

# 02 Workshop

SRF Thickness & Sections Creation

New York City College of Technology  
The City University of New York  
Department of Architectural Technology

**ARCH 3609** Integrated Software in  
the Architectural Office

1. Open Rhino and type curve (degree 3) to create two curves.
2. Now select both curves and using the gumball rotate 90 degrees in the z axis (red arc) so the are "standing".
3. Select one of them and move it further than the other in the positive y axis (they should be one behind the other) and slightly up in the positive z axis.
4. Type **loft** and select the two curves. In the window that pops up select style normal and make sure that the option closed loft is not checked. Press enter.
5. Type **offsetsrf** and in the parenthesis select solid=yes, give a distance and hit enter. Place the thickened srf under a layer called thickness.
6. Go in the top view and create two sectional lines (one horizontal and one vertical). Place the lines in a new layer called section cuts.
7. Now type **section** and while in the section command give direction snapping to the end-points of the horizontal and vertical section lines. Place right away the resulting lines in a new layer called section. Turn off this layer.
8. Select the thickened and type **cut plane**. A new plane will be generated. Place the plane under the layer called section cuts. Do the same for the other section.
9. Copy 2 times the composition together with the cut planes.
10. In the first copy type **trim** and trim out all the geometry that is behind the horizontal cut plane. In the second copy type **trim** and trim out all the geometry that is behind the vertical cut plane. Then copy the section curves from step 7 to the trimmed srf's.
11. For both of the above copies turn on the layer called section and turn off the layer called section cuts.
12. Go under the front and side views respectively and **make2d** (current view, maintain source layers) having selected first the trimmed origami geometry and then the section curves (generated for step 7). Make sure that you have a ground line.
13. Clean the resulting lines from the make2d process using the commands trim and extend.
14. Save your Rhino file.

Upload the Rhino file on Blackboard under Workshop 02 by 3.00pm.

CONTINUE HOME: ILLUSTRATION

Select all the section lines, export to illustrator and work with the lineweights etc.  
-Make sure that you fill with black the lines of the layer called section.  
-Add figures for scale.