

Lecture Slides: Blender Week 2: http://kieranhicks.com/Presentations/Blender_Week_2.html#0

Tutorial Videos: Basic Blender: <https://www.youtube.com/playlist?list=PL9057AB8E3C66AE80>

Rigging: <https://www.youtube.com/watch?v=p0htATi5tpA>

Texture Painting: <https://www.youtube.com/watch?v=L7ALfRw6l5I>

Unwrapping: <https://www.youtube.com/watch?v=f2-FfB9kRmE>

Task 1:

Today you are going to be making use of the skeleton system in blender by rigging a model.

First you need to create a model of an animal or creature of your choosing, it can be something simple like the worm thing from the lecture or it can be something more complex like a dog. Model this using the same techniques you developed last week/seen in the lectures. I would recommend starting with a cylinder. This model will be used for the next task as well.

(Remember, artistic ability is not assessed in this module!)

Task 2:

Once you have your model made it's time to rig it. To do this:

- Make sure you are in object mode.
- Add an armature to the scene (Shift + A)
- Move it to where you want your root to be this would normally be near the fictional centre of mass e.g near the hip for a human.
- Enter Edit mode on the armature.
- From here use the Extrude tool (E) to create bones for each of the joints of your model.
- When you are happy with your bone structure go back into Object mode.
- Click your model then shift click your armature and press ctrl + p and selected automatic weights.

Once you are done with rigging your model, go into pose mode and moving the bones around to make sure the mesh deforms correctly.

Use your model to complete one of the following tasks, either: 3a (animate), or 3b (texture)

Task 3a:

So you should have a rigged model at this point. We are now going to animate it using key frame animations.

Before we start animating let's set up the views correctly. Drag a new view window by clicking on the upper right corner of an existing view and dragging. Set this view to Dope Sheet done by clicking the little cube button at the bottom left of view.

Whilst being able to see both the Dope sheet and the Timeline (bottom of the screen) change the animation end frames to be 44 for a 2 second long animation (you can make this longer if you wish).

Now let's start animating.

- Make sure you are on frame one.
- Press the red recording symbol in the timeline window.
- Have your model posed in the starting position for the animation.
- Press I and set location Key frame
- Do this again but for Rotation and Scale.
- Set the frame to your end frame which should be 42
- Press I and set Location, Rotation and Scale Key frames. This is to ensure the animation ends as it starts to ensure a nice loop.
- Now using the frames in-between start and end pose the model and set key frames by pressing I to create an animation of your choosing. This could be walking/Attacking/ Jumping etc.

When you are happy with your animation click on file and export the model as a FBX making sure to tick the baked animations option. Import this model into unity and test your animation.

Or, Task 3b: Texture Painting.

In this task you will unwrap and use blenders texture paint to add a texture to your model to do this:

- First you need to mark the seams of your model for the unwrap
- To do this go into Edge mode and select edges of the model and press Space and type in Mark Seams.
- Do this for several edges to allow the model to unwarp nicely.
- Once you are happy with your seams select all the edges of the model (Ax2) and press Space and type in Unwrap.
- Swap or Add a new view to UV mode.
- You should be able to see your unwrapped model at this point if you can't, go back and mark more seams.
- From here swap the view mode to texture paint.
- On the left hand side you will need to create an image material blender should prompt you to do this.
- You should now be able to paint directly onto you're model
- Paint your model as you see fit.

When you are happy with your texture the model as a FBX and save the texture as a PNG and bring both into unity and add the material to your model.