

Liverpool John Moores University

Title: CONSTRUCTION TECHNOLOGY
Status: Definitive
Code: **4540NCCG** (129477)
Version Start Date: 01-08-2021

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

Team	Leader
Fiona Borthwick	Y

Academic Level: FHEQ4 **Credit Value:** 20 **Total Delivered Hours:** 48
Total Learning Hours: 200 **Private Study:** 152

Delivery Options

Course typically offered: S1, S2 and NS2 (S2 for Jan)

Component	Contact Hours
Lecture	48

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Test	Test	Online Test	50	1.5
Report	Assignment	Assignment	50	

Aims

This module will introduce the different technologies used for construction from planning to completion. It will generate an understanding of the different characteristics and design considerations to be considered when selecting the most suitable technological solution. Students will consider adaptations and recycling, and give consideration to the environmental impact of construction projects. On successful completion of this module students will be able to analyse situations and select appropriate construction technology.

Learning Outcomes

After completing the module the student should be able to:

- 1 Explain construction technology terminology
- 2 Identify different techniques used to construct substructures and superstructures and review their function and design selection criteria
- 3 Describe the different types of technology used in the support of buildings
- 4 Illustrate the supply and distribution of building services

Learning Outcomes of Assessments

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

Online Test	1	2
Assignment	3	4

Outline Syllabus

Types of construction activity: Low, medium and high-rise buildings, domestic buildings, commercial buildings

Construction technology terminology

Construction information: Drawings, specification, schedules, CAD, Building Information Modelling (BIM).

Sustainability: Supply chain Lifecycle

Pre-design studies: Desk-top, Site Reconnaissance, Direct Soil Investigation techniques.

Substructure functions and design considerations: Different methods for gathering disturbed and undisturbed samples, influence of soil type, loads and trees on foundation design,

Types of foundations

Types of superstructure

Walls, Roofs & Floors

Site remediation and de-watering

Substructure works: Basement construction: steel sheet piling, concrete diaphragm walls, coffer dams, caissons, culverts.

Superstructure works: Reinforced concrete work: formwork, reinforcement, fabrication, concrete, steel.

Primary service supply

Services distribution

Services accommodation

Learning Activities

These will not normally be traditional didactic lectures in which the student plays little active part, but will be delivered in small groups of up to 20 students in which their interaction with their tutor is a key ingredient of their learning experience.

Students will receive approximately 30 hours of taught material, supported by in-class exercises and discussions designed to help student assimilate learning and to provide early informal feedback on their progress.

Independent Study

Students are expected to undertake personal reading and research into topic areas that have been stimulated from the lectures and seminars. This reading will enhance their academic work and enable valid contribution to lectures and seminars.

VLE support

This will provide links to academic web-sites and on-line journals, facilitate group discussion outside of the classroom, access to outline lecture notes, and provide students with assessment details.

Notes

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