MODULE SPECIFICATION

Module Code:	AUR534

Module Title:	Architectural Design & Technology 2

Level:	5	**Credit Value:**	40

Cost Centre(s):	GABE	JACS3 **code**: HECoS **code**:	K190 100122

Faculty	FAST	**Module Leader:**	Dr Colin Stuhlfelder

Scheduled learning and teaching hours	60 hrs
Guided independent study	304 hrs
Placement	36 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	✓	☐

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 expand on the design principles and design representation skills, with an emphasis on the use of Building Information Modelling related Computer Aided Design programs, developed at Level 4 through the larger scale schemes, and community/commercial buildings.

The themes of green technologies, conservation and community-engagement and social capital will feature as part of the project briefs students will be expected to react to. 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 Design & Technology 1.

The module will also comprise a Work Based Learning element/placement which is expected to engage the student, the employer and the academic provider in the identification, analysis and extension of understanding in a work-related aspect of the student's industrial experience. Students will enhance their engage with Personal Development Planning as part of this module.

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	
1	Apply knowledge and understanding of the performance of materials in use, based on their scientific properties, embodied energy costs and their impact on the natural environment	KS2	KS3
		KS4	KS5
		KS6	KS7
		KS8	KS9
		KS10	
2	Effectively argue the specification and design choices informed by an examination of the specialisms involved with conservation and changes of use in existing buildings	KS2	KS3
		KS4	KS5
		KS6	KS7
		KS8	KS9
		KS10	
3	Deploy a range of analysis and research techniques to create an effective response to project briefs requiring a	KS1	KS2
		KS3	KS4

	comprehensive response with the broad topic of sustainability being a key consideration.	KS5	KS6
		KS7	KS8
		KS9	KS10
4	Reflect constructively to the peer group upon the definition, development and completion of an investigative or creative project in the context of experienced placement employment responsibilities.	KS1	KS3
		KS6	KS9

Transferable skills and other attributes

- Students will be guided to develop specific Building Information Modelling-related Computer Aided Design skills;
- Students will understand the importance of public/community engagement in the delivery of successful schemes;
- Students will use their own concurrent work place experience, placements, and engagement with real clients and real projects, the latter having been a feature of the previous version of this module.

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 Level 4, students must continue to demonstrate that they understand how their designs will be built and will operate through lifecycles associated with their functions.

The majority of the 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. For this module they will include:

- A group project relating to developing a 'green' village scheme;
- A significant conservation project requiring a change of use; and
- The creation of a new build community building.

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.

The Work Based Learning placement will consist of a 36 hour construction-related placement evidenced via a final presentation. The placement will be assessed via a selection of Core Attributes, Key Attitudes and Practical Skillsets as identified in the Wrexham Glyndŵr Graduate Model. Negotiation of this element will be undertaken on a student by student basis, for example if students are already working in a relevant position.

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%	2,000 equivalent
2	1 & 2	Presentation	20%	2,000 equivalent
3	1, 2 & 3	Presentation	30%	3,000 equivalent
4	4	Reflective Practice	30%	20 minutes

Learning and Teaching Strategies:

The module will be delivered in the main in the dedicated Architectural Design Technology studio. Additional lectures will also be delivered in a classroom setting (see syllabus outline). 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 the latest 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 Technologist 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 invited, 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 modules, and the relevant content of concurrent modules, in particular but not exclusively at Level 5, Construction Technology 2 (focused on larger scale construction projects as well as services etc.)

Syllabus outline:

- Design: Consideration of design and design technology relating to larger scale housing schemes, including master planning.
- Exploration of community/commercial buildings from the late 19th Century onwards.
- Examination of the advanced principles of communicating design through drawings, visualisations, models etc.
- Utilising digital modelling and management of schemes.
- Managing: Evaluating the relevant daily, weekly, annual and full lifecycles relating to the uses of the design examples considered, and the designs proposed.
- Exploration of how designers need to propose and manage their projects, from inception to completion.
- Consideration of the regulations and planning considerations placed upon their roles extended to include meeting current sustainability legislation, conservation criteria and localised regulations.
- Practising: Exploring the language relating to developing and communicating designs and the related technologies,
- Justifying material choices and the specifying of these choices in a manner expected of developing Architectural Technologists.
- Development of the digitising of the development process.
- Developing (Self): Using various examples of designs, visualisation skills and presentational techniques to assist in furthering the professional development of Architectural Technologists capable of explaining the work they are producing, and the choices they have made to a level akin to that of qualified practitioners.

Indicative Bibliography:

Essential reading

Bizley, Graham (2010), *Architecture in Detail II*. London: Architectural Press.

Emmitt, Stephen (2013), *Architectural Technology: Research and Practice*. London: Wiley-Blackwell.

Other indicative reading

Rider. T et al (2011), *Understanding Green Building Materials.* New York: W.W. Norton & Company.

RIBA (various) Plan of Work 2013 documentation and toolkits, Royal Institute of British Architects, London

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