

Liverpool John Moores University

Title: SUSTAINABLE ENERGY MANAGEMENT
Status: Definitive
Code: **7125NATSCI** (129005)
Version Start Date: 01-08-2021

Owning School/Faculty: Civil Engineering and Built Environment
Teaching School/Faculty: Biological and Environmental Sciences

Team	Leader
Muhammad Waseem Ahmad	Y

Academic Level: FHEQ7 **Credit Value:** 20 **Total Delivered Hours:** 45
Total Learning Hours: 200 **Private Study:** 155

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	20
Off Site	3
Tutorial	20

Grading Basis: 50 %

Assessment Details

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

Aims

To develop knowledge and understanding of energy sources and of management of production and consumption of energy in an efficient and sustainable way. Develop a critical understanding of energy efficient and sustainable design and construction of buildings and how this can contribute to management of our energy supply.

Learning Outcomes

After completing the module the student should be able to:

- 1 Develop knowledge and understanding of energy sources and be able to evaluate the sustainability of alternate energy sources.
- 2 Critically appraise the efficient and sustainable management of energy consumption and distribution.
- 3 Critically appraise energy efficient and sustainable design, construction and operation of buildings.

Learning Outcomes of Assessments

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

Report	3		
Exam	1	2	3

Outline Syllabus

Energy sources and sustainability of alternative energy sources (e.g. solar thermal, PV, hydropower, geothermal, wind energy, tidal energy, CHP, heat pumps); Energy consumption prediction and management; Energy distribution and smart grids; Green buildings: carbon neutral and sustainable construction and energy efficient building design; Legal and Institutional Framework;

Learning Activities

Lectures, tutorials and off-site field visits. The assessment is an integral part of the learning process.

Notes

This module develops a student's ability to critically analyse and evaluate energy sources and design and construction of buildings in terms of energy efficiency and sustainability.