

Module Outline	Part 1- as validated
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1.	Title	CAD Design Studio with BIM modelling
2.	Level *	6
3.	Credits	20
4.	Indicative Student Study Hours	36
5.	Core (must take and pass), Compulsory (must take) or Optional	Compulsory

*** Foundation Level=3 Degree Year 1 = 4 Degree Year 2 = 5 Degree Year 3 = 6**

PG (Masters) = 7

5. Brief Description of Module (purpose, principal aims and objectives)
<p>Digital construction is an integral component of contemporary design, development and maintenance of modern residential development. Building Information Modelling (BIM) technology is at the forefront of the progressive movement towards total digitalisation of the built environment. With the UK Government currently stating that all publically funded projects must now meet the BIM protocol, this module is designed to provide opportunities to enhance your understanding of modelling a building in a 3D environment and applying BIM. You will build upon your existing CAD skills to become proficient, capable and confident in your abilities to manage building design in an online environment.</p>

6. Learning Outcomes - On successful completion of this module a student will be able to:	
<i>(Add more lines if required)</i>	
	Subject Specific Learning Outcomes
1.	Identify and apply current UK development standards on a residential BIM project
2.	Establish an understanding of integrated digital project delivery
3.	Produce and assess digital designs and specifications that meet client requirements
4.	Initiate and undertake an architectural design project and produce an effective and sustainable solution to a given brief.
	Generic Learning Outcomes
1.	Critically appraise process and delivery outcomes

2.	Evaluate solutions against agreed target criteria
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7. Assessment						
Pass on aggregate or Pass all components <i>(modules can only be pass all components if this is a PSRB requirement)</i>				Pass on aggregate		
Summary of Assessment Plan						
	Type	% Weighting	Anonymous Yes / No	Word Count/ Exam Length	Learning Outcomes Coverage	Comments
1.	Report	40%	Yes	2000	LO 1,2,	
2.	Design solution	60%	Yes		LO 3,4	Portfolio of evidence
Further Details of Assessment Proposals						
Give brief explanation of each assessment activity listed						
<p>Report</p> <p>You will be expected to review current BIM standards and the effectiveness of the UK Government's proposals to bring and embed BIM into the construction industry You will compare and contrast the efficacy of digital delivery compared with traditional methods of producing design specifications.</p> <p>Design Solution</p> <p>You will be given a design brief to produce a solution that meets the client requirements. Part of this will involve the production and assessment of digital design and specifications. It is expected that plans, elevations, sections and detail drawings will be produced using digital means.</p>						

8. Summary of Pre and / or Co Requisite Requirements
Communication and Design Technology

9. For use on following programmes
BSc (Honours) Construction Management (Architectural Technology)

1.	Module Leader	Sean Jeffries
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2.	Indicative Content
	<p>Overall review of UK Government proposals for BIM establishment in the construction industry</p> <p>Benefits and drawbacks of digital design, individual and industry roles and responsibilities in implementing BIM</p> <p>Usage of appropriate software packages, e.g., Autodesk, Revit</p> <p>Understanding, negotiating and solving problems associated with a client brief</p> <p>Production of recognised construction drawings to a professional standard within a known timescale</p>

3. Delivery Method <i>(please tick appropriate box)</i>					
Classroom Based	Supported Open Learning	Distance Learning	E-Learning	Work Based Learning	Other (specify)
Yes					
<i>If the Delivery Method is Classroom Based please complete the following table:</i>					
	Activity (lecture, seminar, tutorial, workshop)	Activity Duration - Hrs	Comments	Learning Outcomes	
1	Lectures	36		LO1-4	
2					
	Total Hours	36			
If delivery method is <i>not</i> classroom based state lecturer hours to support delivery					

4. Learning Resources
<i>To include contextualised Reading List.</i>
Highly Recommended
Barnes, P. and Davies, N. (2015) <i>BIM in Principle and in Practice, 2nd Edition</i> , London: ICE Publishing
Holzer, D. (2016) <i>The BIM Manager's Handbook: Guidance for Professionals in Architecture, Engineering, and Construction</i> , Chichester: John Wiley and Sons
John, E. (2013) <i>CAD Fundamentals for Architecture (Portfolio Skills)</i> , London: Lawrence King

Publishing Ltd

Kumar, B. (2015) *A Practical Guide to Adopting BIM in Construction Projects*, Caithness: Whittles Publishing

Recommended

Sacks, R. and Eastman, C. (2018) *BIM Handbook: A Guide to Building Information Modelling for Owners, Designers, Engineers, Contractors, and Facility Managers*, Hoboken: New Jersey

<https://www.autodesk.co.uk/>