

MODULE SPECIFICATION FORM

Module Title: Plant Form and Function	Level: 4	Credit Value: 20
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Module code: LND407 (if known)	Cost Centre: GAHT	JACS2 code: C200
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Semester(s) in which to be offered: 1	With effect from: Sept 2013
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Office use only: To be completed by AQSU:	Date approved: August 2013 Date revised: September 2015 Version no: 2
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Existing/New: Existing	Title of module being replaced (if any):
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Originating Academic area: Biology and Environment	Module Leader: D.Skydmore
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Module duration (total hours) 200 Scheduled learning & teaching hours 50 Independent study hours 150 Placement hours 0	Status: Core (identify programme where appropriate):
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Percentage taught by Subjects other than originating Subject (please name other Subjects): Nil
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Programme(s) in which to be offered: BSc Wildlife and Plant Biology BSc (Hons) Geography, Ecology and Environment	Pre-requisites per programme (between levels): Nil
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Module Aims:

The module aims to introduce the student to the form of plant structures and their functions, to appreciate the biochemical processes and pathways involved in plant growth and development and to provide an understanding of the classification of plants.

Further, the module aims to introduce the student to the impact of both the environment and of man on plant growth and development and to develop the student's knowledge of plant adaptations to their growing environment (i.e. natural and artificial habitats) together with the necessary skills of evaluation.

Expected Learning Outcomes**Knowledge and Understanding of :**

At the end of this module, students will be able to:

1. Describe plant structures, functions and classification
2. Understand major biochemical processes involved in plant growth and development
3. Understand the mechanisms of plant manipulation by natural and chemical means
4. Investigate plant adaptations to the growing environment

Transferable/Key Skills and other attributes:

Through the module the student will demonstrate:

- Oral, written and visual communication and presentations skills
- Interpersonal skills of effective listening, negotiating, persuasion and presentation
- Information gathering , evaluation and application

Assessment:

The students will carry out two elements of coursework. The first task will be a case study on named plant adaptation to the environment and the second a time constrained assessment on biochemical processes. There will be a combination of formative activities that encourage students to evaluate their learning and apply it in context and there will be summative assessment at the end of the module.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting	Duration (if exam)	Word count (or equivalent if appropriate)
Coursework	1, 4	Written case study	50%		2000 plus diagrams
Coursework	2, 3	Time constrained assessment	50%	2.5hour time constraint	

Brief description of indicative assessment	
Case Study	Written case study on named plant and its structural adaptations to the environment
Time Constrained Assessment	Time constrained assessment on biochemical processes

Learning and Teaching Strategies:

Lectures will form the principal means of delivery of theoretical elements of the module and for delivery of key concepts in the course. Discussions and practical assignments will be used as appropriate to involve students in appraisal of ideas and the application of theory in practical contexts. Formative support provided in tutorials provides guidance and feedback on assignment tasks and activities.

Private directed study will consolidate learning and undertake research for assessments. The focus of study is on wider reading to develop and reinforce knowledge and understanding of the topics and material covered in lectures and preparation for tutorials. This will also help students to develop time management skills, library skills and critical thinking.

Throughout the module delivery the tutor will draw to the student's attention various web sites from the industry and other information available via the VLE, as are a number of additional sources of support and information.

Syllabus outline:

Plant macro- and micro-anatomy and morphogenesis
 Plant taxonomy and identification
 Introduction to plant physiology

- Diffusion and osmosis
- Photosynthesis and respiration
- Translocation
- Nutrition (macro, micro and trace elements)
- Hormones and growth regulation and tropisms
- Effects of temperature
- Photoperiodism

Introduction to plant ecology

Bibliography

Essential reading (books)

Hodson, M.J. & Bryant, J.A., 2012. Functional Biology of Plants, Oxford: John Wiley & Sons

Recommended reading (books)

Adams, C.R. Early, M.P. Bamford, K.M., 2008. Principles of Horticulture, Oxford: Butterworth Heinemann

Begon, M. Townsend, C.A. & Harper, J.L., 2005. Ecology: from individuals to ecosystems, 4th ed New York: Wiley-Blackwell

Capon, B., 2005. Botany for Gardeners, Portland: Timber Press

Dormer, K.J. Hartshorne, J.N. & Simon, E.W., 1986. Lawson's Textbook of Botany, 15th ed London: Bell & Hyman

Esau, K., 1977. Anatomy of seed plants, 2nd ed New York: John Wiley & Sons

Salisbury, F.B. & Ross, C., 1992. Plant Physiology, 4th ed Belmont: Wadsworth Publishing

Stace, C.A., 1991. Plant Taxonomy and Biosystematics, 2nd ed Cambridge: Cambridge University Press

Wareing, P.I. & Phillips, I.D.J., 1986. Growth and differentiation in plants, Oxford: Pergamon Press

Journals

Annals of Applied Biology