

South Dakota School of Mines & Technology

Manufacturing Lab Use

- Manufacturing labs include:
 - CM 204, wood shop
 - CM 214, machine shop
 - CM 215, The Zoo: specifically, CNC plasma, welding, anodization
 - CM 234, The Aquarium: specifically, 3D print
- Every project (student build or requested build) **must** include a drawing of each part to be built and an assembly drawing, if applicable.
- Drawings must be completed in Autodesk Inventor, Solid-Works, or equivalent.
- Parts to be CNC require a model-based file.
 - 3D print parts require an STL file.
 - CNC plasma parts require a DXF file.
 - CNC machined or turned parts require a STP file.
 - Alternatively, students may develop a file in Mastercam or Torchmate.
- Software: CM 268 PC's will have installed and maintained Inventor, SolidWorks, Mastercam, and Torchmate. Local installs of these applications are available. Local installation is instructed in ME126L. [Dr. Aaron Lalley](#) will support these applications in CM 268 and for local installs. The program tablets do not meet the minimum requirements of these applications, and the ME department will **not** support these applications when installed on a program tablet.
- The SolidWorks license is not maintained. Therefore, the only installs that will work are through the auto-install the ME department developed, available on the South Dakota Mines ITS OneDrive. These installs will not work remotely and must access the license through the network.
- To initiate any project, first contact lab support staff ([Dr. Aaron Lalley](#), [Mr. Vasili Tseptsura](#), or one of the Manufacturing, 3D Print, or Controls mentors.