

Module Code:	AUR616
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Module Title:	Architectural Design & Technology 3
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Level:	6	Credit Value:	40
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Cost Centre(s):	GABE	<u>JACS3 code:</u>	K190
		<u>HECoS code:</u>	100122

Faculty	FAST	Module Leader:	Dr Colin Stuhlfelder
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Scheduled learning and teaching hours	48 hrs
Guided independent study	352 hrs
Placement	0 hrs
Module duration (total hours)	400 hrs

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

Pre-requisites

Office use only

Initial approval: 29/08/2019

Version no: 1

With effect from: 01/09/2019

Date and details of revision:

Version no:

Module Aims

The module aims to conclude examination of the design principles and design representation skills developed at Levels 4 & 5 through the engagement of students in an urban regeneration development, culminating in the design of a significant civic/commercial building within the development.

This continuous project will integrate into the design process a self-directed building case study where the choice of subject reflects a particular design technology innovation to be included as part of their own building design. Furthermore, students will be expected to underpin the case study and their design with a detailed technical report on the chosen innovation, allowing them to demonstrate their ability to undertake a significant piece of independent research. To support students in these undertakings, the module will be the vehicle for embedding research methods skills.

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	Critically investigate the various contextual influences and interdependencies arising from site, local, regional considerations when delivering a sustainable scheme with a significant civic purpose.	KS1	KS2
		KS3	KS4
		KS5	KS6
		KS7	KS10
2	Evaluate a variety of qualitative and quantitative data to identify and defend the selection of a range of solutions for an output capable of addressing the complexities of the assigned project briefs.	KS1	KS2
		KS3	KS4
		KS5	KS6
		KS7	KS8
3	Apply independently directed research methodologies and problem solving techniques to critically analyse and debate existing case studies and design technology innovations in order to communicate current and future applications and trends for the described technology	KS1	KS3
		KS5	KS6
		KS7	KS8
		KS9	KS10
4	Synthesise the findings of relevant research and the assumptions made in response to the brief into a detailed	KS1	KS3
		KS4	KS5

proposal evidencing the role of lead designer within the context of current digital information management.	KS6	KS7
	KS8	KS9
	KS10	

Transferable skills and other attributes

- Students will develop an appreciation of a large scale, long term project;
- Students will understand the importance of integrating detailed research into the design process;
- Students will appreciate the role of civic identity and pride in the build environment.

Derogations

Credits shall be awarded by an Assessment Board for those modules in which a pass mark (40%) has been achieved, with a minimum mark of 40% in each element of assessment.

Assessment:

Indicative Assessment Tasks:

Following on from their experiences at Levels 4 and 5, students must continue to demonstrate that they understand how their designs will be built and will operate through lifecycles associated with their functions.

All assessments will be based on design project briefs set for the students, with each representing an increasing level of complexity with a variety of specific requirements aimed at replicating the client/designer relationship and process as understood in the current information management context. For this module they will include:

- A group project relating to developing a master plan for a regeneration area;
- A case study;
- A technical report; and
- A significant civic/commercial building designed to integrate the technology explored in the case study and technical report.

These will assess Learning Outcomes at multiple points, as the assignments are cumulative design-based tasks and it would not aid progression if outcomes relating to design and design technology were not considered for each design response.

All assessments must achieve the minimum pass mark of 40%

Where group tasks are detailed, students will be provided with an individual marking criterion.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration or Word count (or equivalent if appropriate)
1	1	Group Project	20%	1,000 equivalent
2	2	Presentation	20%	1,000 equivalent
3	1 & 2	Report	30%	3,000 equivalent

4	1, 2, 3 & 4	Presentation	30%	3,000 equivalent
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Learning and Teaching Strategies:

The module will be delivered in the dedicated Architectural Design Technology studio. Learning will be based around a planned lecture series and programmed studio-based critical reviews. The reviews assess group and student progress through the stages of their responses to set project briefs in a context where all students are able to observe developments and learn not only from their own feedback, but also to contribute to and develop from the feedback received by their peers.

Working around lectures, critical reviews, and the encouragement of design discussion and evaluation, an environment of collegiality and encouragement of fellow students through the shared experience of the studio (which includes drawing boards, PCs carrying CAD programs, a plotter and other work stations) will be engendered. This should be understood as replicating the professional experience of working in an Architectural or Architectural Technologists practice.

Studio-based 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, either 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, or visit areas and buildings of note and importance.

As one of the modules designated only for Architectural Design Technology students, the four themes of Design, Managing, Practising and Developing (Self) required by the Chartered Institute of Architectural Technologists as part of their professional assessment will be reflected in the module content. Furthermore, students will be expected to reflect, in their design and design technology choices, the cumulative knowledge from Level 4 and 5 modules, and the relevant content of concurrent modules. In particular but not exclusively at Level 6, Construction Technology 3 (focused on modern methods of construction) should be considered in this module. These are in addition to an advancement of the considerations of life-cycle performance, sustainability, and due regard for wellbeing, health, safety and comfort from the previous design modules.

Syllabus outline:

- Design: Consideration of design and design technology relating to large scale urban regeneration master planning and tall building development.
- Examination of advancements in design technology with particular emphasis on the late 20th and the 21st centuries.
- Exploration of professional principles of communicating design through drawings, visualisations, models etc.
- Expectations placed on a Chartered Architectural Technologist with further emphasis on the digital modelling and management of schemes.
- Managing: Examination of management techniques relating to longitudinal projects with multiple inputs.
- Consideration of the need to work within UK legislation and regulations.
- Practising: Exploration of the language relating to developing and communicating.
- Examination related to technologies, material choices and the specifying of these choices in a manner expected of a Chartered Architectural Technologists.
- Enhancement of digital modelling and management as the main means of communicating the final design.
- Developing (Self): Using various examples of designs, visualisation skills and presentational techniques to assist allowing students to use the module to prepare for becoming Chartered Architectural Technologists.
Engagement with various research methods appropriate to their field of study.

Indicative Bibliography:**Essential reading**

Farr, Douglas (2010), *Sustainable Urbanism*. Hoboken: John Wiley & Sons.

Farrell, P., Sherratt, F., & Richardson, A. (2016), *Writing Built Environment Dissertations and Projects: Practical Guidance and Examples*. Oxford: Wiley-Blackwell.

Other indicative reading

Bell, J. & Waters, S. (2018), *Doing Your Research Project: A Guide for First-time Researchers*, 7th Ed. Maidenhead: OU Press.

Gehl, Jon (2010), *Cities for People*. Washington: Island Press.

Greetham, B. (2014), *How to write your undergraduate dissertation*, 2nd Ed. Basingstoke: Palgrave MacMillan.

UK/Welsh Government guidance on Building Information Modelling.

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