



REVIT MECHANICAL

BIM Modelling



Multi Axis Innovations
Innovative solutions to aec Industry

MULTI AXIS INNOVATIONS
RAJKUMAR ROAD, BANGALORE

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Session 1

Basic of BIM

- Introduction to BIM
- Create a project file from template
- Understanding of user interface
- Create a simple room with four walls
- Place floor, roof for room
- Place door and windows
- Create section and elevation views
- Place all views in defaults sheet
- Make changes in door positions
- Delete few doors and see change in schedule and views

Session 2

View model

- Change scales and duplicate views
- Duplicate of views
- Detail view creation
- Visual style view creation
- Place Section views
- Place Elevation views
- Using view cube create different views
- Understand Navigation panel
- Use Section box for creating view
- Hide and Unhide elements
- Temporary hide elements
- Shortcuts in Revit

Session 3

Managing Views and Properties

- **Create Duplicate Views**
- **Duplicate view as dependent**
- **Create Match line**
- **Add Reference to views**
- **Create Call out view**
- **Place in Sheets**
- **View Crop Properties**
- **Visual graphics**
- **Filters in view**
- **View range**
- **Plan region view**
- **Scope box properties**
- **Modifying view controls**
- **Discipline**
- **Under Lay of View**
- **Selection of Objects**
- **Hide and Unhide Elements**

Session 4

Link Arch Model, Copy Monitor

- **Create Mechanical/Electrical file From template**
- **Link Arch Model**
- **Use different options for linking**
- **Copy monitor levels and grids**
- **Room bounding Option**
- **Understand Phase in Linking**
- **Tag Room Names**
- **Create Master Elevation and Plan Views**

- **Understand Co-ordination Review**
- **Link Unload/Reload**
- **Reload From Option**

Session 5

Place Ducts

- **Place Ducts**
- **Place Mechanical Equipment**
- **Change Different type of Ducts**
- **Add Air terminals**
- **Add Flex Ducts**
- **Connect duct with equipment**
- **Change the equipment size as mentioned**
- **Width,Height and Offset of Duct**
- **Justification in ducts**
- **Bottom of duct and offset**
- **Draw ducts in section view**
- **Check the disconnections in ducting**
- **Use Different type of Ducts**

Session 6

Duct Fitting,Duct Accessory

- **Setup the routing preference of duct in edit type**
- **Add air terminals(supply and return)**
- **Adding and Modifying Fittings**
- **Place duct accessories**
- **Work with duct fitting control**
- **Create Legend of Duct Properties**
- **Mechanical Settings**
- **Filter for Mechanical System**

- **Schedule for Mechanical System**
- **LOD 400 Connections**
- **Different Duct Fittings**
- **Change Duct Offset and Routing**

Session 7

Place Pipes

- **Place Pipes**
- **Place Plumbing Equipment**
- **Place Pipe Fittings and Pipe Accessories**
- **Connect with Equipment**
- **Pipe Instance properties**
- **Pipe Type Properties**
- **Placing Slope in Pipes**
- **Changing Diameter and offset in Pipes**
- **Tag by category, Room tag and tag all**
- **Spot elevation/Spot Co-ordinate/Spot Slope**
- **Place text, justification, find and replace**
- **Leaders**

Session 8

Fire System and Sprinkler

- **Create Fire Pipe**
- **Add Sprinklers**
- **Connect Sprinklers with Pipe**
- **Modifying Sprinklers type**
- **Sprinkler Type Properties**
- **Sprinkler instance Properties**
- **Change Sprinkler Height**
- **Give sprinkler offset**

- Duplicate Fire System
- Check Fire Layout System Browser
- Checking Systems for Disconnection
- Adding Connectors and modifying connectors

Session 9

Modify Elements, Selection and View Elements in Link

- Paint Element
- Rotate, Move & Scale Elements
- Polar and Rectangular Array Elements
- Align, Split, Joint Elements
- Manage Selection of elements
- Viewing Elements in Linked Files
- Selection set of Elements
- Select and Un-Select Elements in Link
- Use of Create similar
- Clip board Options Paste from clipboard, align to selected levels, align to selected views

Session 10

Annotation

- Tag by category, Room tag and tag all
- Spot elevation/Spot Co-ordinate/Spot Slope
- Place text, justification, find and replace
- Leaders
- Dimension Linear/Radial/Diameter Elements
- Detail line /Regions
- Revision Cloud
- Key notes
- Title block edit

- **Symbols**
- **Custom Title Book**

Session 11

Collaborate

- **Create Worksets**
- **Create Central File**
- **Backup of Central File**
- **History of Central File**
- **Copy monitor Elements**
- **Co-ordination Review**
- **Worksets assign to Elements**
- **Clash Detection With in File**
- **Clash Detection With, Linked Elements**
- **Save Views with Worksets**
- **Worksets options**

Session 12

Insert and Link

- **Insert AutoCAD File**
- **Insert Revit File**
- **Understand Options of insert Revit**
- **Add images in project**
- **Manage Link Files**
- **Manage Decal**

Session 13

Manage Models

- **Topics**

- **Transfer properties from other files**
- **Object Styles**
- **Line Style/Fill pattern Create and Manage**
- **Project Information and Parameters**
- **Shared Parameters**
- **Project Location and Properties**
- **Element ID and Search**
- **Warnings in Model**
- **Macros in Revit**
- **Units, Snap in Model**
- **Project Parameters**
- **Material**

Session 14

Insert and Link

- **Insert AutoCAD File**
- **Insert Revit File**
- **Understand Options of insert Revit**
- **Add images in project**
- **Manage Link Files**
- **Manage Decal**
- **Insert views from other Revit files**
- **Insert 2D Elements from other files**

Session 15

Duct Systems and Mechanical Settings

- **System Browser**
- **Graphic Overrides**
- **Checking Systems**
- **System Inspector**
- **Duct Sizing**

Create Schedules

- **Add Filed in Schedule**
- **Use Sorting and Grouping in schedule**
- **Use Filter in Schedule**
- **Format Field in schedule**
- **Calculate Totals**
- **Format header and schedule lines/Fonts**
- **Phases in Schedule**
- **Schedule from Linked file**

Session 16

Families

- **Loading of Families**
- **View Families in Project browser**
- **Types of Families**
- **Editing annotation family**
- **Create model in place family**
- **Elements of Family**
- **Family Category and Parameters**
- **List of websites providing Revit families**
- **Modelling in Family using Extrusion Blend,Resolve, Sweep**
- **Void in Family**
- **Visibility in Family**
- **Reference plane and assigning Parameters**
- **Create Symbolic lines Family**

Session 17

Presentation of Documents and Printing

- **Align grid**
- **Guide grid**
- **Consistence in line styles**
- **Using view templates**

- **Printing options**
- **Saving print sets**
- **Margins in Sheets**
- **Title on Sheet Value**
- **View List**
- **Sheet List**

Session 18

View elements in Link and View Template

- **View elements according to Host**
- **View elements according to link**
- **View elements according to custom**
- **Worksets for viewing model**
- **Using Filters List in View**
- **Using View Template and Assign**
- **Managing Starting View**
- **Project Browser Management**
- **Title on Sheet View**
- **Managing View Title Family**

SAMPLE PROJECT

LOD 100 Project

- **Single Floor Project With 7 Rooms of total 200 Square meter**
- **Project Should have all Family name and View names**
- **Warning Should be minimum**
- **All the Sheet view should be places in Sheet**
- **Create Schedule for Wall , Door and Window with Count**
- **Project Information to be filled**
- **All the Floor plan should be dimensioned and tagging**
- **Develop Four Elevations and Dimension them**
- **Develop two Sections of the Building**
- **Show 3D View for all the Rooms**
- **Minimum 10 Sheets in the project**