

## Autodesk® Dynamo for Revit Fundamentals

### Brief Synopsis of Class Contents:

Dynamo is a powerful BIM connected Computational Design tool. With access to the Revit Application Programming Interface (API), Dynamo allows you to perform repetitive and more advanced functions within Revit. Learning Dynamo is a great way for creating new opportunities to transform your business, offer new services, and enhance the overall quality of your projects. From exploring design alternatives to rule-based system rationalization to automating repetitive tasks, Dynamo will play an important role in your AEC workflows. Dynamo's usefulness extends from Architectural Programming to Building Performance Analysis, Simulation, Construction Means and Methods, as well as Process Automation. This course introduces the student to the fundamentals of Dynamo with hands on exercises providing practical examples everyone can exploit in their work.

### Learning Objectives:

- Understand the role of Computational Design & Visual Programming in the AEC Process
- Explore Key uses for Dynamo
- Learn about Dynamo integration with Revit
- Create basic Dynamo Scripts
- Use the Dynamo Player on real-world projects

### Courseware:

N/A

### Number of Days:

2 Half Day Sessions

### Continuing Education Hours:

7 hours

### Who Should Attend:

New users of Dynamo: BIM Managers, Advanced Revit Users, all disciplines

### Prerequisites:

No prior Dynamo experience required. Students should have a high degree of competency and comfort using Revit, as well as working knowledge and experience with Family Editing.

### System and Software Requirements:

<http://www.asti.com/LiveLab-Learning-and-Training/LiveLab-System-Requirements>

### FAQs and Cancellation Policy:

<http://www.asti.com/LiveLab-Learning-and-Training/LiveLab-FAQS>

## Class Outline and Topics:

### Visual Programming in the AEC Process

- Overview of Visual Programming in AEC
- Computational Design & Design Scripting

### Key Uses for Dynamo

- Automate Repetitive Tasks
- Rule-Based Virtual Design & Construction
- Creating Complex Geometry
- Information Exchange (Revit & Excel)
- Model-based Analysis & Simulation
- Performance Validation

### Introduction to Dynamo

- User Interface, Settings, Navigation
- Auto vs. Manual Runs
- Node Search, Watch Node, Code Block
- Wiring techniques
- DesignScript Syntax
- Custom Packages
- List Management, Lists of Lists, Lacing
- Geometry: Vectors, Points, Curves, Surfaces, Solids, Meshes, 3<sup>rd</sup> party
- Adaptive Components & Dynamo
- Utilizing the Dynamo Player for Revit

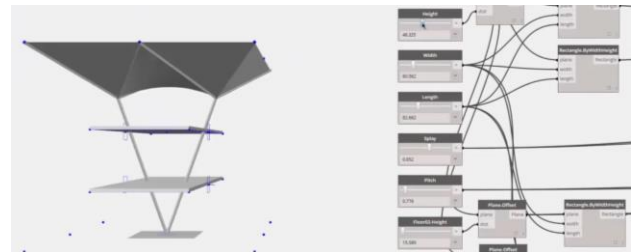
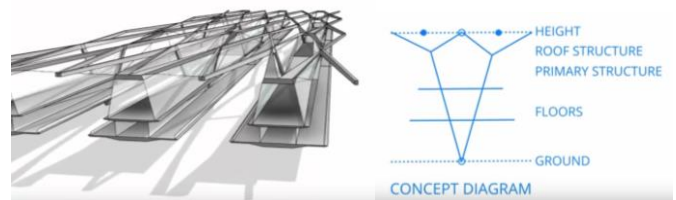
### Overview of Dynamo Discipline-Specific Solutions

- Solving Complex Design Challenges
- Prefabrication
- Means & Methods
- Process Automation

### Resources

- **Current Dynamo Resources**  
<http://dynamobim.org>

- **Packages**  
<http://dynamopackages.com>
- **Dynamo Dictionary**  
<http://dictionary.dynamobim.com>
- **Dynamo Help Center**  
<http://dynamobim.org/help-center>



Images courtesy Autodesk Dynamo



Image courtesy Shepley Bulfinch