## Intro to Cad: Notes #2

1. Part Design: used to create real world solid models of parts; solid parts are usually created from 2D profiles that are extruded or evolved in order to form a base feature. Lightly integrated with a 2D sketching tool.
   1. \*Using Catia to optimize performance from both efficiency and safety point of view. (Make sure design details for component are in place)
      1. Pockets and Mirrored Extent
      2. Assigning the materials
   2. Go step through step in simulations and evaluations of 3D modeling and creating
   3. Load any required templates, and save each model file correctly
      1. As well as in the right format, and right dimensions
      2. Know how to change the name of a part
      3. Pick the right planes to make it easier
   4. Know Sketch, and Circle functions when dealing with Catia at a basic level
      1. Creating different rings and utilize groove function
   5. Demonstrate the right functions and know how to use undo or redo when using Catia
      1. Know how to utilize dimensions
2. Utilize the coordinate system when designing in Catia to the right axis and views.
   1. Move the cursor to right origin
      1. Center it to be aligned with the origin (Pick the right angles)
   2. Know the increments and using snaps
      1. Can pick anywhere rather than the edge (correspond to design)
         1. Set Up right constraints
            1. Knowing geometric constraints
         2. Using cross-sections and rotations
            1. Knowing rotation around the axis

Selective rotation axis

* + - * 1. Working on different planes such as x-y, x-z

Know how to change views

* 1. Know the issues when designing such as additional materials
     1. Doing the right modifications and knowing “Click actions”

1. Know when a design have any constraints, as well as the # of constraints, and why a model may not move around.
   1. Know what over-constraints are and any conflicts
      1. Using and utilizing the right constraints geometrically
      2. Sometimes this may require changing the dimensions
         1. Generating cross sections and grouping/groove functions
2. Referencing the axis in the profile, and using the correct axises when referencing it (As well as using aligning)