# Steps to 3D Print at the Clarkston STEM Lab

### **STEP I: OBTAIN A 3DPRINTEROS ACCOUNT**

- Complete the form at the following link to be added to the iCollege page (<u>https://technology.gsu.edu/technology-services/it-services/labs-and-classrooms/icollege-equipment-</u> course-request/)
- You will be added to the Georgia State University MakerSpace iCollege page within the next 24hours. Login to <u>https://gastate.view.usg.edu/</u> and search for the class 'Georgia State University MakerSpace and STEM Training'
- 3. Complete the 3D printing modules and the 3D printing Quiz on iCollege
  - Sign in to icollege and access the above modules and Quiz in the class 'Georgia State University MakerSpace and STEM Training'
- 4. Sign in with 3DPrinterOS webpage
  - After you complete the quiz successfully you can access the 3DPrinterOS webpage <u>https://cloud.3dprinteros.com/</u>
  - Click on the SSO tab, scroll down to find Georgia State University and sign in with your CampusID and password.
  - You have to wait 24 hours after you complete the quiz and sign-in to 3DPrinterOS before you can start using the printers, your account will be configured on 3DPrinterOS during this period.

## **STEP II: ADD your files to 3DprinterOS**

- Login to 3DPrinterOS. <u>https://cloud.3dprinteros.com/</u>Click on the SSO tab, scroll down to find Georgia State University and sign in with your CampusID and password.
- 2. Click on MY FILES and ADD your 3D files to 3DPrinterOS (it must be a .stl file or other 3D printing extensions)
  - a. Find someone else's shared file that is ready to 3D print on www.thingiverse.com
  - b. You can create your own file using https://www.tinkercad.com
  - c. For advanced designs, you can use software to generate 3D files. Example software, Mathematica, Inventor (available on GSU computers), or Google Sketchup (free download)

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### **STEP III: PREPARE PRINTERS AND PRINT FILES**

Next, you will prepare your file for the 3D printer.

- 3. There are 3 types of 3D printers available at the Clarkston STEM Lab.
  - Lulzbot mini (More info: <u>https://www.lulzbot.com/</u>)
  - Lulzbot TAZ 6 (More info: <u>https://www.lulzbot.com/</u>)
  - Makerbot 5<sup>th</sup> Replicator (More info: <u>https://www.makerbot.com/3d-printers/replicator/</u>)

The type of printer you choose will not affect the quality of your print as the same settings are used for all the printers. You may choose the printer for your job based on the queue for each printer. Click on the Printers tab and scroll down to the Clarkston STEM Lab printers to check your place in the queue.

- 4. Use the REPAIR menu to repair your 3D file in case of any error
- 5. Use the LAYOUT menu to configure your build plate.
  - a. Click on ON BED
  - b. CLICK on CENTER
  - c. Save your new layout
- 6. If you decide to print on the Lulzbot mini or the Lulzbot TAZ 6 click on the SLICE menu. If you decide to print on the Makerbots, click on the EXTRAS (...) menu and choose the SLICER for MAKERBOTS icon.
- 7. You can now control some settings for your 3D print.
  - a. Select your Printer type
  - b. Select a printing profile
  - c. Change Plat. Adhesion to BRIM (Use RAFT if your object does not have a flat surface)
  - d. Check Supports and click on SLICE
- 8. To queue your print, click on print and select the available printer in the Clarkston STEM Lab

You will receive an email to your GSU mail when your print is ready to be picked up.