

Dynamo Course Course details

Dynamo

Description

This course introduces the concept of visual programming, parametric modeling and process automation. Covering the structure of visual programming, working with nodes and lists, Dynamo geometry, connection of Dynamo and Revit, dealing with Dynamo packages.

Course structure:

30 hours Dynamo course

Resourcing, text books and reading material:

We recommend the following resources:

• Dynamo tutorials

Web resources:

https://diroots.com/e-learning/dynamo-courses/dynamo-basics-training-course/

Prerequisites:

- Basic knowledge and skills about using computers. •
- Engineering background is recommended •
- Revit user •

Certificates:

- Certificate from CAD MASTERS •
- Certificate from Autodesk

Grading:

Attendance	40%
Assignments	60%

To pass the course and receive both Autodesk certificate & CAD MASTERS certificate you should:

- Attend at least 80% of course hours •
- Score more than 70% as a total score •



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Course Objectives:

- 1. Understand VPL concept
- 2. Ability to use nodes and create one.
- 3. Ability to create parametric mass
- 4. Ability to complete script for Revit

Course Outline:

This course including the following:

First

• Introduction to Visual Programming in BIM Process.

- Getting Started with Dynamo.
- Access Dynamo plug-in inside Revit.
- Opening and Saving Dynamo files.
- User Interface.
- Switch between script and model environment.
- The Structure of Visual Programing.
- Node Library.
- Introduction to Nodes.
- Wires.
- Dynamo Geometry.

Second

- Working with Custom Nodes.
- Understand Design Script Syntax Basics.
- Switching from Nodes to Code.
- Working with Lists.
- Understand Lists.
- List Structure.
- Creating Lists.
- Creating Ranges and Sequences.
- Understanding Lacing.
- Using List at Level.
- Working with Lists within Lists.
- Extracting Items from a Single List.
- Extracting Items from Lists within Lists.
- Filtering Lists by Boolean.
- Working with Excel.
- Importing Lists from Excel.
- Exporting Lists to Excel.
- Dynamo Package.

- Points.
- Curves.
- Surfaces.
- Solids.
- Working with Nodes.
- Placing Nodes.
- Working with Wires.
- Aligning Nodes.
- Working with identical Nodes.
- Using String and Number Nodes.
- Creating Groups.
- Using Code Blocks.
- Searching for Dynamo Package.
- Installing Dynamo Package.
- Find Package Nodes.
- Introduce the common used packages.
- Use packages for sample work.
- Custom Nodes.

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- Create Custom Nodes.
- Edit Custom Nodes.
- Connecting Dynamo with Revit for Process Automation.
- Get Revit Parameters Data.
- Set Revit Parameter Data.
- Dynamo Scripts for Revit.
- Auto Generate Family types from Excel Sheets.

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- Auto Model Columns, walls ... etc.
- Auto Generate Element Reinforcement.
- Auto Generate Sheets and views.

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Third

Sample Automated Workflows.

- Sheets.
- Create Sheets from Excel.
- Add Legend to Sheets.
- Duplicate Sheets.
- ° Renumber Views on Sheet.
- Batch Print PDF.
- Views.

- Hide Categories in Views.
- Tag Elements in Multiple Views.
- \circ Duplicate Views as Dependents.
- Rename Dependent Views and Assign Scope boxes.
- Annotation.
- Dimension Grid Lines.
- ° Tagging for multiple Views.



knowledge makes a difference

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AUTODESK. Make anything.

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