

Bentley OpenBuildings Designer User

Target Audience

This course is designed for civil engineers, architects, structural engineers, BIM modelers, and building design professionals who want to develop practical skills in Bentley OpenBuildings Designer. It is suitable for beginners as well as professionals transitioning from traditional CAD workflows to BIM-based building design. The program also benefits project coordinators, design consultants, and students pursuing careers in the AEC industry. Basic knowledge of engineering drawings and construction concepts is recommended.

Course Objectives

- Develop a comprehensive understanding of the OpenBuildings Designer interface, BIM workflows, and project setup.
- Learn to create accurate architectural, structural, interior, mechanical, and plumbing building models using industry best practices.
- Gain proficiency in producing construction documentation, schedules, reports, and coordinated drawing deliverables.
- Understand BIM collaboration, model coordination, QA/QC processes, and data exchange using standard industry formats.
- Build the practical skills required to efficiently model, document, and manage building projects throughout the design lifecycle.

Course Outcomes

Upon successful completion of this course, participants will be able to create and manage complete BIM models using Bentley OpenBuildings Designer for multidisciplinary building projects. They will confidently model architectural, structural, interior, and MEP components while maintaining project standards and coordination. Learners will be capable of generating professional construction documentation, schedules, and project deliverables, and will effectively collaborate with project teams using BIM workflows and industry-standard data exchange formats.

Course Outline

The course comprises **40**-hours of theory and labs and is divided into **10** different Modules. Each chapter will be followed by hands-on lab exercises to reinforce learning and gauge understanding of the topics covered.

Table of Contents

Module 1: Introduction to OpenBuildings Designer

- 1.1 Overview of Bentley OpenBuildings Designer
- 1.2 BIM Concepts and Building Information Modeling Workflow
- 1.3 User Interface and Navigation
- 1.4 File Management and Project Setup
- 1.5 Understanding Workspaces and Standards

Module 2: The 3D Model

- 2.1 Understanding 3D Modeling Environment
- 2.2 Creating and Managing Building Models
- 2.3 Model Views and Display Settings
- 2.4 Coordinate Systems and Grids
- 2.5 Model Accuracy and Geometry Controls

Module 3: The 3D Building Environment

- 3.1 Building Floor Creation and Story Management
- 3.2 Reference Models and External Files
- 3.3 Site and Terrain Basics
- 3.4 Levels, Spaces, and Zones
- 3.5 Managing Multi-Discipline Models

Module 4: Modeling Structural Elements

- 4.1 Columns and Structural Frames
- 4.2 Beams and Slabs
- 4.3 Foundations and Footings
- 4.4 Stairs and Structural Connections
- 4.5 Structural Detailing Basics

Module 5: Modeling Architectural Elements

- 5.1 Walls and Partitions
- 5.2 Doors and Windows
- 5.3 Curtain Walls and Facades
- 5.4 Floors and Ceilings
- 5.5 Roof Modeling Basics

Module 6: Modeling Interior Elements

- 6.1 Furniture and Fixtures
- 6.2 Interior Partitions
- 6.3 Ceilings and Lighting Layouts

6.4 Finishes and Room Components

6.5 Space Planning Techniques

Module 7: Modeling Mechanical and Plumbing Components

7.1 HVAC Components and Ductwork

7.2 Pipes and Plumbing Fixtures

7.3 Equipment Placement

7.4 Clash Detection Basics

7.5 Coordination with Architectural Models

Module 8: Advanced Modeling – Roof Canopy

8.1 Complex Roof Shapes

8.2 Parametric Canopy Design

8.3 Custom Profiles and Extrusions

8.4 Structural Support Integration

8.5 Advanced Visualization of Roof Systems

Module 9: Documentation and Drawing Production

9.1 Creating Plans, Sections, and Elevations

9.2 Annotation and Dimensions

9.3 Sheet Layouts and Title Blocks

9.4 Schedules and Reports

9.5 Printing and PDF Export

Module 10: BIM Collaboration and Deliverables

10.1 Multi-User Collaboration

10.2 Model Coordination Workflows

10.3 IFC and Other Export Formats

10.4 Data Validation and QA/QC