

<b>Module Title</b> <b>Integrated Building Technology 1</b>  <b>Keywords</b> Design rationale, Technological integration, Analysis, Detailed design strategies.	Reference	AC3011
	SCQF Level	SCQF 9
	SCQF Points	15
	ECTS Points	7.5
	Created	August 2002
	Approved	August 2002
	Amended	August 2009
	Version No.	8

### This Version is No Longer Current

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

#### Prerequisites for Module

#### Assessment Plan

None.

	Learning Outcomes Assessed
Component 1	1,2,3

#### Corequisite Modules

None.

Component 1: The student's ability to critically analyse, evaluate, and rationally present technology strategies will be assessed by means of a report and an oral presentation. The coursework includes a group work component and an individual work component.

#### Precluded Modules

None.

#### 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

#### Aims of Module

To provide students with critical thinking and research skills that will enable them to evaluate and develop informed technological strategies about structural and environmental systems, and construction methods, in an integrated manner for both new and existing buildings.

#### 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.

#### Learning Outcomes for Module

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

1. Evaluate technically the appropriate use of structure, materials and components consistent with an architectural intention.
2. Deduce and evaluate environmental strategies and performance of moderately complex buildings supported with rational argument.
3. Critically assess appropriate refurbishment and rehabilitation interventions in a moderately complex building.

### **Indicative Module Content**

This module explores the use of masonry, timber, steel, concrete, and composite construction; and considers the design criteria which influence their choice. These will include aesthetics, technological integration, cost, sustainability and ecology, embodied and operating energy and thermal performance.

### **Indicative Student Workload**

<i>Contact Hours</i>	Full Time
Assessment	15
Lectures	24
Tutorials	24

<i>Directed Study</i>	
Directed Study	20

<i>Private Study</i>	
Private Study	67

### **Mode of Delivery**

This is a lecture based module, with accompanying tutorials / seminars at which students will be expected to formally contribute. Students will be expected to undertake self-directed study to augment taught material.