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MODULE DESCRIPTOR

Module Title

Introduction to Building Technology

Reference	AC1002	Version	12
Created	April 2022	SCQF Level	SCQF 7
Approved	July 2005	SCQF Points	15
Amended	November 2022	ECTS Points	7.5

Aims of Module

To enable the student to analyse and understand the structural and environmental principles that underlie the construction of buildings.

Learning Outcomes for Module

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

- 1 Demonstrate knowledge of the basic principles of structure and its materials as applicable to the design and construction of buildings including performance in the event of fire.
- 2 Demonstrate knowledge of the principles of human environmental comfort.
- 3 Apply knowledge of structural properties to the design and/or testing of a simple structure.
- 4 Apply knowledge of human responses to environmental conditions to specific solutions to issues of comfort.

Indicative Module Content

Strategic site analysis considering basic principles of sustainable design, site specific design, design precedent, opportunities for renewable technologies and the impact of buildings on their immediate environment. Basic structural principles in relation to forces and loads; Identification of tension, compression, bending, shear and deflection; Investigation and critical appraisal of principles of timber frame construction. Historic development of construction techniques; Material characteristics and properties; Building fabric; Principles of thermal performance; Use and specification of building components; Environmental considerations of construction techniques and specification choices. Basic principles of measuring fabric performance. Basic domestic scale services; drainage; heating, ventilation. application and integration of renewable technologies

Module Delivery

This module is delivered by lectures, practical workshops, directed student research and online activities.

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:	60%	Outcomes Assessed:	3, 4
Description:	Over the course of the semester students are asked to compile a 'Journal' of coursework exercises, site visits, records of workshop exercises and lecture notes which incorporate analytical graphic, written and technical design tasks.				

Component 2

Type:	Examination	Weighting:	40%	Outcomes Assessed:	1, 2
Description:	In an open book exam setting where students can use the 'Journal' that they have produced over the semester, students are requested to answer questions covering material presented in lectures and/or tutorials.				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

The overall module grade is based on 60% weighting of Component 1 (Coursework Y axis) and 40% weighting of Component 2 (Examination X axis). An overall minimum grade D is required to pass the module. Non-submission of either component will result in an NS grade. Architecture students must pass each component with a minimum D grade to pass the module. The main grid applies to all other courses.

		Examination:						NS
		A	B	C	D	E	F	
Coursework:	A	A	A	B	B	C	E	
	B	B	B	B	C	C	E	
	C	B	C	C	C	D	E	
	D	C	C	D	D	D	E	
	E	C	D	D	E	E	E	
	F	E	E	E	E	F	F	
NS		Non-submission of work by published deadline or non-attendance for examination						

Module Requirements

Prerequisites for Module	None in addition to course (SCQF7) entry requirements.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 Borer P. & Harris C., 2005. The Whole House Book. 2nd Edition. Centre for Alternative Technology Publications).
- 2 Ching F D K., 2008. Building Construction Illustrated. 4th Edition . John Wiley & Son.
- 3 Deplazes A., 2013. 3rd edition. Constructing Architecture: Materials, Processes, Structures; A Handbook. Birkhauser Verlag AG.
- 4 Mitchell, J., 1997. The Craft of Modular Post & Beam. Hartley & Marks Publishers.
- 5 Zaretsky M., 2009. Precedents in Zero Energy Design. 1st Edition, Routledge.
- 6 Seward D, Understanding Structures-Analysis, Materials, Design (2003) 3rd edition.