MODULE SPECIFICATION

Module Code:	AUR413/AURH413

Module Title:	Sustainable Construction

Level:	4	**Credit Value:**	20

Cost Centre(s):	GABE	JACS3 **code**: HECoS code:	K190 (ADT) K220 (CM) 100122 (ADT) 100149 (CM)

Faculty	FAST	**Module Leader:**	David Cheesbrough

Scheduled learning and teaching hours	36 hrs
Guided independent study	164 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	✓	☐
BSc (Hons) Construction Management	✓	☐
HNC Architectural Design Technology	✓	☐
HNC Construction Technology	✓	☐

Pre-requisites
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 of module code

Module Aims

The module aims to give students knowledge of global sustainability issues including social sustainability, quality of life, economic sustainability and environmental sustainability. The legislation and policy that drives this agenda will also be studied especially those in relation to sustainable development including the terminology and any design issues.

Students will examine existing buildings to understand key principles of environmental impact and energy/carbon assessment methodologies. Students will understand the significant impact waste plays, for example, in the construction industry, both in its production and the means by which materials can be recycled. With all these considerations, students will consider how they impact on the operation of construction sites and the various roles of those involved in the process, from labourers on site, the supply chain, and the public as the interact with the active site and the end use of the project.

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	Describe the impact of the built environment on the natural environment in the extraction of materials, use of natural resources, ecology or sustainability.	KS1	KS3
		KS5	KS6
		KS4	KS7
2	Examine how the evolution of the natural and built environment from early settlements to modern day affects understanding of future developments.	KS1	KS5
		KS6	KS7
3	Demonstrate a knowledge of the servicing of the built environment (transport, energy, water, etc.) with particular reference to sustainability and building efficiency.	KS1	KS4
		KS5	KS6
		KS7	KS10

Transferable skills and other attributes

- Students will develop an understanding of Global Sustainability and green issues;
- Students will understand how local, regional and national authorities respond to sustainability issues, through Sustainable Development strategies and other approaches;
- Students will evaluate how the construction industry can deliver sustainable projects, from inception through to demolition.

Derogations

None

Assessment:

Indicative Assessment Tasks:

The module will be assessed by the students producing and delivering a detailed poster presentation to their peers. It will illustrate some aspect of Sustainable Construction as agreed with the Module Leader.

The Poster Presentation will be an opportunity for students to engage in Peer to Peer learning.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration or Word count (or equivalent if appropriate)
1	1, 2 & 3	Poster Presentation	100%	4,000 equivalent

Learning and Teaching Strategies:

The learning and teaching strategy has been developed to ensure that students are aware of the processes of construction and to enable them to apply this knowledge to practice situations. There will be a combination of approaches used:

- Key lectures will impart relevant theory and identify best practice examples
- Directed study worksheets will be used to reinforce the application of theory to practice
- Students (Individually and in groups) will be asked to assess scenarios and present solutions for discussion.

The assessment will provide an opportunity for summative feedback to help enhance and develop the student skillset required for Level 5

Syllabus outline:

- An outline of the archaeological record;
- Patterns of settlements;
- The evolution of the house form;
- Sustainability in the natural and built environments;
- Ecology, transport, energy, water, building materials, waste;
- Weather, climate change and their influence on the built environment;
- Transport patterns;
- Economic sustainability;
- What the future may hold.

Indicative Bibliography:

Essential reading

Baker, S. (2015), *Sustainable Development*. 2nd ed. London: Routledge.

Brandon, P. & Lombardi, P. (2010), *Evaluating Sustainable Development in the Built Environment*. Oxford: Wiley-Blackwell.

Other indicative reading

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

Chartered Institute of Building www.ciob.org.uk

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