

Module Code:	AUR625
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Module Title:	Project Management, Technologies & BIM
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Level:	6	Credit Value:	20
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Cost Centre(s):	GABE	JACS3 code:	K190 (ADT) K220 (CM) H200 (CE)
		HECoS code:	100122 (ADT) 100149 (CM) 100148 (CE)

Faculty	FAST	Module Leader:	Dr Colin Stuhlfelder
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Scheduled learning and teaching hours	24 hrs
Guided independent study	176 hrs
Placement	0 hrs
Module duration (total hours)	200 hrs

Programme(s) in which to be offered (not including exit awards)	Core	Option
BSc (Hons) Architectural Design Technology	✓	<input type="checkbox"/>
BSc (Hons) Construction Management	✓	<input type="checkbox"/>
BSc Civil Engineering Studies	✓	

Pre-requisites

Office use only

Initial approval: 29/08/2019

Version no: 1

With effect from: 01/09/2019

Date and details of revision: 20/04/20 added to BSc Civil Engineering Studies programme

Version no:2

Module Aims

The module aims to provide students with the range of technical skills and knowledge required to deploy established and emerging project management techniques to practice. Students will focus on project processes from initial design briefing to implementation and closure.

Students will engage with the latest technological advancements relating to project delivery, with specific consideration given to the history, application and expected development of project management and Building Information Modelling (BIM) in the United Kingdom and beyond.

Intended Learning Outcomes

Key skills for employability

- KS1 Written, oral and media communication skills
- KS2 Leadership, team working and networking skills
- KS3 Opportunity, creativity and problem solving skills
- KS4 Information technology skills and digital literacy
- KS5 Information management skills
- KS6 Research skills
- KS7 Intercultural and sustainability skills
- KS8 Career management skills
- KS9 Learning to learn (managing personal and professional development, self-management)
- KS10 Numeracy

At the end of this module, students will be able to

Key Skills

At the end of this module, students will be able to		Key Skills	
1	Evaluate the effective use of project management control systems and techniques across a range of sectors and scenarios.	KS1	KS2
		KS4	KS6
2	Critically reflect on the implications of project management through the project life cycle and scheme-by-scheme measures of success.	KS1	KS3
		KS4	KS5
		KS6	
3	Apply independently directed research methodologies and problem solving techniques to analyse critically existing case studies in order to assess current and future applications and trends for Building Information Modelling.	KS1	KS3
		KS4	KS5
		KS6	KS9
		KS10	
4	Synthesise the findings of relevant research and assumptions against a negotiated project example.	KS1	KS2
		KS3	KS4
		KS5	KS6
		KS9	KS10

Transferable skills and other attributes

- Students will develop an appreciation of the relevance of clear project management in their respective industries;
- Students will appreciate the role of people management in the construction sector;
- Students will enhance their skills in critical debating when arguing the merits and drawbacks of BIM.

Derogations

None

Assessment:

Indicative Assessment Tasks:

The assessments will be based on developing an understanding of project management and of BIM leading to the application of these understandings to a negotiated case study based on a reported example or an active project.

The first will be a scenario-based task where students will produce the project initiation documentation for a new project.

The second will begin with a comparative study between UK and another nation/region's approach to BIM, and an evaluation of current and future trends about delivering projects through the project lifecycle. Students will use this comparative study as a means of analysing project delivery with specific reference to their sectors of the construction industry.

The modules will assess Learning Outcomes at multiple points as the assignments are cumulative tasks and it would not aid progression if outcomes relating to project management/BIM advancements were not considered for each response.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration or Word count (or equivalent if appropriate)
1	1	Report	40%	1,500 equivalent
2	1, 2, 3 & 4	Report	60%	2,500 equivalent

Learning and Teaching Strategies:

Learning will be based around a planned lecture series on the topic of project management leading to BIM and project reviews. The reviews will assess progress on the final assessment and will allow students to share information and feedback.

Students will explore the BIM processes, theories of people and information management, and achieving successful collaboration and sharing of data amongst the project team, supported by IT.

Delivery will be supplemented with opportunities for group and individual seminars and tutorials. Furthermore, guest lecturers to bring specific topic expertise into the lecture series will be encouraged, from within the University or through the professional network related to the Built Environment. Where possible site visits will also be organised for students to meet professionals from across the sector and to experience live projects.

Syllabus outline:

Students will engage with schemes considered to reflect good practice and exemplars of Construction project management and BIM in order to assess critically its potential benefits, as well as considering the barriers to the effective digitisation of the design, construction management and facilities management of schemes and projects.

- Analysis of Project Management theory and practice.
- Examination of life cycles and sustainability, teams and motivation, risk, quality management and continuous improvement, project review and evaluation.
- Staged evaluation of the progressive levels of BIM.
- The history of project management, digital drawing and project techniques and onwards to the future predicted trends related to the subject.
- Evaluations of reported case studies from the UK and beyond.
- Application of techniques across different sectors.
- Examination of how theory, together with reference to health and safety aspects, sustainable considerations and commercial awareness, interact.

Finally, within the professional context of delivering projects, students will advance their engage with Personal Development Planning as part of this module.

Indicative Bibliography:**Essential reading**

Fewings, P. and Henjewle, C. (2019), *Construction Project Management: An Integrated Approach*. 3rd ed. London: Routledge.

Williams, M, Collingwood, V, (2008), *The Principles of Project Management*. Farnham: SitePoint.

Other indicative reading

Hardin, B & McCool, D (2015), *BIM and Construction Management: Proven Tools, Methods and Workflows*. Sussex: Sybex.

Race, S. (2013), *BIM Demystified*. London: RIBA.

Young, T.L. (2016), *Successful Project Management*. 5th ed. London: Kogan Page.

Chartered Institute of Architectural Technologists www.ciat.org.uk

Chartered Institute of Building www.ciob.org.uk

Institute for Civil Engineering www.ice.org.uk

Royal Institute of British Architects www.architecture.com

Designing Buildings Wiki www.designingbuildings.co.uk

Students will be guided to online resources during the length of the course and through the VLE.

Other sources:

IHS Database www.ihsti.com