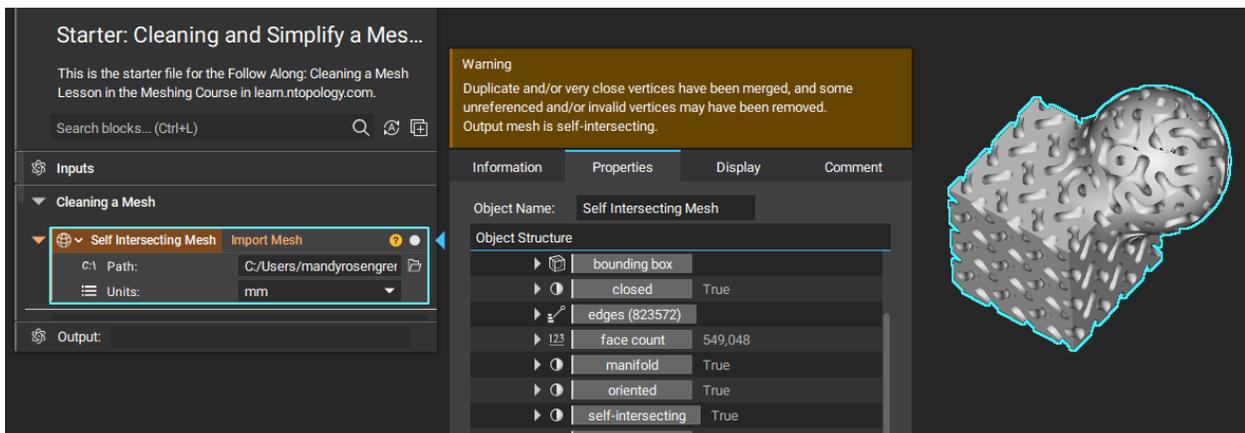


Follow Along: Cleaning and Simplifying a Mesh

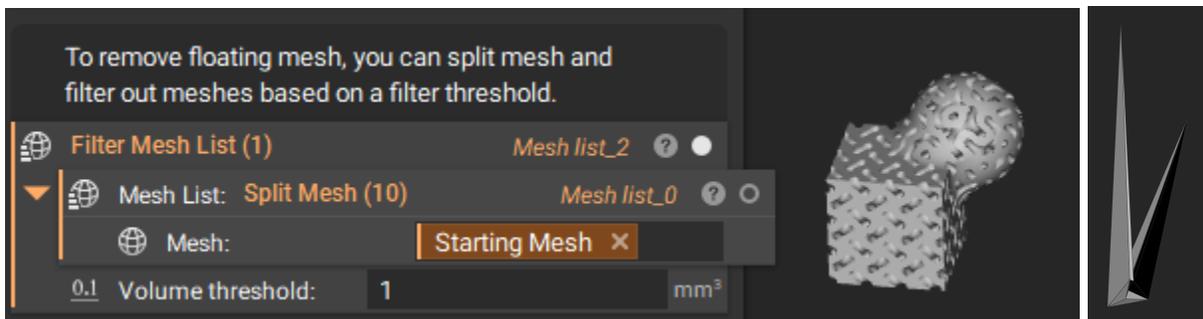
This lesson will walk through an example of using the **Split Mesh**, **Filter Mesh Volume**, **Simplify by Amount**, and **Remesh Surface** blocks.

Please download the mesh file below to follow along with the tutorial.

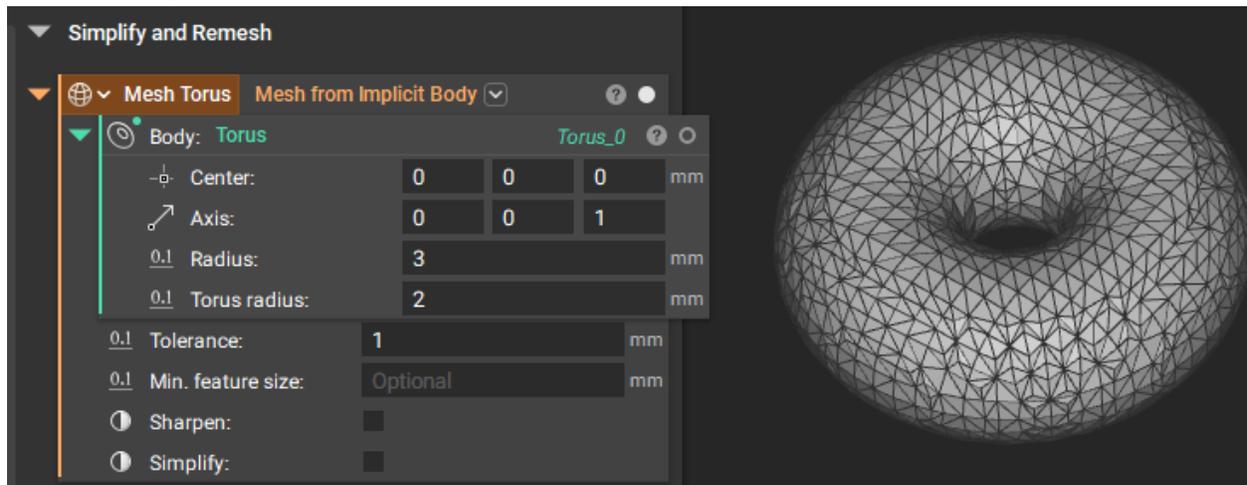
Step 1: Import the mesh labeled Unclean Mesh and make this a variable labeled Self-Intersecting Mesh. Click on the block details to see the warning shown below.



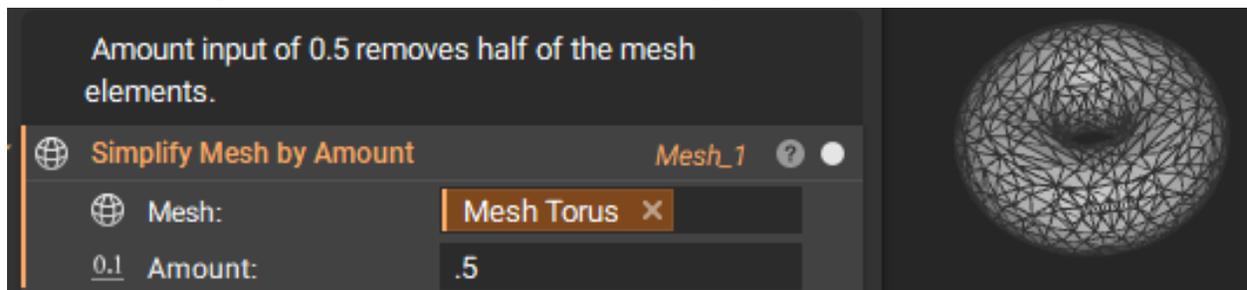
Step 2: One reason for self-intersecting mesh is due to small floating meshes that are produced. To separate these from the main mesh, you can use the **Split Mesh**. Then, the **Filter Mesh List** will remove meshes from the list below a certain threshold. Below is an example of one of these floating meshes.



Step 3: Add a new section and label this Simplify and Remesh. To show some of our simplifying options, we will create a Torus from the create tab. Place this implicit body into a **Mesh from Implicit Body** block with a tolerance of 1mm. Make this block a variable labeled Mesh Torus.



Step 4: Add the **Simplify Mesh by Amount** block to your notebook and add the Mesh Torus variable to the input. For the amount, choose 0.5 to simply the mesh by 50%.



Step 5: Another option for simplifying is the **Remesh Surface** block. Add a **Remesh Surface** block to the notebook and add the Mesh Torus variable into the Surface option. Use an Edge Length of 2mm and a Shape of Triangle to simplify the mesh for simulation or export.

