

Liverpool John Moores University

Title: INFRASTRUCTURE
Status: Definitive
Code: **4502CVQR** (127380)
Version Start Date: 01-08-2021

Owning School/Faculty: Civil Engineering and Built Environment
Teaching School/Faculty: Oryx Universal College WLL

Team	Leader
Khalid Hashim	Y

Academic Level: FHEQ4
Credit Value: 10
Total Delivered Hours: 35.5
Total Learning Hours: 100
Private Study: 64.5

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	22
Tutorial	6
Workshop	6

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	EXAMINATION	100	1.5

Aims

To introduce students to infrastructure and to explain the interlinking between the various forms of infrastructure.

To introduce the students to a systems approach to solving complex engineering problems.

To introduce the planning, design, construction and operational activities required for civil engineering infrastructure & associated works.

Learning Outcomes

After completing the module the student should be able to:

- 1 Explain the importance of sustainable infrastructure
- 2 Apply a systems approach to solving complex infrastructure problems
- 3 Apply the principal features of project planning including the methods available for programming construction works.
- 4 Demonstrate an understanding of relevant health and safety legislation, the hazards arising from construction activities and of the means of managing them through preventative design and protective measures.
- 5 Demonstrate an understanding of civil engineering technology, practices and processes.

Learning Outcomes of Assessments

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

EXAMINATION	1	2	3	4	5
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Outline Syllabus

What is infrastructure? Case studies of different forms of infrastructure, including road, rail, water, wastewater.

Sustainability, definition and application

Systems approach, Multiple cause diagrams

Project definition, Client types; clients' requirements; briefing: time, cost, quality and functional objectives; external influences: environmental issues.

Procurement arrangement options and documentation: Contractual arrangements.

Approaches to obtaining tenders. Procurement route selection: Simple selection procedure

Construction methods, sequences and resources used in civil engineering projects.

Use of suitable

Health & Safety legislation, particularly CDM regulations, principal provisions; Safe systems of work; Work method statements, risk assessments and safety method statements.

Use of computer software to produce construction programmes.

Learning Activities

Lectures, IT workshops, tutorials.

Notes

This module introduces students to infrastructure, partly through the use of case studies. They are also introduced to sustainability, and to the importance of sustainable infrastructure. They are also introduced to the management of

infrastructure projects.