

## Construction Technology 2

### Module Information

2022.01, Approved

#### Summary Information

Module Code	5326BEUG
Formal Module Title	Construction Technology 2
Owning School	Civil Engineering and Built Environment
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

#### Teaching Responsibility

LJMU Schools involved in Delivery
Civil Engineering and Built Environment

#### Learning Methods

Learning Method Type	Hours
Lecture	22
Online	22
Workshop	22

#### Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	12 Weeks

#### Aims and Outcomes

Aims	To examine construction methods and building services installations with a specific focus on framed structures, and commercial – industrial buildings.
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**After completing the module the student should be able to:**

**Learning Outcomes**

Code	Number	Description
MLO1	1	Analyse and explain a range of processes and techniques involved in the construction of the substructure for single storey and multi storey framed buildings.
MLO2	2	Analyse and explain a range of processes and techniques involved in the construction of the superstructure for single storey and multi storey framed buildings.
MLO3	3	Explain the principles and operation of a range of building services for industrial and commercial buildings.
MLO4	4	Evaluate the application of modern methods of construction and sustainable technologies to industrial and commercial buildings.
MLO5	5	Recognise health and safety risks related to various construction techniques used for frame structured single and multi storey buildings.

**Module Content**

Outline Syllabus	Substructure – pile foundations, displacement and replacement, pile caps and ground beams, pad foundations. Basement excavation and construction. Reinforced concrete ground floor slabs. Superstructure – Single storey framed buildings of portal frame and lattice girder construction in steel concrete and timber. Multi storey structural frames in steel in-situ concrete and precast concrete. Cross laminated timber multi storey structures. Tunnel form and Slip form construction. Cladding to single storey and multi storey buildings. Roofing to single and multi-storey buildings. Structural concrete floors,- metal deck, precast concrete and in-situ concrete. Suspended Ceilings, Access Floors and Internal Partitions. Services – Heating Ventilation and Air conditioning plant, electrical installations, lifts and escalators installation. Pumped systems of water supply and fire fighting and suppression systems to multi storey buildings. Modern Methods of Construction, inclusivity and sustainable technologies will be considered where appropriate.
Module Overview	
Additional Information	Provides an advanced knowledge of construction technology through more complex building types and systems. Students are able to explore construction technology through more analytical methods. The concept of services in commercial and industrial buildings are also introduced. On the Quantity Surveying Degree Apprenticeship programme, the knowledge learning outcomes for this module are K4, K6, K7, S2, and S3.

**Assessments**

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	SCENARIO BASED ASSIGNMENT	50	0	MLO2, MLO4, MLO5
Centralised Exam	TIMED OPEN BOOK TEST	50	0	MLO1, MLO3, MLO4, MLO5

**Module Contacts**

**Module Leader**

Contact Name	Applies to all offerings	Offerings

Tom Hogarth	Yes	N/A
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**Partner Module Team**

Contact Name	Applies to all offerings	Offerings
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