

**Weekly Design Evaluation - Week 10 – Friday 3/9/18 Name\_\_\_\_\_**

**Class Design Section – Out of Class Project - 50 points total**

**Class Design Section CDS - Final Project Drawings, 5 drawings plus the title block – 50 points total (10pts each, 10pts for the Title Block and layout, 10 points off for a missing 3<sup>rd</sup> part drawing). These are to be completed before 1pm – email with the pdf drawing files - printed drawings at the instructor’s desk (late drawings after 1pm evaluated at 50%), your marked-up drawing from Week 9 and this pre-markup or checklist at the instructor’s desk.**

**Generalized grading criteria for all drawings include:**

- Opportunity for extra credit for going beyond what is asked for in this section, up to 10%.
- Up to 10 points off for a missing or incomplete 3rd part drawing
- 50% for printing during or after the presentations (print before class).
- Drawings include, in order:
  - Cover Sheet with a photo real image(s) of your assembly along with project name and designer and similar information.
    - Printed in color
  - Exploded assembly drawing with a Bill of Materials, Balloons and Exploded Line Sketches
    - Printed in grey scale
  - Part drawings (3) of parts of your choice (choose the more complex ones, two will be graded)
    - Include 2D and GD&T annotations over various sheets
    - Printed in grey scale
  - Other drawings will be considered for:
    - Special projects that lack an adequate amount of parts, and sheet metal projects
    - Extra credit but only if it adds to the information attempting to be communicated or helps better explain how your project can be fabricated.
  - Every drawing has Title Block items as described throughout the quarter, all CAPITALS, logo (unique with company information), part description (Title), file name, company name, units of measure, dimensioning standard, confidentiality statement (filled in with your company name), material, drawn by (your initials) and date, checked by and date, etc...
  - Printed per the printing instruction on the Resources Page section on the class website per the requirements below:
    - A drawing set, on ANSI B sized paper, printed full size to scale (measure this), in grey scale (not color except for the Cover Sheet), ANSI dimensioning standard, appropriate units and precision, views laid out with appropriate spacing and symmetry, proper and readable annotations with an engineering fold and in order.

**Specific Grading Criteria for your final project drawings:**

Drawing Template - Title Block Items and Drawing Layout (random part drawing selected) 10 points total.

- All CAPITALS, Engineering Fold (1pt)
- Logo - effort, unique, (1pt) fills the box, company information including: name, address, phone number, web and email address (1pt)
- Company name section (1pt)
- Part *Description* (Title) section (1pt) file name section (fits) (1pt)
- Material, Weight, Units of measure/tolerance section (1pt)
- Drawn by (initials) and Draw date - today’s date (1pt)
- Interpret Geometric Tolerancing section (1pt)
- Dimensioning standard, Confidentiality statement section (1pt)
- Errors and Extras

Cover Sheet drawing – Print in color - 10 points total – provide an image(s) of the assembly or an important part of the assembly (will check the assembly file for the items below)

- Print color (1pt), Material or applied appearance on parts in assembly (1pt), Scene (1pts), add a spot or point light, lights on - must be visible (1pt), Camera - 16:9 aspect ratio (1pt)
- Object fills image (1pt), Object centered in image (1pt)
- Project name, designer, company name (1pt)
- None or N/A for the Material, Weight, Finish and Scales sections in the Title Block (1pt)
- Errors and Extras

Exploded assembly drawing graded as follows – Print in grey scale - 10 points total

- Print grey, create new isometric type view with a different orientation (if needed) to make it more readable in a drawing (1pt), organized with edge and object offsets, HLR, proper scale so that it fits but not too crowded, put on two sheets if needed (1pt)
- Bill of Materials, on the Sheet Notes layer, organized and neat, consistent row height, rows in logical order, filled in, CAPITALS (1pt), numbers centered - text left justify (1pt), Columns include – and in order: Item Number, Description, Material, Part Number and Quantity categories, complete and filled (1pt)
- Balloons, circular split line for all parts, item number/quantity (1pt), organized, easy to read, magnetic line, no crossing extension lines, Sheet Notes layer (2pts)
- Explode Line Sketches, complete, neat, organized, no stacked lines, lots of clearance (2pts)
- Errors and Extras

Part drawings graded as follows, every sheet contains the following – Print in grey scale - 10 points each (2) – 20 points total average

- Print Grey, ANSI dimensioning standard, units, appropriate precision, appropriate sheet scale, verify scale by measuring a dimension (1pt)
- 3 standard views with at least 2 Display Styles, Isometric view with Shaded or SWE Display Styles (1pt)
- 3 extra views – all unique - over your various sheets - choosing from the Detail View, Projected View, Section View, Crop View and others, ordered view letters, has to add to the information attempting to be demonstrated with your project – don't add clutter (1pt)
- Dimensions – Dimension layer, organized, extension line offsets - 10 average/sheet (1pt), 4 - 2D tolerances, 2 unique, over your various sheets, on the appropriate part features (1pt)
- At least 3 Datums and 6 Feature Control Frames, 3 unique, over the 3 sheets, on the appropriate toleranced dimensions for the appropriate features or surfaces referring to the datums (if needed) (1pt), need to make sense, use your guidebook (1pt)
- Note section - Sheet Notes layer with fabrication details and Mass Properties (1pt)
- Views and annotations laid out with appropriate spacing, symmetry and not crowded (1pt)
- View titles - Sheet Notes layer, CAPITALS, font and size, centered below and underlined (1pt)
- Errors and Extras

Third part drawing – Up to 10 points off if the third part drawing is incomplete or missing or if you do not provide the Week 9 marked-up drawing.