

Architectural CAD, IET-161  
Spring 2013, Week 5  
In Class Evaluation (ICE)  
*Evaluation Model, Project Model*  
70 points total

Name: \_\_\_\_\_

Day and date: \_\_\_\_\_

*Evaluation Model* (30pts), download this model from the website

- Modify all of the exterior walls to be “Exterior - Brick and CMU on MTL. Stud” (1pt), modify the orientation (1pt), remove constraints if necessary and redefine the changed exterior dimensions (related to the NS Reference Plane) (1pt).
- Create new floor plans for the missing floors (1pt)
- Create a roof by editing a type of roof family using the following guidelines: duplicate an existing roof and rename it to “Steel Joist 10” - Membrane - Insulated” (1pt), change the structure to: “Structure, Steel Bar Joist Layer” (1pt), 10” thick (1pt), and for sheathing “Metal Deck” (1pt), ½” thick (1pt) add a Finish 1 layer on top of the structural layer (1pt) “Roofing, EPDM Membrane” 3/8” thick (1pt).
- Install this roof as a Roof by Footprint for a flat roof on the Roof level (1pts), using the Finish Face Interior of the exterior walls (1pt).
- Install a foundation stem wall, adjust the FLOOR 1 view range to -1’ 0” (1pt), modify a family to make the width of your wall 6” (1pt) concrete for the structure (1pt), duplicate and rename to “Foundation 6” Concrete “ (1pt), T. O. Footing level to -10’ (1pt), adjust this view range to -1’ – 0” (1pt), Depth option to T. O. Footing (1pt), Core Face Exterior (1pt) complete around the perimeter of the building excluding the alcove (1pt), create a floor plan (1pt)
- Install a footing under the stem wall, modify a family to make the width of your footing 18” wide (1pt), concrete for the structure (1pt), appropriate rename (1pt), adjust your T. O. Footing view range to a negative -1’ – 0” (1pt), continuous and complete (1pt).
- Clean up dimensions and annotations on the FLOOR 1 (2pts)
- Errors and Extras

*Project Model* (40 points total)

- Install a pitched Roof by Footprint on your model or a portion of it, your choice of roof type (1pt), make this a gabled roof (1pt), define an offset (1pt) from the Finish Face Exterior, pitch of your choice but not 4”/12” or 9”/12” (1pt)
- Install a sloped Roof by Footprint on your model or a portion of it, your choice of roof type (1pt), define an offset (1pt) from the Finish Face Exterior, angled like the book (1pt), pitch of your choice - a standard whole unit to 12” slope (1pt), Attach Top/Base on all open walls (1pt).
- Install a Roof by Extrusion over an exterior doorway of your choosing, your choice of roof type (1pt), whole unit length (1pt), constrained to the wall (1pt).

- Install Grid Lines as demonstrated in class and in the book, numbered ascending from north to south, lettered ascending from west to east (2pts), grid lines on core face exterior for the end grids (1pt), specific whole unit lengths for interior grids (1pt), core centers for perpendicular exterior wall structures (1pt)
- Insert a Structural Column, load Family – Concrete – Concrete-Round-Column diameter of your choosing (1pt), at 6 intersections or more, of grid lines (1pt), Height from one floor to the next (1pt), with offset for floor thickness (1pt), camera View of these columns (1pt), rename this view to Camera-Columns (1pt).
- Install a foundation stem wall, adjust your first floor view range to a negative -1' – 0" (1pt), modify a family to make the width of your wall the width of your first floor core (1pt) concrete for the structure (1pt), appropriate rename (1pt), T. O. Footing level to -4' (1pt), adjust this view range to Top: 4' – 0", Cut plane: 2' – 0", Bottom: -1' – 0" , View Depth Level: -1' (1pt), Depth option to T. O. Footing (1pt), Core Face Exterior (1pt) complete around the perimeter of your building (1pt) create a floor plan (1pt)
- Install a footing under the stem wall, modify a family to make the width of your footing 20" wide (1pt), concrete for the structure (1pt), appropriate rename (1pt), adjust your T. O. Footing view range to a negative -1' – 0" (1pt), continuous and complete (1pt).
- Clean up dimensions and annotations (2pts)
- Errors and Extras