these 2D files is converted to a 3D representation.



- a. In Solidworks choose <Save As> ... Save as type: STL
- b. In Fusion 360:
  - Select the piece you would like to convert to an .stl
  - Choose <Make> in the upper right of the screen. (A)

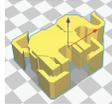


- If the popup window (B) doesn't show you a triangle count, reselect your object
- Uncheck the <Export to print utility> box
- Click <Okay> this will ask you where you would like to save your .stl file

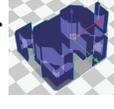
2. Start Cura  and import your file. If you've imported a 2D image choose how you would like Cura to process your file and hit enter.
3. If you're using a trackpad, move forward or backward with 2 fingers to zoom in and out, revolve around your model by clicking on your trackpad while you move around with 2 fingers.
4. To manipulate your model click on it and choose from the following tools.

Scale  Rotate  and Mirror. 

You can also change your object's appearance between: Solid



and x-ray.



5. To position your model simply click on it and drag it around the work area.  
For more accuracy you can use one of the axes in the coordinate system at the center of the model. You will then be able to move your model along that one axis.
6. When you're finished altering and placing your model export it to an SD card.  
In the bottom right corner choose "Save File". Then choose the location of your SD card.
9. Move your SD card to the printer.
  - a. Turn dial to scroll through options, press dial to select Models.
  - b. Select: Print -> External Media -> Find your file -> start a print
  - c. Platform will heat, while waiting: Fill out Print Job Summary form.
10. Stay for beginning of print to watch out for early errors.
  - a. Carefully remove filament that leaks onto build platform.
  - b. If necessary, cancel, pause, or have a mentor change filament during a print. Press the dial to pause the print.
11. Clean-up:
  - a. Wear safety gloves.
  - b. Use a scraper to remove your part and raft from the platform. If necessary, the platform can be removed after cooling by rotating the front metal clips forward.

