MODULE DESCRIPTOR

Module Title

Environmental Design

Reference	AC4008	Version	6
Created	July 2021	SCQF Level	SCQF 10
Approved	July 2002	SCQF Points	15
Amended	September 2021	ECTS Points	7.5

Aims of Module

To provide the student with the ability to use and evaluate sophisticated and integrative design methods and tools in the environmental design of buildings.

Learning Outcomes for Module

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

1	Develop the environmental requirements for a building.
2	Design appropriate environmental systems and integrate these in an architectural proposal.
3	Evaluate the design in terms of the environmental targets set, capital and running costs of the environmental system and the comfort criteria for the building's occupants.

Indicative Module Content

The module provides practical guidance on the design of environmental systems, both active and passive; the assessment of comfort, space, environmental, and cost implications; and the communication of these ideas.

Module Delivery

This is a workshop/tutorial based course. It is a continuation of the design project studied in the first semester. Students consider the design of environmental systems (thermal & visual) appropriate to, and integrated with, the project building. They are advised by staff on sources of information and receive assistance in the interpretation and application of the information they collect. A substantial part of the module is devoted to studio-based student centred and library-based research.

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Indicative Student Workload	Full Time	Part Time
Contact Hours	30	N/A
Non-Contact Hours	120	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
Description:	The submission consists of a project which demonstrates the integration and application of environmental systems both thermal and visual.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The overall module grade is based on 100% weighting of Component 1 (Coursework). 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	Environmental Design, Thomas, R., (ed); 3rd ed Spon, 2006
2	Energy Manual : sustainable architecture (2008)Heggar, etal; Basel ; Boston : Birkhauser ; Munich : Edition Detail
3	Building Services Engineering (2013)Chadderton, David;Hoboken : Taylor and Francis, 6th Edition
4	Environmental Design : CIBSE Guide A (2015) Butcher, etal; London : Chartered Institution of Building Services Engineers, 8th Ed
5	Modelling, design and optimization of net zero energy buildings (2015) Athienitis, etal; Berlin, Germany : Wilhelm Ernst & Sohn