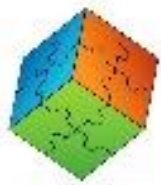




REVIT STRUCTURE

BIM Modelling



MULTI AXIS INNOVATIONS
RAJKUMAR ROAD, BANGALORE

Multi Axis Innovations
Innovative solutions to aec Industry

Contents

Session 1	3
Basic of BIM	3
Session 2	3
View model.....	3
Session 3	4
Managing Views and Properties	4
Session 4	4
Build elements: Wall, Door, Window and Datum Elements.....	4
Session 5	5
Floor, Roof and Ceiling	5
Session 6	5
Curtain Wall, Stair, Ramp, Railing and Baluster:.....	5
Session 7	6
Session 8	7
Modify Elements, Selection and View Elements in Link	7
Session 9	7
Annotation.....	7
Session 10	8
Collaborate	8
Session 11	8
Insert and Link	8
Session 12	8
Manage Models.....	8
Session 13	9
Massing, Site Elements and Project Location.....	9
Session 14	10
Material and render	10
Basic of Massing.....	10
Session 15	10
Create Schedules	10
Session 16	10
Families.....	10
Presentation of Documents and Printing	11
Session 17	11
View elements in Link and View Template	11

Session 18 12
SAMPLE PROJECT..... 12
LOD 100 Project..... 12

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

Build elements: Wall, Door, Window and Datum Elements

- **Place Walls**
- **Draw grids**
- **Draw levels and modify Existing levels**
- **Reference Planes**
- **Wall Instance Properties**
- **Wall Type Properties**
- **Wall Attach and Detach**

- **Wall Location line**
- **Change Wall type**
- **Adding wall layers**
- **Joining walls**
- **Stacked Walls**
- **Wall with dimensions**
- **Door type and Instance properties**
- **Window type and Instance properties**
- **Wall Sweep and reveals**

Session 5

Floor, Roof and Ceiling

- **Basic floor creation by sketch**
- **Editing floor Boundary**
- **Editing floor layers**
- **Floor properties**
- **Basic Ceiling creation by sketch**
- **Adjusting Ceiling Tiles**
- **Roof Creation**
- **Sloped Roof creation**
- **Roof by Extrusion**
- **Adding slope for Ceiling and floor**
- **Floor opening and Shaft**
- **Dormer Roof**
- **Managing Hatch for Ceiling Patter**

Session 6

Curtain Wall, Stair, Ramp, Railing and Baluster:

- **Curtain Wall place grid and mullion**
- **Curtain wall grid editing**

- **Curtain wall profile editing**
- **Add monolithic stairs by sketch method**
- **Different type of stairs**
- **Stair properties**
- **Thread, riser and stair supports**
- **Add railing to host**
- **Modifying Railing**
- **Place and modify ramp**
- **Baluster properties**
- **Using profiles in Railing and Baluster Assignment**
- **Draw Stair between two levels**
- **Change landing positions**
- **Add Railing to Stairs**
- **Model Ramp between two Levels**

Session 7

Column, Beam, Truss

- **Column, Beam, Truss**
- **Structural Footings**
- **Different types of Footing**
- **Structural Column Properties**
- **Structural beam Properties**
- **Structural Stress, Beam System**
- **Structural Joins**
- **Openings in Structural Elements**
- **Placing Rebar**
- **Rebar Shapes**
- **Bar Bending Schedule**
- **Connections in Rebar**

Session 8

Modify Elements, Selection and View Elements in Link

- **Pin & Unpin Elements**
- **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**
- **Modify Select Options**

Session 9

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 10

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 11

Insert and Link

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

Session 12

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 13

Massing, Site Elements and Project Location

- **Basic of Massing**
- **Curtain System in Massing**
- **Create Floor, Wall and roof from Mass**
- **Top Surface and Building Pad**
- **Site Components**
- **Sub Region**
- **Split and Merge Region**
- **Project Location**
- **Project Base point**
- **Survey Point**
- **True north and Project North**

Session 14

Material and render

Basic of Massing

- **Curtain System in Massing**
- **Create Floor, Wall and roof from Mass**
- **Top Surface and Building Pad**
- **Site Components**
- **Sub Region**
- **Split and Merge Region**
- **Project Location**
- **Project Base point**
- **Survey Point**
- **True north and Project**

Session 15

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**

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 17

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**

Session 18

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**