

## Liverpool John Moores University

Title: ENVIRONMENT SYSTEMS  
Status: Definitive  
Code: **7008BEPG** (102417)  
Version Start Date: 01-08-2021

Owning School/Faculty: Civil Engineering and Built Environment  
Teaching School/Faculty: Civil Engineering and Built Environment

Team	Leader
Edward Loffill	Y

**Academic Level:** FHEQ7  
**Credit Value:** 20  
**Total Delivered Hours:** 36  
**Total Learning Hours:** 200  
**Private Study:** 164

### Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	17
Seminar	16

**Grading Basis:** 50 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	open book	60	3
Report	AS2	Report on human impact on the environment	40	

### 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.*

## Learning Outcomes

After completing the module the student should be able to:

- 1 Undertake critical analyses of the environmental impact of alternative industrial and agricultural policies, both nationally and globally.
- 2 Interpret ecological data, and critically review management of the natural environment.
- 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.

## Learning Outcomes of Assessments

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

EXAM	1	2	3
REPORT	1	2	3

## 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.*

## Learning Activities

Lectures and seminars.

## Notes

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.