

Liverpool John Moores University

Title: ENVIRONMENTAL SYSTEMS
Status: Definitive
Code: **7043PG** (102377)
Version Start Date: 01-08-2016

Owning School/Faculty: Civil Engineering
Teaching School/Faculty: Civil Engineering

Team	Leader
Felicite Ruddock	Y

Academic Level: FHEQ7
Credit Value: 15
Total Delivered Hours: 43
Total Learning Hours: 150
Private Study: 107

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	10
Seminar	30

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	closed book	40	3
Report	AS2	assignment 1	30	
Report	AS3	assignment 2	30	

Aims

This module builds on the understanding of environmental systems and ways in which human activity can effect them. Its principal aims are:

- 1. To develop knowledge of environmental systems, in particular: ecosystems, resources and human impact on the environment.*
- 2. To develop understanding of the working of these systems and to enable the student to make technical and management decisions in the light of this knowledge.*

3. *To use this understanding to critically review international, national and organisational policies with respect to sustainable development.*

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 Position the activities of their own or other organisations with respect to both sustainable development and ethics.
- 3 Interpret ecological data, and critically review management of the natural environment.
- 4 Develop critical awareness of own learning through reflection.
- 5 Locate, and critically analyse, relevant material from journals and other sources.

Learning Outcomes of Assessments

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

EXAM	1	2	3
ASSIGNMENT 1	1	2	3
ASSIGNMENT 2	4	5	

Outline Syllabus

1. *The structure and function of the principal biomes and the relative importance of natural and human influence on their stability.*
2. *Ecosystems, the structure of trophic levels and the movement of energy and nutrient; succession and climax.*
3. *Basic concepts of stability, diversity, longevity, efficiency and tolerance; the importance of species for classifying environments; the role of the biotic and abiotic.*
4. *Resources and their classification: renewable, non-renewable and recyclable - lifecycle analysis.*
5. *Energy, water and mineral resources at a variety of scales; their spatial, economic and environmental advantages and limitations.*
6. *Evaluation of the extent of human impact on the environment; natural resource exploitation and environmental pollution.*
7. *The impact of population growth and organisation; public health issues and the importance of clean water supplies and sanitation.*
8. *The importance of interlinkages between relevant factors and the concept of integrated pollution control.*

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. It ensures the awareness and competencies in methodology necessary for the consideration of specific environmental issues in subsequent modules.