




Module Specification

Part 1: Basic Data					
Module Title	Crop Production and Soil Management				
Module Code	UILV75-30-1		Level	1	Version1
Credit Rating	30	ECTS Credit Rating	15	WBL module?	No
Owning Faculty	Hartpury		Field	Animal and Land Sciences	
Department	Agriculture		Module Type	Standard	
Contributes towards	BSc (Hons) Applied Agriculture BSc (Hons) Applied Agriculture (SW) BSc (Hons) Applied Agriculture (Livestock Production) BSc (Hons) Applied Agriculture (Livestock Production) (SW) BSc (Hons) Applied Agriculture (Crop Production) BSc (Hons) Applied Agriculture (Crop Production) (SW) BSc (Hons) Applied Agriculture (International) BSc (Hons) Applied Agriculture (International) (SW)				
Pre-requisites	None		Co- requisites	None	
Excluded Combinations	None		Module Entry requirements	None	
Last Major Approval Date	19 January 2017		Valid from	1 September 2017	
Amendment Approval Date			Revised with effect from		
Review Due By	1 September 2023				

Part 2: Learning and Teaching	
Learning Outcomes	<p>On successful completion of this module students will be able to:</p> <ol style="list-style-type: none"> 1. Identify and explain how the key physical and chemical parameters of different soils influence land management. (A) 2. Compare and contrast a range of alternative systems for crop production and examine their impact on the environment. (A) 3. Assess the impact of soil quality on plant growth through soil cultivations and soil conditioners. (A) 4. Analyse the scientific basis behind plant nutrition. (A) 5. Perform a range of practical tasks relating to crop production to industry standards. (A) 6. Apply data to interpret yield and predict profitability for crops using appropriate statistics. (A) 7. Produce concise industry relevant agronomic reports. (A)
Syllabus Outline	<p>The module will introduce students to crops and the importance of soil and soil management to crop production. Students will be involved with field cultivations on the college farm.</p> <ul style="list-style-type: none"> • Soil forming factors: parent materials; climate and topography; physical, chemical and biological influences on soil development. • The production of modern crop varieties by means of traditional plant breeding and by genetic engineering; the development of herbicide resistant and pesticide resistant crops; the contribution of varietal characteristics to crop performance.

	<ul style="list-style-type: none">• Soil texture and classification; soil structure and structural stability; soil density and porosity; soil strength and compaction; soil hydraulic conductivity and infiltration rate.• Practical skills to determine soil texture, classification and soil analysis.• Quality requirements for key crops, including but not limited to: milling/feed wheat, malting/feed barley, oilseed rape, sugar beet, potatoes, peas, beans, forage maize and linseed.• Soil profiles, macro and micro nutrients and nutrient cycles.• Importance of water, organic matter content and air to soil structure and soil management, and how crops impact on these.• Factors that affect crop production: choice of variety, seed generation and treatment, soil type, seedbed cultivation, seed germination percentage and vigour, pests and diseases.• Soil erosion, pollution, environmental issues, mitigation plans.• Establishment methods: conventional, min till, no till.• Gross/net margin analysis of different crops and systems.• Production of agronomic reports.																														
Teaching and Learning Methods (and contact hours)	<p>The module will be delivered to allow students to follow the annual production cycle of crops. Students are encouraged to develop core vocational skills through relevant short courses, and visits to subject specific farms, producers and food processing industries. These will occur throughout the module to support student learning. The module includes directed study time where students will be set reading tasks for seminar work.</p> <p>Students will apply their fundamental knowledge and understanding of crop production and soil management to assist them to begin problem solving, suggest improvements to current practice, and support future study and further employment opportunities within industry. Students will be encouraged to develop their knowledge and understanding and academic skills through contact time in lectures, independent and directed study, industry visits, lab sessions, research and evidence based learning.</p> <p>Independent learning includes hours engaged with essential reading, case study preparation, assignment preparation and completion etc. These sessions constitute an average time per level as indicated in the table below. Scheduled sessions may vary slightly depending on the module choices you make.</p> <p>Virtual Learning Environment (VLE) This specification is supported by Moodle where students will be able to find all necessary module information. Direct links to information sources will also be provided from within the VLE.</p>																														
Key Information Sets Information	<p>HEFCE require Key Information Sets (KIS) to be produced at programme level for all undergraduate programmes of more than one year in length. KIS are comparable sets of standardised information about undergraduate courses allowing prospective students to compare and contrast between programmes they are interested in applying for.</p> <table><tr><th colspan="5">Key Information Set - Module data</th></tr><tr><td colspan="5">Number of credits for this module</td></tr><tr><td colspan="4"></td><td>30</td></tr><tr><td>Hours to be allocated</td><td>Scheduled learning and teaching study hours</td><td>Independent study hours</td><td>Placement study hours</td><td>Allocated Hours</td></tr><tr><td>300</td><td>72</td><td>228</td><td>0</td><td>300</td></tr><tr><td colspan="5"></td></tr></table>	Key Information Set - Module data					Number of credits for this module									30	Hours to be allocated	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours	300	72	228	0	300					
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	<p>The table below indicates as a percentage the total assessment of the module which constitutes a -</p> <p>Written Exam: Unseen written exam, open book written exam, In-class test Coursework: Written assignment or essay, report, dissertation, portfolio, project Practical Exam: Oral Assessment and/or presentation, practical skills assessment, practical exam</p> <p>Please note that this is the total of various types of assessment and will not necessarily reflect the component and module weightings in the Assessment section of this module description:</p> <table><tr><td colspan="4">Total assessment of the module:</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td colspan="4">Written exam assessment percentage</td><td>0%</td></tr><tr><td colspan="4">Coursework assessment percentage</td><td>100%</td></tr><tr><td colspan="4">Practical exam assessment percentage</td><td>0%</td></tr><tr><td></td><td></td><td></td><td></td><td>100%</td></tr></table>	Total assessment of the module:										Written exam assessment percentage				0%	Coursework assessment percentage				100%	Practical exam assessment percentage				0%					100%
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Reading Strategy	<p>Students are expected to read a range of text books, study skills material, journal articles and industry relevant publications in support of the module.</p> <p>Any core essential reading will be indicated clearly in the first week of module teaching along with the method for accessing it, e.g. students may be expected to purchase a set text, be given a study pack, or be referred to texts that are available electronically, etc. This guidance will be available on the relevant VLE page.</p> <p>Further and wider reading is encouraged for this module with relevant material indicated in lectures, lecture notes, seminar preparation instructions and on the relevant VLE.</p> <p>Access and skills Formal opportunities for students to develop their library and information skills are provided within the induction period and study skills sessions. Additional support is available through online resources. This includes interactive tutorials on finding books and journals, evaluation of information and referencing. Sign up workshops are also offered.</p>																														
Indicative Reading List	<p>The following list is offered to provide an indication of the type and level of information students may be expected to consult. As such, its currency may wane during the life span of the module specification. However, as indicated above, CURRENT advice on readings will be available via other more frequently updated mechanisms.</p> <p>Books:</p> <p>Ashman, M. R. and Puri, G. (Current Edition) <i>Essential soil science. A clear and concise introduction to soil science</i>. Oxford: Blackwell Publishing.</p> <p>Brown, J H (Current Edition) <i>An introduction to plant breeding</i>. Oxford: Blackwell.</p> <p>Department for Environment, Farming and Rural Affairs (DEFRA) (2010) <i>Fertiliser recommendations for agricultural and horticultural crops</i> (RB209). London: The Stationery Office.</p> <p>Finch, H J S, Lockhart, J A R, Samuel, A M and Lane, G P F (Current Edition) <i>Lockhart and Wiseman’s crop husbandry including grassland</i>. Cambridge: Woodhead.</p> <p>Gerrard, J. (Current Edition) <i>Fundamentals of soils</i>. London: Routledge.</p> <p>Kang, M S (Ed) (Current edition) <i>Crop improvement: challenges in the 21st century</i>. New York: Food Products Press.</p>																														

	<p>Morgan, R. P. C. (Current Edition) <i>Soil erosion and conservation</i>. Oxford: Blackwell Publishing.</p> <p>Soffe, R J (Ed) (Current Edition) <i>Agricultural notebook</i>. Oxford: Blackwell Science.</p> <p>Soil Association (Current Edition) <i>The biodiversity benefits of organic farming</i>. Bristol: Soil Association.</p> <p>Websites and databases:</p> <p>British Society of Soil Science http://soils.org.uk/</p> <p>Agriculture Research: http://www.rothamsted.ac.uk/</p> <p>Farmers Weekly: http://www.fwi.co.uk/</p> <p>Home Grown Cereal Association: https://cereals.ahdb.org.uk/</p> <p>National Institute of Agricultural Botany: http://niab.com/</p> <p>Journals</p> <p>Journal of Agronomy and Crop Science</p> <p>Journal of Crop Improvement</p> <p>European Journal of Soil Science</p> <p>Plant and Soil</p>
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Part 3: Assessment

Assessment Strategy	<p>The module is assessed through an assessment portfolio which will include controlled and uncontrolled elements; the controlled element will be a written in class test to prepare students for future examinations. The portfolio will provide a summary of student progress. This may be centred on practical achievement of vocationally relevant skills, short answer questions, short projects or reflective logs.</p> <p>Throughout the module and skills assessment there will be opportunities for students to receive formative feedback to support them in their development and allow them to reflect effectively on their performance and whether it meets industry requirements. Additional opportunities for reflection will occur within groups during visits and project completion. Portfolios will be constructed throughout the course of the module and must be completed by the submission date.</p> <p>In line with the Institution's commitment to facilitating equal opportunities, a student may apply for alternative means of assessment if appropriate. Each application will be considered on an individual basis taking into account learning and assessment needs. For further information regarding this please refer to the VLE.</p>
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Identify final assessment component and element	Portfolio	
% weighting between components A and B (Standard modules only)	A:	B:
	100%	N/A
First Sit		
Component A (controlled conditions) Description of each element	Element weighting (as % of component)	
1. Portfolio (equivalent to 4,000 words)	100%	

Resit (further attendance at taught classes is not required)	
Component A (controlled conditions) Description of each element	Element weighting (as % of component)
1. Portfolio (equivalent to 4,000 words)	100%
If a student is permitted a retake of the module under the Academic Regulations and Procedures, the assessment will be that indicated by the Module Specification at the time that retake commences.	