



Theory	Practical	Total Course Length
37 Hours	37 Hours	74 Hours

Synopsis

In this course you will learn how to create Parametric Models of MEP Systems.

Using hands-on exercises in both Imperial and Metric to represent Real-World situations and be able to deal with various Engineering Design Projects.

Prerequisites

Trainee should have knowledge of MEP Engineering Terminology and Computer Aided Design Systems. A basic understanding of computer's operating system, launching an application, creating and saving files is a must.

What will you Learn ?

Introduction to Autodesk Revit MEP
 Starting New Project
 Linking and Importing CAD
 HVAC, Hydronic Piping, Plumbing & Electrical Systems
 Annotation Construction Documents
 Tags and Schedules
 Views Setup & Sheet Composition
 Managing Project
 Project Team Collaboration
 Phasing and Groups
 Family Concepts & Techniques
 Exporting Views and Sheets
 Plotting
 The Navisworks File System
 Navigating in a Model
 Working with Viewpoints
 The Review Tab
 Dealing with Objects, Sorting and Grouping
 Clash Detection
 The Time Liner
 Presenting, Animating, and Exporting

Outline

Introduction to Autodesk Revit MEP

Building Information Modeling and Overview of the Interface.

Starting New Project

Project Template, Setup New Project, Levels & Grids, Linking and Importing CAD Files and Inserting Image.

HVAC Systems

Adding Air Terminals and Mechanical Equipment, Creating and Modifying Duct Systems, Automatic Ductwork Layouts.

Hydronic Piping Systems

Adding Mechanical Equipment, Creating Hydronic Systems and Automatic Piping Layouts.

Plumbing Systems

Adding Plumbing Fixtures, Plumbing Systems and Fire Protection Systems.

Electrical Systems

Placing Electrical Components, Creating Electrical Circuits, Cable Trays and Conduit and Electrical Panel Schedules.

Annotation Construction Documents

Dimensions, Text, Detail Lines and Symbols.

Tags and Schedules

Tags, Rooms & Room Tags, Schedules and Legends.

Views Setup

Sections, Elevations, Detail Views, Filters and Duplicating View.

Sheet Composition

New Sheet Family - Title Blocks, Setting Views on Sheet and Adding Document Information on Sheet.

Managing the project

Additional Settings, Transfer Project Standards, Object Styles and Purged Unused.

Project Team Collaboration

Worksets, Design Options, Phasing and Groups.

Family Concepts & Techniques

Solid and Void Forms, Parametric Framework, Shared Parameters, Symbolic & Model Lines and Additional Information to Family.

Exporting Views and Sheets

Exporting to CAD Format, 3ds MAX & Navisworks and Plotting.

The Navisworks File System

Navisworks file types, Opening files directly, Appending and merging models.

Navigating in a Model

Navigation bar, Walking through model, Rotating model with the Orbit tool, Looking around your model, Using the Gravity tool and View Cube

Working with Viewpoints

Saving a viewpoint, Choosing render styles, Changing the background, Slicing your model using section and Getting rid of lines and text.

The Review Tab

Getting measurements, Finding the shortest distance between objects
 Creating redlines

Dealing with Objects

Selecting objects, Overriding Color, Transparency, and Transform, Hiding and turning on objects,
 Moving, Rotating & Scaling, Viewing properties and Adding links & Fields,
 Switching back to Revit and Holding objects.

Sorting and Grouping

The Selection Tree, Finding items, Saving Selections Set, Quick Find tool and Selection Inspector.

Clash Detection

Creating a clash test and setting rules,
 Selecting objects to clash and adding clearances, Running, Resolving &
 Reducing clashes, Grouping and Assigning clashes,
 Creating reports: Viewpoints and HTML.

The Time Liner

Configuring appearances, Creating tasks, Adding selection sets to a task,
 Adding multiple tasks and running the movie, Simulating settings,
 Exporting the Time Liner and Adding a data source.

Presenting, Animating, and Exporting

Animating saved viewpoints, Animating objects and Creating a script.

