



***MECHANICAL,
ELECTRICAL,
PLUMBING &
FIRE PROTECTION***

BUILDING INFORMATION MODELING

MEPF Syllabus

Building Information Modeling

- BIM Introduction

1.Introduction

BIM Project Setup and Modeling in Revit

- General Project Setup
- Visibility Graphics
- Starting a Project
- Project Coordinate System
- Building Components
- Family Creation

- 1.Revit software user interface and File formates
- 2.Modification Tools
- 3.Central File creation & Worksets
- 4.Import CAD & Link CAD
- 5.Link Revit Models
- 6.Copy and set up monitoring
- 7.View Filters and View Templates
- 8.View Range
- 9.Drawing aid
- 10.Projects unit
- 11.Levels & Grids
- 12.Internal Orgin
- 13.Project Base points
- 14.Survey Points
- 15.Loading Component
- 16.Placing Component
- 17.Modifiyng parameter
- 18.Managing views
- 19.Floor plan view
- 20.Ceiling plan view
- 21.Cutting a paln view
- 22.Plan Region
- 23.Introduction
- 24.Extrusion
- 25.Blend
- 26.Revolve
- 27.Sweep
- 28.Swept Blend
- 29.Void
- 30.Material Creation
- 31.Types of Parameters
- 32.Adding Parameters
- 33.Lighting Fixture and Power Sockets
- 34.Air terminal with plenum box
- 35.Air Terminal Tag
- 36.Duct Elbow

Mechanical

- Heating
- Ventilation
- Air Conditioning

- 1.Creating Duct Systems
- 2.Splitting Duct Systems
- 3.Duct Settings
4. Modeling Ductwork
- 5.Placing Duct Placeholders
- 6.Defining Duct Routing Preferences
- 7.Sizing Ductwork
- 8.Adding Duct Accessories
- 9.Adding Duct Insulation
- 10.Modifying Ductwork and Fittings

Plumbing

- Piping
- Plumbing Settings

1. Pipe Settings
2. Modeling Piping
3. Placing Pipe Placeholders
4. Defining Pipe Routing Preferences
5. Adding Pipe Accessories
6. Modifying Piping and Fittings
7. Adding Pipe Insulation
8. Creating Parallel Pipes
9. Modeling Sloped Pipe
10. Adding Plumbing Fixtures
11. Using Copy and Monitor for Plumbing Fixtures
12. Placing Pipe Connectors
13. Creating Plumbing Piping Systems
14. Splitting Piping Systems
15. Creating Piping System Types
16. Working with Piping Components
17. Laying Out Plumbing Systems o s o o
18. Creating Risers and Underfloor Views
19. Understanding Plumbing Scheduling
20. Understanding Plumbing Tags

Electrical

- Electrical Settings
- Conduit and Fittings
- Cable Tray& Fittings
- Lighting
- Circuiting and Wiring
- Panels and Schedules
- Phasing

1. Voltage definitions
2. Distribution systems
3. Load classifications
4. Demand factors
5. Hidden line settings
6. Wiring types
7. Circuit loads
8. Panel schedule templates
9. Fitting angles
10. Draw a conduit and parallel conduit
11. Modification of Conduit
12. Bend radius of Conduit
13. Split Conduit
14. Upgrading Fittings of Conduit
15. Justification settings of Conduits
16. Connection of conduit to equipment
17. Conduit standards and Sizes
18. Adding and Modifying Conduits Settings
19. Types of cable tray
20. Modification of Tray
21. Bend radius of cable tray
22. Split Cable tray
23. Upgrading Fittings of Cable tray
24. Justification settings of cable tray
25. Adding and Modifying cable tray sizes
26. Lighting Fixtures and Photometric Data
27. Placing Lighting Fixtures - Reference Planes
28. Placing Unhosted Lighting Fixtures
29. Emergency Lighting Fixtures
30. Mounting Parameters
31. Creating and Naming Circuits
32. Wiring Settings
33. Wiring Circuits
34. hecking Circuits
35. Creating Power Circuits
36. Panel Naming
37. Creating Panel Schedules
38. Editing Panel Schedule Template Options
39. Create Phases
40. Create View for Phases
41. Phase Filter
42. Graphic Overrides

Fire Fighting

- 1.Types of Fire Fighting Systems
- 2.Sprinkler systems
- 3.Placing Fire Protection Components in Revit
- 4.Routing Fire Protection Pipes
- 5.Fire-Alarm Devices & Control Panels
- 6.Creating & Modifying Custom Sprinkler Families
- 7.Design a complete fire protection system

BIM Construction Documentation

- Construction Document
- Dimension and Annotation
- Text and Tag
- Areas
- Schedules

1. Title Block
2. Adding Views to a Sheet
3. Modifying a View on a Sheet
- 4.Sections and Callouts
- 5.Adding Revisions and Printing sheets
6. Temporary Dimensions
7. Permanent Dimensions
- 8.Applying and Removing Constraints
- 9.Callout views
10. Creating Details
11. Inserting a Detail Component
12. Repeating Detail
- 13.Area Schemes
- 14.Area Plans
- 15.Area Boundaries
- 16.Area Tags
- 17.Color Schemes
- 18.Legend Views
- 19.Keynotes
20. Introduction
- 21.Room Schedule
- 22.Creating Schedule and Quantities
- 23.Exporting Schedule
24. Modifying Schedules
25. Material Takeoff

Rendering and Walkthrough

- 1.Lights
- 2.Rendering
- 3.Walkthrough

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