Environment Systems

Module Information

2022.01, Approved

Summary Information

Module Code	7008BEPG
Formal Module Title	Environment Systems
Owning School	Civil Engineering and Built Environment
Career	Postgraduate Taught
Credits	20
Academic level	FHEQ Level 7
Grading Schema	50

Teaching Responsibility

LJMU Schools involved in Delivery
Civil Engineering and Built Environment

Learning Methods

Learning Method Type	Hours
Lecture	17
Seminar	16

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	To develop an understanding of environmental systems and ways in which human activity can effect them. To develop knowledge and understanding of the workings of environmental systems, in particular: ecosystems, resources and human impact on the environment, and to enable the student to make justified technical and management decisions in the light of this knowledge and understanding.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Undertake critical analyses of the environmental impact of alternative industrial and agricultural policies, both nationally and globally.
MLO2	2	Interpret ecological data, and critically review management of the natural environment.
MLO3	3	From a critical awareness of current environmental problems generate and evaluate innovative ideas for the improvement of systems and processes in the field of water, energy and the environment.

Module Content

Outline Syllabus	1. The structure and function of the principal ecosystems and the relative importance of natural and human influence on their stability.2. The structure of trophic levels and the movement of energy and nutrient; succession and climax; biodiversity, including measurement and modelling of biodiversity; the role of the biotic and abiotic. Calculation of biotic indicators.3. Resources and their classification: renewable, non-renewable and recyclable - lifecycle analysis. Reserves.4. Energy, water and mineral resources at a variety of scales; their spatial, economic and environmental advantages and limitations.5. Evaluation of the extent of human impact on the environment; ecological footprint, natural resource exploitation, waste management and environmental pollution.6. The impact of population growth and organisation; public health issues and the importance of clean water supplies and sanitation.7. The systems approach; the importance of interlinkages between relevant factors and the concept of integrated pollution control. Systems modelling.
Module Overview	
Additional Information	The module explores the background to the environment and how it can affect and be affected by human activity. It furthers an understanding of the complexity of environmental issues. In considering resource issues as well as pollutant effects, it builds on a background of both input and output effects of human impact. It provides methods by which to quantify impact.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Centralised Exam	Examination	60	3	MLO1, MLO2, MLO3
Report	Report	40	0	MLO1, MLO2, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Ed Loffill	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings