**Rapid Prototyped Part Process**

1. Create a sketch / hand drawing
2. Review design and feasibility with one or more teammates
   1. This review may be repeated before moving on (possible return to step #1)
3. Review design and feasibility with PE
   1. This review may be repeated before moving on (possible return to step #1)
4. Create CAD solid models (use only NX or SolidWorks)
   1. One model file for each individual part
   2. Assembly file if appropriate
5. Review CAD models with PE and get approval to move forward
   1. This review may be repeated before moving on (possible return to step #4)
   2. 2D Drawings w/ dimensions may be required at discretion of PE
      1. One model file for each individual part
      2. Assembly and exploded view if appropriate
   3. Discuss material and print direction
6. Create STL files for Manufacturing

Depending on “vendor” choice

6A. RPI School of Engineering 3D printing service (PLA, ABS materials)

* 1. Create Document Package
     1. Design Lab Requisition Form with **SIGNED** PE approval
     2. Paper copy of CAD drawings (if requested by PE)
     3. Flash Drive - available in PE office (JEC 3103)
        1. .STL files of part
        2. CAD drawing and model files (.prt - NX or .sldprt & .slddrw - SolidWorks)
  2. Deliver Document Package to PE Office – JEC 3103
  3. Wait
     1. If there is a problem – your PE will contact you
     2. You will be notified via email when job is ready to pick up in JEC 3018

6B. Benet Labs (SLA process)

1. Email STL files to Jeff Morris to do a quality check
2. Continue with steps 6A a through b above

6C. Student owned printer

1. Still need approval from PE before anything is made (step #6)
2. RPI will **NOT** reimburse cost

6D. The Forge

* 1. Still need approval from PE before anything is made (step #6)
  2. ONLY appropriate if student wants to run the machine. The Forge is NOT a vendor/company which will make parts for you.
  3. RPI will **NOT** reimburse cost

6E. Other RPI prototyping resources – HASS Digital Fabrication Shop (Sage), Architecture Fabrication Shop (Greene), etc…

1. VERBOTEN – instead use choices 6A, 6B, 6C, or 6D