

# Autodesk Revit Architecture Essentials

## Course Description

The Autodesk Revit Architecture Essentials course offers a comprehensive introduction to building information modeling (BIM) using the Revit software. Participants will learn fundamental concepts, tools, and workflows essential for creating architectural designs, generating construction documents, and collaborating effectively in a BIM environment.

## Audience

This course is designed for architects, designers, engineers, construction professionals, and students who are new to Autodesk Revit Architecture or transitioning from other CAD software to Revit. No prior experience with Revit is required, making it suitable for beginners.

## Pre-requisite Knowledge/Skills

No prior experience with Revit is required. However, a basic understanding of architecture, construction, or design concepts is helpful. Participants should have access to Autodesk Revit software for hands-on practice.

## Course Objectives

- Upon completion of this course, participants will be able to:
- Understand the principles of BIM and its application in architectural design.
- Navigate the Revit interface proficiently.
- Create, modify, and manage architectural elements such as walls, floors, ceilings, and roofs.
- Generate and customize construction documents using Revit.
- Collaborate effectively with team members through BIM workflows.
- Demonstrate proficiency in essential Revit tools and workflows.

## Course Outline

### Module 1: Introduction to Revit

- 1.1 Workflow and BIM
  - BIM and Revit
  - Revit Terms
  - Revit and Construction Documents
- 1.2 Overview of the Interface
- 1.3 Opening Projects
  - Opening and Saving Projects

- Saving Projects
- 1.4 Zooming and Panning
- Viewing Commands
- Viewing in 3D...
- ViewCube
- Visual Styles
- Select and Identify Elements in a Project
- Practice 1a: Open and Review a Project
- Module Review Questions
- Command Summary

## **Module 2: Starting a Project**

- 2.1 Selecting a Project Template
- 2.2 Linking and Importing Files...
- Linking and Importing Raster Image Files
- Linking and Importing PDF Files
- 2.3 Linking in Revit Models.....
- 2.4: Modifying Imported/Linked Files
- Managing Links
- Modifying the Visibility of Imported/Linked Files
- Practice 2a: Start a Project and Link Files
- 2.5: Modifying Levels
- Setting Up Levels
- Creating Plan Views
- Practice 2b: Set Up Levels...
- 2.6: Modifying Grid Lines
- Creating Grids...
- Practice 2c: Add Grids...
- Module Review Questions
- Command Summary

## **Module 3: Working with Views**

- 3.1 Understand the Project Browser
- 3.2 Duplicating Views
- 3.3 View Control Bar
- Modify How the View Displays
- View Properties
- Hiding and Overriding Graphics

- Visibility/Graphic Overrides
- View Templates
- Practice 3a: Duplicate Views and Set the View Display
- 3.4 Working with Crop Regions
- Adding Callout Views
- Plan Regions...
- Practice 3b: Add Callout Views
- 3.5 Elevations
- Creating Elevations and Sections
- Sections
- Modifying Elevations and Sections
- 3D Section Views
- Practice 3c: Create Elevations and Sections
- Module Review Questions
- Command Summary

## **Module 4: Revit Families**

- 4.1 The Different Kinds of Families
- About Revit Families
- 4.2 Placing Components
- Loading Components
- Using Snaps
- Snap Overrides
- Snaps Settings...
- 4.3 Modifying Components
- 4.4 Families with Connectors
- Creating Additional Family Types in a Project
- Practice 4a: Load Components
- Module Review Questions
- Command Summary

## **Module 5: Basic Sketching and Modify Tools**

- Draw Tools
- Adding General Model Elements
- Drawing Aids

- Reference Planes
- Editing Building Model Elements
- Selecting Multiple Elements
- Measuring Tool
- Filtering Selection of Multiple Elements
- Practice 5a: Sketch and Edit Elements
- Moving and Copying Elements
- Working with Basic Modify Tools
- Rotating Elements
- Mirroring Elements
- Creating Linear and Radial Arrays
- Aligning Elements
- Practice 5b: Work with Basic Modify Tools
- Working with Additional Modify Tools
- Splitting Linear Elements
- Trimming and Extending
- Offsetting Elements
- Practice 5c: Work with Additional Modify Tools
- Module Review Questions
- Command Summary

## **Module 6: Adding Columns**

- 6.1 Modifying Columns
- Adding Columns
- 6.2 Adding Isolated Footings
- Practice 6a: Add Columns
- Module Review Questions
- Command Summary

## **Module 7: Modeling Walls**

- 7.1 Modeling Walls
- 7.2 Modifying Walls
- Wall Openings
- Editing Wall Profiles
- 7.3 Wall Profiles and Footings
- Adding Wall Footings
- Practice 7a: Model the Exterior Shell
- Practice 7b: Add Interior Walls

- Practice 7c: Model Additional Walls
- 7.4 Adding Room Elements
- Practice 7d: Add Room Elements
- Module Review Questions
- Command Summary

## **Module 8: Working with Doors and Windows**

- 8.1 About Doors and Windows
- 8.2 Creating Additional Door and Window Sizes
- Practice 8a: Add Doors and Windows
- Module Review Questions
- Command Summary

## **Module 9: Working with Curtain Walls**

- 9.1 Creating Curtain Walls
- 9.2 Adding Curtain Wall Grids
- Modifying Curtain Wall Grids
- Practice 9a: Work with Curtain Walls
- Module Review Questions

## **Module 10: Modeling Floors**

- 10.1 Modeling Floors
- Modifying Floors
- Joining Geometry
- Practice 10a: Model Floors
- Creating Shaft Openings
- Creating Sloped Floors
- Creating Multiple Slopes for Drainage
- Practice 10b: Create Shaft Openings and Sloped Floors
- Module Review Questions
- Command Summary