

# Assignment 03

Due Thursday, May 30

## READ

Read up until page 66.

## DO

Use grasshopper to generate a pattern of contours. The definitions I worked on in class are in the github repository in the CLASSES folder. Try any of the techniques we explored in class. Experimenting with what we have already done is encouraged! Use RhinoCAM to make the toolpath. Try machining the pockets to different depths for visual effect. Do not make any pocket depth more than the diameter of the bit, or 0.25". Feel free to use the template in the TEMPLATES folder for pocketing. Note that if you have multiple operations at different depths, post the SETUP, not each individual OPERATIONS. That way, you'll have just one NC file with all the pocket code.

## MATERIALS

0.5"-0.75" thick MDF or Plywood, 30"x22" max.

## TOOLING

Onsrud 61-285, 0.250" dia. Single, straight-flute cutter. The recommended feed per tooth, or chip load is 0.009"-0.011". Let's just say 0.010" to be safe for now. If we run the spindle at 10000RPM, the feed rate would be:

Feed Rate (Inch per minute) = Spindle Speed (RPM) x # of flutes x chip load

$10000 \times 1 \times 0.01 = 100 \text{ IPM}$

## DELIVERABLES

Your code saved with an extension of .NC saved to a flash drive. A physical object produced on the machine and photo documentation.

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