Advanced Blender Tools - Edit Mode Basics - Part 1

Updated August 2022

'Modes' Note:

When we're talking about 'Modes', when you select a mesh object (ex. Cube) and you're in 'Object Mode', you will be able to select other objects. However, if you've selected a mesh object and you enter 'Edit Mode', you won't be able to select any other objects until you go back to 'Object Mode'

File Edit Render Window Help
 File Edit Mode
 Edit Mode
 User Perspective

Changing from Object to Edit Mode? \rightarrow Press the 'Tab' button.

(1) Cube

Vertex Mode: Highlights the edges of a mesh and allows them to be selected Line Mode: Allows any line of a mesh object to be selected Face Mode: Allows any face of a mesh object to be selected

<u>Note:</u> Any selected edges, line or face can be grabbed (G), Scaled (S), or Rotated (R), you can also use the traditional rotate, scale and grab tools in edit mode as well. In addition, if you rotate a face too much, it will create a bit of a problem and create some weird Geometry, so if you wanted to 3D Print it off, it simply wouldn't work.

Extrude Tool - Best works in 'Face Mode'



The 'Extrude Tool' adds

additional sections to a mesh object.

Pressing Shift + Selecting another face will allow for one to select more than one face.

Pressing Ctrl while extruding, it will (by default) drag it out in 1 meter increments.

Try practicing making a Chair using both the Shift, and Ctrl functions!

Once you're done, delete your chair. If you long hold on the 'Extrude' Tool on your toolbar, you'll see other options. Select two faces on your square and experiment with other tool types!





<i>Note: When using 'Extrude Along Normals', you can use the additional settings menu on the bottom left hand corner and select 'Offset Even'.</i>	
Subdivide - Right Click on a selected face / Edges This simply just breaks up the face/edge on both the X and Y axis in even amounts, allowing for more complex geometry. <i>Pictured: Cube face subdivided and the subdivide options.</i> <i>Note: N-Gons may mess things up down the road, so always try to make shapes / designs with 4 sides, and nothing more.</i>	Free Correct Meru Studie Faces Brude Faces VU Ummp Faces VU Ummp Faces VU Studie Faces VU VU Studie Faces VU VU VU Vumpe faces V Subdivide Number of Cuts Smoothness 0.000 Create N-Gons Quad Corner Type Fractal 0.000 Along Normal 0.000
	Random Seed 0

Loop Cut

Creates edges that go around the entirety of an object mesh. Easy way to avoid what is referred to as 'N-Gons'.

Clicking and dragging your mouse will allow you to create more specific lines and areas.

Let's say we make a house. We've taken a cube, and have made a cut right in the center of the cube and have dragged it upward on the Z-Axis.

We then create two additional loop cuts and slide the line into the areas we see in the picture.

From there, we can select the 'Face' tool, then the 'Extrude Tool'. Here's where things get a bit tricky. Because the box is currently on an angle, we need to tell it to go upward. So, we'll begin the extrusion, and press the 'Z' button on our keyboard twice. This will tell Blender to extrude only on the Z-Axis.

Once we have something looking a bit like a chimney. We can now press again on the top part of the chimney, the 'S' button for scale, Press 'Z' to scale only on





Z-Axis, and press '0' (Zero) to set it totally flat.

Multiple Loops at Once You can set the number of cuts from just 1, to ... well, as many as you like using the toolbar on the top of the 3D Viewport.

Edge Loop

If you wanted to use the 'Edge Tool' to select and entire loop, instead of shift-clicking each edge, you can press 'Alt-(select an edge)' and it will select that whole connected edge.

Edge Ring

Similar to a ring on your finger, it does the perpendicular edges. Pressing 'Ctrl+Alt' will select all the perpendicular edges.

Edge and Vertex Slide



You cannot use transform or anything else in objects like a UV Sphere, or else it will ruin its dimensions. Instead, you can use 'Edge' and 'Vertex' slides! They can be found





Bevel Edge Tool

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Harden Normals
Clamp Overlap
Loop Slide
Seams

Sharp



You can create beveled edges on a cube using this Bevel tool. You can select edges or faces and use the bevel tool and the multiple tool options it has to create beveled edges.

Bevel has a few additional uses, such as taking a Single Loop cut and turning it into two loop cuts!

You can also change modes of Bevel Edge via the upper toolbar and change it from 'Edges' to 'Vertices' to create beveled edges.

Inset Face Tool



This creates insets, or essentially allows for the inset of objects.

You can use the inset tool to create an inset of

