Liverpool John Moores University

Title:	ECOLOGY AND BEHAVIOUR
Status:	Definitive
Code:	**4003NATSCI** (112570)
Version Start Date:	01-08-2015
Owning School/Faculty:	Natural Sciences & Psychology
Teaching School/Faculty:	Natural Sciences & Psychology

Team	Leader
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Academic Level:	FHEQ4	**Credit Value:**	24.00	**Total Delivered Hours:**	62.00
Total Learning Hours:	240	**Private Study:**	178		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	38.000
Off Site	13.000
Workshop	10.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam	Ecology & Behaviour exam	40.0	1.00
Report	Field rpt	Field report	30.0	
Report	Zoo rpt	Zoo report	30.0	

Aims

To provide an introduction to the diversity of animal behaviour.

To provide a fundamental knowledge of ecological concepts and how organisms interact with their effective environment.

Learning Outcomes

After completing the module the student should be able to:

1	describe the behaviour of a wide range of animal species in relation to reproduction, foraging, communication, cooperation and competition.
2	recognise the influence of the environment on the distribution and abundance or organisms.
3	identify the characteristics of communities and recognise how the properties of populations together with those of their abiotic environment influence ecosystems
4	identify common behaviours in selected species and explain their purpose.

Learning Outcomes of Assessments

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

Behaviour & Ecology Exam	1	3
Mull Wood	2	
Zoo Report	4	

Outline Syllabus

The environment; biotic and abiotic elements. Concept of limiting factors. Population characteristics. The logistic equation; intrinsic rate of natural increase, the concept of carrying capacity. Community characteristics; species diversity, growth form and structure, trophic structure. Types and consequences of population interactions; predator-prey, host-parasite, herbivore plant; interspecific competition and its consequences. Concept of habitat and niche. Community change and ecological succession. The ecosystem concept. Structure and types of ecosystems. Food chains. Food webs and trophic levels. Energy flow, energy transfer efficiencies. Nutrient cycles, decomposition processes. Finding a mate: habitat choice; territories; courtship; male-male competition; mating; post-mating behaviour. Parents & Offspring: production of offspring; parental care; offspring development; parent-offspring interactions; helpers. Eating & not being eaten: foraging; mechanisms; adaptations; coevolution; cooperation and competition; kleptoparasitism; tool use; anti-predator behaviour; camouflage; mimicry; alarm signals. Communication: advertisement; signals; messages; language. Group-living: group behaviour; altruism; selfishness; cooperative behaviour; mixed species groups; interspecific relationships; mutualism.

Learning Activities

The module is delivered by a series of lectures, workshops and fieldwork

Notes

The module provides students with a basic understanding of ecology, animal behaviour and the interrelationship between the two.