Autodesk Revit MEP 2015

Course Details

- 45 Days of training
- Live projects of gulf
- Exercise files included
- Instructor: Latheef patel

Course Description

Autodesk® Revit® MEP 2015 teaches users about the key building information modeling (BIM) software features and functions used by mechanical, electrical and plumbing engineers. Lessons and demonstrations cover basic and advanced topics including Revit fundamentals, modeling essentials, design analysis, family creation and managing projects.

Lesson Outline

Getting Started

- Starting Revit
- Starting Revit for the First Time
- Opening a Project File
- Identifying the User Interface Components
- Managing User Interface Components
- Understanding the Ribbon
- Customizing the User Interface
- Understanding the Quick Access Toolbar
- Understanding the Options Bar
- Understanding the Application Menu
- Understanding the InfoCenter Toolbar
- Using the Revit App Store
- Understanding the Project Browser
- Understanding the Properties Palette
- Understanding the Type Selector
- Understanding the Status Bar
- Understanding the Drawing Area
- Understanding the View Controls
- Understanding the Navigation Bar
- Understanding the ViewCube
- Understanding the Steering Wheels
- Understanding the Options Dialog
- Managing File and Template Locations
- Managing the Places List
- Starting a New Project from Recent Files
- Starting a New Project from the Application Menu
- Understanding the Units and Snaps
- Using the Mouse
- Using the Keyboard
- Customizing Keyboard Shortcuts
- Managing Windows
- Understanding Macros
- Saving and Closing Files
- Closing the Application

Revit Fundamentals

- Understanding BIM
- Understanding the Difference between BIM and CAD
- Understanding Revit Concepts

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- Working with the Different Versions of Revit
- Understanding Bidirectional Associativity
- Recognizing Parametric Relationships
- Understanding Families
- Placing Model Elements
- Placing View-Specific Elements
- Working with Datum Elements
- Placing Elements from the Project Browser
- Loading Families and Using Type Catalogs
- Finding Families Using Autodesk Seek
- Editing Families within a Project

Basic Modify and Reporting Tools

- Selecting Objects
- Modifying Selection Settings
- Saving Selection Sets
- Copying and Moving Objects
- Rotating Objects
- Creating Linear Arrays
- Creating Radial Arrays
- Scaling Objects
- Mirroring Objects
- Using the Clipboard for Copy and Paste
- Splitting Objects
- Creating Elements Consistently with Match Type Properties and Create Similar
- Aligning Objects
- Trimming and Extending Objects
- Offsetting Objects
- Pinning Objects in Place
- Deleting Objects
- Measuring versus Dimensioning Objects
- Understanding Element IDs
- Understanding and Reviewing Warning Messages
- Reporting and Displaying Coordinates

Modeling Essentials

- Understanding Revit MEP Workflow
- Linking an Architectural Model
- Creating and Modifying Levels
- Controlling Datum Visibility
- Limiting Visibility of Datum Using Scope Boxes
- Understanding Spaces
- Placing Spaces
- Placing Space Separators
- Understanding HVAC Zones
- Creating HVAC Zones
- Setting and Showing the Active Work Plane
- Creating Reference Planes
- Modeling Accurately with Length and Angle Snap Increments
- Working with Object Snaps
- Using Visualization Aids When Working in 3D Views
- Coordinating Between Mechanical and Electrical Disciplines

Design Analysis

- Enabling the Sun Path Diagram
- Creating a Solar Study
- Controlling Construction Types
- Understanding Building and Space Type Settings
- Understanding Energy Settings
- Performing an Energy Analysis with a Mass Model
- Performing an Energy Analysis with Building Elements
- Calculating Heating and Cooling Loads
- Exporting to gbXML

HVAC Airside

- Understanding HVAC Airside Workflow
- Adding Mechanical Equipment
- Placing Air Terminals
- Placing Air Terminals on Ducts
- Creating Duct Systems
- Splitting Duct Systems
- Understanding Duct Settings
- Modeling Ductwork
- Placing Duct Placeholders
- Defining Duct Routing Preferences
- Generating Duct Layouts
- Sizing Ductwork
- Adding Duct Accessories
- Modifying Ductwork and Fittings
- Adding Duct Insulation
- Analyzing Duct Systems
- Checking Duct Systems
- Creating Duct Pressure Loss Reports
- Understanding HVAC Airside Scheduling
- Understanding HVAC Airside Tags
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General Piping

- Understanding Pipe Settings
- Modeling Piping
- Placing Pipe Placeholders
- Defining Pipe Routing Preferences
- Adding Pipe Accessories
- Modifying Piping and Fittings
- Adding Pipe Insulation
- Creating Parallel Pipes
- Modeling Sloped Pipe

HVAC Piping

- Understanding HVAC Piping Workflow
- Creating Piping Systems
- Generating Pipe Layouts
- Sizing Pipe
- Analyzing Piping Systems
- Checking Piping Systems
- Creating Pipe Pressure Loss Reports
- Understanding HVAC Piping Tags

Plumbing

- Understanding Plumbing Workflow
- Adding Plumbing Fixtures
- Using Copy and Monitor for Plumbing Fixtures
- Placing Pipe Connectors
- Creating Plumbing Piping Systems
- Splitting Piping Systems
- Creating Piping System Types
- Working with Piping Components
- Laying Out Plumbing Systems
- Creating Risers and Underfloor Views
- Understanding Plumbing Scheduling
- Understanding Plumbing Tags

Electrical

- Understanding Electrical Settings
- Specifying Demand Factors and Load Classifications
- Understanding Cable Tray and Conduit Settings
- Modeling Cable Trays
- Modeling Conduit
- Creating Parallel Conduits
- Adding Electrical Devices
- Creating Low Voltage Systems

Power

- Understanding Power Workflow
- Adding Electrical Equipment
- Placing Electrical Fixtures
- Creating Circuits
- Understanding Wiring Settings
- Wiring Circuits
- Connecting Mechanical Equipment and Other Power Loads
- Checking Circuits
- Creating Panel Schedules
- Creating a Panel Schedule Template

Lighting

- Understanding Lighting Workflow
- Understanding Lighting Fixtures and Photometric Data
- Placing Lighting Fixtures
- Using Copy and Monitor for Lighting Fixtures
- Adding Lighting Switches
- Creating a Switch System
- Powering Lighting Systems
- Analyzing Lighting Systems
- Rendering Views to Analyze Lighting
- Managing Lighting with Groups
- Understanding Lighting Scheduling
- Understanding Lighting Tags

Schedules and Tags

- Understanding Parameters
- Creating Project Parameters
- Creating Shared Parameters
- Understanding Schedules and Tags
- Placing Element Tags
- Placing Space and Room Tags
- Creating a Schedule and Specifying Fields
- Modifying Schedules with Filters
- Modifying Schedules with Sorting and Grouping
- Modifying the Formatting of Schedule Titles and Headers
- Modifying Schedule Formatting
- Modifying the Schedule Appearance
- Placing Schedules on a Sheet
- Working with Space and Room Schedules
- Creating and Managing a View List
- Importing and Exporting Schedule Views

Annotation

- Working with Text Annotations
- Using Keyboard Controls to Add Symbols to Text
- Checking Spelling in a View
- Finding and Replacing Text
- Modifying Text Type Properties
- Creating Keynotes
- Modifying Keynotes and Keynote Settings
- Creating a Keynote Legend
- Working with Symbols and Note Blocks
- Working with Legends
- Managing Arrowheads

View Graphics

- Working with Visual Styles
- Understanding Scale and Detail Level
- Understanding Plan View Range
- Understanding View Discipline
- Understanding View Templates
- Creating View Templates
- Applying and Assigning View Templates
- Creating View Types
- Understanding Object Styles
- Understanding Visibility and Graphic Overrides
- Creating Element and Category Overrides in a View
- Creating Filter Overrides
- Using Temporary Hide or Isolate and Viewing Hidden Elements
- Using Temporary View Properties
- Understanding Crop Regions
- Creating a Non-Rectangular Crop Region
- Understanding Annotation Crop Regions

Views and Sheets

- Creating Plan Views and Reflected Ceiling Plan Views
- Creating a Plan Region
- Creating Section Views
- Segmenting Section Views
- Creating Callout Views
- Sketching a Callout View
- Creating Drafting Views
- Creating a Reference View
- Duplicating Views
- Creating Matchlines and View References
- Creating Additional View References
- Creating and Using Sheets
- Working with Viewports on Sheets
- Aligning Views on Sheets with a Guide Grid
- Using a Sheet List and Placeholder Sheets
- Creating Custom Titleblocks
- Creating a Key Plan
- Managing Sheet Issues and Revisions
- Creating Revision Clouds and Tags
- Adding a Revision Schedule to a Titleblock
- Creating Supplemental Drawings

Printing and Publishing

- Understanding Printing and Publishing
- Printing and Managing Print Settings
- Printing to PDF
- Publishing Files to Buzzsaw

Managing Your Projects

- Managing Project Information
- Specifying the Location and Site
- Managing Project Browser View Organization
- Using Parameters and Filters for Browser Organization
- Managing Project Browser Sheet Organization
- Working with Coordinate Systems
- Relocating a Project
- Rotating True North and Project North
- Mirroring a Project
- Understanding Project Template Files
- Transferring Project Standards
- Deleting Unused Items from a Project
- Setting the Starting View

Worksharing

- Introducing Worksharing Concepts
- Understanding Worksharing Terminology
- Enabling Worksharing in a Project File
- Creating the Central Model
- Creating a Local Model
- Creating Worksets
- Understanding Workset Visibility
- Understanding How Central and Local Files Communicate

- Closing a Workshared Project
- Understanding Editing Requests
- Understanding the Active Workset
- Understanding Worksharing Display Modes
- Specifying Open Worksets
- Managing Worksets in Linked Revit Files
- Working Offline and Editing at Risk
- Viewing the Workshared Project History
- Rolling Back Workshared Projects
- Detaching a File from Central

Family Creation

- Understanding Loadable Families
- Introducing Family Creation
- Understanding the Family Editor
- Working with Tag Families
- Creating a Custom View Tag
- Working with Component Families
- Introducing Form Creation
- Creating Solid Extrusions and Blends
- Creating Solid Revolves
- Creating Solid Sweeps and Swept Blends
- Creating Void Forms
- Creating Reference Planes and Reference Lines
- Creating Dimension and Parameter Constraints
- Creating Family Geometry
- Understanding Family Geometry Display Settings
- Adding Connectors to Families
- Creating Family Types
- Working with Families in a Project
- Creating and Grouping Family Parameters
- Creating Shared Parameters
- Creating Parameter Formulas
- Creating a Type Catalog

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