Liverpool John Moores University

Title:	SUSTAINABLE DESIGN
Status:	Definitive
Code:	**7439BEPG** (123543)
Version Start Date:	01-08-2020
Owning School/Faculty:	Civil Engineering and Built Environment
Teaching School/Faculty:	Civil Engineering and Built Environment

Team	Leader
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Academic Level:	FHEQ7	**Credit Value:**	20	**Total Delivered Hours:**	28
Total Learning Hours:	200	**Private Study:**	172		

Delivery Options
Course typically offered: Semester 1

Component	Contact Hours
Lecture	20
Seminar	5
Workshop	3

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	AS1	PORTFOLIO	100	

Aims

To evaluate the implications of design decisions on the environmental performance of buildings.

Learning Outcomes

After completing the module the student should be able to:

1 Examine the practicalities and implications of zero carbon building design and analyse current practice for commercial, industrial and residential development.
2 Investigate the current statutory and non statutory regulations, environmental assessment methods, and examine environmental and other associated drivers for change.
3 Evaluate the role of building simulation modelling in development of design and implication for the internal environmental conditions and building energy performance.

Learning Outcomes of Assessments

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

PORTFOLIO	1	2	3

Outline Syllabus

The design development process and integrated working.
Client briefing
Building requirements and constraints, building performance ambitions.
Statutory regulations: Building Regulations
Environmental Assessment Methods: BREEAM, LEED, Code for Sustainable Homes,
Passivhaus
Building Design: Layout, structure, envelope construction and performance, orientation and glazing.
Internal and external environmental design conditions: heating, lighting ventilation.
Building simulation modeling of design proposals.
Sustainable and renewable material specifications.
Low and zero carbon technologies.
Building energy monitoring.

Learning Activities

The module will be delivered via a series of key-note lectures which are archived in the Wimba classroom, live seminars and a portfolio of project-based tasks. The learner will have an induction session where the approach will be introduced; typically four archived "lectures" will be followed by a live seminar. A workshop will be held at the University to act as a summative discussion on the learner's assessment of their organisation.

Notes

This module allows the student to discuss evaluate the implications of design decisions on the environmental performance of buildings. Case studies will be used

to ensure that learning is grounded in practical application.