

Module Title	Reference AC4008
Environmental Design	SCQF SCQF
	Level 10
	SCQF Points 15
	ECTS Points 7.5
Keywords	Created May 2002
Environmental Systems, Architectural Design, Comfort, Cost	Approved July 2002
	Amended August 2008
	Version No. 4

This Version is No Longer Current

The latest version of this module is available [here](#)

Prerequisites for Module

None.

Corequisite Modules

None.

Precluded Modules

None.

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.

Mode of 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.

Assessment Plan

Learning Outcomes for Module

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

	Learning Outcomes Assessed
Component 1	1,2,3

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.

Indicative Student Workload

<i>Contact Hours</i>	Full Time
Tutorials/Seminars	20
Assessment	10
<i>Directed Study</i>	
Directed Study	70
<i>Private Study</i>	
Research	50

Component 1: Project

Indicative Bibliography

1. Environmental Design, Thomas, R., (ed); 3rd ed Spon, 2006
2. Energy Manual : sustainable architecture (2008) Heggart, et al; 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, et al; London : Chartered Institution of Building Services Engineers, 8th Ed
5. Modelling, design and optimization of net zero energy buildings (2015) Athienitis, et al; Berlin, Germany : Wilhelm Ernst & Sohn