MODULE DESCRIPTOR

Module Title

Building Structure and Technology

Reference	SU2025	Version	9
Created	February 2024	SCQF Level	SCQF 8
Approved	July 2005	SCQF Points	15
Amended	April 2024	ECTS Points	7.5

Aims of Module

To enable the student to understand the structure and construction of moderately complex buildings.

Learning Outcomes for Module

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

1	Analyse the structure and construction of moderately complex buildings.
2	Demonstrate knowledge, understanding and application of the structural and construction details of moderately complex buildings.

Indicative Module Content

Structure: Structural material properties and environmental impact; alternative structural systems (simple frames, portal & moment frames, combined systems); vertical and lateral loading; load path; connections and supports; lateral stability and bracing methods (diagonal bracing, shear walls and moment connections); internal forces (tension, compression, bending, shear and deflection); structural elements and their functions (simple beams, continuous beams, cantilever beams, composite beams, trusses, slabs, columns and walls); steel structures; reinforced concrete structures; timber structures; approximate sizing. Construction: Alternative materials and systems for roofing, cladding, and flooring; assembly of components and installation of systems; environmental impact and architectural considerations; impact of interstitial condensation; basement waterproofing and foundation strategies; fire safety strategies; construction of retaining walls, earthworks, and hard standings.

Module Delivery

This module is delivered by an approach involving student research, online activities, targeted lectures, group work and seminars.

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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
Description:	Report consisting of analysis and investigation into the structure and construction of moderately complex buildings.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

In order to pass the module students must achieve D or greater. A non submission will be given 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 in addition to SCQF8 entry requirements.
Corequisites for module	None.
Precluded Modules	None.

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INDICATIVE BIBLIOGRAPHY

1	Macdonald, A.J., 2019. Structure and Architecture. 3rd ed. London: Routledge.
2	Ching, F., 2020. Building Construction Illustrated. 6th ed. Wiley.
3	Chudley, R., 2012. Advanced Construction Technology. 5th ed. Harlow: Pearson/Prentice Hall.
4	Silver, P. & McLean, W.,2013, Introduction to Architectural Technology, 2nd Edition,London: Laurence King.
5	Megson, T. H. G., (2019), Structural and stress analysis, Butterworse-Heinemann.
6	Yeomans, D. T., 2015, How structures work : design and behaviour from bridges to buildings, 2nd edition, Wiley Blackwell.
7	Silver, P., (2013), Structural engineering for architects : a handbook, London Laurence King.
8	Davison, B.,(2012),Steel designers' manual, Wiley-Blackwell.