

	Core Subject	L1	L2	L3	L4	Minimum curriculum hours		Assessment		
						Lecture	Workshop	Assignment	Assignment Suggestion	Examination
1. BIM Initiation	<i>1.1. BIM Concept</i>					1	0	1	Assignments can be in quiz, worksheet...etc. It can be arranged so that it won't occupy any curriculum hour.	Only one examination for the whole course
	1.1.1 BIM definitions and terminology	✓								
	1.1.2 The difference between 2D CAD, 3D CAD and BIM	✓								
	1.1.3 Concept of BIM as whole project & whole estate perspective	✓								
	1.1.4 Value and benefits of adopting BIM	✓								
	1.1.5 Value of BIM for AM & FM	✓								
	1.1.6 Collaborative working in BIM	✓								
	1.1.7 Limitation of BIM	✓								
	1.1.8 Challenges within existing working practices & how BIM addresses these		✓							
	1.1.9 How BIM affect the current practice in ACEO industry		✓							
	<i>1.2. Local & Global Contexts, BIM standards and guidelines</i>					1	0			
	1.2.1 Local BIM standards & resources		✓							
	1.2.1.1 CIC BIM Standards		✓							
	1.2.1.2 Government BIM standards & resources		✓							
	1.2.2 Global context in BIM development	✓								
	1.2.3 Global BIM standards & resources		✓							
	1.2.3.1 BSI PAS 1192		✓							
	1.2.3.2 BIM FORUM LOD Specification 2018		✓							
	1.2.3.3 OpenBIM		✓							
						2	0	1		

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2. BIM Software and Technology Trend	2.1. BIM Software					1	0	1	Participants are suggested to spend their own time on getting know the BIM software. E.g. Homepage of BIM software, self reading...etc.	Only one examination for the whole course	
	2.1.1 Overview of industry leading BIM software / applications		✓								
	2.1.2 Characteristic, strength and limitation of industry leading BIM software	✓									
	2.1.3 Versions and file formats	✓									
	2.1.4 Interoperability across industry leading BIM software	✓									
	2.2. Technology Trend					1	0	1	Participants are suggested to spend their own time on getting know various technology trend related to BIM.		
	2.2.1 Cloud platform	✓									
	2.2.2 Laser scanning		✓								
	2.2.3 Photogrammetry		✓								
	2.2.4 GIS		✓								
	2.2.5 Application of smart devices		✓								
	2.2.6 VR/AR/MR		✓								
	2.2.7 VDC	✓									
	2.2.8 RFID		✓								
	2.2.9 Gaming technology in BIM	✓									
	2.2.10 Robotics	✓									
	2.2.11 Automation	✓									
	2.2.12 API	✓									
	2.2.13 MiC	✓									
	2.2.14 Indoor positioning	✓									
							2	0	2		

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3.1. – Client BIM Strategic Stage											
3.1.1 BIM strategy, BIM uses, BIM processes	✓				3	1	1	Participants are suggested to spend their own time on further readings. Workshop can be incorporated into assignment.	whole course		
3.1.2 Key personnels in relation to BIM	✓										
3.1.3 Determine the info management & CDE strategy				✓							
3.1.4 Determine the BIM / AIM / GIS strategy				✓							
3.1.5 Determine level of development in the context of graphics and information				✓							
3.1.6 Determine level of integration of digital information into asset & facility management				✓							
3.1.7 Case study		✓									
3.2. – Client Pre-tender Project Stage											
3.2.1 Determine & oversee the development of Client Information Model (CIM)				✓	3	1	1	Participants are suggested to spend their own time on further readings. Workshop can be incorporated into assignment.			
3.2.1.1 Organisational Information Requirements (OIRs)				✓							
3.2.1.2 Asset Information Requirements (AIRs)				✓							
3.2.2 Employers Information Requirements (EIR)				✓							
3.2.3 Determine project technology & systems requirement & integration				✓							
3.2.4 Determine project delivery requirements				✓							
3.2.5 Determine the soft landings approach				✓							
3.2.6 Contract & consultancy requirement		✓									
3.2.7 Assessment on supply chain capability & capacity (Tender Assessment)				✓							
3.2.8 Case study		✓									
3.3. – Definition & Design Stage											
3.3.1 BIM Execution Plan developed by supply chain				✓				Participants are suggested to spend their own time on further readings. Workshop can be incorporated into assignment.			
3.3.1.1 Pre-contract BIM Project Execution Plan				✓							
3.3.1.2 Post-contract BIM Project Execution Plan				✓							
3.3.2 Supervision in fulfilling BIM uses in planning & design stages listed in CIC BIM Standards				✓							
3.3.3 Project Information Model (PIM) data exchanges and validation				✓							

3. BIM Process	3.3.4	BIM PIM file setup					3	1	1				
	3.3.4.1	BIM origin point & orientation setup											
	3.3.4.2	Model division											
	3.3.4.3	Modelling methodology											
	3.3.4.4	Project-based industry and BIM standards											
	3.3.5	Direct BIM related meetings											
	3.3.5.1	Meeting with high level		✓									
	3.3.5.2	Meeting with supply chain level		✓									
	3.3.5.3	Internal meeting		✓									
	3.3.5.4	Multidiscipline collaboration meeting		✓									
	3.3.6	Case Study		✓									
	3.4. – Construction Stage						3	1	1		Participants are suggested to spend their own time on further readings. Workshop can be incorporated into assignment.		
	3.4.1	BIM Execution Plan developed by supply chain				✓							
	3.4.1.1	Pre-contract BIM Project Execution Plan				✓							
	3.4.1.2	Post-contract BIM Project Execution Plan				✓							
	3.4.2	Supervision in fulfilling BIM uses in construction & handover stage listed in CIC BIM Standards				✓							
	3.4.3	Project Information Model (PIM) data exchanges and validation				✓							
	3.4.4	Direct BIM related meetings				✓							
	3.4.5	Case study		✓									
	3.5. – Handover Stage						1	0.5					
	3.5.1	As-built information verification				✓							
	3.5.2	Oversee data transfer from PIM to Asset Information Model (AIM)				✓							
	3.5.3	Supervision in fulfilling BIM uses in handover stage listed in CIC BIM Standards				✓							
	3.5.4	Case study		✓									
	3.6. – Operation & Maintenance Stage						1	0.5	1		Same as above		
	3.6.1	Update Assets Information Model (AIM)		✓									
	3.6.2	Roles, responsibilities and authorities for maintaining the AIM		✓									
	3.6.3	Post occupancy evaluation		✓									
	3.6.4	Case Study		✓									
							14	5	5				

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4. Digital Information Management, Collaboration and Integration	4.1. Digital Information Management					2	1	1	Participants are suggested to spend their own time on further readings. Workshop can be incorporated into assignment.	Only one examination for the whole course	
	4.1.1 Value of data & how it should be managed		✓								
	4.1.2 Interoperate data/information to facilitate cross-disciplinary and cross-BIM platform collaboration		✓								
	4.1.3 Limitation of BIM software in relation to information management		✓								
	4.1.4 Determine level of development in the context of graphics and information in different stages				✓						
	4.1.5 Determine level of integration of digital information into asset & facility management				✓						
	4.1.6 Oversee the process and quality of information exchange				✓						
	4.1.6.1 IFC / BCF / XML...etc.		✓								
	4.1.6.2 COBie		✓								
	4.2. Common Data Environment (CDE)					1	1	1	Participants are suggested to spend their own time on further readings. Workshop can be incorporated into assignment.		
	4.2.1 Overview of CDE		✓								
	4.2.2 Overview of various CDE platform		✓								
	4.2.3 Setup of CDE			✓							
	4.2.4 Assessment of CDE			✓							
	4.2.5 Management of CDE				✓						
	4.2.6 Limitation of CDE		✓								
	4.3 – Data Quality Control & Assurance across various stages						1.5	1.5	1		Same as above
	4.3.1 System checking				✓						
	4.3.2 Model audit				✓						
	4.3.3 Model checking				✓						
	4.3.4 Audit reporting				✓						
						4.5	3.5	3			

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5. Commercial and Contractual Aspects	5.1 Commercial Issue					2	1	1	Participants are suggested to spend their own time on further readings. Workshop can be incorporated into assignment.	Only one examination for the whole course	
	5.1.1 Establishing BIM ready Environment to support the corporate			✓							
	5.1.1.1 BIM strategy in organization level		✓								
	5.1.1.2 Challenges in BIM implementation		✓								
	5.1.1.3 Phases in BIM implementation				✓						
	5.1.1.4 Hardware requirement for BIM		✓								
	5.1.1.5 Software requirement for BIM		✓								
	5.1.1.6 Manpower management for BIM				✓						
	5.1.1.6.1 Staff plan				✓						
	5.1.1.6.2 Staff recruitment				✓						
	5.1.1.6.3 Staff training				✓						
	5.1.2 Promotion of adopting BIM in office / to clients		✓								
	5.1.2.1 Value and benefit of adopting BIM	✓									
	5.1.2.2 Value and benefit of data and information from BIM	✓									
	5.1.2.3 Evaluating Return on Investments (ROI) of adopting BIM		✓								
	5.2. Contract Issue								Participants are required to study the reference readings, then to write an article or analysis based on the case		
	5.2.1 Ownership of data	✓									
	5.2.2 Intellectual property right	✓									

5.2.3	Legal implication and potential liability	✓				2	0	0	analysis based on the case study provided by lecturer.	
5.2.4	Professional indemnity	✓								
5.2.5	Introducing NEC	✓								
5.2.6	Commercial implications for contracts & insurances in relation to BIM	✓								
						4	1	1		
Sub-Total						26.5	9.5	12		
Total						36		Examination		3