

## COURSE TEMPLATE

### Application Details

*Category	FOCUS_AREA
*Focus Area/Industry	Industry 4.0,
*Sector	

### Course Details

*Course Name	Autodesk Revit Architecture - Plumbing		
*Course Overview	This 4-day comprehensive training program introduces participants to essential tools, workflows, and processes in Autodesk Revit with a focus on Architectural and Plumbing disciplines. Participants will gain hands-on experience in creating BIM models, developing custom families, generating construction documentation, and collaborating across disciplines. The course builds a solid foundation in BIM processes, improving productivity, design coordination, and documentation quality.	*Course Objective	By the end of this program, participants will be able to:  Understand and apply BIM concepts in Architectural and Plumbing disciplines.  Create and manage BIM models in Revit for architectural design and plumbing systems.  Develop custom Revit families and parametric components.  Generate construction documents, schedules, and annotations from Revit models.
*Target Group (By designation)	This training is designed for:  Architects and Architectural Designers  MEP Engineers (Plumbing focus)	Minimum Training Requirement (If any)	Participants should meet the following prerequisites:  Basic computer literacy  Familiarity with architectural or MEP design concepts (preferred but not

*Course Learning Outcome (CLO)	*CLO Statement		*Learning Domain
	Upon completion of this course, participants will be able to:		
	CLO 1	Recognize the fundamental principles of BIM and its application in Architecture and Plumbing.	Knowledge - Level 1
	CLO 2	Explain the basic interface, tools, and project setup procedures in Autodesk Revit.	Knowledge - Level 2
	CLO 3	Demonstrate the creation of Architectural BIM models including walls, doors, windows, roofs.	Skill - Level 3
	CLO 4	Develop custom Revit families for architectural and plumbing components.	Skill - Level 4
	CLO 5	Build plumbing BIM models including piping systems and fire protection layouts.	Skill - Level 5
	CLO 6	Generate construction documents, drawings, and schedules from Revit models.	Skill - Level 4
	CLO 7	Show collaborative behavior in BIM project environments.	Attitude - Level 3
	CLO 8	Adapt to BIM workflows to enhance project coordination and reduce design errors.	Attitude - Level 4
	CLO 9	Perform clash detection using Navisworks for architectural and plumbing BIM models.	Skill - Level 5
	CLO 10	Apply BIM standards and guidelines in Revit project settings and documentation.	Knowledge - Level 3

### Mapping of Training Modules and CLO

*Module	*CLO	*Theory Duration (Hours)	*Practical Duration (Hours)	Total Hours	Practical Elements (if any)
Module 1: Revit Architecture Basics - Introduction to Revit - Basic Revit Commands - Project Setup - Creating Architectural BIM Model - Choosing Project Template - Setting Project North & Coordinates - Grid & Elevation Setup - Creating Walls, Floors, Windows, Doors, Stairs - Curtain Walls, Furniture, Sanitary Parts, Roofs	1, 2, 3	3	5	8	Hands-on creating walls, doors, windows
Module 2: Family Creation & Editing - Introduction to Creating Families - Parametric Framework - Creating Family Elements - Additional Tools for Families - Creating Family Types - Visibility Display Settings - Custom Doors and Windows	4	2	6	8	Hands-on family creation and editing
Module 3: Scheduling & Collaboration - Introduction to Schedules - Creating and Modifying Schedules - Key Schedules - Takeoff Schedules - Project Collaboration Concepts - Linking Files, Managing Shared Coordinates - Monitoring & Coordination of Linked Projects	6,10	2	6	8	Hands-on schedules, collaboration tools
Module 4: Revit MEP - Plumbing Focus-Starting MEP Project - Linking Models - Understanding MEP Systems - Fire Protection Systems - Hydronic Piping Systems - Adding Mechanical Equipment - Drawing Piping - Creating Hydronic Systems	5	2	6	8	Hands-on modeling plumbing systems, docs
Module 5: BIM Coordination & Clash Detection - Introduction to Navisworks - BIM Concept of Clash Detection - Performing Clash Detection - Creating Clash Reports - 4D BIM Explanation - BIM Process Feedback & Updates - BIM in Malaysia Insights	7, 8, 9	1.5	4.5	6	Hands-on Navisworks clash detection
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Total Hours		10.5	27.5	0	
		Grand Total Hours		38	

PRACTICAL CENTRIC:

N/A

#### Mapping of CLO with Training Strategies and Assessment Method

*CLO	*Training Strategy	*Assessment Method	*Assessment Weightage (%)
1	Lecture	Quiz	5
2	Lecture	Quiz	5
3	Hands-on	Demonstration	10
4	Hands-on	Demonstration	10
5	Hands-on	Demonstration	10
6	Hands-on	Demonstration	10
7	Group Activity	Presentation	10
8	Case study	Presentation	10
9	Hands-on	Demonstration	15
10	Lecture	Written Assignment	15
Total Weightage			100

Note:

1. \*compulsory field to be filled.

2. Fill the course details carefully in this excel document (soft copy) and submit this template via online submission form