

Three-Dimensional Modeling, IET-265 Name: _____

Winter 2013, Week 5

In Class Evaluation (ICE)

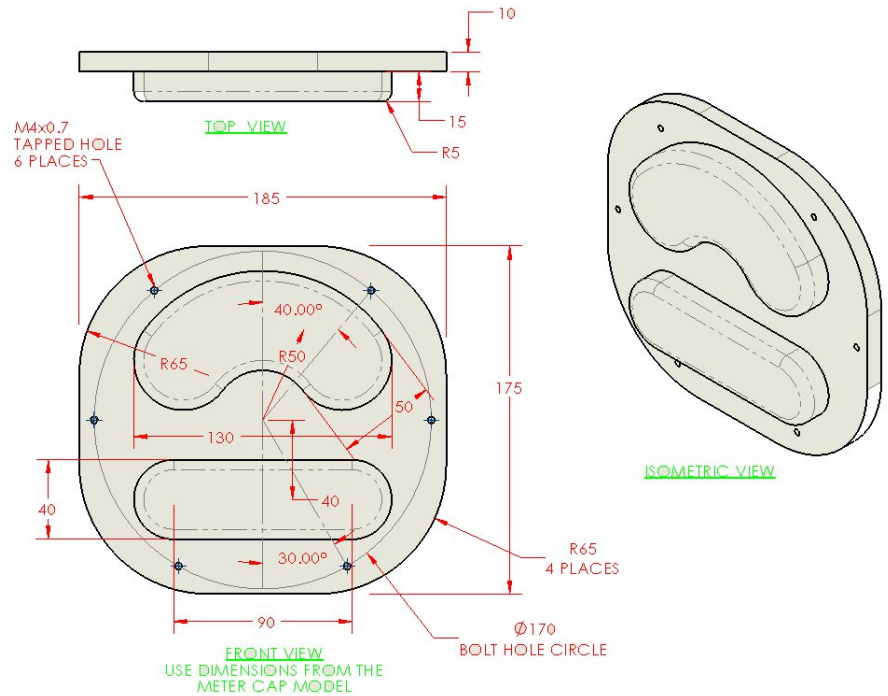
Day and date: _____

Meter Window, Meter Assembly with modifications, 4Bar Linkage Assembly, Assembly Model

70 points total

The *Meter Window* (10 pts) use the geometry from the meter cap and place on new part to make 2 windows.

- Completeness with symmetry (1pt)
- Correct starting plane, front (1pt)
- Material Acrylic (1pt)
- Appearance clear (1pt)
- Fully defined sketches with dimensions (1pt)
- Feature Fillet, Hole Wizard (Tapped hole, ANSI M4 x 0.7, Through All, no additional options) see sketch nearby (1pt each)
- Find the Mass, precision at 4 units after the decimal (3pts)
- Extras and errors



Meter Assembly, (using some modeled parts from the previous weeks) (10pts)

- Complete with all of the parts including the Meter Window (3pts)
- Proper orientation of all parts (1pt)
- Base fixed and to the origin (2pts)
- Hole Wizard on the *Meter Cap* matching the pattern from the *Meter Window* (Flat Head Screw, M4, Fit Normal, Through All End Condition, no additional options) (1pt)
- Properly mated, so that all parts are fixed or fully defined (3pts)
- Apply a scene, extra
- Extras and errors

4Bar Linkage Assembly (20pts)

- Complete with all of the parts (4pts)
- Symmetry of the base (1pt)
- Proper orientation of all parts (1pt each)
- Base fixed to the origin (2pts)
- Properly mated, so that the parts move as intended (6pts)
- Each linkage part is a different configuration (3pts)
- Extras and errors

Assembly Model (30pts)

Design at least 3 unique parts with the expectation of assembling them for the next Design Assignment. Parts in the assembly, other than the base, must be able to move, rotationally or translationally (like a machine).

- Base, one part has to be a base feature to be fixed to the Origin in the assembly.
 - To have a round or rectangular hole(s) or slot(s) or an extruded boss(es) for use as a reference for the insertion of additional parts
 - Hole Wizard holes in the base for mounting to some external structure
- Parts1 and 2 (or more)
 - To be inserted on the base or on one of the other parts
 - Must fit into slots, holes or bosses on the Base as described above
 - Fasteners, connectors, pins and similar items are not appropriate parts for this assignment but can be used.
- Include the following features on at least one of the parts above:
 - Hole Wizard feature on a part other than the Base
 - Linear or circular pattern
 - Include a Fastener from the Toolbox in the Design Library into your assembly, in more than one location, properly mated.
 - Feature using the Slot Sketch Entity on a part

Evaluation:

- A minimum level of complexity is required for each part.
- For the sketches of your parts I will be looking for about 24 average of all Sketch Relation groups, Dimensions and Reference Geometry items
- For the Features of your parts I will be looking for 6 Features or Bodies average
- If there are more sketch elements than is required then I will consider those extra elements against your features and visa versa.