

Autodesk Dynamo Training Course

Course Overview

Course Length: 8-Hours

- 8-Hours – 4 x 2-hour training sessions
- Remote training over MS Teams
- Sessions are recorded and download links for each session are provided for future use
- Training for up to 1-3 people
- Sessions can start within 7 days upon ordering
- Flexible sessions (for example, consecutive or Monday, Wednesday, Friday)
- Courses are private and topics can be customised to suit
- Includes Certificate of Completion

The Autodesk Dynamo Training Course provides practical instructor-led training for BIM managers, BIM coordinators, architects, engineers, designers, CAD managers, and Autodesk software users wanting to automate workflows, improve productivity, and create custom design solutions using Dynamo.

Dynamo is Autodesk's visual programming platform that enables users to automate repetitive tasks, create intelligent workflows, manipulate data, generate geometry, and connect information across multiple Autodesk applications without requiring advanced software development skills.

Topics Covered

Dynamo Training Topics Covered – Revit Automation, Computational Design and Visual Programming

- Dynamo fundamentals and visual programming concepts
- Dynamo user interface and workflow management
- Working with nodes, wires, lists, and data structures
- Geometry creation and manipulation
- Parametric modelling techniques
- Revit element creation and modification
- Family automation workflows
- Annotation and documentation automation
- Sheet, view, and schedule generation
- Data extraction and reporting
- Excel and external data integration
- Python scripting within Dynamo
- Custom node development
- Package management and deployment
- Generative design methodologies
- Computational design workflows
- Design automation standards
- Quality assurance and script governance

- Dynamo for Civil 3D workflows
- Dynamo for Autodesk Forma workflows
- Enterprise digital engineering automation
- Reusable company script libraries
- BIM process optimisation
- Data-driven design and analysis
- Advanced workflow customisation

Prerequisites

Participants attending this Autodesk Dynamo Online Course should have working knowledge of at least one Autodesk application such as Revit, Civil 3D, Advance Steel, FormIt, or another Autodesk design platform.

No previous programming experience is required. The course is designed for both technical and non-technical users wanting to automate workflows through visual programming. Access to Autodesk Dynamo and the relevant Autodesk software platform is required for participation in the training sessions.

Training Guide Contents

Chapter 1: Introduction to Dynamo

- What is Dynamo?
- Dynamo Interface Overview
- Visual Programming Concepts
- Understanding Nodes and Connections
- Working with Dynamo Player

Chapter 2: Data Management and Automation

- Working with Lists
- Data Structures
- Importing and Exporting Data
- Filtering and Sorting Information
- Automation Best Practices

Chapter 3: Dynamo for Revit*

- Accessing Revit Elements
- Working with Parameters
- Sheet and View Automation
- Family Management
- BIM Management Workflows
- Model Auditing and Quality Control

Chapter 4: Dynamo for Civil 3D*

- Surface Automation
- Alignment Automation
- Profile Automation
- Corridor Automation
- Quantity Takeoff Workflows
- Infrastructure Design Productivity

Chapter 5: Dynamo for Inventor*

- Introduction to Dynamo for Inventor
- Parametric Design Automation
- Rule-Based Modelling
- Assembly Automation
- Property and Metadata Management
- Design Configuration Workflows

Chapter 6: Dynamo for Advance Steel*

- Structural Member Automation
- Connection Automation
- Numbering and Naming Workflows
- BOM Generation
- Fabrication Data Workflows
- Model Validation

Chapter 7: Dynamo for FormIt*

- Parametric Concept Design
- Generating Building Forms
- Site Planning Automation
- Urban Design Studies
- Design Option Generation
- Revit Integration Workflows

Chapter 8: Dynamo for Robot Structural Analysis*

- Connecting Revit and Robot
- Structural Model Data Exchange
- Structural Analysis Automation
- Load Case Management
- Result Extraction and Reporting
- Structural Design Optimisation Workflows

Chapter 9: Dynamo for Autodesk Alias*

- Parametric Surface Modelling
- Driving Alias Geometry with Parameters
- Design Exploration and Iteration
- Configurable Product Design
- Spreadsheet-Driven Design Workflows
- Surface Quality and Curvature Analysis
- Data Exchange with Inventor, Fusion, and Other Autodesk Applications
- Industrial Design Workflow Automation
- Custom Script Development for Alias Projects
- Design Validation and Optimisation Workflows

Chapter 10: Dynamo Sandbox (Standalone)*

- What is Dynamo Sandbox?
- Standalone Visual Programming
- Working with External Data Sources

- Excel and Database Integration
- Geometry Generation
- Cross-Platform Automation Workflows

Chapter 11: Dynamo and Autodesk Platform Services (APS)*

- Introduction to APS
- Dynamo and REST APIs
- Working with JSON Data
- Connecting Dynamo to Autodesk Construction Cloud
- Model Data Extraction Workflows
- Data Exchange Automation
- Digital Twin Workflows
- BIM Reporting and Dashboards

Chapter 12: Dynamo for Forma*

- Introduction to Dynamo for Forma workflows
- Connecting Dynamo to Forma projects and datasets
- Creating parametric building and site studies
- Automating urban planning and development scenarios
- Generating design options and massing alternatives
- Integrating GIS and external data sources
- Environmental and sustainability analysis workflows
- Developing reusable computational design tools
- Managing scripts and standards across teams
- Best practices for enterprise digital design automation

Chapter 13: Custom Project Automation Workshop**

- Identifying Automation Opportunities
- Building Custom Scripts
- Testing and Debugging
- Script Optimisation
- Creating Reusable Workflows
- Developing Project-Specific Dynamo Solutions

*Only one chapter is allocated within the 8-hour course. Combining chapters for additional Autodesk applications will add 2-hours per chapter.

**Creating custom scripts may take additional time than allocate within the 8-hours and can be pre-determined prior to commencement of training.