

Liverpool John Moores University

Title: Sustainable and Lean Principles within Construction
Status: Definitive
Code: **7318BEPG** (120988)
Version Start Date: 01-08-2015

Owning School/Faculty: Built Environment
Teaching School/Faculty: Built Environment

Team	Leader
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Academic Level: FHEQ7 **Credit Value:** 20.00 **Total Delivered Hours:** 33.00
Total Learning Hours: 200 **Private Study:** 167

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	22.000
Workshop	11.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	Portfolio	Industry case study based	100.0	

Aims

To identify and critically appraise how environmental sustainability and lean principles can be incorporated into a more modern and innovative construction organisation and industry.

Learning Outcomes

After completing the module the student should be able to:

- 1 Identify and critically assess the effects of construction on the natural environment.
- 2 Critically evaluate the application of innovative and practical solutions within the construction industry context.
- 3 Define and use various environmental performance measurement tools.
- 4 Examine the developments and characteristics of lean-based approaches to managing construction projects.
- 5 Critically appraise the benefits and barriers to implementing lean in construction project environments.
- 6 Apply a lean based approach to a specific project management situation.

Learning Outcomes of Assessments

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

Portfolio Case Study Based	1	2	3	4	5	6
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Outline Syllabus

Sustainable development - historical context
Climate change and energy use
Construction waste and industrial ecology
Performance measurement/business process innovation
Lean principles - historical context
Lean based approaches, barriers and benefits
Lean and Project management
Lean and green - synthesis

Learning Activities

Series of lectures and workshops using case studies and interactive group work.

Notes

The module provides a wide ranging study of sustainability and lean principles affecting a modern construction sector.