

FULL PROGRAM

1- Autodesk Revit 2019 Architecture Fundamentals Course Description

The objective of the Autodesk® Revit® 2019 Architecture: Fundamentals learning guide is to enable you to create a full 3D architectural project model including walls, doors, windows, components, floors, ceilings, roofs, stairs, the basic tools that the majority of architectural users need. This includes how to navigate the user interface and use the basic drawing, editing, and viewing tools. The final part of the course focuses on creating construction documents.

Intended Audience For This Autodesk Revit 2019 Architecture Fundamentals

» This course is for beginner users of Revit Architecture, Architects, General Engineer Designers and Interior Designers as well as any other designer and draftsmen who have knowledge of Architectural Design and understanding of construction technical documents, Residential and Commercial Design.

Autodesk Revit 2019 Architecture Fundamentals Course Objectives

- » Understanding the purpose of BIM and how it is applied in the Autodesk Revit software
- » Navigating the Autodesk Revit workspace and interface
- » Working with the basic sketching and modifying tools
- » Linking CAD and Revit files as the basis of a project
- » Creating Levels and Grids as datum elements for the model
- » Creating a 3D building model with walls, curtain walls, windows, and doors
- » Adding component features, such as furniture and equipment
- » Adding floors, ceilings, and roofs to the building model
- » Modeling stairs, railings, and ramps
- » Setting up sheets for plotting with text, dimensions, details, tags, and schedules
- » Creating details

Autodesk Revit Architecture Fundamentals Course

1. Introduction to BIM and Autodesk Revit
 - a. BIM and Autodesk Revit
 - b. Overview of the Interface
 - c. Starting Projects
 - d. Viewing Commands
 - Basic Sketching and Modify Tools
 - . Using General Sketching Tools
 - a. Editing Elements
 - b. Working with Basic Modify Tools
 - c. Working with Additional Modify Tools
 - Starting Architectural Projects
 - . Linking and Importing CAD Files
 - a. Linking in Revit Models
 - b. Setting Up Levels

- c. Creating Structural Grids
- d. Adding Columns
- Modeling Walls
- . Modeling Walls
- a. Modifying Walls
- b. Adding Room Elements
- Working with Doors and Windows
- . Inserting Doors and Windows
- a. Loading Door and Window Types from the Library
- b. Creating Additional Door and Window Sizes
- Working with Curtain Walls
- . Creating Curtain Walls
- a. Adding Curtain Grids
- b. Working with Curtain Wall Panels
- c. Attaching Mullions to Curtain Grids
- Working with Views
- . Setting the View Display
- a. Duplicating Views
- b. Adding Callout Views
- c. Creating Elevations and Sections
- Adding Components
- . Adding Components
- a. Modifying Components
- Modeling Floors
- . Modeling Floors
- a. Creating Shaft Openings
- b. Creating Sloped Floors
- Modeling Ceilings
- . Modeling Ceilings
- a. Adding Ceiling Fixtures
- b. Creating Ceiling Soffits
- Modeling Roofs
- . Modeling Roofs
- a. Creating Roofs by Footprint
- b. Establishing Work Planes
- c. Creating Roofs by Extrusion
- Modeling Stairs, Railings, and Ramps
- . Creating Component Stairs
- a. Modifying Component Stairs
- b. Working with Railings
- c. Creating Ramps
- Creating Construction Documents
- . Setting Up Sheets
- a. Placing and Modifying Views on Sheets
- b. Printing Sheets
- Annotating Construction Documents
- . Working with Dimensions

- a. Working With Text
- b. Adding Detail Lines and Symbols
- c. Creating Legends
 - Adding Tags and Schedules
 - Adding Tags1
- a. Working with Schedules
 - Creating Details
 - Setting Up Detail Views
- a. Adding Detail Components
- b. Annotating Details

2- Autodesk Revit Architecture: Site & Structural Design Course Description

The purpose is to design buildings: walls, doors, floors, roofs, and stairs. However, architects also frequently need to add site and structural information. The Autodesk Revit 2019 Architecture: Site and Structural Design guide covers the elements and tools that are used to create topographic surfaces for site work and add structural elements.

Autodesk Revit 2019 Architecture: Site And Structural Design Course Objectives

- » Create topographic surfaces
- » Add property lines and building pads
- » Modify toposurfaces with subregions, splitting surfaces and grading the regions
- » Annotate site plans and add site components
- » Work with Shared Coordinates

Autodesk Revit 2019 Architecture: Site And Structural Design Course

1. Site Design
 - a. Preparing a Project for Site Design
 1. Coordinate Systems in Autodesk Revit
 2. Sharing Coordinates
 3. Modifying Coordinates Individually
 - b. Creating Topographical Surfaces
 1. Editing Toposurfaces
 2. Site Settings
 - c. Adding Property Lines and Building Pads
 1. Creating Property Lines
 2. Creating Building Pads
 - d. Modifying Toposurfaces
 1. Creating Subregions
 2. Splitting Surfaces
 3. Grading a Site
 - e. Annotating Site Plans
 1. Labeling Contours
 2. Add Spot Dimensions
 - f. Adding Site Components

- g. Working with Shared Positioning
 - 1. Publishing and Acquiring Coordinates
 - 2. Selecting Locations
- Structural Tool
- Structural Basics
 - 1. Grids Review
 - 2. Adding Structural Columns
 - 3. Loading Structural Content
- a. Creating Foundations
 - 1. Adding Structural Walls
 - 2. Wall Foundations
 - 3. Individual Footings and Pile Caps
 - 4. Foundation Slabs and Structural Floors
- b. Modeling Structural Framing
 - 1. Beam Systems
 - 2. Adding Bracing

3- Autodesk Revit: BIM Management - Template & Family Creation Description

The objective of the Autodesk® Revit® 2019 BIM Management: Template and Family Creation course is to enable users who have worked with the software to expand their knowledge in setting up office standards with templates that include annotation styles, preset views, sheets, and schedules, as well as creating custom system, in-place, and component families.

Autodesk Revit BIM Management - Template & Family Creation Course Objectives

- » Create custom templates with annotation styles, title blocks, and custom element types.
- » Create schedules, including material takeoff schedules with formulas.
- » Create custom wall, roof, and floor types as well as MEP system families.
- » Set up a component family file with a parametric framework.
- » Create family geometry.
- » Create family types.
- » Modify the visibility of components and incorporate additional family items such as controls, MEP connectors, and nested components.
- » Create specific families, including in-place families, profiles, annotations, and parameters.

Autodesk Revit: BIM Management - Template And Family Creation Course

- 1. Creating Custom Templates
 - a. Preparing Project Templates
 - 1. Managing Settings
 - 2. Families in Templates
 - 3. Using Resource Projects
 - 4. Setting Default Template Files

- b. Customizing Annotation Types
 1. Creating Text Types
 2. Creating Dimension Types
 3. Loading Tags and Symbols
 4. Specifying View Tags
- c. Creating Title Blocks
 1. Adding Labels
 2. Adding Revision Schedules
 3. Adding Sheets to Project Templates
- d. Setting Up View Filters
- e. Adding View Templates
- Creating Schedules
- . Introduction to Schedules
 1. Importing and Exporting Schedules
- a. Creating Building Component Schedules
 1. Fields Tab
 2. Filter Tab
 3. Sorting/ Grouping Tab
 4. Formatting Tab
 5. Appearance Tab
 6. Schedule Properties
 7. Filtering Elements from Schedules
- b. Modifying Schedule Appearance
 1. Setting up Parameter Values
 2. Modifying Columns and Rows
 3. Modifying Titles and Headers
 4. Setting the Appearance
 5. Adding Image Fields and Images
- c. Additional Schedule Types
 1. Creating Key Schedules
 2. Creating Material Takeoff Schedules
- d. Advanced Schedule Options
 1. Conditional Formatting
 2. Embedded Schedules
- e. Working with Project Parameters
 1. Creating Fields from Formulas
 2. Combining Parameters
- Custom System Families
- . Creating Wall, Roof, Floor, and Ceiling Types
 1. Practice 3a Create an Architectural Wall Type
 2. Practice 3b Create a Structural Floor Type
- a. Vertically Compound Walls
 1. Practice 3c Create a Vertically Compound Wal
- b. Stacked and Embedded Walls
 1. Practice 3d Create Stacked and Embedded Walls
- c. Creating MEP System Families
- Component Family Concepts

- . Creating Component Families
 1. Preparing to Create Families
 2. Saving Custom Family Files
- a. Creating the Parametric Framework
 1. Adding Dimensions and Labels
 2. Flexing Geometry
 3. Creating and Modifying Parameter
- b. Creating Family Elements
 1. Creating 3D Elements
 2. Extrusions
 3. Blends
 4. Revolves
 5. Sweeps
 6. Swept Blends
 7. Aligning and Locking
- c. Creating Family Types
 1. Working with Families in Projects
- Advanced Family Techniques
- . Additional Tools for Families
 1. Adding Controls
 2. Setting Room Calculation Points
 3. Adding Connectors
 4. Adding Openings
 5. Adding Components
 6. Associating Family Parameters
- a. Visibility Display Settings
 1. Adding Lines
 2. Creating Masking Regions
- Additional Family Type
- . Creating 2D Familie
 1. Creating Detail Items
 2. Creating Profiles
 3. Creating Tags and Symbols
- a. Creating Line-based Families
- b. Creating In-Place Families
- c. Working with Shared Parameters
 1. Shared Parameters
- Creating Architectural Specific Families
- . Creating Custom Doors and Windows
- a. Creating Angled Cornices and Copings
 1. Creating Fascias
- b. Creating Custom Railings
 1. Creating Rail Profiles
 2. Creating Baluster, Post, and Panel Families
 3. Creating Railing Types
- Creating MEP Specific Families
- Creating Structural Specific Families

4- Autodesk Revit 2019: Collaboration Tools Course Description

The objective of the Autodesk Revit 2019: Collaboration Tools course is to enable students, who have a basic knowledge of Autodesk Revit, to increase their productivity while working with other people on a team, either in the same firm or other firms as well as with other disciplines. It also covers linking Autodesk Revit files and linking or importing other CAD files. Practices are available for each of the primary disciplines covered by Autodesk Revit: architecture, MEP, and structure.

Autodesk Revit 2019: Collaboration Tools Course Objectives

- » Set up project phasing
- » Create and display a variety of design options
- » Use groups
- » Link Autodesk Revit files
- » Use multi-discipline coordination including Copy/Monitor and Coordination Review
- » Import and export vector and raster files including exporting Autodesk Revit models for energy analysis
- » Understand, use, and setup worksets

Autodesk Revit: Collaboration Tools Course

1. Phasing, Design Options, and Groups
 - a. Applying Project Phasing
 1. Phases and Views
 2. Creating Phases
 - b. Using Design Options
 1. Viewing Design Options
 - c. Working with Groups
 1. Creating Groups
 2. Using Groups in a Project
 3. Modifying Groups
 4. Groups in Other Projects
- Linking Models
 - . Linking Models
 1. Managing Links
 2. Linked Model Properties
 - a. Views and Linked Models
 1. Preparing Views for Other Disciplines
 2. Display Settings in Linked Models
 - b. Copying and Monitoring Elements
 1. Copy/Monitor Options
 2. Working with Copy/Monitor Elements
 - c. Coordinating Linked Projects
 1. Coordination Review
 2. Reconcile Hosting
 3. Interference Checking

- Importing and Exporting
- . Importing and Linking Vector Files
 - 1. Working with Other File Formats
- a. Modifying Imported Files
 - 1. Arranging Imported Files
 - 2. Modifying Type Properties
 - 3. Querying Imported Files
 - 4. Deleting Layers
 - 5. Exploding Imported Files
 - 6. Modifying the Visibility of Imported Files
- b. Importing Raster Image Files
 - 1. Editing Raster Files
- c. Exporting Files
 - 1. Exporting CAD Format Files
 - 2. Exporting to DWF
- d. Exporting for Energy Analysis
 - 1. Exporting to gbXML
- Project Team Collaboration
- . Introduction to Worksets
 - 1. Workset Definitions
- a. Opening and Saving Workset-Related Projects
 - 1. Saving Workset Related Files
- b. Working in Workset-Related Projects
 - 1. Editing Elements in Worksets
 - 2. Permissions to Edit
 - 3. Relinquishing Worksets
 - 4. Ending the Day Using Worksets
- c. Visibility and Display Options with Worksharing
 - 1. Controlling Workset Visibility
 - 2. Worksharing Display Options
- d. Worksharing and Linked Models
 - 1. Managing Links in Local Files
 - 2. Managing Worksets in Linked Models
- e. Setting Up Worksets
 - 1. Placing Elements in Worksets
 - 2. Creating the Central File
 - 3. Other Workset Types
- f. Best Practices for Worksets
 - 1. Working with Company Policies
 - 2. Tips for Using Worksets
 - 3. Tips for Creating Worksets