

**Module Information**

2022.01, Approved

**Summary Information**

Module Code	7506CATSCI
Formal Module Title	Ecosystem Services, Land-use and Waste Management
Owning School	Biological and Environmental Sciences
Career	Postgraduate Taught
Credits	15
Academic level	FHEQ Level 7
Grading Schema	50

**Teaching Responsibility**

LJMU Schools involved in Delivery
LJMU Partner Taught

**Partner Teaching Institution**

Institution Name
Centre for Alternative Technology

**Learning Methods**

Learning Method Type	Hours
Lecture	30
Practical	7
Seminar	1

**Module Offering(s)**

Display Name	Location	Start Month	Duration Number Duration Unit
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APR-PAR	PAR	April	12 Weeks
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## Aims and Outcomes

Aims	<p>a) Gain a critical appreciation of the key roles played by species, populations and healthy ecosystems in provision of essential tangible and intangible services to human society, as well as the need to ensure ecological integrity on appropriate scales;b) Develop a comprehensive understanding of the environmental impacts of sourcing, management and disposal of material and water resources, the case for wise use and reuse where appropriate in order to function within resource, ecological and societal constraints, and the lessons to be learned from nature in resource design and processing;c) Show critical awareness of the varied impacts of land use on environmental quality, biodiversity and ecosystem service provision, including industrial, domestic and agricultural wastes and their management;d) Recognise the inherent lack of sustainability in modern, centralised food production and the necessity for ecologically-designed agriculture;e) Critically evaluate the overriding roles of climate change and industrial expansion in imposing progressive change in ecosystem and resource management, and the imperative for sustainable adaptation.</p>
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**After completing the module the student should be able to:**

### Learning Outcomes

Code	Number	Description
MLO1	1	Have a critical understanding of the ecological and biodiversity foundations of ecosystem functioning and the necessity for ecosystem integrity for provision of services to society, with reference to the published literature.
MLO2	2	Show mastery in the comprehensive understanding of the increasing problems caused by direct and indirect societal impacts on ecosystems and biodiversity for the continued provision of ecosystem services.
MLO3	3	Develop critical arguments to analyse the ecological and ecosystem service provision implications of current and future policy for the built environment and offer effective or innovative ecological solutions to the problems of sustainability and adaptation.
MLO4	4	Develop critical responses to evidence from the peer-reviewed literature and primary or secondary data critically evaluate the potential impacts of climate change and biodiversity losses on both current and future ecosystem service provision within an adaptation transformation context.

## Module Content

Outline Syllabus	Ecosystem services; land use and sustainable agriculture; contaminated land; water security; sustainable waste and sanitation management; floodplain strategies and Sustainable Drainage Systems (SuDS); resource production; food security, biomimetics, all within the context of sustainability and adaptation planning.
Module Overview	
Additional Information	This module will be available onsite and via distance learning.

## Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Lit Review (2,400 words max.)	80	0	MLO1, MLO2, MLO3

Presentation	Presentation	20	0	MLO3, MLO4
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## Module Contacts

### Module Leader

Contact Name	Applies to all offerings	Offerings
Colm Bowe	Yes	N/A

### Partner Module Team

Contact Name	Applies to all offerings	Offerings
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