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# **UNITED CADD SERVICES**

# **REVIT Architecture Course Syllabus**

(Duration 40 Hours)

- Introduction to CAD, 3D &BIM Concept
- REVIT (**REV**iseInstan**T**ly) Architecture user interface: Tabs & Menus, Panels, Type Selector, Options Bar, Project Browser, Drawing Area, Status Bar
- Opening a Project
- · Creating Elements like Wall, Window, Door etc,
- Modifying an Element, Moving, Rotating, Mirroring, Copying, Cutting& Pasting, Arraying, Trimming, Extending, Splitting, Offsetting
- · Grouping & Aligning Elements
- Project Views : Elevations, Sections, 3D views
- Adding Floor, Ceiling, Stair, Railings, Ramps, Columns, Opening, Roof, Curtain wall, Model text, Room & Computing Area and Volume
- Cutting openings in walls, floors, roofs and ceilings
- Placing Interior components like furnitures, lights & fixtures
- Creation of toposurface through points, Property line
- Creation of building pad (base of building) in a toposurface
- Insertion of site components like trees, parking space in a toposurface
- Massing studies to explore designing ideas and conceptualized shapes to build a Building model
- Annotation & Detailing
- Creating Levels to define floors of a building model
- Working with Construction documents: Adding views to a sheet, title block, Schedules, Drawing list, revisions, revision cloud
- Applying materials, Lights, Cameras, Backgrounds
- Rendering & Walkthrough Techniques
- Setting Backgrounds for the scene

# **REVIT Structure Course Details**

(Duration 30 Hours)

Learn how to create accurate foundation plans and framing plans, with details such as brace frames and trusses, with Revit Structure. Starting with referencing an architectural model, learn how to create grids, setup views, add foundations, rebar, and framing, and create slopes, slabs, trusses, elevator pits, etc. This course caters to members having experience/knowledge with Revit Architecture & basic knowledge of structural engineering.

- Linking architectural model
- Creating levels and view templates
- Adding foundation walls, footings, and slabs
- Creating a steel frame
- Adding floors and slabs
- Reinforcing
- Adding steel brace frames
- Creating stairs and ramps
- Annotating a drawing
- Creating schedules
- Adding trusses

## **REVIT MEP Course Details**

(Duration 60 Hours)

In the construction world, MEP stands for "**Mechanical, Electrical and Plumbing**" MEP engineering is the science and art of planning, designing and managing the MEP systems of a building. See below an example of the unity between mechanical, electrical and plumbing



Pre\_requisite for learning Revit MEP: Basic Knowledge of Revit Architecture and knowledge of the specific trade in Mechanical, Electrical and Plumbing.

### **Starting a MEP Project**

- Linking Architectural & Structural models
- Copying Levels from Architectural & Structural models & Creating new floor plans & ceiling plans from them
- View setting for the floor plan

#### Mechanical

- Adding Mechanical equipment for HVAC
- Adding Air terminal Diffusers
- Adding Supply Ducts & Return Ducts
- Adding Accessories & Fittings
- Resizing Ducts & Pipes
- Tagging Ducts, equipment, accessories & fittings
- Adding Spaces & Zones and analyzing Heating & Cooling loads

#### **Electrical**

- Adding receptacle
- Adding Panel for distribution and create panel schedule
- Adding room space & zone
- Creating circuits for receptacles
- Adding lighting & fixtures
- Adding switches
- Creating a lighting circuit & switch circuit
- Creating and labeling a wiring plan
- Creating conduits to levels
- Adding cable tray

### **Plumbing**

- Creating Plumbing views
- Adding Plumbing Fixtures
- Adding Sloping & PVC Sanitary pipes
- Adding Equipment like pumps, boilers, chillers, tanks etc.
- Adding piping & insulations
- Creating Piping system like Cold water, Hot water etc.
- Adding Pipe accessories like Valves

- Tagging plumbing items
- Showing Plumbing system browser

### **Fire Protection**

- Creating a Sprinkler view
- Adding Sprinklers and Sprinkler pipes
- Modeling the main pipe & branches
- Adding pipe accessories
- Tagging Sprinkler items
- Adding speciality items
- Fire alarm circuits
- Creating a Fire alarm view
- Sprinkler tags & Schedules