

Liverpool John Moores University

Title: ENGINEERING MEASUREMENT

Status: Definitive

Code: **6538BESL** (124088)

Version Start Date: 01-08-2021

Owning School/Faculty: Civil Engineering and Built Environment

Teaching School/Faculty: Sri Lanka Institute of Information Technology

| Team | Leader |
|----------------|--------|
| James Hartwell | Y |
| Dianne Marsh | |

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|------------------------------|-------|-----------------------|-----|-------------------------------|----|
| Academic Level: | FHEQ6 | Credit Value: | 20 | Total Delivered Hours: | 70 |
| Total Learning Hours: | 200 | Private Study: | 130 | | |

Delivery Options

Course typically offered: Semester 2 and Summer

| Component | Contact Hours |
|-----------|---------------|
| Lecture | 28 |
| Workshop | 42 |

Grading Basis: 40 %

Assessment Details

| Category | Short Description | Description | Weighting (%) | Exam Duration |
|----------|-------------------|--------------------|---------------|---------------|
| Report | AS1 | MEASUREMENT REPORT | 50 | |
| Test | AS2 | IN-CLASS TEST | 50 | |

Aims

This module consolidates and builds upon the student's learning to date in the fields of measurement and BIM technologies and processes. Students will examine the most effective quantification techniques for complex construction and engineering projects through analysis of and comparison between available measurement protocols.

Learning Outcomes

After completing the module the student should be able to:

- 1 Appraise and apply the rules of the standard method of measurement to prepare project documentation related to complex construction, building services and civil engineering projects.
- 2 Evaluate emerging practices of the Quantity Surveyor in relation to sustainable design, and environmental and performance considerations.
- 3 Critically evaluate the BIM protocols, processes and software appropriate to the role of the Quantity Surveyor/Estimator working in a collaborative environment throughout the project life cycle.

Learning Outcomes of Assessments

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

| | | |
|---------------|---|---|
| MEASUREMENT | 1 | 3 |
| REPORT | | |
| IN-CLASS TEST | 2 | 3 |

Outline Syllabus

Design economics

Cost planning

Benchmarking

Value engineering

Building services measurement

Large scale and high rise construction projects measurement.

Civil engineering measurement

Tender documentation for a variety of different procurement options.

BIM protocols

BIM Processes

Application and evaluation of BIM software applicable to the role of the Quantity Surveyor/ Estimator.

Development of contract practice skills in relation to pre and post contract management

Learning Activities

Lectures and workshops

Notes

This module will provide students with an understanding of BIM as it relates to the QS and engineering measurement.