



## BUILDING INFORMATION MODELLING (BIM) COURSE FOR MECHANICAL AND ELECTRICAL ENGINEERING

Certificate of Completion  
(Sichuan College of Architectural Technology)

Trainer: Wang Yuhong

FEE:  
RM1,000.00

HRDCorp Claimable

Wang Yuhong, a lecturer from Sichuan College of Architectural Technology, China, has won several awards, including the Silver Award in the 2023 National Youth Vocational Skills Competition and the 2022 Sichuan Province Youth Vocational Skills Competition. He is a recognized BIM Technician evaluator and holds qualifications as a first-level cost engineer, second-level constructor, and BIM senior modeling engineer. He has guided students to win numerous BIM competition prizes and has been named Excellent Guiding Teacher multiple times. Wang has published over 10 papers, obtained 4 utility model patents, and co-authored a textbook. He has led BIM projects solving enterprise construction problems and provided BIM training for companies in China.



6 July - 21 Sept 2024  
(Every Saturday)



8.30am - 12.30pm



Virtual Class :  
VooV Meeting



Interaction Medium:  
Mandarin

### COURSE OUTLINE

This course uses XX basement as a project case study with supportive construction drawings. It covers two aspects: model creation and model application. It introduces the method of using Revit2018 software to create mechanical and electrical features including the use of full-professional models. Simple applications for pipeline synthesis, net height analysis, project quantity statistics, construction drawing production, rendering, etc. will be covered in this program.

The learning method is through practice and hands-on exercises and synthesis, using engineering cases, group learning and weekly Q&A and discussions. Students' performance is evaluated through take-home assignments and completion of comprehensive large-scale project.

REGISTER NOW



SCAN ME



+03-7725 8899

+6010-282 9912



wcw@wcwacademy.com

www.wcwconsulting.com

www.merdeka-university.org.my



## Course Planning

No	Unit	Hour	Time	Date
1	Basics knowledge of BIM technology	4	8.30am - 12.30pm	6-Jul-24
2	Electromechanical modeling preparation	4	8.30am - 12.30pm	13-Jul-24
3	Water supply and drainage	4	8.30am - 12.30pm	20-Jul-24
4	Water supply and drainage Sprinkler and fire hydrant system	4	8.30am - 12.30pm	27-Jul-24
5	Sprinkler and fire hydrant system	4	8.30am - 12.30pm	3-Aug-24
6	HVAC system	4	8.30am - 12.30pm	10-Aug-24
7	HVAC system	4	8.30am - 12.30pm	17-Aug-24
8	HVAC system Electrical System	4	8.30am - 12.30pm	24-Aug-24
9	Electrical System	4	8.30am - 12.30pm	31-Aug-24
10	Mechanical and electrical	4	8.30am - 12.30pm	7-Sep-24
11	Mechanical and electrical Pipeline	4	8.30am - 12.30pm	14-Sep-24
12	Pipeline	5	8.30am - 1.30pm	21-Sep-24
	Total	<b>49</b>		

**\*Note: The above training and learning outline may subject to change and to be determined by the trainer for the appropriateness to the participants.**

**《BIM 机电建模技术》课程设置**
**Building Information Modelling (BIM) Course for Mechanical and Electrical Engineering**

No.	Topic	Sub-topic	Knowledge base	Remarks
1	Basics knowledge of BIM technology (4)	Introduction to BIM technology (1)	1. The concept and development of BIM technology, characteristics of BIM, current main applications etc.	Requirement: Understand BIM technology and REVIT software, and install revit2018 version
		BIM technology application cases (1)	1. Case sharing, introduction of BIM related software, course requirements, and learning objectives.	
		Introduction to mechanical and electrical BIM workflow and related software (1)	1. Introduction to Revit and BIM related softwares.	
			2. Introduction to MEP software interface and working environment.	
			3. BIM electromechanical workflow explanation	
		Introduction to software basics (1)	1. Introduction to terminology: project, element, view, family, parameter	
			2. View property settings.	
			3. Project browser settings.	
4. Display settings for each view (three settings).				
	5. Sample introduction and sample application.			
	6. Description of different file formats.			
	2	Electromechanical modeling preparation (4)	Creation of levels (1)	1. Various commands for elevation creation, modification of elevation symbols and parameters, correspondence between elevation and plan view, and creation of plan view.
			Creation of Grid (1)	2. Various commands for grid creation, modification of grid symbols and parameters, adjustment of grid distance, etc.
Creation of Structural components (1)			1. Drawing of basic components of pillars, beams and plates.	
Creation of Building Units (1)			1. Wall, door, window drawing.	
3	Water supply and drainage (6)	Basic knowledge and settings of water supply and drainage (1)	1. Water supply and drainage pipe type settings.	
			2. Water supply and drainage pipe materials and specifications.	
			3. Water supply and drainage pipe size settings.	

			4. Water supply and drainage filter settings.	
		Water supply and drainage pipeline drawing (1)	1. Basic creation method of water supply and drainage pipe drawing.	
			2. Water supply and drainage pipe alignment settings.	
			3. Automatic connection of water supply and drainage pipes.	
			4. Drainage pipe slope setting and drawing method.	
			5. Setting and selection of water supply and drainage pipe fittings.	
		Water supply and drainage accessories and bathroom creation (1)	1. Loading, editing and adding of water supply and drainage accessories.	
			2. Loading, editing and adding of bathroom fixtures.	
		Practical class (3)	1. Water pipe well drawing exercise.	
			2. Bathroom drainage drawing exercise.	
4	Sprinkler and fire hydrant system (6)	Basic knowledge and settings of sprinklers and fire hydrants (1)	1. Fire hose type settings.	
			2. Fire water pipe material and specification type settings.	
			3. Fire hose size settings.	
			4. Fire water filter settings.	
		Sprinkler and fire hydrant pipeline drawing (2)	1. Basic creation method of fire hose drawing.	
			2. Fire hose alignment settings.	
			3. Automatic fire hose connection.	
			4. Setting and selection of fire water pipe fittings.	
		Water supply and drainage accessories and bathroom creation (1)	1. Loading, editing and adding fire water accessories.	
			2. Loading, editing and adding fire hydrant boxes.	
			3. Loading and adding sprinkler heads.	
		Practical class on sprinkler and fire hydrant (2)	1. Fire hydrant system drawing exercise.	
2. Sprinkler system drawing exercise.				
5	HVAC system (4)	Basic knowledge and settings of heating and ventilation systems (1)	1. Duct type settings.	
			2. Duct size settings.	
			3. Duct mechanical setup.	
		暖通风系统基本知识及设置 (2)	1. Basic drawing methods of air duct drawing.	
			2. Duct alignment settings.	
			3. Automatic connection of air ducts.	

			4. Installation and use of air duct fittings.			
		HVAC system attachment creation (1)	1. Loading and editing of air duct accessories.			
			2. Loading, editing and adding of duct ends.			
6	HVAC system (6)	Basic knowledge and settings of HVAC systems (1)	1. HVAC pipe type settings			
			2. HVAC pipe material and specification type settings.			
			3. HVAC pipe sizing settings.			
		Basic knowledge and settings of HVAC systems (2)	1. Basic drawing methods for HVAC pipe drawing.			
			2. HVAC pipe alignment settings.			
			3. Automatic connection of HVAC pipes			
			4. Condensate pipe slope setting and drawing method.			
		HVAC system attachment creation (1)	1. Installation and selection of HVAC pipe fittings.			
			2. Loading, editing and adding of HVAC accessories.			
			3. Loading, editing and addition of HVAC machinery and equipment.			
		Practical class (2)	1. HVAC system drawing exercise 1.			
			2. HVAC system drawing exercise 2.			
7	Electrical System (6)	Electrical equipment and piping and wiring (2)	1. Lighting equipment drawing.			
			2. Electrical equipment drawing.			
			3. Piping line settings.			
		Cable tray setup (1)	1. Cable tray type settings.			
			2. Cable tray size settings.			
			3. Other cable tray settings.			
			4. Filter addition for cable trays.			
		Cable tray drawing (2)	1. Basic drawing methods for cable trays.			
			2. Cable tray alignment settings.			
			3. Automatic connection of cable trays.			
			4. Accessories for cable trays.			
			5. Display settings for cable trays.			
		Practical class (1)	1. Perform electrical system creation exercises.			
		8	机电族创建 (6)	Mechanical and electrical family creation 1 (2)	1. Basic ways to create shapes: stretching, fusion, rotation, lofting, lofting and fusion explanation.	
			Mechanical and electrical	Mechanical and electrical family creation 2 (2)	1. Creation of electromechanical family.	

		Practical class (2)	1. Perform electromechanical family creation exercises.	
9	Pipeline (6)	Pipeline comprehensive basic settings (2)	1. Link settings for each specific model.	
			2. Manage model links.	
			3. Display settings for linked models.	
			4. Binding link processing.	
			5. Create a tag family.	
			6. Generation of comprehensive cross-section drawings.	
			7. Depth and display processing of comprehensive cross-section diagram.	
			8. Comprehensive section drawing markings.	
			9. Auxiliary techniques for section drawing processing.	
		Collision inspection and clear height analysis (1)	1. Revit software to create collision checks.	
			2. MEP net height analysis report production.	
		Material extraction and collision inspection report output (1)	1. Material table: Relevant introduction to engineering quantity statistics.	
			2. Material table: Definition and generation of engineering quantity attributes.	
			3. Definition of Collision check classification.	
4. Collision check viewport analysis.				
5. Collision report.				
Practical class (2)	1. Conduct comprehensive pipeline exercises.			

**\*Note:**

1) Participants are required to understand BIM technology and install REVIT 2018 version before the first class.

2) REVIT 2018 will be provided to the participants before training.