

Liverpool John Moores University

Title: CONSTRUCTION ENGINEERING TECHNOLOGY 2
Status: Definitive
Code: **5252BEUG** (125680)
Version Start Date: 01-08-2020

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

Team	Leader
Raj Shah	Y

Academic Level: FHEQ5
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
Workshop	22

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Technical Report	50	
Technology	AS2	Time controlled assessment	50	

Aims

To develop the students understanding of construction techniques associated with the production of high and low rise framed buildings, both new build and refurbishment. To enable students to evaluate the relative merits of the various construction methods in any given situation. To improve the students understanding of construction methods used for infrastructure projects such as roads, bridges, airports including earthworks, subsurface drainage systems, ground stabilisation and earth retaining walls.

Learning Outcomes

After completing the module the student should be able to:

- 1 Analyse and illustrate the various construction and civil engineering solutions available for substructure for low and high rise buildings.
- 2 Compare and contrast different design solutions and methods of construction used for superstructure high-rise and low-rise framed structured buildings.
- 3 Analyse the importance of sustainability in the context of the design and construction of buildings and infrastructures including surface and subsurface drainage system.
- 4 Evaluate the impact of new technologies on current construction and engineering processes for buildings and infrastructures like roads, bridges, retaining walls and airports.

Learning Outcomes of Assessments

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

Technical Report	1	3	4	
Time Controlled Assessment	1	2	3	4

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.*
- *Surface and subsurface drainage network design and construction with associated components like collection chambers and manholes etc.*
- *Civil Engineering Construction: Road Construction, Retaining wall, Culvert and Bridges and Airport*

Learning Activities

Lectures and workshops. Industry case studies will be used.

Notes

The module provides an advanced knowledge of construction technology through more complex building types and high rise frame structured systems. Students are able to explore construction technology used for drainage system including laying pipelines, manholes and infrastructure like roads, pavement, bridges, culverts, retaining walls and airports.