

**Summary Information**

<b>Module Code</b>	7514CATSCI
<b>Formal Module Title</b>	Ecological Assessment
<b>Owning School</b>	Biological and Environmental Sciences
<b>Career</b>	Postgraduate Taught
<b>Credits</b>	15
<b>Academic level</b>	FHEQ Level 7
<b>Grading Schema</b>	50

**Module Contacts**

**Module Leader**

Contact Name	Applies to all offerings	Offerings
Sarah Dalrymple	Yes	N/A

**Module Team Member**

Contact Name	Applies to all offerings	Offerings
--------------	--------------------------	-----------

**Partner Module Team**

Contact Name	Applies to all offerings	Offerings
--------------	--------------------------	-----------

**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	9
Practical	13
Seminar	8

## Module Offering(s)

Offering Code	Location	Start Month	Duration
SEP-PAR	PAR	September	12 Weeks

## Aims and Outcomes

<b>Aims</b>	<p>a) Study and understand research-based methods which have been developed to assess key concepts in sustainable ecology, such as biodiversity and forms of ecosystem functioning.</p> <p>b) Understand concepts of ecosystem health and functioning and carry out an assessment of habitat function, habitat quality and health.</p> <p>c) Practice the use of, and evaluate the value of, identification techniques for flora and fauna which focus on different taxonomic levels and morphological-functional groups.</p> <p>d) Show critical awareness of the value of local, national, international and traditional information on ecology, ecological health and ecological change.</p> <p>e) Use multivariate data and expert knowledge to assess ecological health and to suggest management plans for ecosystems or habitats where appropriate.</p>
-------------	--

## Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Critically evaluate methods for monitoring aspects of ecosystem health and functioning, and relate ecosystem health and functioning to sustainability.
MLO2	Synergize multivariate information on ecosystems to make judgments on an ecosystem or habitat functioning, stability and resilience and where appropriate, devise management recommendations.
MLO3	Develop a deep and systematic understanding of the value of different ecological data sets and types of data in assessing and monitoring ecosystems and habitats.

## Module Content

### Outline Syllabus

Ecological surveys, functional habitat mapping, use of Geographical Information Systems. Definitions of ecosystem health and how this might be determined. Recognizing habitat values such as biodiversity and regulating services. The value of local, national and international data sets, value of citizen science, local and traditional environmental knowledge.

## Module Overview

## Additional Information

### Indicative References:

Berkes, F., Colding, J. and Folke, C. (2000) Rediscovery of traditional ecological knowledge as adaptive management. *Ecological applications*, 10(5), pp.1251-1262.

de Bello, F., Lavorel, S., Díaz, S., Harrington, R., Cornelissen, J.H., Bardgett, R.D., Berg, M.P., Cipriotti, P., Feld, C.K., Hering, D. and da Silva, P.M. (2010) Towards an assessment of multiple ecosystem processes and services via functional traits. *Biodiversity and Conservation*, 19(10), pp.2873-2893.

Barker T & Fisher J (2019) Ecosystem health as the basis for human health', published with revisions as Chapter 19 in: Selendy J.M.H (editor), *Water and Sanitation Related Diseases and the Changing Environment: Challenges, Interventions and Preventive Measures*. Second edition, Wiley-Blackwell and Horizon International

Rapport D J, Costanza R, McMichael A J. (1998) Assessing ecosystem health. *Tree* 13(10) 397-402

Raymond, C.M., Fazey, I., Reed, M.S., Stringer, L.C., Robinson, G.M. and Evely, A.C., (2010) Integrating local and scientific knowledge for environmental management. *Journal of environmental management*, 91(8), pp.1766-1777.

Silvertown, J., (2009). A new dawn for citizen science. *Trends in ecology & evolution*, 24(9), pp.467-471.

Wheater, C.P. (2020) *Practical Field Ecology*. Second Ed. Paperback. Wiley-Blackwell's.

## Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Report	Report	80	0	MLO2, MLO1
Presentation	Presentation	20	0	MLO3