

Extrude Curve

Version 20 offers extrusion options for open and closed chain geometry. This lesson is going to teach you how to use the Extrude Curve function.

STEP 1

With a NW drawing screen go to the POINT menu and select Coordinates. Perform the following actions.

- Enter X0, Y3, Z0 and click the CONTINUE button.
- Enter X1, Y2.5, Z0 and click the CONTINUE button.
- Enter X2, Y2.5, Z0 and click the CONTINUE button.
- Enter X3, Y2, Z0 and click the CONTINUE button.
- Enter X4, Y1.5, Z0 and click the CONTINUE button.
- Enter X5, Y1.5, Z0 and click the OK button.

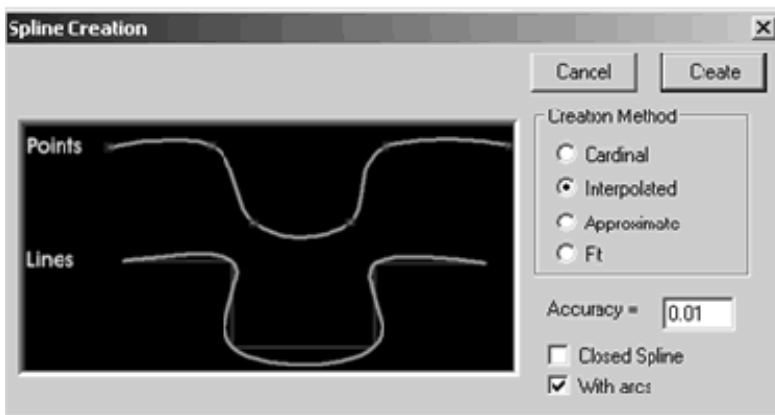
STEP 2

Place your cursor in an empty area of the drawing screen and click your mouse to make sure that the points are deselected. Now click the VIEW ALL button from the top toolbar.



STEP 3

Starting on the first point that you created, hold down your CONTROL key on your keyboard and click on each of the 6 points going from left to right. When they are all selected, go directly to the SPLINES menu and select CREATE to open the spline box.



Choose the INTERPOLATED option, enter an accuracy value of .01, check the “With Arcs” option, make sure that the “Closed Spline” option is NOT selected and click the CREATE button.

This will draw the spline geometry.

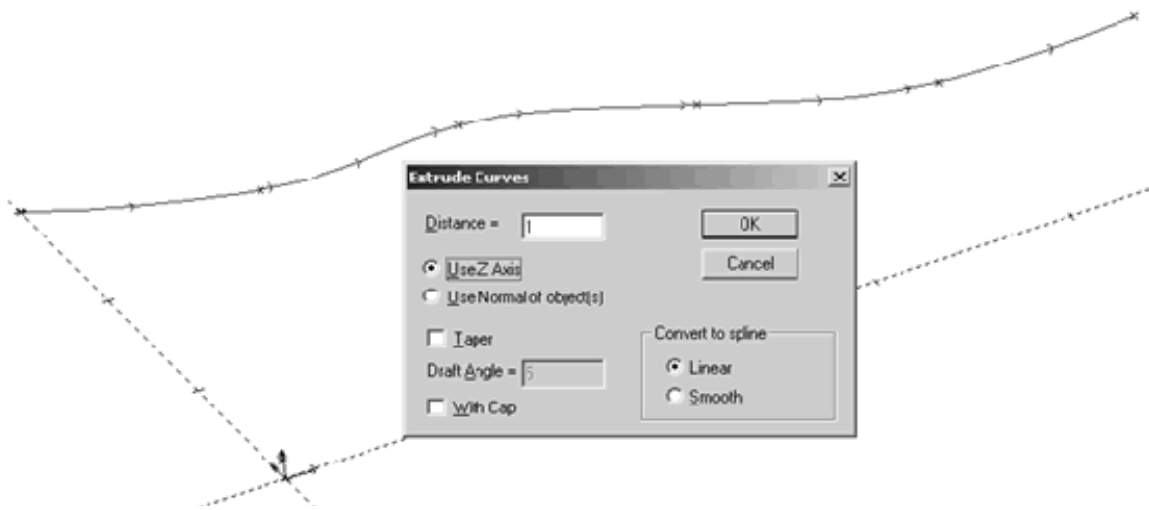
STEP 4

Place your cursor in an empty area of the drawing screen and click your left mouse button to make sure that everything is deselected. Now go to the 3D menu and turn your 3D ON. Select the View All icon from the main toolbar.



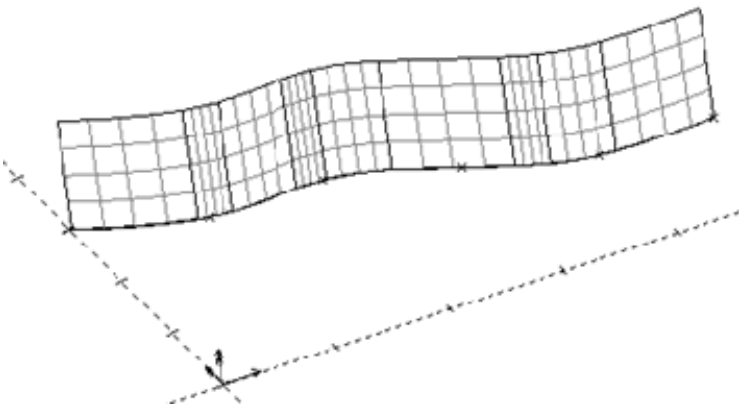
Now go to the SOLIDS menu and select SURFACE CREATION. Select the Extrude Curve option and click the NEXT button in the upper right corner of this box.

Now you are in the Chain Selection mode. Go to the left side of the spline, place your cursor on the first arc segment of the spline and click on it. It will turn purple and you will see a directional arrow at the mid-point of the arc segment. Point this arrow so that it is going toward the right and click your left mouse button one time to set the direction. Now hit your F3 key on your keyboard to select the entire chain and bring up the Extrude Curve box.



STEP 5

Enter a distance of 1, representing 1 inch in positive Z. Select the "Use Z Axis" option as the spline is actually 2D (X-Y plane). Taper and "With Caps" should NOT be checked. Select the **Linear** option as we are working with converted spline geometry already and then click OK to create the surface.



This is how you use the Extrude Curve option for an open ended chain. You can also use this for closed chained geometry.