

## Liverpool John Moores University

Title: CONSTRUCTION TECHNOLOGY AND MATERIALS  
Status: Definitive  
Code: **4223BEUG** (124918)  
Version Start Date: 01-08-2021

Owning School/Faculty: Civil Engineering and Built Environment  
Teaching School/Faculty: Civil Engineering and Built Environment

Team	Leader
Tom Hogarth	Y
Spencer Kelly	

**Academic Level:** FHEQ4      **Credit Value:** 20      **Total Delivered Hours:** 44  
**Total Learning Hours:** 200      **Private Study:** 156

### Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	22
Practical	10
Tutorial	12

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Scenario based assignment	50	
Portfolio	AS2	To include lab reports	50	

### Aims

*To provide an overview and develop understanding of techniques and materials associated with the construction of low-rise domestic dwellings.*

### Learning Outcomes

After completing the module the student should be able to:

- 1 Describe, detail and compare a range of processes and techniques involved in the site investigation and construction of the substructure work of low rise buildings.
- 2 Describe and compare a range of construction methods in relation to the primary elements of the superstructure of low rise buildings.
- 3 Specify and compare a range of processes and techniques involved in the construction of the secondary elements and finishes of low rise buildings.
- 4 Understand and identify the properties of common building materials used in the construction of low rise buildings.

### **Learning Outcomes of Assessments**

The assessment item list is assessed via the learning outcomes listed:

Report	1	2
Portfolio	3	4

### **Outline Syllabus**

#### *Substructure*

- *Domestic foundations of the forms of strip, raft and pile foundations for low rise buildings.*
- *Mechanical plant used in substructure work.*
- *Excavations.*
- *Site investigations for housing sites; dealing with trees on site, high water tables, contaminated land etc.*
- *Site set up.*

#### *Superstructure*

- *Ground floor construction; suspended and solid floors.*
- *External cavity wall construction.*
- *Timber frame construction.*
- *Upper floors in timber and precast concrete.*
- *Pitched and flat roofs*

#### *Secondary Elements and Finishes*

- *Stair construction.*
- *Door and Window construction and fixing.*
- *Internal partitions in masonry and timber.*
- *Typical finishes for domestic buildings.*

#### *Building Materials*

- *Concrete specification and testing, Clay brickwork and mortar specifications, Concrete blockwork specification and testing, timber properties of hardwoods and softwoods, manufactured timber boards, Plasters and plasterboard, corrosion and protection of metals. Thermal insulation materials.*

*Construction drawings and illustrations.*

### **Learning Activities**

Lectures, tutorials and practical sessions.

### **Notes**

This module provides an overview and develops understanding of techniques and materials associated with the construction of low-rise domestic dwellings.