

Summary Information

Module Code	4303BEUG
Formal Module Title	Digital Built Environment
Owning School	Civil Engineering and Built Environment
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Civil Engineering and Built Environment

Learning Methods

Learning Method Type	Hours
Lecture	22
Workshop	22

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	To review state of the art developments in information technology (IT) for architecture, engineering, construction industry (AEC); and to discuss how these technologies may shape the current and future of quantity surveying practice.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Review development of information technologies for AEC, chronically.
MLO2	2	Identify working principles of vector and object-based software packages; and review their current and future trends.
MLO3	3	Recognise role of information technology in attaining sustainable development goals for AEC.
MLO4	4	Recognise Construction 4.0, and frontiers in IT based collaboration for AEC.
MLO5	5	Review contemporary discourse in emerging technologies such as Parametric Tools, Artificial Intelligence, and Big Data.

Module Content

Outline Syllabus	- Information technology at glance for built environment: a historical context- Computer aided design - influence of 2D systems on quantity surveying practice - Object oriented design - building information modelling - current state - Building performance evaluation: energy and daylight simulations - A critical perspective: Diffusion of IT in the Built Environment - Small and Medium Enterprises- Construction 4.0 - Future trends: Parametric Design, Artificial Intelligence, Internet of Things, Big Data, Sensor Technology
Module Overview	
Additional Information	To review state of the art developments in information technology (IT) for architecture, engineering, and construction industry (AEC); and to discuss how these technologies may shape the current and future of quantity surveying practice.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Technology	Software implementation tasks	50	0	MLO1, MLO2, MLO3
Essay	Essay	50	0	MLO1, MLO4, MLO5

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
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Partner Module Team

Contact Name	Applies to all offerings	Offerings