3D Solid ABS Printing
Application Manual

The following stages will walk you through the process of taking a solid modeled part from a CAD program to downloading the file to the 3D Printer.

Stage 1: At Your Computer
1. Log in to your H:
2. Start your Solid Modeling software and create (or open) your drawing file (must be a Part file in Inventor or Solid Works)
3. Save – the original so you can edit it later as needed
4. Then Save Copy As, or Export:
   - Change to File Type of .stl
   - Can keep the same file name

Stage 2: At the 3D Printer Computer
1. Log in to your H:
2. Start the 3D Printer software (make sure the 3D Printer is on line – see Stage 4)
   - C:\Catalyst
   - Choose the Catalyst.bat icon
3. Open your drawing file (in .stl format)
4. Modify the Catalyst settings for most efficient production
   - Set the scale to fit within the envelope (and practical size)
   - Rotate the part for most efficient development (least amount of support material and run time are affected by which surface is up or down)
   - Set most efficient model material and support options (usually set the model material and support to Sparse – 'honeycombs' the insides and uses less plastic)
5. When all options are set run the Processing function
   - Screen changes to Processing Model and saves
   - Wait for the screen to return both the Status and Pack and Download window (an image showing the placement of your part on the support platform)
6. Select the Letter 'I' icon for Processing Information and record:
   - Time estimate
   - Cubic inches of Model Material
   - Cubic inches of Support Material
7. Close the Information window only
8. Save the file in the Pack and Download screen as a .cmb.gz file (also to your H: drive)
(Note: CMB files are Tool Path files)
(Note: if only processing one part – go to Stage 3, Option 1)
9. Repeat this process for each part to be built

Stage 3: Downloading the File to the 3D Printer
Option 1: Downloading a Single Part
1. Keep the Catalyst software open to the Pack and Download screen (from step 8 above)
2. Select the icon to Send the Jobs to the Modeler (little picture of a computer connected to the printer)
3. The software downloads the .cmb.gz file to the 3D Printer

Option 2: Downloading Multiple Parts on One Support Tray
1. Open the Status software
        - May be open already if you were just using the Catalyst software
        - If not currently open go to C:\Catalyst
                - Select the Status.bat icon
2. Select the icon to Send One or More Jobs to the Modeler (little picture of a computer connected to the printer)
        - The Pack and Download screen appears
3. Select the icon to Add a Job to the Build Envelope (Plus Sign)
4. Locate your file in your H: drive (.cmb.gz file format)
5. Repeat the Add a Job process for each part to be printed.
        - May move parts around on the Support Tray either for more efficient space utilization or to print on a smoother portion of the Support Tray
6. When all models are located on the Support Tray select the icon to Send the Jobs to the Modeler (little picture of a computer connected to the printer)
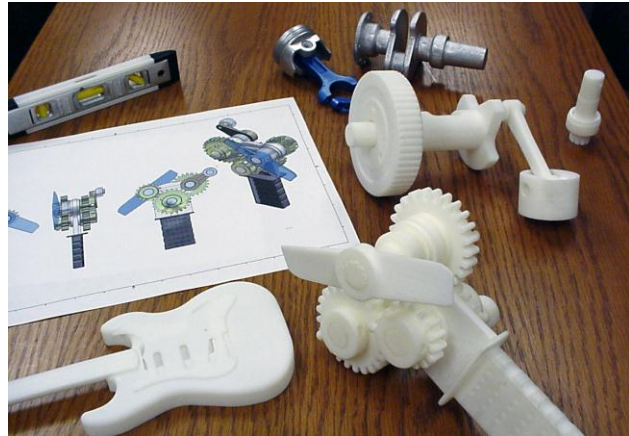
Stage 4: Printing the Part
Requires Instructor Permission
1. Turn on the power to the 3D Printer (takes approx 5 to 10 minutes to warm up)
2. Make sure the network cable is connected
3. Make sure there is sufficient Model and Support material loaded (or plan to add material as required during print process)
4. Make sure the Support tray is loaded correctly and lock in place and the door is closed
5. Download the Model file(s) from the 3D Printer Computer (go through Stages 1 thru 3 as required)
6. Return to the 3D Printer and press the Start Model button