



National Manufacturing Day 2017 3D Printing Design Competition Resources

This page is intended to provide you with some resources that may be helpful for you to get started with your contest entries. These resources are mostly 3rd party sites and services. Most of these services are not affiliated with YSU or the contest organizers and no affiliation with or endorsement of these resources is expressed or implied.

Getting Started

Most of us have heard about 3D printing, but what is it, exactly? Here are some informative websites that might be useful to help you get started:

- <http://www.3ders.org/3d-printing-basics.html>
- <https://www.shapeways.com/tutorials/> (Comprehensive list of tutorials, including beginner courses for kids.)

Design Software

- Free:
 - Beginner
 - Tinkercad (tinkercad.com)
 - 3D Slash (3dslash.net)
 - Sketchup (sketchup.google.com)
 - Intermediate / Advanced
 - Autodesk Fusion 360 (<https://www.autodesk.com/products/fusion-360/students-teachers-educators>)
- Paid / Professional (Many have free trials or low-cost student versions):
 - AutoDesk Inventor
 - SolidWorks
 - Siemens NX
 - PTC Creo

Where to Get Parts Printed

There are numerous 3D printing resources in the Youngstown area, as well as online service bureaus where you can order parts. Here is a partial list of resources to get you started:

Local Resources – Makerspaces:

- Ask your teachers – many of your schools have 3D printers that you may be able to use.
- YSU Launch Lab (1st Floor, Williamson College of Business Administration) – Makerspace, open to the public - <https://cms.ysu.edu/launch-lab/launch-lab>
- Oak Hill Collaborative Makerspace - <http://oakhillcollaborative.org/makerspace/>

Local Resources – 3D Printing Service Bureaus

- Printing 3D Parts – Youngstown (www.printing-3d-parts.com)

Online Resources – 3D Printing Service Bureaus

- Shapeways (shapeways.com)
- i.materialise (i.materialise.com)
- Protolabs (protolabs.com)