GH | Parametric Design

Project 1 due 2.20.2017

Topics in Computer Application Design
ARCH 5064 | ARCH 4164 |Spring 2017
Joseph Iwaskiw | parametricjoe@gmail.com

project brief

you are to complete the panelization script below, design a surface using rhino, apply the script, lasercut, and fabricate. The form can be anything you want.   This project will teach you skills of research, self instruction, script de-bugging, and fabrication.

the final product will be a physical model composed of chipboard/cardboard, lasercut, and assembled
     # this model must have at least 30 pieces

reccomended steps

complete 4 part panelization tutorial by designalyze found at: http://designalyze.com/tutorial/cuny-spring-2014-mega-post (we will cover part 1 and part 4 in class)
complete the assignments of adding notation to the script as you go along - really focus on the understanding of what is happening step by step
make new shape in rhino and apply script - any shape is acceptable - must be a surface to work
once script is complete, export the flattened panelized pieces (must be at least 30, or 15 pieces by 15 pieces) to Auto-CAD. Take to lasercutter and cut out.
        # hint: make sure you scale properly in Rhino using the units command and scaling
        # hint: set the text on the flattened pieces to an etch layer - ask lasercutter TA - this will help assembly
assemble cut out pieces into 3D form.

submission

bring model to class 2.20.2017 for pin-up

resources

modeLab Intro
https://www.youtube.com/watch?v=cv4HLOsGwBE&index=6&list=PLGV167zE8gnUzZxgWwP-kqPQrofJsXtB4g

06-Trig Curves+Lists: - pdf
07-Spiraling: - pdf
08- Phyllotaxis + expressions: - pdf
09-attractors and fields: - pdf

modeLab Data Trees
https://www.youtube.com/watch?v=kNYe_f4ux4w&list=PLGV167zE8gnWXyanfp58roX_7_cGGTtBR
01-Intro: 12:00 - pdf
02-points, lists, + data matching: 16:00 - df
03-list and lists of lists: 12:00 -pdf
04-intro to data trees: 13:30 - pdf

notes

do not be afraid to fail, all I ask for is the pieces to be cut out
google image search "panelization script grasshopper" and "panelized digital fabrication" for a better visual of the final product
the project itself is easy - the point of it is to understand the process of how we got there. Spend extra time going over the script, both in the assignments and in your own time. If you can understand what is happening in this script - it will make your time much better spent down the line.
feel free to go above and beyond - your aperture does not need to be just a simple cut out, you can do all the tutorials earlier then assigned, etc... Be creative within the construct.