

Liverpool John Moores University

Title: CIVIL ENGINEERING TECHNOLOGY
Status: Definitive
Code: **4506ICBTQS** (126949)
Version Start Date: 01-08-2021

Owning School/Faculty: Civil Engineering and Built Environment
Teaching School/Faculty: ICBT, Colombo

Team	Leader
Alison Cotgrave	Y

Academic Level: FHEQ4
Credit Value: 15
Total Delivered Hours: 77
Total Learning Hours: 150
Private Study: 73

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	45
Practical	15
Tutorial	15

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS2	Examination	70	2
Report	AS1	Assignment (1500 Words)	30	

Aims

Aim(s) of the module is to introduce modern civil engineering, construction technology, forms of civil engineering structures, structural element design and related services and to demonstrate understanding of advance structural design principles and integrity of elements. This module focuses on a wide range of civil engineering structures such as roads, tunnels, bridges, maritime designs, waterways, transportation & service engineering.

Learning Outcomes

After completing the module the student should be able to:

- 1 Identify & explain the technology of various types & forms of civil engineering structures &, principles of structural planning, designing & integration
- 2 Demonstrate the knowledge on the use of specifications and standards for civil engineering works of various types of civil engineering structures.
- 3 Appraise the principles of various structural designs & elements to achieve functional requirements of various types of civil engineering structures.
- 4 Examine various problems & complexities of civil engineering design & integration and alternative design solutions to overcome such complexities.

Learning Outcomes of Assessments

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

Examination	1	2
Assignment	3	4

Outline Syllabus

Note: Tutor must address below indicative content applies to various types of civil engineering structures such as roads, tunnels, bridges, maritime designs, waterways, transportation & service engineering;

Concrete & Steel form of civil engineering structures: roads, tunnels, bridges, maritime designs, waterways, transportation

Site surveying & levelling procedures for civil engineering works

Usage of modern surveying equipment's

Collecting and reporting survey data

Construction techniques of various civil engineering structures & its elements: earthworks, sub structural element design & related super structural elements of roads, tunnels, bridges, maritime designs, waterways, transportation

Total Quality Management (TQM) of civil engineering construction

Introduction to Euro codes, British Standards & code of practice for civil engineering works

Effects of seismic forces and seismic resistance design of civil engineering structures

Practical approach to problem solving in civil engineering

Learning Activities

Students will be supported in their learning, to achieve the above learning outcomes, in the following ways:

By a series of lectures and theoretical approach to identify structural design principles & its behaviour and Total Quality Management of various types of civil engineering works.

In-class practical sessions and tutorials to familiarize various techniques & methods to apply standards & code of practices for various civil works & structural designing.

Outbound survey practical's & demonstrations with the guidance of field experts to understand site surveying & levelling procedures, data collection and reporting to produce various engineering details of civil engineering projects

Self-managed studies to analyse the behaviour of various structural designs & elements to achieve functional requirements of various types of civil engineering structures.

Civil engineering construction technology, structural behaviours & site surveying procedures are some key features of this module.

A recommended resource list - indicating key reading, virtual and physical learning assistance, is provided to help enable students to undertake self-directed study.

Notes

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