



ISHANI MISHRA

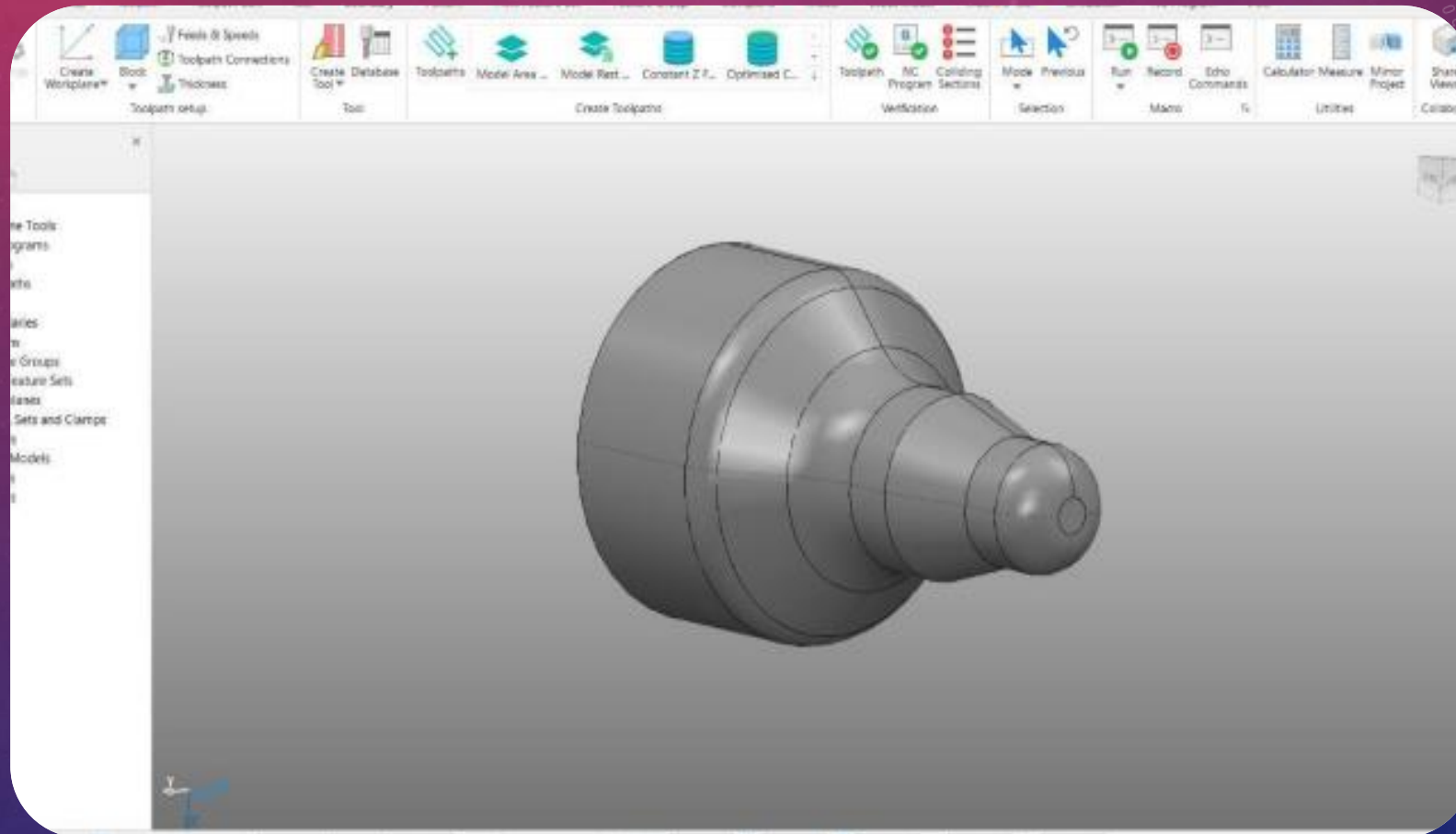
CAD/CAM ASSIGNMENT

EXPERIMENT-10

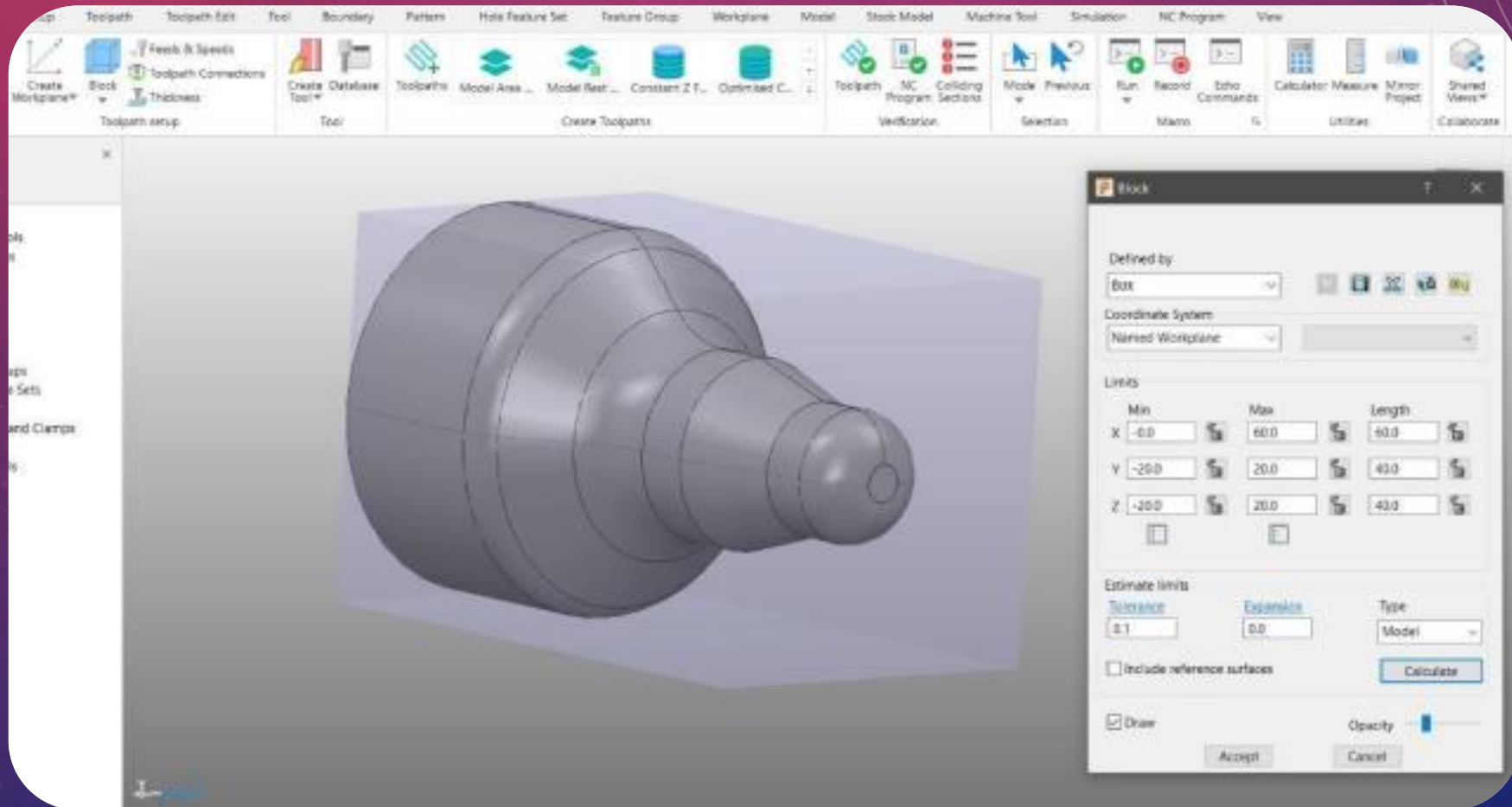
SOLIDWORKS | POWERMILL

REG. NO. 20BME0136

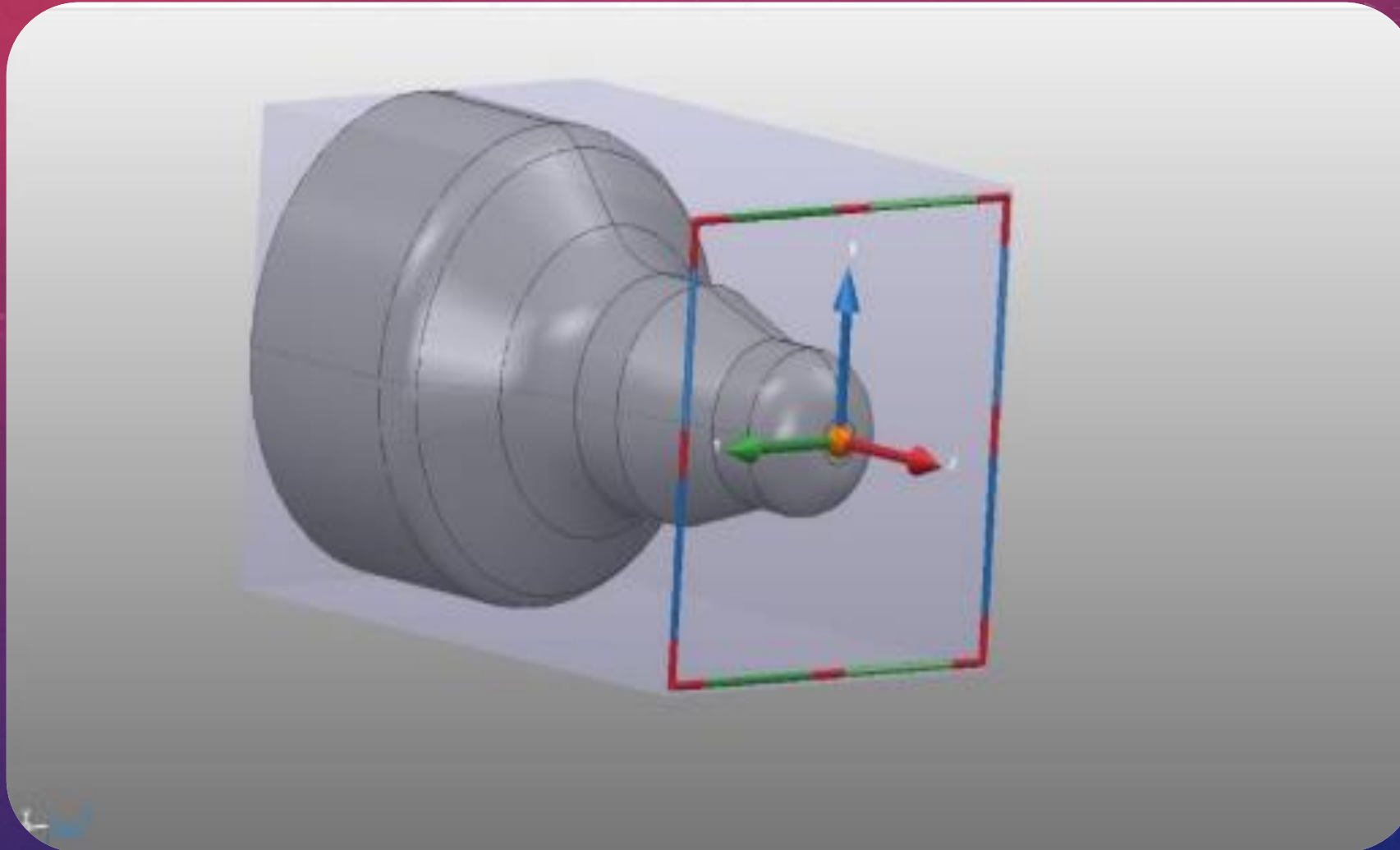
First, we have to import the cad model into the powermill software, by choosing the file and its format.



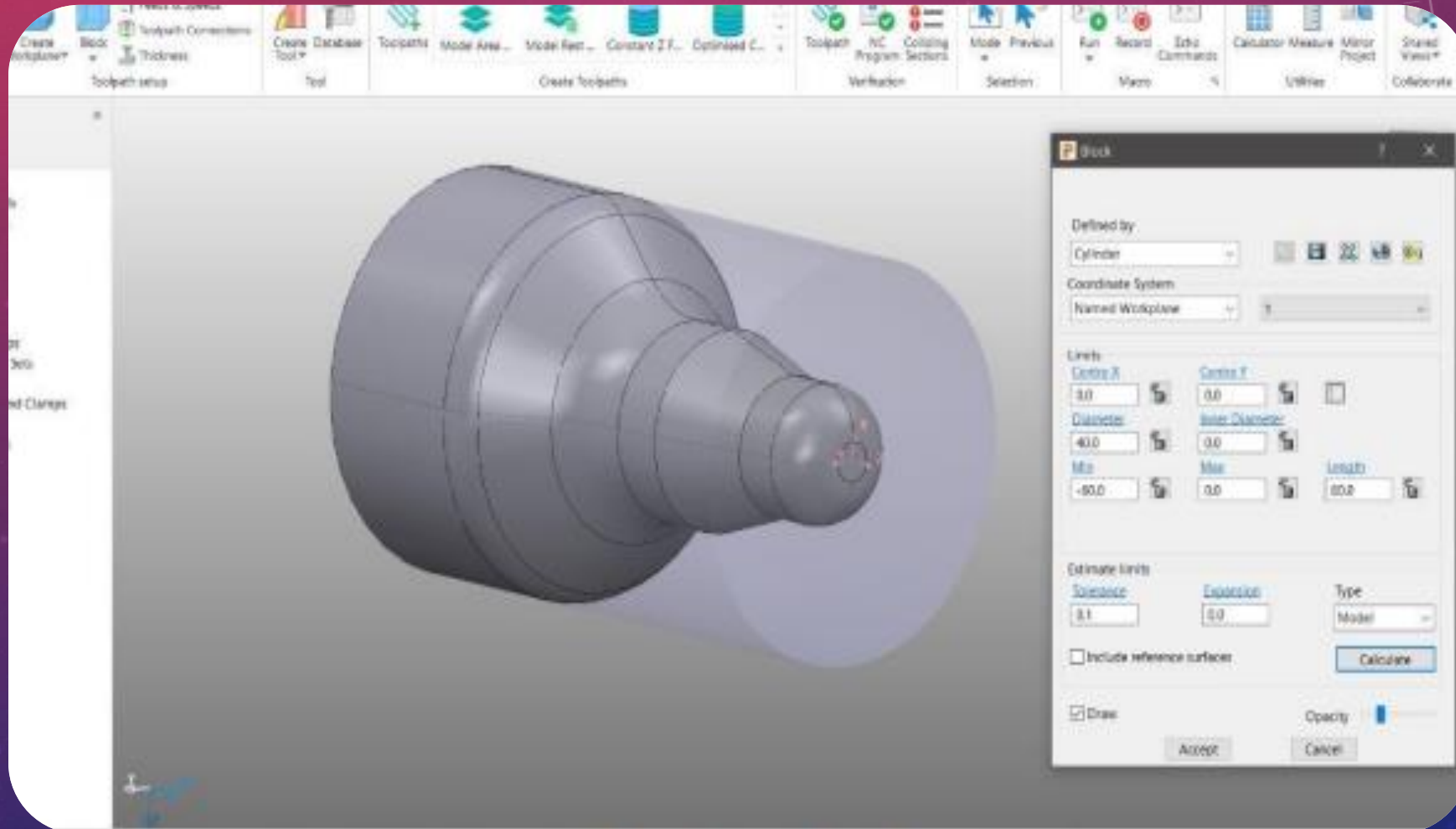
In order to specify the details of the raw material to be machined, we use the block command.



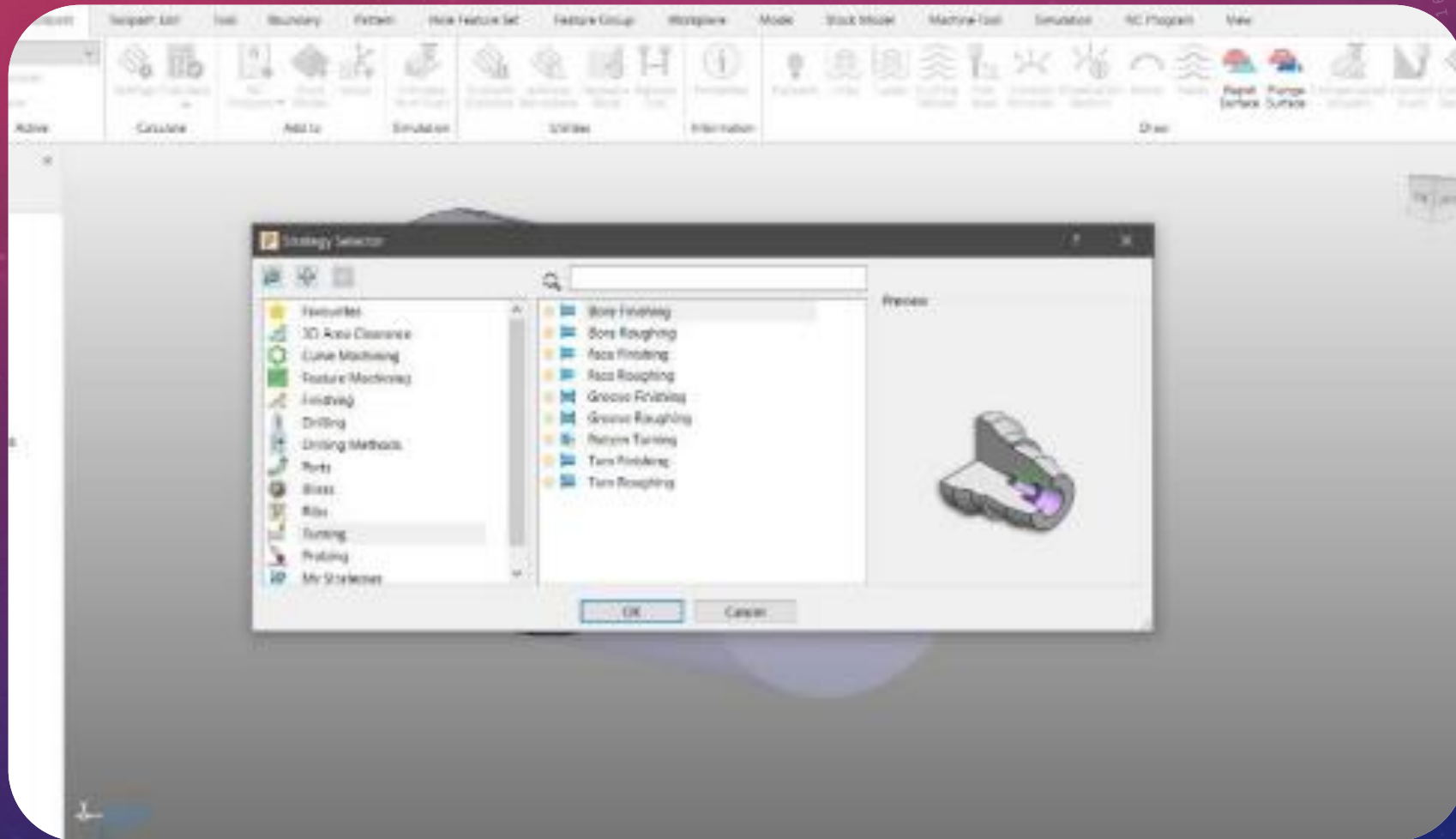
In order to define the work plane of our component, we must go to, Work planes → Create and Orientate Work plane → Work plane Positioned Using Block



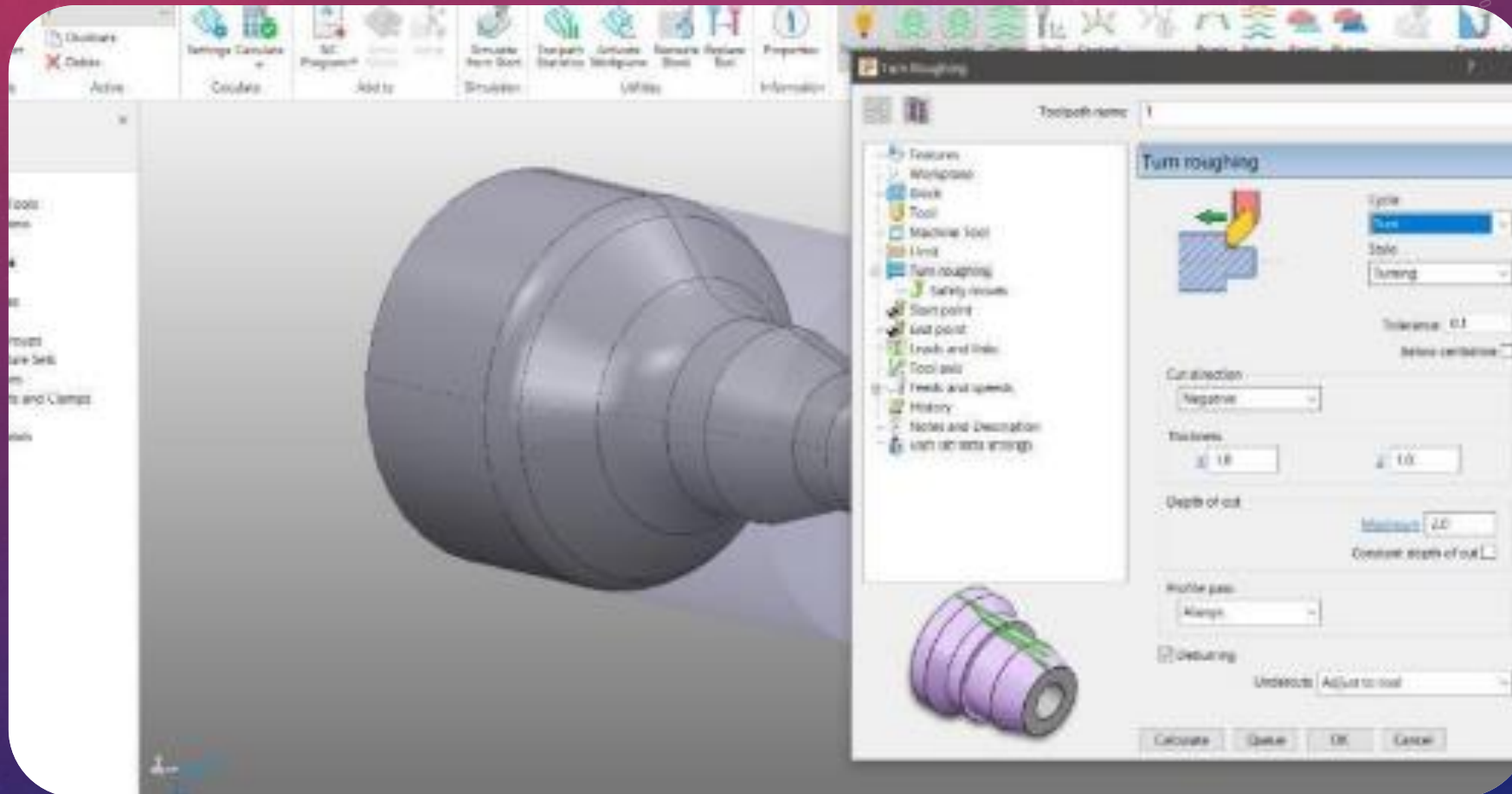
Now, we change the block around our component from box to cylinder.



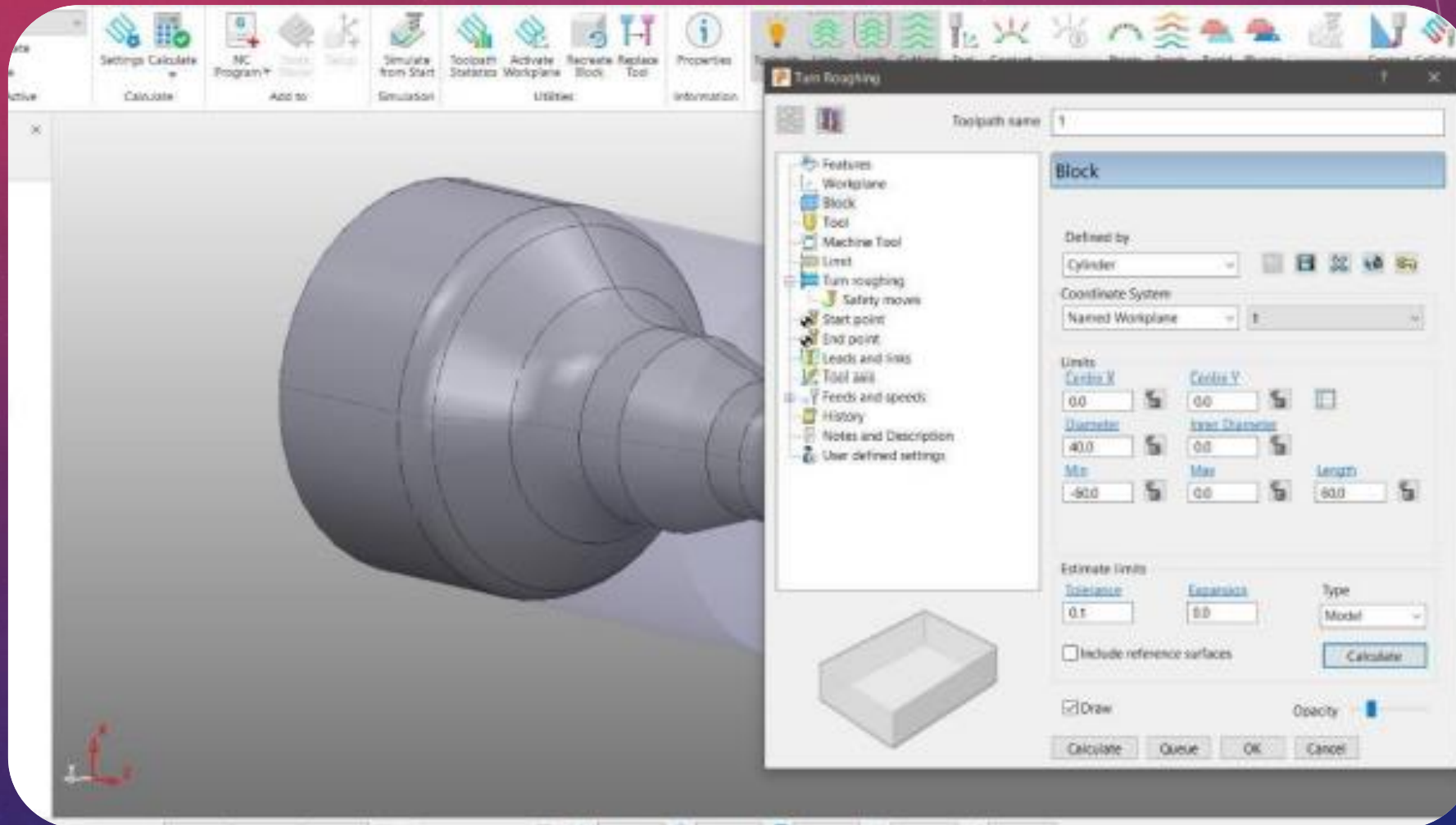
Now, we have to define the toolpath for the manufacturing of our component. We start by selecting toolpath which opens a small window with different toolpath strategies.



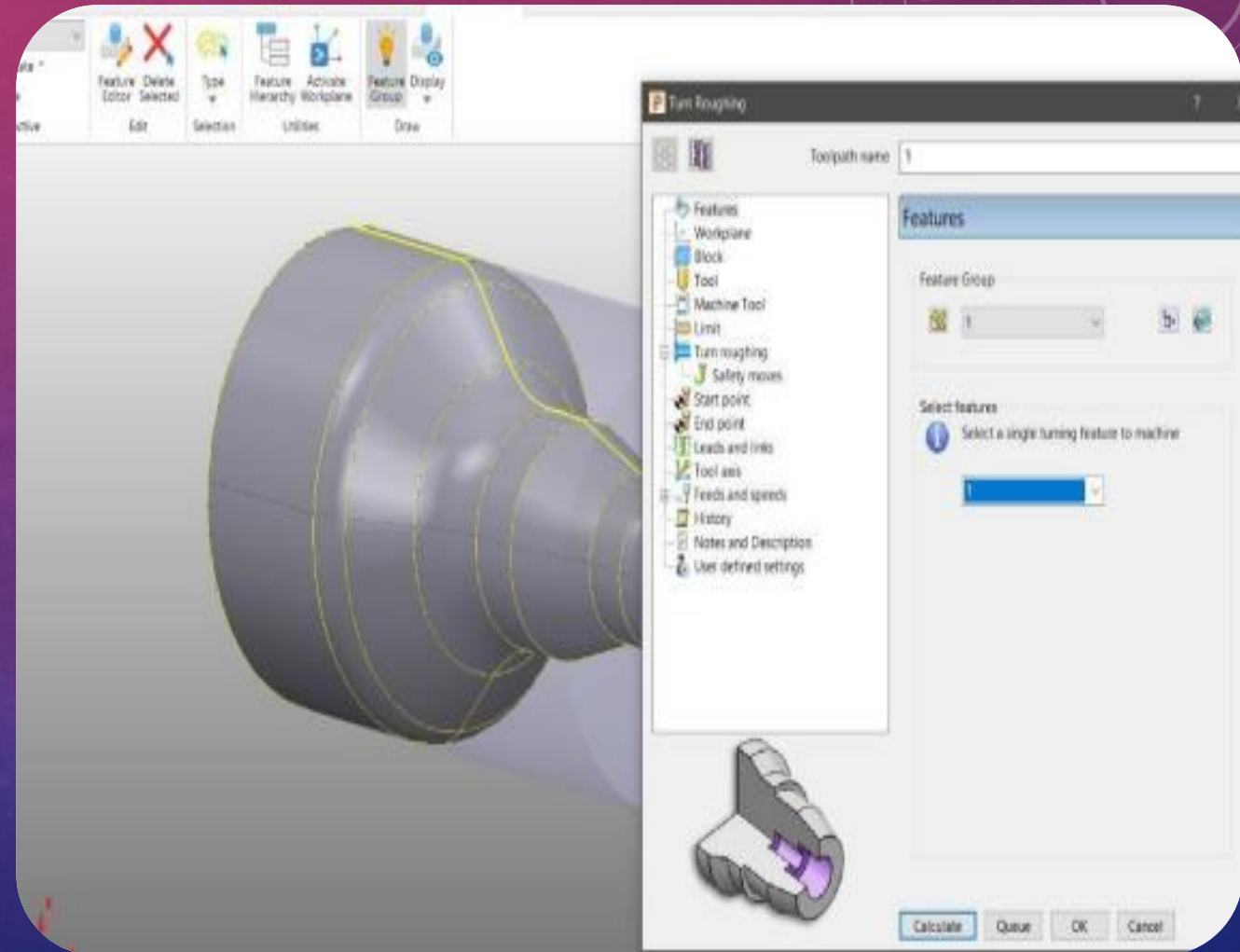
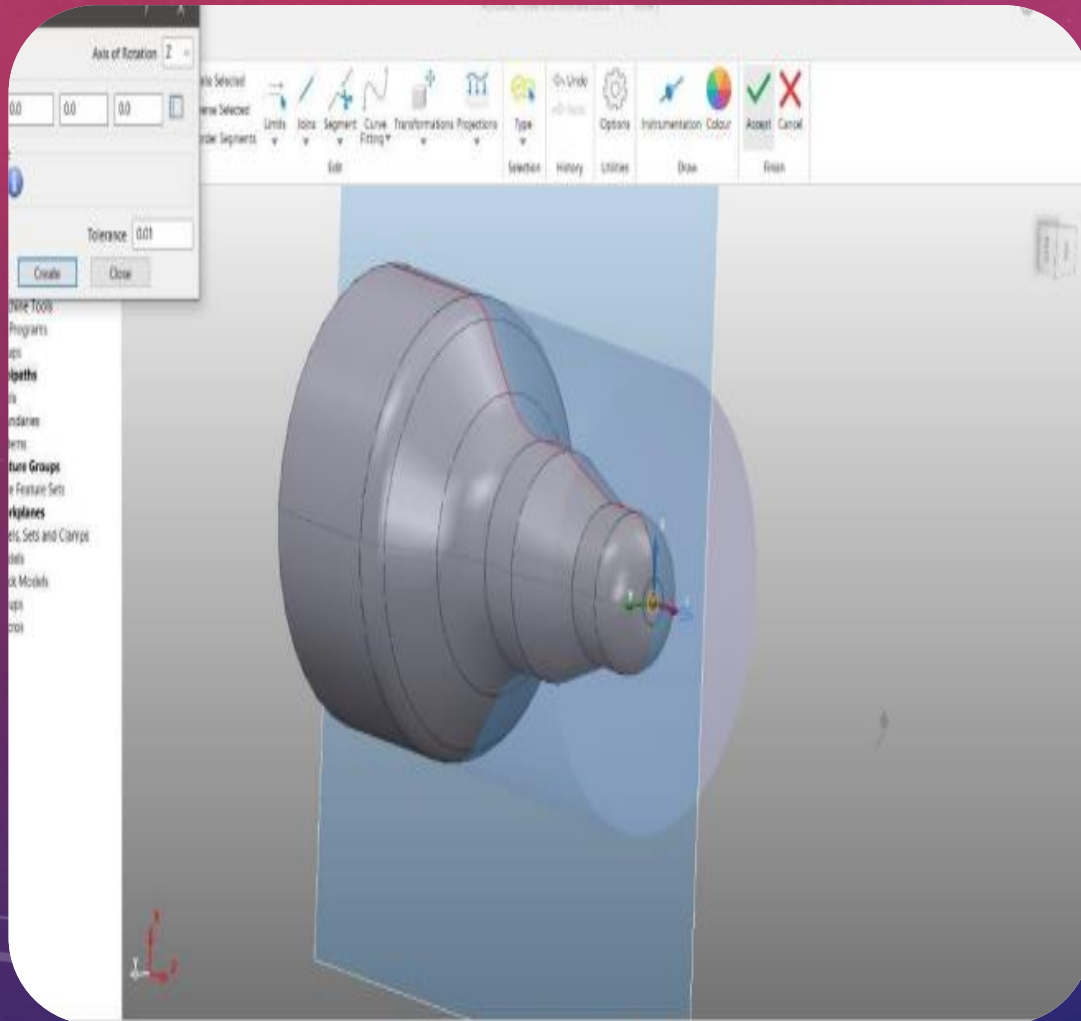
Next, we have to select the type of strategy for the manufacturing. We select Turn roughing under the Turning option. A window pops up for defining the properties of Turn roughing.



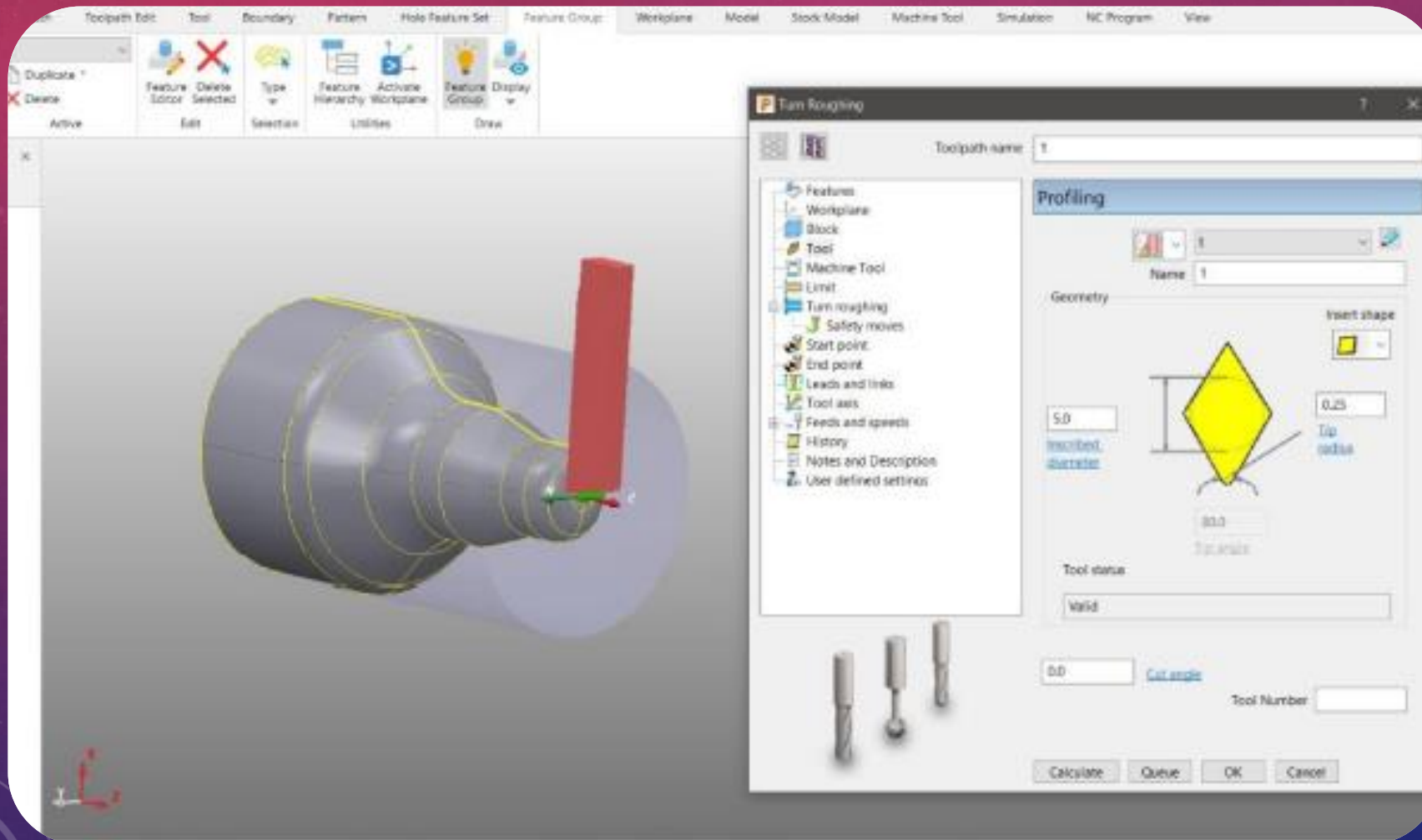
Now, we choose the work plane where we want to start the operation and redefine the block for the component.



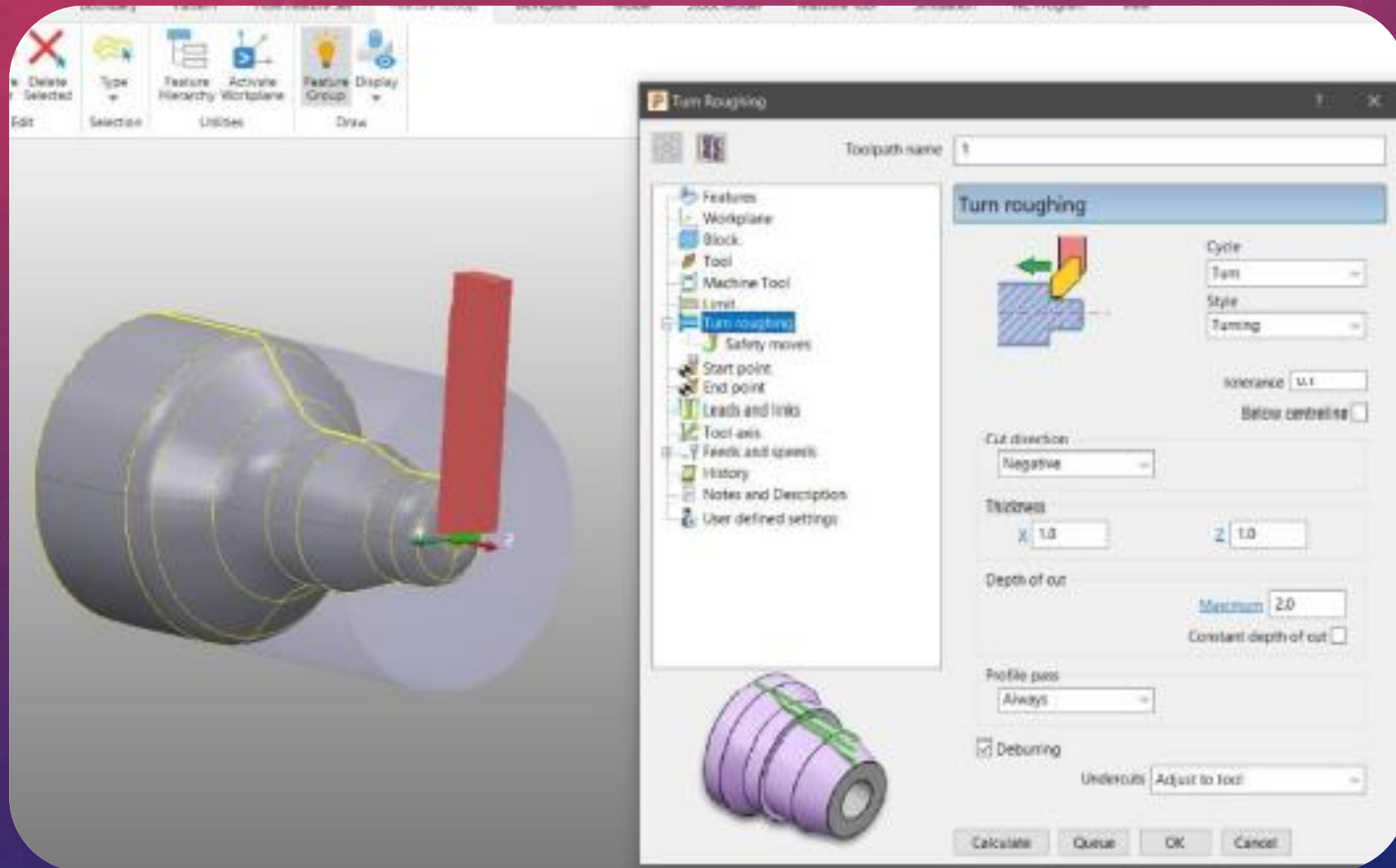
Now, we define the feature for the turning operation by clicking on the Edit feature option, then the Profile option and we select the feature that we have created in the editing box for the turn roughing strategy.



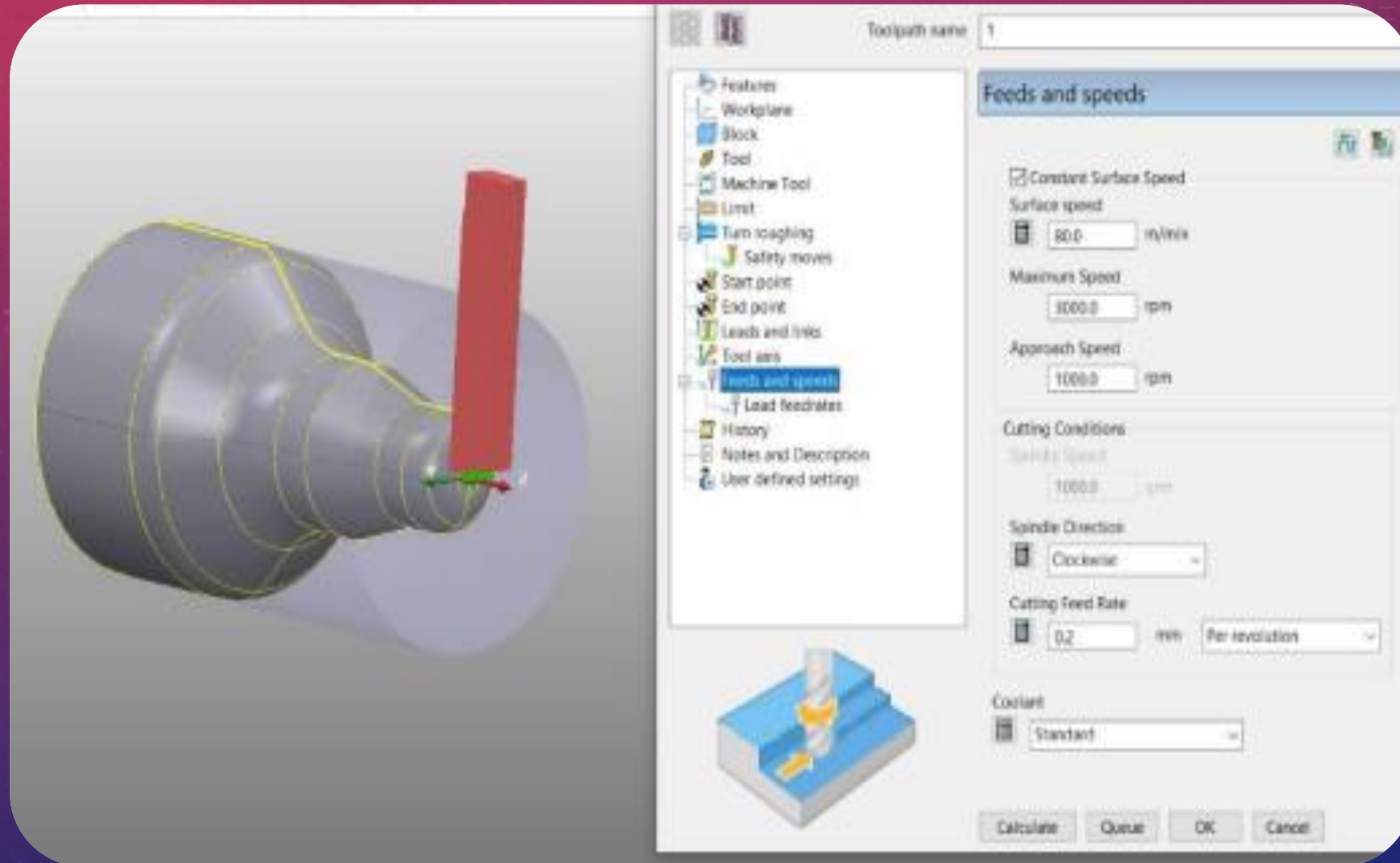
Now, we have to define the dimensions of the tool for the operation using the turning profile tool option.



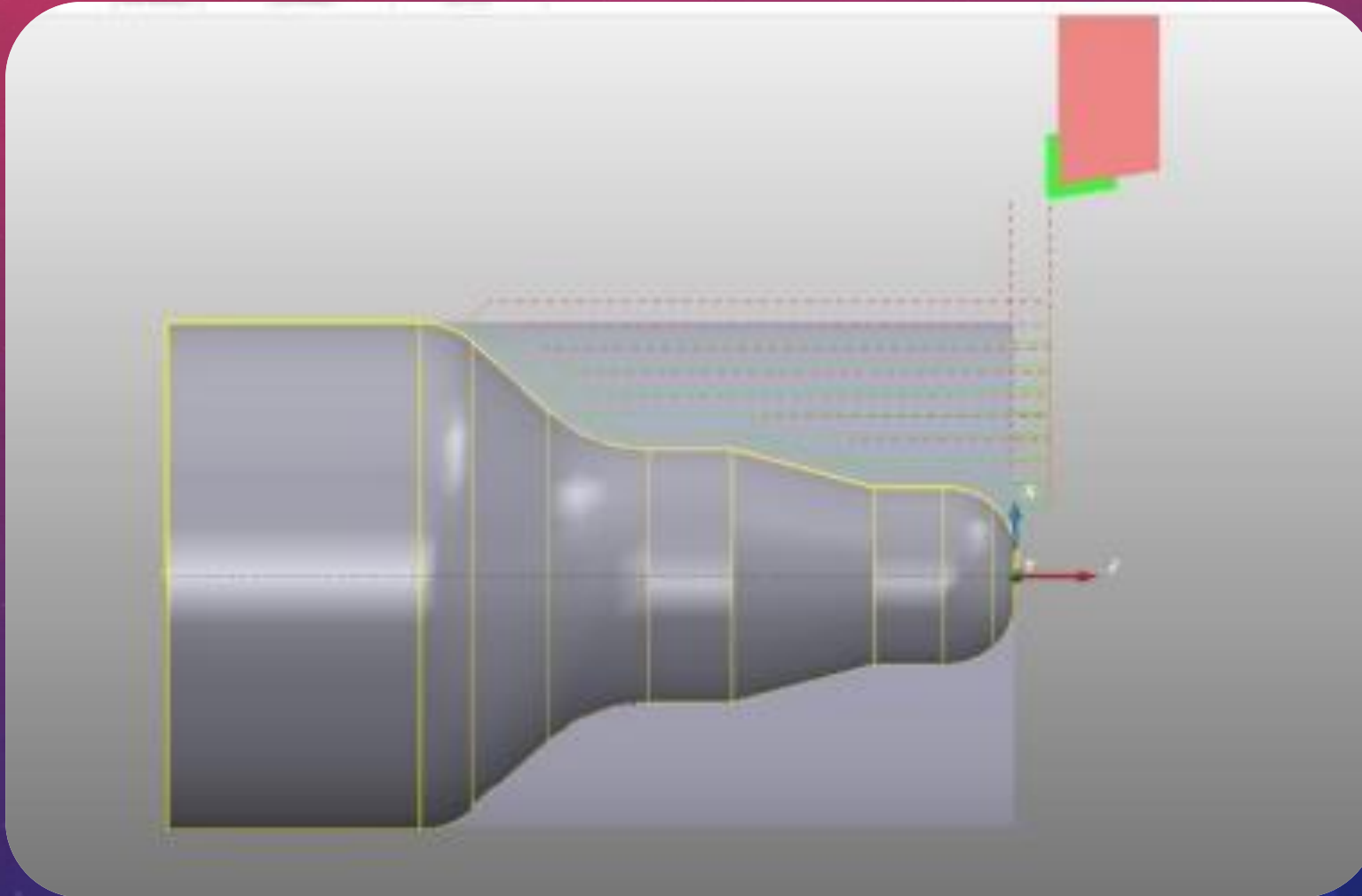
Next, we give the depth of the cut.



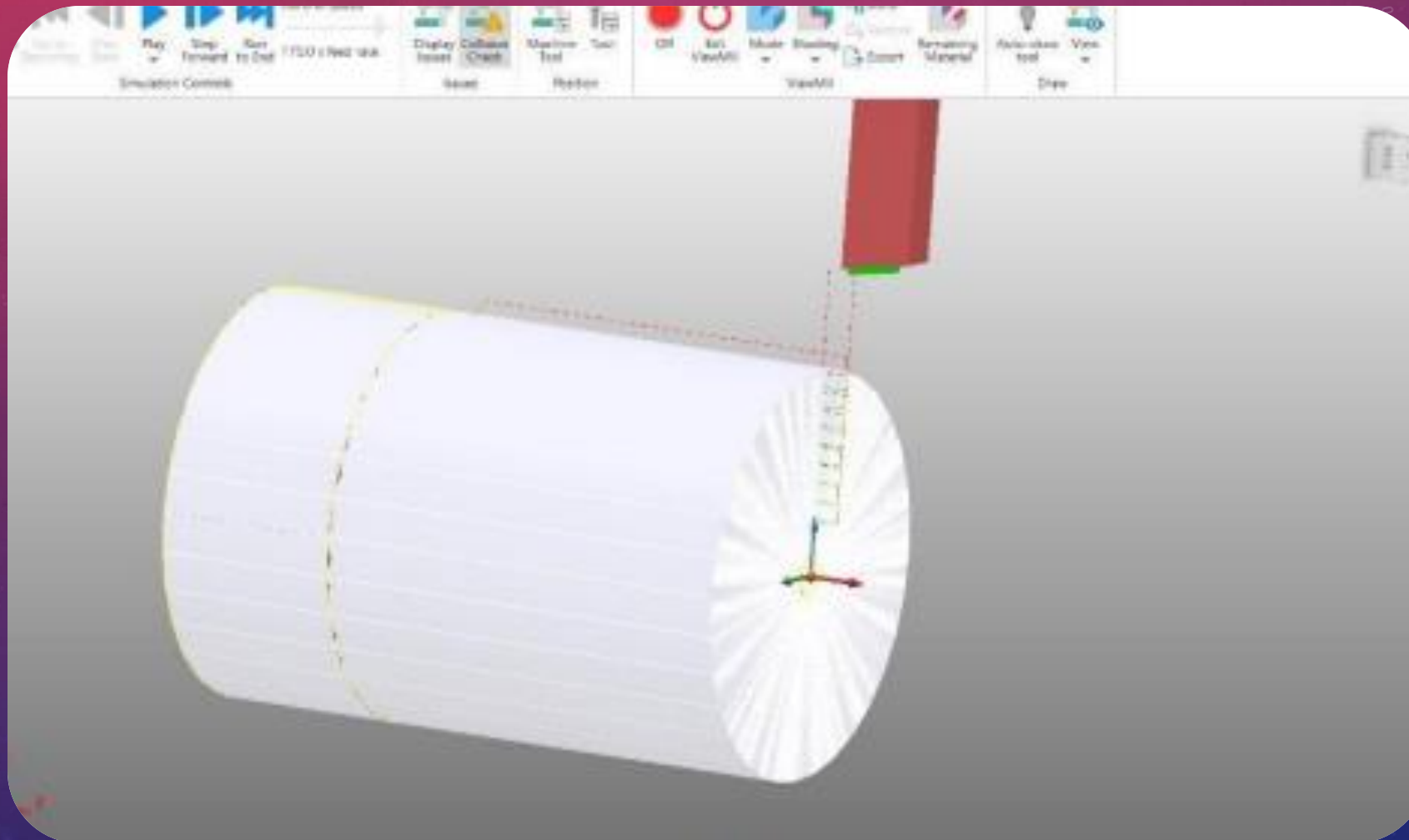
In order to define the process parameters, we go to the Feeds and speeds option.



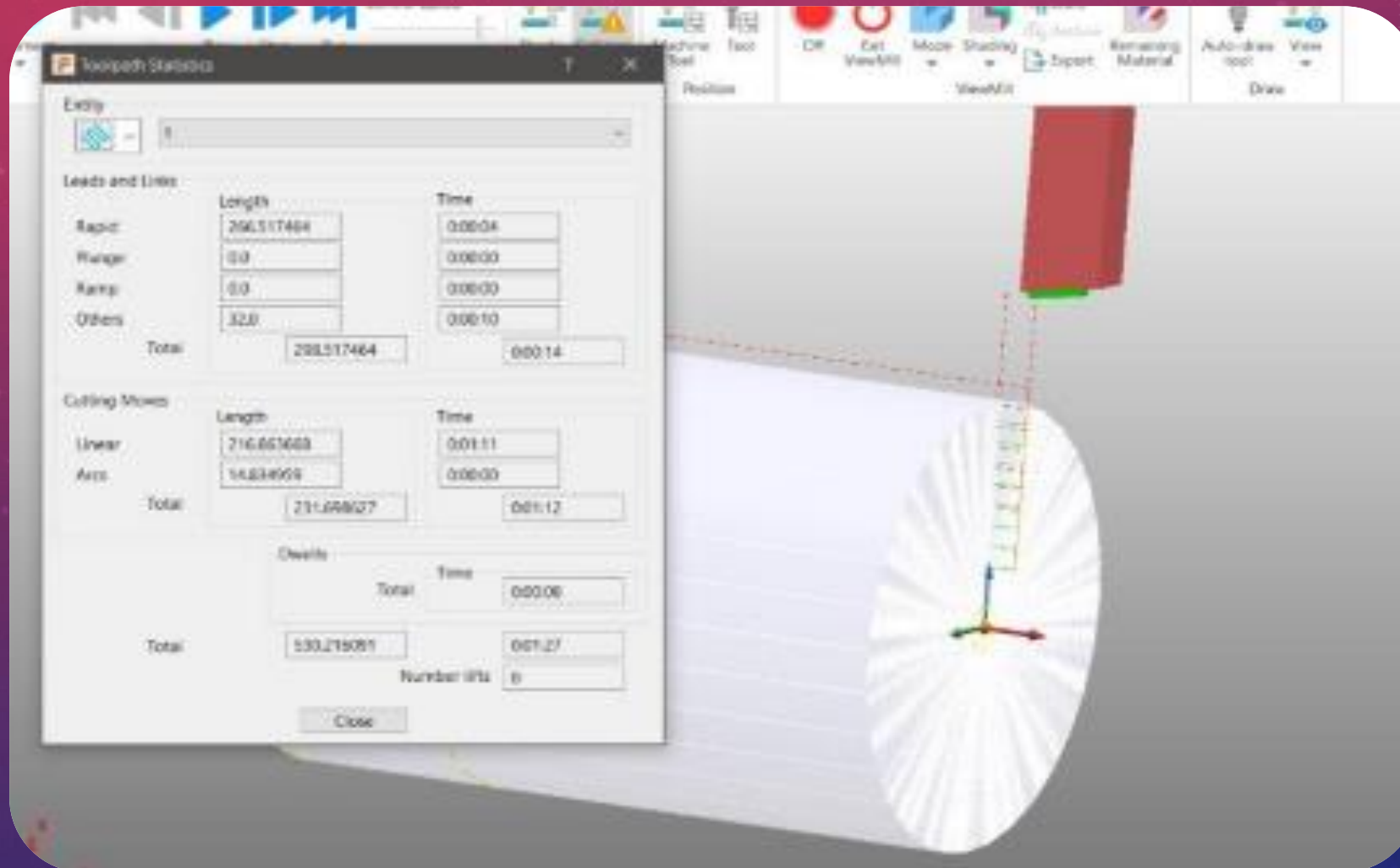
Use the calculate option to activate the tool path.



Now, go to the simulation tab and change the shading to rainbow and click the ON option to start the simulation.



Go to tool statistics to calculate the machining time.



Machining Time :- 1 minute 27 seconds

SL.NO.	Macining Operation	Selection of tool and dimensions			Process Parameters		
		Tool Type	Shape	Tip radius	Speed (rpm)	Feed (m/min)	Depth of cut
1.	Turn Roughing	Profile	Diamond	0.25	3000	80	2
2.	Turn Roughing	Profile	Diamond	0.75	4000	90	4
3.	Turn Roughing	Profile	Diamond	1.5	5000	100	2