

## ETSC 265 Solid Modeling – 3D Printer – Printing Procedure (1/2/18):

Students pay a lab fee in ETSC 265 to print a 3D part on a Dimension printer as part of the class.

- Print up to 4 cubic inches total, which is the sum of the build and the support material
  - About the size of a large ice cube (about 1.6 inches cubed)
  - Student should plan on designing a part about 3 to 3.5 cubic inches which allows for 1 to .5 cubic inches of support material.
  - Depending on how complex the part and its print orientation determines the amount of support needed.
    - Lots of internal cavities and over hangs will result in a lot of support material and longer build times

Learning Intent:

- To teach the students how to create and export a model file into an STL, import that STL file into the printer software, orient the part, determine the total amount of material needed and then repeat the above two steps to optimize conditions.

Procedure:

- Honor system, if its abused then someone will have to baby sit the printers.
- Once a single print has been initiated the Printer Log on a clip board needs to be filled out with the relevant information and initialed by the instructor or SA
  - This is done for each print job.
- If a student needs to print something outside of the lab fee a student can expect to pay an additional fee for extra material, contact our Lab Technician Matt Burvee at [Matthew.Burvee@cwu.edu](mailto:Matthew.Burvee@cwu.edu) for more information.

Advice:

- Dimensions printers are good machines but very expensive to run and thus this procedure, treat them with respect.