

HARPER ADAMS UNIVERSITY

Programme Specification

1	Awarding Institution:	Harper Adams University
2	Teaching Institution:	Askham Bryan College
3	Course Accredited by:	Not Applicable
4	Final Award and Level:	FdSc (Level 5)
5	Interim Award(s) and Level(s):	Certificate of Higher Education Horticulture (Level 4)
6	Award Title:	Horticulture
7	UCAS Code:	D417
8	JACS Code(s):	D417
9	QAA Benchmark Statement(s):	Agriculture, Horticulture, Forestry, Food, Nutrition and Consumer Sciences (July 2016)
10	Language of Study:	English
11	Mode of Study:	Full-time Part-time
12	Date Approved or Revised:	Horticulture Validation Event – 12 th January 2017 (September 2017 – August 2023)

CONTEXT AND RATIONALE

The horticulture industry is estimated to be worth £1.2billion to the British economy and over €400 million in Ireland and it provides regular employment for over 37,000 people in the UK and 6,000 in Ireland, with many of these jobs in rural areas (Chartered Institute of Horticulture, 2014).

Today's horticultural businesses operate in a highly competitive and demanding global market environment. In addition, consumer demand in the UK is also changing with the drive for local food and organic production. Production, harvesting and storing of vegetables is highly mechanised and technologically advanced.

Horticulturists are employed not only in the more typical plant nurseries, greenhouse, public parks, and vegetable growers, but also in hospitals (horticultural therapy), and tourist attractions (managing environments for animals and visitors). The college has strong links with many employers and specialist staff come from vocational backgrounds within the industry.

Today's horticultural businesses operate in a highly competitive and demanding global market environment. Changing world population and climate will create further challenges for the industry, with 39% of growers already citing climate change as having impact on their growing habits (NFU, 2010). In addition, consumer demand in the UK is also changing with the drive for local food and organic production. Production, harvesting and storing of vegetables is highly mechanised and technologically advanced.

In 2013 a report entitled 'Horticulture Matters' was presented to the government by leading horticultural organisations (Chartered Institute of Horticulture, Lantra, The Horticultural Trades Association, Landex, British Association of Landscape Industries, English Heritage, The Royal Botanic Gardens Kew, The Royal Horticultural Society). The group surveyed 200

horticultural businesses and found that: 72% struggled to fill vacancies with 10% taking over a year to fill and 19 % recruit overseas. 67% thought career entrants were inadequately prepared for work. (3% demanded government action).

Horticulturists are employed not only in the more typical plant nurseries, greenhouse, public parks, and vegetable growers, but also in hospitals (horticultural therapy), and tourist attractions (managing environments for animals and visitors).

Employment prospects are excellent with horticultural opportunities, either within the UK or worldwide. Many students have come to study on degree courses at the college after successful careers in other areas, keen to pursue their main interest. Past students have found careers within production horticulture, historic gardens, local authorities, botanic gardens, landscaping companies and nurseries. The college has strong links with many employers and specialist staff are from vocational backgrounds within the industry.

The FdSc Horticulture programme aims to educate undergraduates to a level where they can take up supervisory and management positions equipped with a broad range of horticultural expertise to meet the needs of industry.

GENERIC AIMS

All FdSc wards aim to provide the following:

1. To develop in each student subject knowledge and understanding appropriate to individual interests and developing vocational needs.
2. To develop each student's intellectual powers, their understanding and judgement, their ability to see relationships within what they have learned and to examine the field of study in a broader perspective.
3. To develop the personal effectiveness and employability of students, in particular their ability to learn, to communicate, to work with others and to solve problems.
4. To develop those skills of professional scholarship required for career management, lifelong learning and innovation.
5. To inculcate an awareness of the wider consequences of economic activity and a determination to minimise harmful effects on the environment and people.
6. To provide a lively, stimulating and challenging education experience.

AWARD-SPECIFIC AIMS

The FdSc Horticulture award aims to provide the following:

1. To equip students with a thorough understanding of horticultural management systems and the underpinning scientific, economic and management principles to prepare them for entry into the horticultural sector.
2. To develop the ability to identify, analyse and solve technological and economic problems encountered in horticulture and landscape systems and evaluate new techniques and, where appropriate, apply them to commercial practice.
3. To develop communication and management skills and the ability to apply them to problems associated with plant production and landscaping situations.
4. To develop the ability to evaluate the wider global, environmental, economic, social, ethical and political issues associated with sustainable horticultural development.
5. To develop the ability to apply detailed scientific knowledge and understanding of plant sciences to problems associated with the horticultural industry.

GENERIC OUTCOMES

On successful completion of FdSc awards, students will be able to:

- a) Demonstrate a detailed knowledge of key theories, ideas and terminology associated with the discipline, with some appreciation of how knowledge is developed and used in practice.
- b) Select and use strategies to solve problems that are complex or unpredictable.
- c) Analyse data using recognisable principles or approaches, and draw out specific findings from this process with some awareness of the limitations of the approach.
- d) Compare and contrast ideas and/or data to strengthen evidence or arguments towards a specified purpose.
- e) Review information using selected methods to address complex issues or problems, with an awareness of some of the limitations of the source material.
- f) Select and use appropriate technologies to enable or enhance the performance of specific tasks, and appreciate the role information and communication technologies play in the discipline or relevant professions.
- g) Work productively with others on negotiated tasks and evaluate team performance with reference to some of the internal and external factors affecting success.
- h) Recognise, pursue and record personal development in a way that supports the needs of relevant professional employers.
- i) Communicate effectively through different media and genre, for specialist and non-specialist audiences.
- j) Perform practical operations in more complex or unpredictable situations that require the selection and application of appropriate skills and review personal effectiveness in practical tasks.
- k) Work independently and autonomously with only some supervision in academic and practical tasks; make decisions about when support is needed.
- l) Use research to inform the development of knowledge and understanding, and to inform decision-making.
- m) Recognise the complexity of sustainable practice, and assess the sustainability of different practices, processes and/or developments.
- n) Compare and contrast international examples or case studies that are associated with the discipline and identify global factors or trends that have an impact on specific areas of study.
- o) Recognise some ethical challenges associated with research and within professional behaviour, and appreciate the role of personal responsibility and professional codes in complex ethical dilemmas.
- p) Not applicable.
- q) Not applicable.

AWARD-SPECIFIC OUTCOMES

On successful completion of the FdSc Horticulture award, students will be able to: -

- R) Compare and contrast a variety of the concepts and techniques for plant production and landscape management and how they are applied in industry.
- S) Apply propagation and plant production techniques studied to a wide variety of plant materials to meet the standards and requirements of the industry.
- T) Apply practical skills and competencies to landscape design, construction and garden management situations to ensure sustainable landscapes and gardens.
- U) Apply specialist skills in scientific, technical, intellectual and managerial aspects of horticulture and the landscape industries, outside the context in which they were originally studied, especially with regard to their chosen specialism.

RELATIONSHIP WITH EXTERNAL REFERENCE POINT(S)

QAA Subject Benchmark statement for Agriculture, Horticulture, Forestry, Food, Nutrition and Consumer Sciences (July 2016) states:

Degree programmes in **horticulture** are designed to develop the knowledge and skills required to integrate the challenges of food security, sustainable production, preservation of biodiversity, climate change and human well-being. Graduates may go on to manage horticultural enterprises and related businesses, operate in international trade and production systems, manage amenity landscapes or be involved in closely related official or commercial research and advisory work. Graduates with horticulture degrees have a thorough understanding of plant manipulation and production methods and of the underpinning scientific, economic and business principles. They are able to identify technological and economic problems encountered in current production systems, evaluate new techniques and, where appropriate, apply them to commercial practice. Graduates appreciate the social, rural and urban landscape values associated with horticulture and the dilemmas facing their current and future management; appreciate the underpinning global nature of production and supply chains; and evaluate the wider consequences of horticultural activities including public concerns over sustainable land use and production practices.

QAA Quality Code for Higher Education. Section A: Setting and maintaining academic standards, 2014.

PROFESSIONAL ACCREDITATION ARRANGEMENTS

Not applicable.

COURSE DURATION, PROGRESSION, MODULE COMPENSATION, TRANSFER, ADVANCED STANDING AND INTERIM AWARDS

Course Duration

The full-time programme will be completed in two years, with each academic year consisting of two semesters, each semester being typically of 12 in weeks duration, including directed study weeks and examination periods.

The part-time programme will be completed in four years and typically be no less than 50% of the standard module diet of the full-time version of the award.

The maximum duration of study for full-time and part-time students (including up to one year postponement of studies) will be three years and five years respectively

Progression

Students progressing to the second year must have satisfied the requirements for progression in line with Harper Adams University academic regulations.

Students may progress to the BSc/BSc (Hons) Applied Horticulture (top-up) programme following successful completion of the FdSc Horticulture. For admission to the BSc (Hons) top-up programme, students would normally be expected to have successfully completed their FdSc programme with a minimum of mean grade of 55% in their final year. For admission to BSc top-up programme, students would normally be expected to have successfully completed their FdSc programme and have a reference from their Course Manager in support of their suitability for top up study.

Students may also progress onto the BSc/BSc (Hons) Horticulture with Landscape Garden Management from the Foundation Degree Horticulture programme at Level 4 (Year 1), following a minimum mean grade of 60%.

Module Compensation Exclusions

The following modules are not eligible for compensation within the FdSc Horticulture programme:

Year1 modules: Propagation and Practical Botany
 Plant Identification and Taxonomy
 Academic Skills
 Industry Skills

Year 2 modules: Personal Research Project
 Plant Pests and Diseases
 Plantsmanship
 Academic Development
 Professional Development

Transfer

For transfer between courses, matching awards facilitate transfer at the end of the preparatory year (year 1). Students will transfer all credits and marks from the preparatory year into the destination award. Only in the case of pre-requisites have not being met will students be required to study credit in addition to the normal study load during year two (Level 4).

Entry with Advanced Standing

Table 4.1 in **Section 4** of the *Academic Quality Assurance Manual* identifies the maximum credit that can normally be advanced for students wishing to enter with advanced standing from a Harper Adams' award, or an award from another institution. Harper Adams' awards which qualify for the maximum volume of advanced standing into this programme are listed as follows:

None

Interim awards which qualify for a lower level of advanced standing, including Harper Adams' awards, into this programme are listed below:

Certificate of Higher Education in Horticulture

The course structure diagram(s) identify the specific study programme(s) for candidates entering with advanced standing. **Section 4.5.10** of the *Academic Quality Assurance Manual* specifies the arrangements for transfer and advanced entry and these will apply unless an alternative arrangement has been approved.

Entry with Accreditation of Prior Learning (APL)/ Accreditation of Prior Experiential Learning (APEL) will be accepted in accordance with the Askham Bryan College procedure and Harper Adams University academic regulations. No more than $\frac{2}{3}$ credit for the award may be derived from APL. Within this limit, no more than half of the total credit value of the award may be derived from APEL.

Holders of a matching HNC/FdSc may apply to be admitted to part two of this programme, subject to satisfaction of the admitting Course manager of their suitability for study on the

programme. Students would normally have to achieve the minimum credit requirements for the award specified.

Interim Awards

The requirements for interim awards associated with final awards are as follows:

Certificate of Higher Education Horticulture

Students will have obtained a minimum of 120 credits, with a maximum of 15 credits at level 3, and have met generic outcomes A - O and award specific outcomes R - U as identified within the level 4 curriculum map of this programme specification.

COURSE STRUCTURE, LEVELS AND CREDIT REQUIREMENTS FOR INTERIM AND FINAL AWARDS

Harper Adams' programmes are based on a credit-accumulation system where 1 credit represents 10 notional hours of student study time. Modules are normally 15 credits or multiples thereof. Modules are also at different levels from Levels 3 – 7, according to their intellectual challenge. Courses leading to specific awards include **core modules**, **optional modules** from which students must select choices up to the number of credits required, and, in some cases, **elective credit** whereby students may study any modules of their choice from within the Harper Adams portfolio, subject to timetabling and pre-requisite constraints, in place of optional modules, with the approval of their programme manager.

The minimum credit requirements needed to progress to interim and final awards are listed in **Section 4.4.5** of the *Academic Quality Assurance Manual*. These are reflected in the corresponding course structure study programmes, which follow.

Course Structure - FdSc Horticulture

Part 1 - Level 4		Part 2 - Level 5	
Year 1		Year 2	
Semester 1 Core	Semester 2 Core	Semester 3 Core	Semester 4 Core
Industry Skills (ABC4101) 15 credits		Personal Research Project (Module Code TBC) 15 credits	
Academic Skills (ABC4100) 15 credits	Propagation and Practical Botany (ABH4109) 15 credits	Professional Development (Module Code TBC) 15 credits	
Introduction to Business (ABC4102) 15 credits	Plant Establishment and Maintenance (ABH4105) 15 credits	Academic Development (Module Code TBC) 15 credits	Project and Contract Management (Module Code TBC) 15 credits
Plant and Soil Science (ABH4104) 15 credits	Introduction to Design and Landscape Construction (ABH4102) 15 credits	Business Enterprise (Module Code TBC) 15 credits	Plant Pests and Diseases (Module Code TBC) 15 credits
Plant Identification and Taxonomy (ABH4106) 15 credits		Plantsmanship (Module Code TBC) 15 credits	Plant Production and Technology (Option) (Module Code TBC) 15 credits
			Landscape and Garden Design and Surveying (Option) (Module Code TBC) 15 credits

Full-time students will normally study at least 120 credits (equivalent to 1200 study hours) per year from a combination of core (compulsory) and optional modules. Students intending to top-up to a BSc/BSc Honours programme should discuss their option choices with their Course Manager.

Validation Date: 12th January 2017

Date of Approval following Response to Validation Report: July 2017

Period of Approval: September 2017 – August 2023

COURSE DESIGN, LEARNING, TEACHING AND ASSESSMENT METHODS

Assessment philosophy

Assessments will vary to reflect the academic, practical and professional skills development of students on the FdSc Horticulture programme.

Learning and teaching methods

Teaching and learning methods used to deliver this curriculum are designed to provide experience, and, through reflection upon it, develop concepts which can then be explored through testing and experimentation. Methods vary according to the nature of each module's subject matter but include a wide diversity from more formal lectures to student centred activities including assignments, seminars, field trips, guest lectures and case studies. Practical skills will be developed during sessions in the college farm and land, on field trips and in laboratories.

All students carry out a major individual research project in the final year. The curriculum is delivered in such a way that there is a reducing reliance on tutor-directed study as students progress through their programme. Students will be supported with their study via the college's VLE which will prepare them for the autonomy expected of HE students.

Transferable skills

FdSc programmes aim to allow students to develop important transferable skills in the preparatory year of the course to enable learners to continue to parts one and two of the programme. In addition to academic modules, students must undertake at least 50 hours of work placement to ensure that they develop work related skills within their chosen industry.

All FdSc courses at Askham Bryan College include the Academic Skills (Level 4) and Academic Development (Level 5) modules plus Industry Skills (Level 4) and Professional Development (Level 5). These are designed to develop the skills required to succeed on College courses, to obtain employment, to manage careers and to develop the scholarship required in a learning society. The programme includes activities to develop core skills of communication, numeracy, IT and personal development planning. Vocational placement periods (normally 150 hours in each of part one and part two) help to develop the skills and attributes required in the world of work. Higher level modules are designed to develop teamwork, independent learning, problem solving and research.

All students may also study for additional qualifications, recognised by industry, at an additional cost.

Typical assessment

Typically, modules are assessed by two pieces of assessment, although this may vary. The first will provide formative in-course feedback and the second provides a summative end-of module assessment; each contributing 50% to the weighted mean module work. The exact details are specified in each module descriptor. Unless otherwise specified in module descriptors the overall mark is derived from a weighted mean, with no threshold requirement in any assessment component. Formative assessment methods are diverse and include literature review-based essays, problem based assignments, oral presentations and business written reports, individual and team scenario exercises, experimental work and placement assignments. Time constrained assessment includes closed and open book assessment, with both seen and unseen questions and tasks set.

Practical assessments include design and set-up of scientific experiments, analysis of collected data and presentation of results. In some cases, assessment by professionals (e.g. bank managers) may be used.

ENTRANCE REQUIREMENTS

Applicants will normally have 5 GCSE's or above including English, maths and science at Grade C or above. Achievements at level 2 in appropriate Functional Skills will also be considered as an alternative for English and maths and Merit grades or above in Science based modules at Level 3 can be used as an alternative to GCSE Science.

Applicants are expected to achieve a minimum of 48 UCAS points.

Applicants will normally have studied a two year level 3 programme at A Level or a vocational Level 3 Diploma. Normally applicants will be expected to show achievements in science modules at Merit grade or above in vocational programmes. This reflects the science based nature of the programmes.

Applicants without appropriate achievements in Science may be asked to undertake an assessment of scientific knowledge.

Applications from those that have significant life or work experience after leaving compulsory education will normally have studied and achieved an Access to HE course or successfully completed a minimum of a one year level 3 courses and/or be able to demonstrate that they are working at an appropriate level in English, maths and science through an assessment process.

Curriculum Map for FdSc Horticulture

Award Outcomes	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
Level 4																						
Academic Skills					x	X			X		X	X										
Industry Skills		x	x				x	x		x	x		x	x								
Introduction to Business		X					X				X		X									
Plant and Soil Science	X					X				X		X		X								
Propagation and Practical Botany			X		X				X	X								X	X			
Plant Establishment and Maintenance				X	X					x			X		X			X	X	X		X
Plant Identification and Taxonomy	X			X				X				x		X							X	
Introduction to Design and Landscape Construction		X								X			X		X			X	X	X		X
Level 5																						
Personal Research Project			x	x	x						x	x			x							
Academic Development		x	x			x			x	x												x
Professional Development							x	x	x	x			x		x							
Business Enterprise							X								X							
Plantsmanship	X										X			X				X		X		
Plant Pests and Diseases	X			X	X				X				X	X							X	X
Project and Contract Management	X	X							X											X		
Plant Production and Technology (O)		X		X		X				X			X					X	X		X	
Landscape and Garden Design and Surveying (O)		X		X		X				X			X							X		X

Level 4

A	Knowledge	Identify and describe key theories, ideas and terminology associated with the discipline.
B	Problem Solve	Solve straightforward, routine or predictable problems using strategies that are specified.
C	Analysis	Analyse data or ideas using specified procedures to generate usable findings.
D	Synthesis	Categorise information and draw on multiple sources to fulfil a specified purpose.
E	Evaluation	Review information in a balanced manner, using specified methods to fulfil a given purpose.
F	Digital Competence	Use technologies to enable or enhance the performance of specific tasks and demonstrate a commitment to developing appropriate digital competencies.
G	Team Work	Work with others to meet specified objectives and fulfil personal goals.
H	Career Develop	Recognise how learning within their programme links to future careers and identify the knowledge, skills and attributes associated with different relevant professions.
I	Communications	Communicate clearly to convey an understandable message in relation to specific tasks and audiences.
J	Practical Comp	Perform practical operations in predictable, routine situations that require the application of specified procedures.
K	Autonomy	Take responsibility for studies and self-development with guidance and support. Use the resources available to help learning.
L	Research	Recognise that research can generate theory and ideas that are used in practice.
M	Sustain Practice	Recognise the meaning and importance of sustainable practice, and identify some of the ways that sustainable practice manifests.
N	Global	Identify a range of international examples or case studies that are associated with the discipline.
O	Ethics	Recognise some ethical challenges and appreciate the need or personal responsibility.
P	Placement	Not applicable.

Level 5

A	Knowledge	Demonstrate a detailed knowledge of key theories, ideas and terminology associated with the discipline, with some appreciation of how knowledge is developed and used in practice.
B	Problem Solve	Select and use strategies to solve problems that are complex or unpredictable
C	Analysis	Analyse data using recognisable principles or approaches, and draw out specific findings from this process with some awareness of the limitations of the approach.
D	Synthesis	Compare and contrast ideas and/or data to strengthen evidence or arguments towards a specified purpose.
E	Evaluation	Review information using selected methods to address complex issues or problems, with an awareness of some of the limitations of the source material
F	Digital Competence	Select and use appropriate technologies to enable or enhance the performance of specific tasks, and appreciate the role information and communication technologies play in the discipline or relevant professions.
G	Team Work	Work productively with others on negotiated tasks and evaluate team performance with reference to some of the internal and external factors affecting success
H	Career Dev	Recognise, pursue and record personal development in a way that supports the needs of relevant professional employers.
I	Communications	Communicate effectively through different media and genre, for specialist and non-specialist audiences.
J	Practical Comp	Perform practical operations in more complex or unpredictable situations that require the selection and application of appropriate skills and review personal effectiveness in practical tasks.
K	Autonomy	Work independently and autonomously with only some supervision in academic and practical tasks; make decisions about when support is needed.
L	Research	Use research to inform the development of knowledge and understanding, and to inform decision-making.
M	Sustain Practice	Recognise the complexity of sustainable practice, and assess the sustainability of different practices, processes and/or developments.

N	Global	Compare and contrast international examples or case studies that are associated with the discipline and identify global factors or trends that have an impact on specific areas of study.
O	Ethics	Recognise some ethical challenges associated with research and within professional behaviour, and appreciate the role of personal responsibility and professional codes in complex ethical dilemmas
P	Placement	Not applicable.
Q	Honours	Not applicable
R	Award specific outcomes	Compare and contrast a variety of the concepts and techniques for plant production and landscape management and how they are applied in industry.
S	Award specific outcomes	Apply propagation and plant production techniques studied to a wide variety of plant materials to meet the standards and requirements of the industry.
T	Award specific outcomes	Apply practical skills and competencies to landscape design, construction and garden management situations to ensure sustainable landscapes and gardens.
U	Award specific outcomes	Apply specialist skills in scientific, technical, intellectual and managerial aspects of horticulture and the landscape industries, outside the context in which they were originally studied, especially with regard to their chosen specialism.
V	Award specific outcomes	Develop the ability to appraise, analyse, evaluate, plan, design and manage the varying sites and situations found within horticultural and landscape settings.

A-Q =Generic Outcomes

R-V = Award Specific Outcome

