

### Summary Information

Module Code	4505BEKL
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
LJMU Partner Taught

### Partner Teaching Institution

Institution Name
International College IMPERIA

### Learning Methods

Learning Method Type	Hours
Lecture	22

### Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-PAR	PAR	January	12 Weeks
JAN_NS-PAR	PAR	January (Non-standard start date)	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	<ul style="list-style-type: none"> <li>- Information technology at glance for built environment: a historical context</li> <li>- Computer aided design - influence of 2D systems on quantity surveying practice</li> <li>- Object oriented design - building information modelling - current state</li> <li>- Building performance evaluation: energy and daylight simulations</li> <li>- A critical perspective: Diffusion of IT in the Built Environment - Small and Medium Enterprises</li> <li>- Construction 4.0</li> <li>- Future trends: Parametric Design, Artificial Intelligence, Internet of Things, Big Data, Sensor Technology</li> </ul>
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	AS1	50	0	MLO1, MLO2, MLO3
Essay	AS2	50	0	MLO1, MLO4, MLO5

## Module Contacts

**Module Leader**

Contact Name	Applies to all offerings	Offerings
Anupa Manewa	Yes	N/A

**Partner Module Team**

Contact Name	Applies to all offerings	Offerings
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