

Weekly Design Evaluation – Week 8 – Monday 5/21/18 Name _____
Class Design Section - 60 points total

Out of Class Design Projects – 40 points total. – The Junction Box Drawing and Drawing Title Block Template – Send color pdf of the drawing by Sunday at midnight. Print this single drawing and hand it in at the instructor's desk before the beginning of class on Monday. Hand in this checklist at the instructor's desk by 9:45am at the end of the evaluation on Monday.

Drawing Template Title Block Items (evaluated from your printed “Junction Box” drawing below) (20pts)

- All CAPITALS no lower case text (2pts)
- Logo - effort, unique, (2pts) fills the box, company information including: name, address, phone number, web and email address, readable (3pts)
- Company name section filled in and within in border (modify text size if needed)(2pts)
- Part “Description” section, file name section (fits) (2pts)
- Material, Weight, Units of measure sections (3pts)
- Drawn by (initials) and Draw date - today’s date (2pts)
- Interpret Geometric Tolerancing section, section filled in properly (2pts)
- Dimensioning standard, Confidentiality statement section (2pts)
- Errors and Extras

“Junction Box” Drawing (part from week 2) (20pts)

- B sized sheet, Scale 1:2 (1pt)
- 3 standard views (HLR), Right View (HLV) (3pts)
- Front-Top-Right Isometric View (Shaded)(1pt)
- Create a Back-Top-Left Isometric View (Shaded) positioned to the left of the Top View (2pts),
- Section View “A” of the Front View, looking left – in the center of the part – (HLR) positioned to the left of the Front View (1pt)
- Detail View “B”, Scale 1:1, of the Top Tab Hole in the Front View (HLR) positioned to the right of the Right View (1pt)
- Views centered with consistent offsets top-bottom and left-right (3pts)
- Add dimensions in various views (4pts) on the red dimension layer, dimension cleanup (2pts)
- View Titles, ALL CAPS – UNDERLINED, centered, sheet note layer, all views (3pts)
- Sheet Notes section with fabrication details – Note 1 stating: “PART DEFINED IN THIS DRAWING INTENDED FOR MOLD MAKING, REFER TO SPECIFICATION FOR DETAILS (2pts)
- Create your own Sheet Note 2 stating some sort of fabrication detail (1pt)
- Errors and Extras
- Save a B sized PDF in color, print the PDF on an ANSI B Sheet in grey scale – 1:1 so choose “not scaled” – on the HP 99251
- Send the PDF, hand in the printed drawing

In Class Design Project – 20 points total. The Sarrus Mechanism modifications, saved and sent as a “Pack and Go” zip folder with all of the parts excluding the Wheel Guard - to be sent by 9:45am at the end of the evaluation. Make the following modification to the various parts in this assembly, correct any errors as you go. Details provided during the evaluation.

- Assembly - Standard ANSI Inch, 4 units after decimal (1pt)
- Base Plate fixed to the Origin (1pt), planes coordinated (1pt)
- For the Sarrus Mechanism assembly – copy the existing folder with the parts and assembly and rename it “Sarrus Mechanism Modifications” (1pt)
- Hinge plate modifications - square, center hole proportionally larger (1pt), mass properties on the Back Right Configuration (2pts)
- Sarrus Pin Modified (1pt), fully defined with no rotation (1pt)
- Base Plate widened to accommodate the new Hinge Plate width (1pt), modifications and Wheel Mount modifications (1pt), no interference (1pt)
- Wheel Mount modifications (1pt)
 - Mass (2pts)
- Sarrus Wheel modifications, Wheel handle centered (1pt)
 - Mass (2pts)
- Sarrus Push Rod – long enough to provide the appropriate motion, quarter inch increments, no binding and no reversals (1pt)
- Toolbox Machine Screws, two, with nuts and washers, fully defined (no rotation) (2pts)

Final Design Section - 80 points total – SolidWorks files to be saved and sent as a “Pack and Go” zip folder with your parts and assembly to be sent by Sunday at midnight.

FDP score as described in class