

<b>Module Code:</b>	AUR407/AURH407
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<b>Module Title:</b>	Design & Technology 1
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<b>Level:</b>	4	<b>Credit Value:</b>	20
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<b>Cost Centre(s):</b>	GABE	<b>JACS3 code:</b>	K190 (ADT) K220 (CM)
		<b>HECoS code:</b>	100122 (ADT) 100149 (CM)

<b>Faculty</b>	FAST	<b>Module Leader:</b>	Dr Colin Stuhlfelder
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Scheduled learning and teaching hours	36 hrs
Guided independent study	164 hrs
Placement	0 hrs
<b>Module duration (total hours)</b>	<b>200 hrs</b>

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

<b>Pre-requisites</b>
None

**Office use only**

Initial approval: 29/08/2019	Version no: 1
With effect from: 01/09/2019	
Date and details of revision: 02/04/20 APSC approved HNC awards	Version no:3
25/11/20 HNC title change to HNC Construction Technology with effect from Sep 21	
18/06/2021 Administrative change to module code	

### Module Aims

The module aims to introduce students to the basic principles of design and technology through collaborative working, exploring how they can present their work across a range of formats from hand drawn sketches to Computer Aided Design outputs, as well as practicing what it is to be professional in collaborative settings. Students will be introduced to and engage with Personal Development Planning as part of this module.

Through a range of domestic projects of an increasing level of detailed design, they will explore inclusive retrofitting and new build briefs, with consideration for issues of life-cycle performance, sustainability, and due regard for wellbeing, health, safety and comfort.

### 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	Demonstrate how collaborative working can benefit the development of a professionally delivered project.	KS1	KS2
		KS3	KS5
		KS8	KS9
2	Communicate an appropriate design and technology response to domestic project briefs.	KS1	KS2
		KS3	KS5
		KS7	KS10
3	Evaluate the appropriateness of various technological and material choices over the lifetime of the proposed design.	KS1	KS3
		KS4	KS5
		KS6	KS9
		KS10	
4	Demonstrate a knowledge of the principles of good design practice within the design development process and its application to the successful management of projects.	KS1	KS3
		KS4	KS5
		KS6	KS7
		KS8	KS9
		KS10	

**Transferable skills and other attributes**

- Students will understand a multitude of presentational skills, including verbal and visual formats;
- Students will understand what the expectations of their respective professional bodies are;
- Students will appreciate the language of modern design as understood in the United Kingdom as well as the wider world.

**Derogations**

*None*

**Assessment:**

Indicative Assessment Tasks:

The module will be assessed across a series of group tasks leading to the production of a portfolio demonstrating their collective responses to three design briefs directed to the development of:

- A shelter constructed of limited materials;
- An extension for a disabled child; and
- A new build on a restricted site for a professional working from home.

The assessment approach is to support the task-orientated, collaborative working of students coming to the module with varying interests in design, in technology, and in management in order to develop the skills set out in the learning outcomes in an embryonic professional setting.

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, 2, 3 & 4	Portfolio	100%	4,000

**Learning and Teaching Strategies:**

Learning will be based around a planned lecture series and programmed studio-based critical reviews. The reviews assess group 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, technology, and management 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 workstations) will be engendered. This should be understood as replicating the professional experience of working in a collaborative environment where the task-based nature of the assignment can be encouraged and realised.

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, from either 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.

**Syllabus outline:**

Students will be expected to reflect, in their design and design technology choices, the relevant content of concurrent modules, in particular but not exclusively at Level 4, the Construction Technology 1 (also focused on domestic construction),

- Design: Consideration of design and design technology relating to domestic buildings from the late 19th Century onwards.
- Examination of the basic principles of communicating design through drawings, visualisations, models etc.
- Managing: Examination of the relevant lifecycles relating to the design examples considered, and the designs proposed.  
Consideration of how designers and managers need to propose and manage their projects, from inception to completion.  
Exploration of the regulations and planning considerations placed upon their roles.  
Consideration of performance, sustainability, Health & Safety, wellbeing, comfort etc.
- Practising: Exploration of the language relating to developing and communicating designs.
- Evaluation of technologies, material choices and the specifying of these choices.
- Developing (Self): Using various examples of designs, visualisation skills and presentational techniques to assist in the development of convincing professionals.
- Understanding the expectations placed on them as members of their respective professional bodies.

**Indicative Bibliography:**

**Essential reading**

Cottrell, S. (2010), *Skills for Success: The Personal Development Planning Handbook*. Basingstoke: Palgrave.

Silver, P. and McLean, W. (2013), *Introduction to Architectural Technology*. 2nd ed. London: Laurence King Publishing.

**Other indicative reading**

Dunn, N. (2014), *Architectural Modelmaking*. 2nd ed. London: Laurence King Publishing.

Thompson, N. (2018), *Effective Communication*. 3rd ed. Basingstoke: Palgrave Macmillan.

Zell, Mo (2008), *The Architectural Drawing Course*. London: Thames & Hudson.

The Professional Codes of the respective professional bodies related to the built environment courses, for example, the Chartered Institute of Architectural Technologists, and the Chartered Institute of Building.

Chartered Institute of Architectural Technologists [www.ciat.org.uk](http://www.ciat.org.uk)

Chartered Institute of Building [www.ciob.org.uk](http://www.ciob.org.uk)

Designing Buildings Wiki [www.designingbuildings.co.uk](http://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](http://www.ihsti.com)