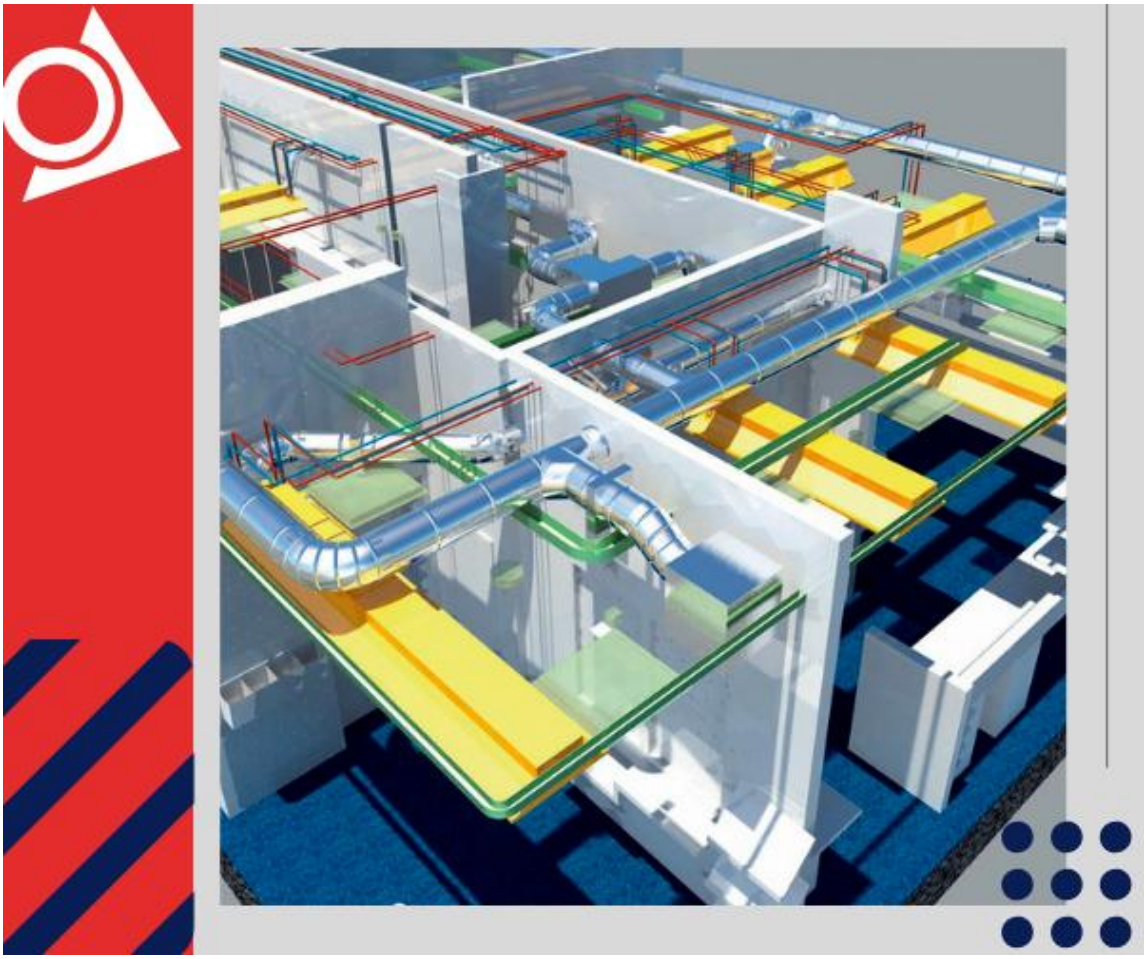
GREGORIAN INSTITUTE OF TECHNOLOGY, KOTTAYAM

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ADD ON COURSE IN REVIT MEP



COURSE INFORMATION

This course is intended to introduce users to the software's user interface and the basic HVAC, electrical, and piping/plumbing components that make the Autodesk Revit software a powerful and flexible engineering modeling tool. The course will also familiarize users with the tools required to create, document, and print the parametric model. The examples and practices are designed to take the users through the basics of a full MEP project from linking in an architectural model to construction documents.

ADD-ON COURSE - Revit MEP

COURSE CODE : AC-03-03

PERIODS/SEMESTER-40

CREDITS – 3

COURSE OBJECTIVES

The Course enables the entry level and working engineers to understand the basics, different systems used in MEP for Domestic and commercial purposes. To achieve the optimal design, one should needs good analytical skills and up-to-date technical knowledge of various system designs.

LEARNING OUTCOME

Employment Opportunities:

1. BIM Engineer MEP
2. Lead Electrical Revit Design
3. Engineering support Specialist
4. BIM molder for Electrical Building

COURSE STRUCTURE

Particulars	Duration (hrs)
1. Theory Sessions	12 hours
2. Practical Sessions	28 hours
Total	40 hours

DETAILED SYLLABUS

SlNo.	DAY/DATE	Theory / Practical	Professional skills/Knowledge	Theory [hrs]	Practical [hrs]
	DAY 1	Theory	AN INTRODUCTION TO REVITMEP • Introduction to Revit MEP Design	1HR	0
	DAY 2	Practical	. Graphical User Interface: Ribbon, Tabs, Customizing ribbon, Quick access toolbar, Options Bar, Properties Palette, Project Browser, View Control Bar, Status Bar	1hr	2hrs
	DAY 3	Practical	. User Interface Control, Keyboard Shortcuts		2 hrs
	DAY 4	Practical & Theory	WORKSHARING • Central files, Create a New work set, Create a new Local file, Synchronizing a Local file with Central file	1hr	1 hr
	DAY 5	Practical	• Work sharing: Working with Linked Revit file, Placing Link Revit file . Using Shared Coordinates, Managing Revit Links, Controlling Visibility of Revit Links		2 hrS
	DAY 6	Practical	. Monitoring Elements within Shared Models: Copy/Monitor, Copy/Monitor Workflow for Linked Models, Reviewing Warnings for Monitored Elements, Stopping Element Monitoring		1hr
	DAY 7	Practical	• Link CAD Files • Exercises included for Practice		1 hrs
	DAY 8	Practical	Reference Planes and Lines, Constraints and Dimensions . Parameters : Type parameters, Instance Parameters, Parameter Discipline, Type, and Grouping, Type catalogs, Formulas, Lookup tables, Shared		2 hrs

			parameters, Project parameters		
	DAY 9	Practical	. Family Types, Solid Modeling: Extrusions, Blends, Revolves, Sweeps, Swept Blends, Join geometry, Voids, Visibility control		1 hrs
	DAY 10	Practical	• Duct Connector, Pipe connector, Electrical connector • Exercises included for Practice		2 hrs
	DAY 11	Practical	HVAC COOLING AND HEATING LOAD ANALYSIS . Space Modeling: Placing Spaces, Space Property Schedule, Modify Space Properties, Zones		1 hrs
	DAY 12	Practical	. Performing Heating and Cooling Load Analysis Supply Airflow schedule: Load Analysis, Heating and Cooling loads report	1 hr	2 HRS
	DAY 13	Practical	• Logical systems, Mechanical settings, System Browser	1 hr	1 HRS
	DAY 14	Practical	Setting Up Air Systems: Parameters . Mechanical System & Duct Work: Air distribution components	1 hr	2 HRS
	DAY 15	Practical	Mechanical Equipment Components : Air Conditioning/Handling Units, VAV Boxes	1 hr	1 hrs
	DAY 16	Practical	. Duct Work: Create New duct Types, Automatic Duct routing, Manual Duct routing	1 hr	2 hrs
	DAY 17	Practical	• Mechanical Piping System: Parameters, Creating Pipe systems, Selecting Fitting for Pipe Types, Mechanical pipe settings	1 hr	2 hrs
	DAY 18	Practical & Theory	. Pipe Routing Options : Automatic & Manual Pipe Routing	1 hr	1 hrs
	DAY 19		Final project assessment	1 hr	2 hrs

	DAY 20		PROJECT WORK		
			TOTAL	12	28
			Grand Total	40 hrs	

REFERENCE BOOKS/VIDEOS

1. AUTOCAD MEP TOOLSET NOW INCLUDED WITH AUTOCAD, Autodesk
2. AUTOCAD ELECTRICAL TOOLSET NOW INCLUDED WITH AUTOCAD, Autodesk
3. AUTOCAD MECHANICAL TOOLSET NOW INCLUDED WITH AUTOCAD, Autodesk
4. RASTER DESIGN TOOLSET NOW INCLUDED WITH AUTOCAD, Autodesk

ASSESSMENT CRITERIA

1. LECTURE CLASS
2. DEMONSTRATION
3. PRACTICE
4. GROUP DISCUSSION
5. DISCUSSION WITH PEER GROUP
6. RECORD BOOK / DIARY
7. VIVA-VOCE
8. ATTENDANCE AND PUNCTUALITY
9. ASSIGNMENTS
10. PROJECT WORK

BLOOM'S TAXONOMY

Bloom'sTaxonomy Domain	**Percentage Distribution**
Remembering- R	**4.45%**
Understanding- U	**18.18%**
Applying-P	**32.02%**

Analysing- A	**18.18%**
Evaluating-E	**4.45%**
Creating - C	**22.72%**

MARK DISTRIBUTION

Attendance	Exam	Report	Activity / Practical	Viva	Total
20	20	10	40	10	100

GRADING SYSTEM

Grade	Grade Point	Mark Range
S	10	mark > 90 %
A	9	80% < mark < 90%
B	8	70% < mark < 80%
C	7	60% < mark < 70%
D	6	50% < mark < 60%
E	5	40% < mark < 50%
F	0	mark < 40%

Note :Students securing Grade point of 5 or more will be treated as qualified in this course.