CSG TRAINING

AUTODESK Authorized Training Center

Course Title

Autodesk Revit 2026 – Fundamentals for Structure

Course Description

This course introduces structural engineers, designers, and BIM professionals to **Building Information Modeling (BIM)** using **Autodesk Revit 2026**, with a focus on **structural modeling, detailing, and construction documentation**. Learners progress from project setup through design development and finally to producing coordinated construction documents.

Course Duration

- **Total Duration: 3 Days (24 Hours)**
- **Delivery Mode:** Instructor-led (classroom or virtual) with hands-on exercises

---

Prerequisites

- Basic knowledge of **structural engineering terminology**
- Familiarity with CAD or BIM concepts recommended
- Access to **Autodesk Revit 2026** (Imperial units)

Course Structure Overview

The course is organized into **three major sections**:

1. Introduction to Revit and Project Setup
2. Design Development
3. Construction Documentation

Course Structure & Outline

Section 1: Introduction to Revit and Project Setup

Module 1: Introduction to Revit

- Building Information Modeling (BIM) concepts
- Revit terminology and structural elements
- Navigating the Revit interface
- Working with views and navigation tools
- Opening, saving, and managing projects

Module 2: Starting a Revit Project

- Selecting and configuring project templates
- Linking CAD files and Revit models
- Managing and modifying links
- Creating and modifying levels
- Creating and modifying structural grids

Module 3: Working with Views

- Understanding the Project Browser
- Duplicating and organizing views
- View properties and visibility controls
- View templates
- Callouts, elevations, sections, and 3D section views

Module 4: Revit Families

- Understanding Revit families and components
- Working with structural component families
- Loading and placing components
- Using snaps and snap settings

Module 5: Basic Sketching and Modify Tools

- Draw tools and sketching aids
- Reference planes
- Editing and selecting elements
- Measuring and filtering selections
- Move, copy, rotate, mirror, and array tools
- Trim, extend, split, and offset tools

Section 2: Design Development

Module 6: Structural Columns

- Placing and modifying structural columns
- Copying and monitoring elements from linked models
- Coordination review tools

Module 7: Foundations

- Modeling and modifying structural walls
- Wall joins, profiles, and openings
- Adding wall footings
- Adding isolated footings
- Working with custom footing families

Module 8: Structural Framing

- Modeling beams and beam systems
- Adding bracing
- Modifying framing (slopes, offsets, justifications)
- Beam joins, coping, and cantilevers
- Adding trusses and attaching framing to roofs

Module 9: Structural Slabs

- Creating structural floors and foundation slabs
- Modifying slabs and slab edges
- Joining geometry
- Creating shaft openings

Module 10: Structural Reinforcement

- Reinforcement concepts and settings
- Rebar cover and visibility
- Sketching rebar shapes
- Multi-planar and free-form rebar
- Modifying, splicing, and coupling rebar
- Area, path, and fabric reinforcement

Section 3: Construction Documentation

Module 11: Creating Construction Documents

- Setting up sheets and title blocks
- Placing views on sheets
- Modifying views and view titles
- Printing and exporting sheets to PDF

Module 12: Working with Annotations

- Creating and modifying dimensions
- Setting constraints
- Working with text and text types
- Adding detail lines and symbols
- Creating legends

Module 13: Tags and Schedules

- Adding tags in plan, section, and 3D views
- Creating and formatting schedules
- Filtering and sorting schedule data
- Graphical column schedules

Module 14: Creating Details

- Setting up detail and drafting views
- Referencing drafting views
- Adding detail components and repeating details
- Annotating details with tags, filled regions, and linework

  Practices:

Appendices and Capstone Project

- Additional tools for design development
- Worksharing fundamentals
- Revision tracking and keynoting
- **Capstone Project:** Concrete Structure Modeling
