

<b>Module Title</b> <b>Advanced Building Technology</b>	Reference ACM011 SCQF SCQF Level 11 SCQF Points 15 ECTS Points 7.5 Created August 2002
<b>Keywords</b> Design rationale, Technological Integration, Analysis, Detail Design Strategies, Processes, Assembly, Buildability	Approved August 2011 Amended September 2012 Version No. 2

## This Version is No Longer Current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 develop, devise and apply integrated strategies for structure, construction and environment performance of complex buildings.

### Learning Outcomes for Module

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

### Mode of Delivery

This is delivered by a blended learning approach involving student research, online activities, targeted lectures and tutorials / seminars at which students will be expected to formally contribute. Students will be expected to undertake self-directed study to augment their learning of delivered materials.

### Assessment Plan

	Learning Outcomes Assessed
Component 1	1,2,3

Component 1: The student's ability to analyse, evaluate, and rationally present technological strategies will be assessed by coursework.

to:

1. Develop the visual, thermal and acoustic environmental requirements for a complex building.
2. Devise environmental, structural and constructional strategies for a complex building.
3. Apply and integrate the environmental, structural and constructional strategies into the design of a complex building.

### **Indicative Module Content**

This module explores theories, choices, applications and integration of low energy ventilation, heating, cooling, lighting and structural solutions including specialised systems, where appropriate. The need to research and critically assess the physical properties and characteristics of building materials, components and systems, and the environmental impact of specification choices is stressed. Processes of designing details, assemblies, buildability and performance issues are explored together with the relevant regulatory requirements (e.g. fire, access, health and safety etc) and non-regulatory comfort criteria. The concept of buildings as

### **Indicative Bibliography**

1. Bachman, L R., 2003, Integrated buildings: the systems basis of architecture, New Jersey, Wiley.
2. Bean, R., 2004, Lighting: Interior and Exterior, Oxford: Architectural Press.
3. Browne, M Neil, 1991, Asking the right questions : a guide to critical thinking, Prentice-Hall.
4. Deplazes, A., (ed), 2005 Constructing Architecture, Basel, Birkhauser.
5. Ferguson, I., 1989, Buildability in Practice, London, Mitchell Publishing.
6. Holgate, A. (1997), The art of structural engineering: the work of Jorg Schlaich and his team, Stuttgart, Edition Axel Menges.
7. Templeton, D., (ed), 1997, Acoustics in the built environment: advice for the Design Team, 2nd ed. Oxford: Architectural Press.
8. MacDonald, A. J., 2000, Structure and Architecture, 2nd ed. Oxford: Architectural Press.

### **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 and satisfaction of relevant Health and Safety regulations.

sustainable integrated systems is emphasised.

### **Indicative Student Workload**

<i>Contact Hours</i>	Full Time
Assessment	5
Lectures	16
Seminars	12
<i>Directed Study</i>	
Directed Study	60
<i>Private Study</i>	
Private Study	57