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MODULE DESCRIPTOR

Module Title

Integrated Building Technology 1

Reference	AC3011	Version	12
Created	May 2017	SCQF Level	SCQF 9
Approved	August 2002	SCQF Points	15
Amended	September 2017	ECTS Points	7.5

Aims of Module

To provide students with critical and research skills to enable them to evaluate contemporary conservation practice and develop informed technological strategies in and around the renovation and adaptive reuse of moderately complex existing buildings.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Demonstrate the ability to evaluate the issues relating to the conservation, renovation and adaptive reuse of moderately complex existing buildings.
- 2 Define the issues and evaluate strategies related to environmental and energy performance when working with moderately complex existing buildings.
- 3 Critically assess appropriate refurbishment and rehabilitation interventions by understanding the construction and structure of an existing building through its pathology.
- 4 Critically analyse and apply strategies for energy efficient servicing and lighting systems by demonstrating a grasp of both passive and active systems

Indicative Module Content

This module focuses on contemporary technological practice concerning conservation design and the adaptive reuse of existing buildings. It includes building pathology, environmental analysis, specification and detail design. It will consider new best practice in renovation, particularly focusing on how to make existing buildings stock more energy efficient by explaining embodied energy and the wider environmental impact of materials, fabric energy efficiency and moisture performance of buildings. These issues are part of the broader topic of sustainable design.

Module Delivery

This module is delivered by a blended learning approach focusing on directed student research, lectures with accompanying workshops.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	39	N/A
Non-Contact Hours	111	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type: Coursework Weighting: 100% Outcomes Assessed: 1, 2, 3, 4
 Description: Analyse and investigate the technical feasibility of an existing building in a specified studio brief.

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

In order to pass the module students must achieve 40% or greater.

Module Grade	Minimum Requirements to achieve Module Grade:
A	70% or better
B	60% or better
C	50% or better
D	40% or better
E	35% or better
F	Less than 35%
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None.
Corequisites for module	None.
Precluded Modules	None.

ADDITIONAL NOTES

The module may involve visits to construction sites and completed buildings. These will be dependent on arrangements with contractors, the existence of appropriate insurance cover, satisfaction of relevant Health and Safety requirements, and a risk assessment being undertaken in advance.

INDICATIVE BIBLIOGRAPHY

- 1 Clark, D. (2013) Information Paper No. 20?: Ventilation rates in offices - mechanical and natural. [Online]. Cundall. Available from: <https://cundall.com/Knowledgehub/Information-Papers-19-to-27.aspx?categoryid=66>.
- 2 Watt, D. 2007, Building Pathology: Principles and Practice, Wiley-Blackwell
- 3 Jager, F,P. 2010, Old & New: Design Manual for Revitalizing Existing Buildings, Birkhauser
- 4 Alison. Cotgrave & Mike Riley (eds.) (2013) Total sustainability in the built environment . Basingstoke, Palgrave Macmillan.
- 5 Halliday, S. (2019a) Sustainable construction . Second edition.; Second edition. London?; New York?;; London?; New York?;, Routledge.
- 6 Halliday, S. author. (2019b) Sustainable construction . Second edition. London, Routledge.
- 7 Anon (2015b) Environmental Design: CIBSE guide A. 8th edition. London, The Chartered Institution of Building Services Engineers.
- 8 Voss, K. & Musali, E. (2013) Net zero energy buildings: international projects of carbon neutrality in buildings. [new ed.]. Munich, Institut fur internationale