



AUTODESK REVIT MEP ESSENTIAL TRAINING

Objectives

This 3-day course covers the essentials of Autodesk Revit MEP application. It is to teach trainee the commands and tools necessary for design on mechanical, electrical, and plumbing (MEP) systems. After completing this guide, trainee will be able to:

- ✓ Describe building information modeling methodology.
- ✓ Use the different parts of the Revit MEP user interface and work with different types of Revit elements and families.
- ✓ Create spaces and zones in a Revit model.
- ✓ Analyze an analytical model for conducting a building performance analysis, define heating and cooling loads information, and calculate heating and cooling loads.
- ✓ Create HVAC systems, generate HVAC system layouts, and create and modify ductwork using Revit tools.
- ✓ Layout and create system piping.
- ✓ Create plumbing systems.
- ✓ Create fire protection systems.
- ✓ Create electrical circuits and wiring

Training Programme Day 1

Chapter	Topic	Duration	Time
Chapter 1	Building Information Modeling <ul style="list-style-type: none"> • Lesson: Building Information Modeling for MEP Engineering • About Building Information Modeling 	1-Hour	09.00 AM – 10.00 AM
Chapter 2	Revit MEP Basics <ul style="list-style-type: none"> • The Revit MEP User Interface • The Ribbon Framework Interface • Guidelines for Using the User Interface • About Building Elements • About Families Elements and Families • Guidelines for Working with Revit Elements and Families 	3-Hour	10.00 AM – 01.00 PM
Chapter 3	Viewing the Model <ul style="list-style-type: none"> • About Views Lesson: Managing Views • Creating Views and Adding Matchlines • View Properties • View Templates • Guidelines for Working with Views and View Templates • Object Visibility Settings • Modifying Line Styles 	1-Hour	02.00 PM - 03.00 PM

	<ul style="list-style-type: none"> • About User-Defined Filters • Creating Filters • Guidelines for Controlling Object Visibility • About Section Views • About Elevation Views • Guidelines for Creating Section and Elevation views • About 3D Views • About Cameras • Creating and Modifying Camera Views • Guidelines for Creating and Modifying 3D Views 		
Chapter 4	<p>Starting a New Project</p> <ul style="list-style-type: none"> • About Projects • Project Settings • About Project Templates • About the Mechanical-Default Project • Template About Revit File Types • Creating Project Templates • Guidelines for Creating Project Template Files • Defining Discipline Settings • About Mechanical Settings • About Electrical Settings • Guidelines for Defining Discipline Settings • Options for Importing and Editing DWG Details • Guidelines for Importing and Editing DWG Details • Details Exercise: Import and Edit DWG Details 	2-Hour	03.00 PM - 05.00 PM

Training Programme Day 2

Chapter	Topic	Duration	Time
Chapter 5	Defining Volumes <ul style="list-style-type: none"> • About Spaces • Process of Creating Spaces • Guidelines for Creating Spaces • About Zones • Process of Creating Zones • Guidelines for Creating Zones 	1-Hour	09.00 AM - 10.00 AM
Chapter 6	Building Performance Analysis <ul style="list-style-type: none"> • About Analytical Models • Process of Viewing Analytical Models Analysis • Guidelines for Viewing Analytical Models • Heating and Cooling Loads Information • Process of Specifying Project Energy Data • Process of Specifying Space Heating and Cooling Loads • Parameters • Process of Specifying Zone Heating and Cooling Loads • Parameters • Guidelines for Defining Heating and Cooling Loads • About Heating and Cooling Loads • Heating and Cooling Loads Report • Process of Calculating Heating and Cooling Loads • Guidelines for Calculating Heating and Cooling Load 	3-Hour	10.00 AM - 01.00 PM

<p>Chapter 7</p>	<p>HVAC Systems</p> <ul style="list-style-type: none"> • About HVAC Systems • Mechanical Parts in HVAC Systems • Process of Creating HVAC Systems • Guidelines for Creating HVAC Systems • About Layouts • Duct Sizing • Duct System Inspection Tools • Process of Generating HVAC System Layouts • Guidelines for Generating HVAC System Layouts • Ducts and Duct Fittings • Duct and Duct Fitting Control Grips • Tools for Creating and Modifying Ductwork • Process of Applying Duct Color Fills • Guidelines for creating and Modifying Ductwork 	<p>2-Hour</p>	<p>02.00 PM – 04.00 PM</p>
<p>Chapter 8</p>	<p>Piping Systems</p> <ul style="list-style-type: none"> • About System Piping • Process of Creating a Piping System • Guidelines for Creating a Piping System • About Plumbing Systems • Process of Creating a Plumbing System • Guidelines for Creating a Plumbing System • Lesson: Creating Fire Protection Systems • About Fire Protection Systems • Process of Creating a Fire Protection System 	<p>1-Hour</p>	<p>04.00 PM – 05.00 PM</p>

Training Programme Day 3

Chapter	Topic	Duration	Time
Chapter 9	Electrical Systems <ul style="list-style-type: none"> • About Electrical Circuits • Tools for Working with Electrical Circuits • Process of Creating Electrical Circuits • Guidelines for Creating Electrical Circuits • About Electrical Wiring • Process of Creating a Wire Type • Guidelines for Creating Wiring • Exercise: Create Wiring 	1-Hour	09.00 AM - 10.00 AM
Chapter 10	Working with Architects and Engineers <ul style="list-style-type: none"> • About Project Sharing • Copy and Monitor Tools • Coordinating and Monitoring Changes in the Current Project • Coordination Review Tool • Guidelines for Monitoring Changes in Linked Files • About Interference Checks • Guidelines for Checking and Fixing Interference Conditions 	3-Hour	10.00 AM- 01.00 PM
Chapter 11	Annotations and Schedules <ul style="list-style-type: none"> • About Text • About Tags • Guidelines for Working with Text and Tags • About Temporary Dimensions • About Permanent Dimensions • Guidelines for Working with Dimensions • About Legends • Guidelines for Creating Legends • About Schedules • About Schedule Properties • Exporting Schedules • Modifying Schedule Fields • Guidelines for Working with Schedules 	2-Hour	04.00 PM – 05.00 PM
Chapter 12	The Family Editor <ul style="list-style-type: none"> • About Families • Connectors • Process of Creating Families • Guidelines for Creating and Modifying Families 	1-Hour	4.00 PM – 5.00 PM