Dynamic materials in BP

Here we make a dynamic material whose parameters can be controlled inside a blueprint.

Create a material BP and in it add a few different parameters. For example, for the base color add the vector 3 parameter and name it to color, for the roughness add a scalar parameter and name it to Roughness etc. For pins like Normal we usually use a normal map but to convert it to a parameter, right-click on the normal map node and click the convert to parameter option.

Apply the material to the static or skeletal mesh of a BP. Then open the BP and in the event graph near the event begin-play node drag a reference to the static/skeletal mesh extend the output exec pin and add a create dynamic material instance node and hook its input exec pin of the event begin-play node. Set the element index and the Source Material to the one you want. Element index is the material id for the mesh.

So now you can extend the return value and use it as the target for changing the different parameters. For example add a set vector parameter value node and set the parameter name and value and you’ll see that the value has changed.