

COURSE CIRRCULM

REVIT ARCHITECTURE AND FUNDAMENTALS OF

BUILDING INFORMATION MODELING

MODE: ONLINE

DURATION : 2 MONTHS

Each week will consist of 3 days of study, with each day involving 3 hours of learning—comprising lectures, software training, and practical assignments.

Week 1: Fundamentals of Revit - I

Total Weekly Study Duration: 09 hours

1. Understanding how Revit works, fundamentals of the software, Revit views and interface
2. Revit file formats, introduction to templates, properties and project browser
3. Hierarchy of Revit native elements, families and their types, Revit options
4. How to start a project? (Best Practices)
5. Understanding Revit datum elements (Levels) and Revit coordinate systems
6. Understanding Revit Workplane
7. Basic Wall Modeling: Directions and controlling parameters
8. Concept of LOD (Level of Detail)
9. Walls Modeling: Draw, pick, offset and wall modeling options
10. Element reference levels

Week 2: Fundamentals of Modeling in Revit - II

Total Weekly Study Duration: 09 hours

1. Selection, editing and Modifying elements (Walls) and snapping
2. Understanding Modify tools (Trim, extend, array, etc.)
3. Revit element ID
4. Revit review warnings and types
5. Revit shortcuts
6. Understanding Type and Instance Parameters
7. Edit type properties and duplicate types
8. Revit Project parameters, shared parameters and Global parameters
9. Visual styles and Detail levels
10. Graphic Display options
11. Crop view and Sections



Week 3: Architectural Modeling and Model Management -I

Total Weekly Study Duration: 09 hours

1. Wall edit type
2. Wall line location
3. Wall edit profile
4. Wall sweep and Reveal
5. Wall joints
6. Wall types: Curtain walls and Stack Walls
7. Curtain Wall systems and Mullions Wall based families: Doors and Windows (With types)

Week 4: Architectural Modeling and Model Management - II

Total Weekly Study Duration: 09 hours

1. Floors and Ceilings (And their types)
2. Roofs (by footprint)
3. Columns (Architectural)
4. Components/Furniture
5. BIM content online and Autodesk Library
6. Visibility Graphics Overrides
7. Temporary Hide/isolate
8. Extents and View Range
9. Underlay
10. Selection Set

Week 5: Architectural Modeling – Circulation and Structure

Total Weekly Study Duration: 09 hours

1. Openings
2. Railings
3. Ramps
4. Staircases
5. Datum elements: Grids
6. Structural Columns
7. Beams
8. Foundations and footings
9. Structural Slabs

Week 6: Architectural Modeling, Graphics and Model Management - III

Total Weekly Study Duration: 09 hours

1. Rooms
2. Group
3. Displace elements
4. Camera and 3D view options
5. Section Box
6. Create Plan views and elevations
7. Thin/Thick lines
8. View Templates
9. Temporary view properties
10. Materials and Patterns
11. Object Styles
12. Additional Settings (Line styles, weights, etc.)

Week 7: Model Management, Collaboration and Coordination - I

Total Weekly Study Duration: 09 hours

1. Revit Filters
2. Phasing
3. Schedules and Material take-off
4. Import and Link files: CAD and other formats
5. Revit Links
6. Exporting views
7. Manage Links
8. Copy Monitor

Week 8: Visualization and Architectural Modeling – Massing and Site

Total Weekly Study Duration: 09 hours

1. Topo-surface (2023)
2. Building pad, sub-region and all site settings
3. Topo-solid (2025)
4. Topo-surface/topo-solids from import instance
5. Site Design: Surface finishes, levels, roads, plantation, other site elements
6. Massing (In-place and Conceptual mass family)
7. Massing through extrusion, sweep, blend, rotate and swept blend
8. Modifying massing
9. Elements by face
10. Roof by extrusion
11. Revit Rendering: Local and Cloud
12. Walkthrough
13. Rendering beyond Revit: Twinmotion

Week 9: Advanced Architectural Modeling, systems and Documentation

Total Weekly Study Duration: 09 hours

1. Detailed Wall Sections: Modify vertical section
2. Wall Skirtings and other details
3. Systems Modeling: MEP
4. Analyse (Analytical Modeling)
5. Sun Path and Solar Studies
6. Design Options
7. Parametric Modeling: Adaptive Components
8. Curtain system-based Modeling
9. Annotate: Dimensions, texts and detail lines
10. Scale and Linework
11. Callouts, Keynotes and Tags
12. Legends and Symbols
13. Detail and Drafting
14. Sheet composition and Management
15. Sheet plotting/publishing/Export

Week 10: Content Creation

Total Weekly Study Duration: 09 hours

1. Titleblock family
2. Texts and Labels
3. Family Templates - 2D
4. Creation of 2D profile families
5. Family Templates - 3D
6. Family Category and Parameters
7. Creation of basic 3D families
8. Family Types
9. Door families, Lighting and other families
10. Smart families, line-based, etc.
11. Complex parametric Families
12. Conditions/rule-based Parameters