

Liverpool John Moores University

Title: ENERGY AND ENVIRONMENTAL MANAGEMENT
Status: Definitive
Code: **7101BEUG** (118096)
Version Start Date: 01-08-2019

Owning School/Faculty: Built Environment
Teaching School/Faculty: 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: Standard Year Long

Component	Contact Hours
Lecture	20
Seminar	5
Workshop	3

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Report 1	50	
Report	AS2	Report 2	50	

Aims

To appreciate the role of sustainable energy management in the built environment, and to critically evaluate various methods of managing energy use for sustainable development.

Learning Outcomes

After completing the module the student should be able to:

- 1 Critically appraise typical energy consumption patterns in the built environment.
- 2 Critically analyse and contrast the various methods of minimising energy consumption and managing energy use in the built environment, with particular regard to the technique of building energy modelling.
- 3 Investigate and critically appraise established techniques of generating energy, contrasting these with the range of renewable and low & zero carbon energy generating technologies available and emerging.
- 4 Critically appraise methods of energy storage and distribution in the built environment.
- 5 Critically analyse predictions for future energy sources and energy consumption patterns and in the built environment.

Learning Outcomes of Assessments

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

REPORT 1	1	2	5
REPORT 2	3	4	

Outline Syllabus

Energy consumption in buildings and the wider environments: common and innovative methods of managing and minimising energy consumption; building energy modelling using specialist software; environmental management plans; energy efficiency and conservation; environmental assessment methods: BREEAM, LEED, Code for Sustainable Homes, Passivhaus

Sources of energy: "conventional" and "renewable" sources; fossil fuel depletion; emergence of renewable and low & zero carbon technologies; storage, distribution and management of energy.

Current energy demands of the built and wider environments: prediction of future energy demands; prediction of future energy resources from conventional and renewable sources.

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.