MODULE DESCRIPTOR

Module Title

Integrated Building Technology 2

Reference	AC3012	Version	12
Created	July 2021	SCQF Level	SCQF 9
Approved	August 2002	SCQF Points	15
Amended	September 2021	ECTS Points	7.5

Aims of Module

To provide students with the ability to appraise contemporary technological issues and strategies within a given context by analysing, preparing and implementing strategies for an integrated architectural design project.

Learning Outcomes for Module

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

1	Critically apply an understanding of tectonic theory and principles in the integration of structure and construction in the context of environmental and spatial planning.
2	Critically analyse and apply appropriate strategies with reference to contemporary construction systems, structural performance, material specification and detail design.
3	Demonstrate understanding of the design implications of issues related to energy usage and embodied energy, specification and detail design of materials in the context of the drive to zero carbon.
4	Demonstrate an appropriate level of integration between design ambitions and contemporary technological culture.

Indicative Module Content

The module explores the links between design and technology. Environmental, structural and construction issues and strategies are explained as an integral part of the design process. The choice of technological systems is explained in relation to the physical properties and characteristics (including aesthetic) of building materials, components and systems and the environemtal impact of specification choices. The systems are explored in detail in relation to a design project. Students are encouraged to think critically about their design decisions and the resulting building performance using both physical and computer models.

Module Delivery

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

Module Ref:	AC3012 v12

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
Actual Placement hours for professional, statutory or regulatory body		

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:	100% Individual Coursework Report into the technical aspects and evaluation of a design proposed as a response to a specific studio brief.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The overall module grade is based on 100% weighting of Component 1 (Report). An overall minimum grade D is required to pass the module. Non-submission will result in an NS grade.

Module Grade	Minimum Requirements to achieve Module Grade:
A	A
B	B
C	C
D	D
E	E
F	F
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.

INDICATIVE BIBLIOGRAPHY

1 Watts, A. (2016) Modern construction handbook. Fourth edition. Basel, Birkhauser.

2 Arup Lighting, 2007, Lighting Technical Review, RIBA.

3 Chartered Institution of Building Services Engineers (2018) Environmental design: CIBSE guide A. 8th ed. [Online]. London, Chartered Institution of Building Services Engineers. Available from: https://ezproxy.rgu.ac.uk/login?url=http://www.ihsti.com/scripts/Ti_logon/Ti_logon.asp?reqcode=IPlogon.

4 Voss, K. & Musali, E. (2013) Net zero energy buildings: international projects of carbon neutrality in buildings. [new ed.]. Munic Institut fur internationale Architektur-Dokumentation.

5 Morgan, C. (2018) Sustainable Renovation. [Online]. The Pebble Trust. Available from: https://s3-eu-west-1.amazonaws.com/s3.spanglefish.com/s/31974/documents/[digitalv3]-guide-to-domestic-retrofit-compressed

6 Edwards, B. (2014) Rough guide to sustainability a design primer. 4th ed. London?:, RIBA.

7 Watts, A., 2007, Facades Technical Review, RIBA.

8 Knaack, Klein, Bilow, Auer (2007), Principles of Construction - Facades, Birkhauser.