

# Course : Dynamo Studio, transforming designs into workflows

*Practical course - 2d - 14h00 - Ref. DSY*

*Price : 1180 € E.T.*

Dynamo Studio is a programming environment integrated with Revit to automate your BIM (Building Information Modeling) design processes. In this course, you'll learn how to create parametric models and customized scripts to manipulate the data in your digital mock-ups.

## Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Conceptualizing a custom node
- ✓ Using code blocks
- ✓ Handling data
- ✓ Building surfaces
- ✓ Setting up solids

## Intended audience

Architects, engineers, technicians, draughtsmen, drawing designers in design offices, BIM coordinators and managers.

## Prerequisites

Knowledge of Autodesk Revit and experience in digital mock-up preferred.

## Course schedule

### PARTICIPANTS

Architects, engineers, technicians, draughtsmen, drawing designers in design offices, BIM coordinators and managers.

### PREREQUISITES

Knowledge of Autodesk Revit and experience in digital mock-up preferred.

### TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

### ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.

Participants also complete a placement test before and after the course to measure the skills they've developed.

## 1 What is Dynamo?

- Installation and updating techniques.
- Understanding the user interface.
- Create a custom node.
- Interface and node library.
- All node types.
- Organize inputs, variables, outputs and functions.
- Organization group management.

### Hands-on work

Install and familiarize yourself with the user interface and design custom nodes.

## 2 A graphical programming interface

- Fast iterations.
- Visual logic.
- Interoperability.
- Sophisticated scripting interfaces.
- Extendable features and sharing environment.

### Hands-on work

First sophisticated scripts from the programming interface.

## 3 Programming and data management

- Data types, summary of functions and operators.
- Implement multithreading.
- Use of code blocks.
- Line creation and list collection.
- Extract elements from a list.
- Filter lists of items.
- Modify list items.
- Manage the number in the list.

### Hands-on work

Creation of a programming block.

## 4 Analytical model geometry

- Point design.
- Create curves, lines and arcs.
- Surface construction.
- Setting up solids.
- Knowing solids.
- Vector assembly.
- Drawing up plans.
- File management in SAT format.

### Hands-on work

Construction of geometric shapes, surfaces and solids.

### TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

### TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

### ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at [psh-accueil@orsys.fr](mailto:psh-accueil@orsys.fr) to review your request and its feasibility.

## 5 Interaction with Autodesk Revit

- Selection functions.
- Extract data from Revit.
- Conceptualize sheets and views.
- Views: renaming and duplication.

### Hands-on work

Integrate data into views.

## 6 Developments

- Package management.
- Package creation.
- How to debug.
- Advanced debugging.
- Use the Dynamo player.
- Compatibility: everything you need to know.
- License management.
- Forum interactions.

### Hands-on work

Package design and debug management.