

## 3D MODELING SOFTWARE

*Available in the VRC*

Sketch Up

Rhino- Also available in labs 401, 402, and on dual boot computers in 301 (iMacs 16-25)

We recommend these programs. There are many 3D software programs to use, *just make sure your design will export as an .Obj or .STL file.*

## PLAN AHEAD

In the computer your model exists in a world without gravity or physics. To successfully print your object you'll need to keep the material's characteristics in mind.

### Object is Water-Tight

No gaps or holes & parts are flush

### Object can exist in 3 Dimensions

Forms extending into space won't fall off

Weight distributed to prevent collapse or toppling

Pieces won't break off

Export your model as an .Obj (object) or an .STL file (stereo-lithography) from modeling program.

## FILE REQUIREMENTS:

Name file: Lastname\_Filename

Export your model as an .Obj (object) or an .STL file (stereo-lithography) from modeling program

Bring original file AND .Obj or .STL file

Have your file ready before the scheduled print session

## APPOINTMENTS

### Two Appointments are required:

Consultation- A 15 min consultation is required to determine specifications & print time before you can schedule a 3D printer appointment.

3D Print- A 30 min print appointment will be scheduled during the consult and the file will be finalized and printed.

# 3D PRINTER PREP CONTD.



## CHECK / FIX YOUR FILE WITH THE APP

### Upload your stl. file to the Thingiverse website

Create tab > Upload a thing > Follow guided instructions

Select **save** and **don't select View Publishing**

### Repair with MakePrintable app

Click Repair, to load your object in the app

Problem areas in your object appear

Press Next > the app will attempt to make corrections to the object in a cloud server.

App will show you the fixed model: **save or download**

## PREPARE PRINT

### Set up the print file with the Makerbot software

Open Makerbot Print Software > Add your model

Check scale of the object (Icons on right side of the screen):

*VRC will only print in a Max Size 10 L x 8 W x 6 H in*

*(254 x 203 x 152 mm) volume scale.*

### Arrange model on plate

This places the model flush to the print plate

### Bring print settings with you (Icons on the right of the screen)

Go through and set the print settings; we recommend Minfill settings

Print Mode: \_\_\_\_\_ Support: \_\_\_\_\_

Custom: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Estimate and print preview (Icons on the right side of screen)

How much material is it using? \_\_\_\_\_ g

How long will print take? \_\_\_\_\_ hr \_\_\_\_\_ min (VRC 8hr max)

### The Printer

Add unconnected printer: Replicator 5th gen.

## COME SEE US

Make a consultation appointment if you have questions or to schedule printing if you're ready

### What to bring:

Working file | Original stl. | Repaired stl. | Recommended print settings created in Prepare Print

## DOWNLOAD MAKERBOT SOFTWARE

Go to <https://www.makertbot.com> to create a personal account.

After creating account go back to the makerbot homepage and under the products tab select Makerbotprint. Download software.

After downloading software you will be prompted to make a Thingiverse account: sign in with Makerbot account info and your email.

Explore Thingiverse site, familiar self with: settings, account, things, and apps.

### REPAIR TOOL

Apps > Tools and utilities > MakePrintable > Launch app