

SCIA S8014: Habitat and Wildlife Ecology

Module Details	
Module Code:	SCIA S8014
Full Title:	Habitat and Wildlife Ecology APPROVED
Valid From::	Semester 1 - 2018/19 (September 2018)
Language of Instruction:	
Duration:	1 Semester
Credits::	7.5
Module Owner::	Valerie McCarthy
Departments:	Unknown
Module Description:	This course aims to provide the student with the conceptual basis for understanding of the ecology of individual organisms, their populations, and the biological communities in which they live and how they interact with their environment. The factors that affect the distribution, growth and survival of plant and animal communities are examined. The course introduces wildlife biology both globally and regionally and how ecology can be applied to wildlife management and conservation.

Module Learning Outcome	
On successful completion of this module the learner will be able to:	
#	Module Learning Outcome Description
MLO1	Critically assess the structure and function of populations, communities and ecosystems and how they interact.
MLO2	Describe how organisms interact with their environment and the role that they have in ecosystem and community structure.
MLO3	Appraise contrasting conservation management techniques and to evaluate how concepts in habitat ecology and population dynamics are applied to restoration of wildlife populations.
MLO4	Design and carry out sampling programmes and procedures for identifying and describing plant and animal communities and analyse their distribution.
MLO5	Conduct ecological assessments of specific habitats.
Pre-requisite learning	
Module Recommendations <i>This is prior learning (or a practical skill) that is strongly recommended before enrolment in this module. You may enrol in this module if you have not acquired the recommended learning but you will have considerable difficulty in passing (i.e. achieving the learning outcomes of) the module. While the prior learning is expressed as named DkIT module(s) it also allows for learning (in another module or modules) which is equivalent to the learning specified in the named module(s).</i>	
No recommendations listed	

Module Indicative Content	
Fundamentals of Ecology Diversity of life, evolution, patterns in community structure, global biomes, geographic patterns of life and island biogeography, ecological energy flow and biological production, match between organism and its environment, niche theory and how species co-exist, population dynamics and diversity, intra and interspecific competition, predation, parasitism, herbivory, community development and succession.	
Wildlife Biology Habitat selection, dispersion, population dynamics and regulation, status and origin of Irish vertebrate fauna, sustainable wildlife management, conservation and management of scarce or endangered species, biosecurity and the role of invasive species, restoring damaged ecosystems, the role of reintroductions in biodiversity conservation, wildlife survey and census techniques.	
Habitat Ecology Overview of major Irish habitat types: Woodland, Grassland, Forests, Hedgerows, Boglands. Habitat management and conservation, legislation and governance surrounding habitat and wildlife conservation and management (eg. EU Habitats Directive). Introduction to field techniques used for the study of terrestrial ecosystems and sampling methods for enumerating and classifying fauna.	
Practicals Experimentation and data analyses on topics relating to species diversity, population density and abundance, fecundity, population growth models, habitat selection, population variability, conduct habitat surveys, introduction to animal and plant sampling techniques, habitat mapping, comparison of species diversity, field visits to a range of habitats types such as; wetland, hedgerow, grassland, and sand dunes will be carried out throughout the practical sessions. In addition, a day long field trip will be organised which will introduce the students to a range of flora and fauna and their identification in the field.	
Module Assessment	
Assessment Breakdown	%
Course Work	20.00%
Practical	30.00%
Final Examination	50.00%
Module Special Regulation	

Assessments

Full Time On Campus			
Course Work			
Assessment Type	Essay	% of Total Mark	10
Marks Out Of	0	Pass Mark	0
Timing	S1 Week 6	Learning Outcome	1,2,3
Duration in minutes	0		
Assessment Description An essay on a topic related to habitat and wildlife ecology and conservation.			
Assessment Type	Presentation	% of Total Mark	10
Marks Out Of	0	Pass Mark	0
Timing	S1 Week 11	Learning Outcome	1,2,3
Duration in minutes	0		
Assessment Description Project on a topical issue related to wildlife management and habitat conservation.			
No Project			
Practical			
Assessment Type	Practical/Skills Evaluation	% of Total Mark	30
Marks Out Of	0	Pass Mark	0
Timing	n/a	Learning Outcome	1,2,4,5
Duration in minutes	0		
Assessment Description Laboratory experimentation and Field Visits to major habitat types. In addition, students will design and carry out a laboratory based hypothesis driven project using the skills and analytical methods they have developed. They will give a group presentation on this project.			
Final Examination			
Assessment Type	Formal Exam	% of Total Mark	50
Marks Out Of	0	Pass Mark	0
Timing	End-of-Semester	Learning Outcome	1,2,3
Duration in minutes	0		
Assessment Description End-of-Semester Final Examination			

Module Workload

Workload: Full Time On Campus

<i>Workload Type</i>	<i>Contact Type</i>	<i>Workload Description</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>	<i>Hours</i>
Lecture	Contact	No Description	Every Week	3.00	3
Practical	Contact	No Description	Every Week	3.00	3
Independent Study	Non Contact	No Description	Every Week	3.00	3
Directed Reading	Non Contact	No Description	Every Week	3.00	3
				Total Weekly Learner Workload	12.00
				Total Weekly Contact Hours	6.00

This module has no Part Time On Campus workload.

Module Resources

Recommended Book Resources

Alan Sitkin. (2011), Principles of ecology and management: international challenges for future practitioners, Goodfellow Pub, Woodeaton, Oxford, [ISBN: 9781906884239].
Michael Begon, Colin R. Townsend, John L. Harper. (2006), Ecology : from individuals to ecosystems, 4th. Blackwell Pub, Malden, MA, [ISBN: 1405151986].

Supplementary Book Resources

Read, H.J., Frater, M.. (1999), Woodland Habitats, Routledge, London, [ISBN: 0415180902].
Ambasht, R.S., Navin, K.. (2002), Modern trends in Applied Terrestrial Ecology, Springer, [ISBN: 9780306473326].
Robert M. May and Angela R. McLean. (1997), Theoretical ecology : principles and applications, 3rd. Oxford University Pres, Oxford, [ISBN: 0199209995].
Jodi A. Hilty, William Z. Lidicker Jr., and Adina M. Merenlender ; foreword by Andrew P. Dobson. (2006), Corridor ecology: the science and practice of linking landscapes for biodiversity conservation, Island Press, Washington, DC, [ISBN: 1559630965].
Peter J. Mayhew. (2006), Discovering evolutionary ecology: bringing together ecology and evolution, Oxford University Press, Oxford, [ISBN: 9780198525288].
Michael J. Manfredo. (2009), Wildlife and society: the science of human dimensions, Island Press, Washington, D.C., [ISBN: 9781597269346].
Paul Sterry. (2010), Collins Complete Irish Wildlife, Harper Collins, London, [ISBN: 0007720688].
Chinery, M.. (1993), A field guide to the insects of Britain and Northern Europe, 3rd. Harper Collins, London, [ISBN: 10000219918].

This module does not have any article/paper resources

Other Resources

Website, National Biodiversity Data Centre. National Biodiversity Data Centre Home Page,
<http://www.biodiversityireland.ie/>
Link, Library Catalogue,
<http://tinyurl.com/nrkc45h>
Website, wilflowerfinder,
<http://wildflowerfinder.org.uk/>