



Theory	Practical	Total Course Length
15 Hours	15 Hours	30 Hours

Synopsis

In this course you will learn how to use Dynamo plug-in with Revit software.

Using hands-on exercises, learn to automate design processes through lines of codes, be able to deal with reducing human error and exchange information between softwares for various design projects.

Prerequisites

A Revit professional who wishes to accelerate/advance their work processes can apply for this Revit Dynamo training course.

No scripting background is needed.

What will you Learn ?

- Introduction to Dynamo
- Dynamo Interface
- Data handling
- Math Operations
- Dealing with List and String
- Using List and Levels
- Working with Spreadsheet
- Working with CSV
- Logic Operations
- Lines and Point
- Creating Geometry
- Vectors
- Element Operations
- Creating Scripts
- Custom Nodes and Packages
- Conclusion

Outline

Introduction to Dynamo

Introduction, Scope, Objectives and Why Dynamo.

Dynamo Interface

Toolbar, Settings, Adding Packages, Versions, Nodes and Player.

Data Handling

Types, Block, Creating Stings, Variables and Sequences.

Math Operations

Number List, Addition, Subtraction, Multiplication and Division, Absolute, Number Slider and Integer Number Slider .

Dealing with List and String

Generating List with the Sequence, Modifying and Analysing the List, List Operations, Replacing Elements in a List, String Operations and Splitting a String.

Using List and Levels

Managing Nested List, Using List .Map Node, Dealing with Levels and Lacing.

Working with Spreadsheet

Reading Data from Spreadsheet and Writing Data in Spreadsheet.

Working with CSV

Reading Data from CSV and Creating CSV File.

Logical Operations

Statements: IF, AND, OR.

Lines and Points

Creating Points and Lines, Walls from Line, Points on Line, Ceating Poly Curves and Polygons.

Creating Geometry

Creating Solids (Loft, Sweep), Surface, Points over the Surface, Importing from Revit.

Vectors

Basic Logics of Vectors, Creating Vectors and Translating Geometry with Vectors.

Element Operations

Getting Element Location, Change Element Location, Placing Families on Point, Color Override for Elements and Setting Family Parameter Values.

Creating Scripts

Methodology, Finding Elements without Tags, Find Elements without Insulation, Creating Floor Finish, Exporting Family Details to Excel, Tag Elements and Changing Text or Tag Letter Case .

Custom Nodes and Packages

Uses of Custom Nodes, Creating a Custom Node and Packages.

Conclusion

Introduction to Python, Discussion on Computational Design and What's Next?