

Weekly Design Evaluation - Week 7 – Friday 2/16/18 Name _____
Class Design Section - 60 points total

Out of Class Project – The Sarrus Assembly (20pts) - This is to be completed and handed in at the beginning of class at 1pm. Hand in the markup at 2:45pm at the instructor’s desk.

- Standard ANSI Inch, 3 units after the decimal (3pts)
- Base Plate fixed to the Origin (2pts), planes coordinated (2pts)
- Wheel Mount Fully Defined and mated in rectangular slot (1pt)
- First Hinge Plate Fully Defined and mated in rectangular slot (1pt)
- Hinge Plate with Configurations (2pts)
- Remaining Hinge Plates, five, with flexibility (1pt)
- Pins defined, six, mated in Hinge Holes, fully defined (2pts)
- Wheel defined with rotation (1pt)
- Wheel Guard fully defined (1pt)
- Toolbox Machine Screws, two, with nuts and washers, fully defined (no rotation) (2pts)
- Appropriate motion (2pts)
- Extras and errors

In Class Design Projects – “The Magnet Hook Assembly” (40pts) - These are to be completed in the time left after the TCS section and emailed to me by 2:45pm. Hand in the markup by 2:45pm at the instructor's desk.

The “Magnet Hook - Magnet” part - 10 points total (put all parts of this assembly into one folder)

- Standard ANSI, units IPS, 3 digits after decimal (1pt)
- Origin location, orientation, correct planes (1pt)
- Material – Plain Carbon Steel (1pt)
- Fully defined sketches with dimensions, model integrity (1pt)
- Back magnet diameter will be 0.020 inches shorter (2 significant digits) from the inside edge of the Magnet Holes and extend 0.100 inches beyond the back face of the Magnet Hook Body (1pt)
- Color your part RGB - 28, 50,18 - part appearance: Machined Steel (1pt)
- Rename your features (1pt)
- Mass and Center of Mass (3pts)
- Extras and errors

Modify the “Magnet Hook Body” - 10 points total

- Open and save file as “Magnet-Hook-Body-3-Modify” (1pt)
- Keep original settings (3pts)
- Base sketch modified, Hook Mount modified, Fillet modified, (3pts)
- Rename your features (1pt)
- Mass and Center of Mass (3pts)
- Extras and errors

The “Magnet Hook – Stainless Steel Hook” - 10 points total

- Units in inches, ANSI dimensioning standard, 3 digits after decimal, Material AISI 3165 Annealed Stainless Steel Bar (1pt)
- Origin location, orientation, correct planes (1pt)
- Fully defined 3D sketch with dimensions, model integrity (1pt)
- 3D Sketch sweep sketch path, Sweep sketch profile, Sweep Feature, Fillet (0.5pts each) (2pts)
- Rename your features and path sketch (1pt)
- Part appearance Polished Steel (1pt)
- Mass Properties (3pts)
- Errors and Extras

The “Magnet Hook Assembly” - 10 points total

- Standard ANSI Inch, 3 units after the decimal (1pt)
- Magnet Hook Body fixed to the Origin, planes coordinated (1pt)
- Back Magnets inserted, proper location (1pt)
 - Fully defined or rotation fixed (1pt)
- Stainless Steel Hook inserted (1pt)
 - Concentric mate (1pt)
 - Right planes mated (1pt)
 - Limit Mate (angle): 90 degrees and -2 degrees (2pts)
- Appropriate Motion (1pt)
- Extras and errors

Weekly Design Evaluation - Week 7 - Final Design Section - 60 points total - This is to be completed and handed in at the beginning of class at 1pm.

FDP Project – FDP Score as described in class, 40 points total

FDP Part modifications 20 points total

- Embossed or Debossed Text (10pts)
 - Pick a FDP part and include an Embossed or Debossed Text Feature per the video in the Week 6 Instructional Video Page - send this part separately with the word TEXT in capitals included in the part name. (4pts)
 - On a raised or depressed parallel or co-radial surface (2pt)
 - Must be clear, easy to read, makes sense (2pts)
 - Centered, fills the area (2pts)
 - Extras and Errors
- Rib Feature (10pts)
 - Pick a FDP part and include a Rib Feature per the video in the Week 6 Instructional Video Page – send separately with the word RIB in capitals included the part name. (4pts)
 - Properly defined (2pts)
 - Angled to support another feature (2pts)
 - Draft (2pts)