**Self Fabricated 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. Create CAD 2D Drawings (w/ dimensions, using standard RPI B size template)
   1. One for each individual part
   2. Assembly and exploded view if appropriate
6. Review material needs with PE
   1. If material is common
      1. Talk to PE and/or Sam Chiappone for acquisition from campus sources
      2. Follow purchasing process for individual material order
   2. If material is special - PE may direct you to:
      1. Research procurement options
         1. Follow purchasing process for individual material order
      2. Change design if too special (return to step #1 or #3)
7. Print out CAD Drawings (size A - 8.5” x 11”)
8. Review CAD Drawings with PE
   1. This review may be repeated before moving on (possible return to step #4)
9. Create Document Package
   1. Design Lab Requisition Form with **SIGNED** PE approval
   2. Paper copy of CAD drawings
10. Go to appropriate campus shop and fabricate part
    1. IED / Design Lab shop – JEC 2332
    2. Student Machine shop – JEC 1010