

MODULE DESCRIPTOR

Module Title

Building Information Modelling: Application in Design and Construction

Reference	ACM016	Version	7
Created	April 2023	SCQF Level	SCQF 11
Approved	June 2014	SCQF Points	15
Amended	June 2023	ECTS Points	7.5

Aims of Module

To develop a professional understanding of Building Information Modelling Management (BIMM), and its implications for the built environment across the design and construction stages of a project.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Critically appraise the utilisation of BIM during the architectural (multi discipline) design phase, from concept to detail design, including smart data workflow.
- 2 Review and construct a vehicle to manage activity during the construction phase, including proactive response to technical and contractual issues.
- 3 Review and validate relevant BIM legislation and how it applies to the design and construction stages of a project.
- 4 Evaluate the challenges inherent in providing building information models in a form which is interoperable, across disciplines.

Indicative Module Content

BIM at the conceptual design stage; cross discipline design; shared BIM models; BIM during the construction stages; CDE; technical issues; virtual prototyping; BIM protocol; interoperability; building data storage and accessibility; smart data workflow; digital construction and transformation.

Module Delivery

The module is available for delivery through both face to face and blended learning modes via the Virtual Campus. Access to staff support will be available, either face to face or through online forums. The delivery of this module will be supported through case studies, group activities and discussion forums.

Indicative Student Workload	Full Time	Part Time
Contact Hours	36	36
Non-Contact Hours	114	114
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	150
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type: Coursework Weighting: 100% Outcomes Assessed: 1, 2, 3, 4

Description: An individual written piece of work.

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

This module has a single assessment and a Grade D is required to pass the module.

Module Grade	Minimum Requirements to achieve Module Grade:
A	A
B	B
C	C
D	D
E	E
F	F
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module None.

Corequisites for module None.

Precluded Modules None.

INDICATIVE BIBLIOGRAPHY

- 1 Journals, to include 'Design Studies', 'ITCon', 'Automation in Construction', professional journals, including those from the RICS, RIBA and CIAT.
- 2 Eastman C., 2011, 2018. BIM Handbook: A Guide to Building Information Modelling for Owners, Designers, Engineers, Contractors, and Facility Managers, Wiley
- 3 Centre for Digital Built Britain: <https://www.cdbb.cam.ac.uk/> (rich set of online resources, UK legislation and guide)
- 4 NBS, 2019. The National BIM Report 2019 [online]. National Building Specification (NBS). Available from: <https://www.thenbs.com/knowledge/national-bim-report-2019>
- 5 International Conference on Construction and Real Estate Management (2017 : Guangzhou, China); sponsoring body.; American Society of Civil Engineers, publisher.2017 Available online at: https://app.knovel.com/web/toc.v/cid:kpICCREMON/viewerType:toc//root_slug:iccrem-2017-project?kpromoter=ma