APPROVED

SCIA S8012: Plant Science

Module Details

Module Code:	SCIA S8012
Full Title:	Plant Science APPROVED
Valid From::	Semester 1 - 2018/19 (September 2018)
Language of Instruction:	English
Duration:	1 Semester
Credits::	5
Module Owner::	Eleanor Jennings
Departments:	Unknown
Module Description:	Following this course, the student with be able to critically evaluate plant community structure, distibution and Irish plant biogeography. They will gain skills in botanical field identification and recording methods.

Module Learning Outcome	
On successful completion of this module the learner will be able to:	
#	**Module Learning Outcome Description**
MLO1	Identify plant species and assess the community structure of a range of Irish habitats.
MLO2	Analyse botanical data from a range of habitats.
MLO3	Evaluate the distribution of plant species using appropriate field techniques.

Pre-requisite learning
Module Recommendations *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).*
No recommendations listed

Module Indicative Content
Introduction to the plant kingdom Plant evolution and distribution, including the major groups of plants and when they evolved; overview of the Bryophytes, seedless vascular plants (ferns and horsetails) and the seed-bearing plants.
Plant anatomy and morphology Higher plant anatomy and morphology, in particular vegetative parts, infloresences and fruits.
Plant systematics Introduction to plant taxonomy, nomenclature, and classification; introduction to molecular phylogenetics.
The seed-producing plants: Gymnosperms Structure of Gymnospermae; taxonomy of the major Gymnosperm families found in Ireland.
The seed-producing plants: Angiosperms Structure of the Angiospermae (Magnoliophyta); taxonomy of the major Angiosperm families found in Ireland.
The Irish flora Disribution of the Irish flora, including its history; community structure and floristic composition; red data species in Ireland; issues related to invasive species.
Field Trips Field trips will be conducted to a woodland habitat and the Botanic Gardens as well as regular field surveys of local habitats.

Module Assessment

Assessment Breakdown	%
Project	10.00%
Practical	30.00%
Final Examination	60.00%

Module Special Regulation

Assessments

Full Time On Campus

No Course Work

Project

Assessment Type	Group Project	**% of Total Mark**	10
Marks Out Of	0	**Pass Mark**	0
Timing	n/a	**Learning Outcome**	1,2,3
Duration in minutes	0		

Assessment Description
The student will undertake a short field-based group project with an individual report for submission on a plant group or habitat type.

Practical

Assessment Type	Practical/Skills Evaluation	**% of Total Mark**	30
Marks Out Of	0	**Pass Mark**	0
Timing	n/a	**Learning Outcome**	2,3
Duration in minutes	0		

Assessment Description
Weekly practical classes on species identification (with an emphasis on gymnosperms and angiosperms) and field recording methods. This will include two field visits to selected habitats e.g. comparison of deciduous and coniferous woodland; species diversity in peatland habitats; natural grassland species ecology.

Final Examination

Assessment Type	Formal Exam	**% of Total Mark**	60
Marks Out Of	0	**Pass Mark**	0
Timing	End-of-Semester	**Learning Outcome**	2,3
Duration in minutes	0		

Assessment Description
n/a

Module Workload

Workload: Full Time On Campus					
Workload Type	*Contact Type*	*Workload Description*	*Frequency*	*Average Weekly Learner Workload*	*Hours*
Lecture	Contact	No Description	Every Week	2.00	2
Practical	Contact	Weekly practicals on plant identification with two half day field trips to selected habitats.	Every Week	2.00	2
Independent Study	Non Contact	Small research project on assigned plant family, focused on its evolution, identification and distribution in Ireland.	Every Week	5.00	5
				Total Weekly Learner Workload	9.00
				Total Weekly Contact Hours	4.00

This module has no Part Time On Campus workload.

Module Resources

Recommended Book Resources

John Parnell & Tom Curtis. (2012), Webb's an Irish Flora, 8th. Cork University Press, [ISBN: 9781859184783].

Alison M. Smith et al.. (2009), Plant Biology, 1st. Garland Science, UK, [ISBN: 9780815340256].

Francis Rose, Clare O'Reilly. (2006), The Wild Flower Key: How to Identify Wild Plants, Trees and Shrubs in Britain and Ireland, 2nd. Frederick Warne, London, [ISBN: 0723251754].

Supplementary Book Resources

T.G.F.Curtis & H.N. McGough. (1988), The Irish Red Data Book 1 Vascular Plants, The Stationary Office, Dublin.

This module does not have any article/paper resources

Other Resources

Website, National Botanic Gardens. (2002), A CATALOGUE OF ALIEN PLANTS IN IRELAND (Sylvia C. P. Reynolds), Dublin, National Botanic Gardens, http://www.botanicgardens.ie/glasra/alie ns.htm

Website, D. A. Webb. (1984), THE FLORA OF IRELAND IN ITS EUROPEAN CONTEXT, Journal of Life Sciences, Royal Dublin Society 1983: 143-160, http://www.botanicgardens.ie/herb/census /webbboyle.htm

Website, National Biodiversity Data Centre. Biodiversity Ireland, National Biodiversity Data Centre, http://www.biodiversity ireland.ie

Website, Jenny Seawright. Irish Wilds]flowers (images of Irish flora), http://www.irishwildflowers.ie