

COURSE OUTLINE

Using Dynamo, the latest addition to automating BIM (Building Information Modeling) tools, students will learn visual programming, building graphs, creating geometry, data manipulating, Revit connections, and customizing Dynamo. The one day class starts with learning the fundamentals and concepts behind visual programming and the interface. It progresses with creating your first Dynamo graph, creating and manipulating geometry, translating data to and from Revit, and customizing Dynamo graphs. Upon completing the course you will obtain the knowledge to automate Revit workflows.

Class Duration: 1 day

Topics

Introduction

- What is Visual Programming?
- What is Dynamo?
- Dynamo in Action
- Cartesian Workspace

Hello Dynamo!

- Installing & Launching Dynamo
- The User Interface
- The Workspace
- Getting Started

The Anatomy of a Visual Program

- Nodes
- Wires
- Library
- Managing Your Program
- Managing Your Data with Presets

The Building Blocks of Programs

- Data
- Math
- Logic
- Strings
- Color

Geometry for Computational Design

- Geometry Overview
- Vectors
- Points
- Curves
- Surfaces
- Solids
- Meshes
- Importing Geometry

Designing with Lists

- What's a List
- Working with Lists
- Lists of Lists
- n-Dimensional Lists

Code Blocks and DesignScript

- What's a Code Block
- DesignScript Syntax
- Shorthand
- Functions

Dynamo for Revit

- The Revit Connection
- Selecting
- Editing
- Creating
- Customizing
- Documenting

Custom Nodes

- Custom Node Introduction
- Creating a Custom Node
- Publishing to Your Library
- Python Nodes
- Python and Revit

Packages

- Package Introduction
- Package Case Study - Mesh Toolkit
- Developing a Package
- Publishing a Package
- Zero-Touch Importing

Web Experience

- Send to Web
- Customizer View