

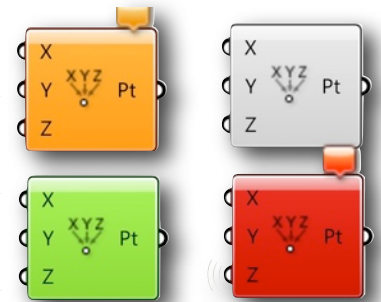
# INTRODUCTION TO GRASSHOPPER

## Target Audience

This course is for the design professionals who want to efficiently get introduced to the concepts and features of Grasshopper at an accelerated pace in an instructor-lead environment **On Line**.

### Block 1-Day 1 [1:45 Hours]

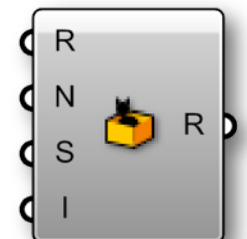
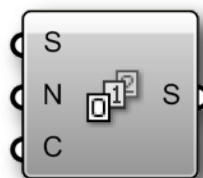
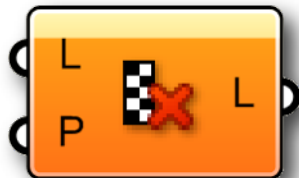
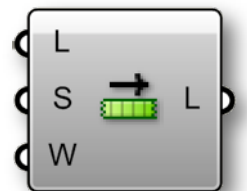
- The interface of GH and its workflow
- Integer, Decimal, and the Numeric Slider Parameters
- Introduction to more Parameters like: The String, Point, Curve, and Geometry Parameters, etc
- Manipulate the data on some parameters
- More about Short, Long, and Cross referenced lists



[ After each block, we will have a 15 minute break! ]

### Block 2-Day 1 [1:45 Hours]

- Introduction to "Sets" components [LISTS]
- Shift, Length and List Item components
- Split, Sub-List and Reverse components
- The Series and the Range components
- Boolean Toggle, Cull Pattern, and the Duplicate data components
- Random, Random Reduce, and the Jitter components, the fun starts here!

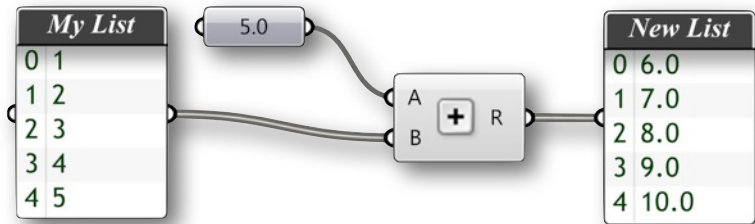


[ Each day we will have a 30 minute Q&A at the end of the 2nd Block ]

# INTRODUCTION TO GRASSHOPPER

## Block 3-Day 2 [1:45 Hours]

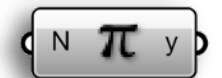
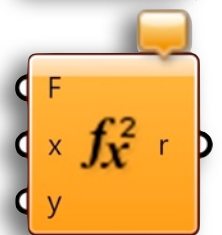
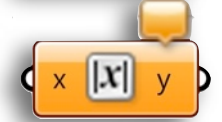
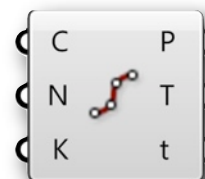
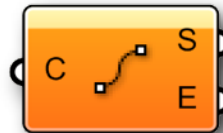
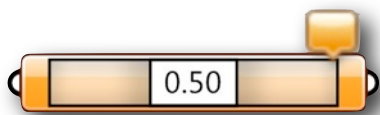
- Introduction to some Math components
- Addition, Multiplication, Subtraction and Division components
- The Absolute and Negative Math components
- Math Functions and the Expression Editor.
- Make a Domain and also decompose a Domain, learn how to use them!



[ After each block, we will have a 15 minute break! ]

## Block 4-Day 2 [1:45 Hours]

- Introduction to "Curves" components
- The Line, Circle, 3PArc, and the Rectangle curve components
- Divide Length, Perpendicular and Horizontal components
- Extend, Offset, Join, Fillet and Project to BRep utility curve components
- Length, End Points, Point on Curve, Evaluate, Perpendicular, and Horizontal Frame etc..
- Polyline, Interpolate, and Control Points curve components

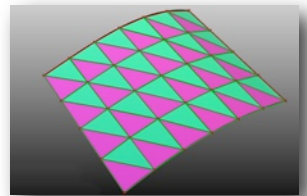
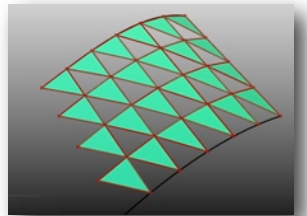
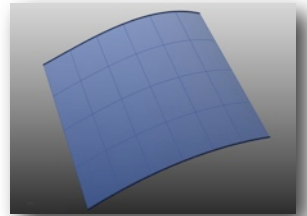


[ Each day we will have a 30 minute Q&A at the end of the 2nd Block ]

# INTRODUCTION TO GRASSHOPPER

## Block 5-Day 3 [1:45 Hours]

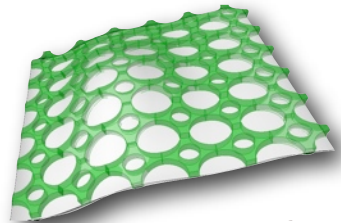
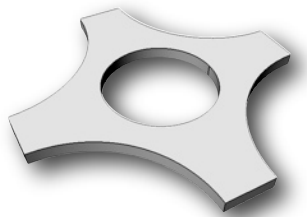
- Quick introduction to some Vector and Surface components
- Unit X, Y and Z Vectors, Amplitude, Reverse and Between Vectors
- Some Vector CPlane components like, XY, XZ and YZ
- Rotate and Offset CPlanes Vector components
- Sphere, Pipe, Cone, and Center Box Surface components
- Work with the Extrude, Loft, Planar, and 3 or 4 point Surface component
- The Bounding Box, Cap, Divide, and Frame Surface components
- Area, Explode, and Evaluate Analyze components



[ After each block, we will have a 15 minute break! ]

## Block 6-Day 3 [1:45 Hours]

- It is time to work with the Intersection and Transform components
- Move, Scale, Mirror, Scale NU, Orient, and Rotate Around an Axis Transform components
- Project CPlane, Srf-Box, and Box Morph Transform components
- Introduction to some Intersection components like: BRep + Plane, BRep + BRep, BRep + Curve, and some Boolean components



[ Each day we will have a 30 minute Q&A at the end of the 2nd Block ]

# INTRODUCTION TO GRASSHOPPER

These are some of the exercises we will cover during the *online* class. We will slowly walk you step by step until you get the grip to handle this awesome Grasshopper!

