



HORTICULTURE

Specification

LEVEL

4

HNC

5

HND

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Edexcel BTEC Level 4 HNC Diploma in Horticulture

Edexcel BTEC Level 5 HND Diploma in Horticulture

The Qualifications and Credit Framework (QCF) has been introduced to replace the National Qualifications Framework (NQF). It recognises achievement through the award of credit for units and qualifications, working at all levels between Entry level and level 8.

To accommodate the new framework we have taken the opportunity to revise the academic level and size of the Edexcel BTEC HNCs (Higher National Certificates). These are now at level 4 and are a minimum of 120 credits in size. They have been nested within the structures of the Edexcel BTEC HNDs (Higher National Diplomas) which are a minimum of 240 credits in size and remain level 5 qualifications.

The qualifications remain as Intermediate level qualifications on the Framework for Higher Education Qualifications (FHEQ). Progression to Edexcel BTEC Higher Nationals continues to be from level 3 qualifications and progression from Edexcel BTEC Higher Nationals will normally be to qualifications at level 6. Learners' progression routes do not necessarily involve qualifications at every level.

As a nested qualification the HNC is an embedded component of the HND. However, it can be taken as a stand-alone qualification.

If a learner enrolls for an HNC they would be eligible to gain a grade for the HNC. If they then move to an HND, the learner is graded on their HND performance. The grade for the HND will include units from the previously achieved HNC.

If a learner opts to take an HND from the start then, on successful completion of the HND, they will receive one grade for the HND achievement only.

If a learner opts to take an HND from the start but later chooses to revert to an HNC programme, then on successful completion of the HNC they will receive a grade for the HNC achievement only.

Existing NQF Higher National unit achievement can count towards the QCF Edexcel BTEC Higher Nationals.

Edexcel BTEC Higher Nationals within the QCF, NQF and FHEQ

QCF/NQF/ FHEQ level	Progression opportunities and examples of qualifications within each level
8	PhD/DPhil Professional doctorates (credit based), eg EdD
7	Master's degrees Postgraduate diplomas Postgraduate Certificate in Education (PGCE)
6	Bachelor's degrees, eg BA, BSc Professional Graduate Certificate in Education Graduate certificates and diplomas
5	Edexcel BTEC HNDs (Higher National Diplomas) Foundation Degrees, eg FdA, FdSc Diplomas of Higher Education (Dip HE)
4	Edexcel BTEC HNCs (Higher National Certificates) Certificates of Higher Education (Cert HE) Level 4 Work-based Diplomas
3	Edexcel BTEC Level 3 Extended Diplomas Edexcel BTEC Level 3 Diplomas Edexcel BTEC Level 3 Subsidiary Diplomas Edexcel BTEC Level 3 Certificates GCE Advanced Level Level 3 Work-based Diplomas Advanced Diplomas

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Qualification titles covered by this specification

Edexcel BTEC Level 4 HNC Diploma in Horticulture (QCF)

Edexcel BTEC Level 4 HNC Diploma in Horticulture (Garden Design) (QCF)

Edexcel BTEC Level 4 HNC Diploma in Horticulture (Sports Turf Management) (QCF)

Edexcel BTEC Level 5 HND Diploma in Horticulture (QCF)

Edexcel BTEC Level 5 HND Diploma in Horticulture (Garden Design) (QCF)

Edexcel BTEC Level 5 HND Diploma in Horticulture (Sports Turf Management) (QCF)

These qualifications have been accredited to the Qualifications and Credit Framework (QCF). The Qualification Numbers (QNs) for these qualifications are listed below.

These qualification titles are as they will appear on learners' certificates. Learners need to be made aware of this when they are recruited by the centre and registered with Edexcel. Providing this happens, centres are able to describe the programme of study leading to the award of the qualification in different ways to suit the medium and the target audience.

Centres are reminded that The Report of the National Committee of Inquiry into Higher Education (the Dearing Report) recommended that they *'develop, for each programme they offer, a 'programme specification' which identifies potential stopping-off points and gives the intended outcomes of the programme ...'*

The Quality Assurance Agency for Higher Education (QAA) has produced guidelines for centres in preparing programme specifications (reference *Guidelines for preparing programme specifications*: QAA 115 06/06) which includes related post-Dearing developments. Annexe 2: *Working with programme specifications: a leaflet for further education colleges* of this QAA document contains additional guidance notes to support further education colleges writing programme specifications for Edexcel awards.

Qualification Numbers

The Qualifications and Credit Framework (QCF) code is known as a Qualification Number (QN). Each unit within a qualification will also have a QCF unit code.

The QCF qualification and unit codes will appear on learners' final certification documentation.

The QNs for qualifications in this publication are:

600/2132/9 Edexcel BTEC Level 4 HNC Diploma in Horticulture (QCF)

600/1719/3 Edexcel BTEC Level 5 HND Diploma in Horticulture (QCF)

Introduction

This specification contains the units and associated guidance for the QCF Edexcel BTEC Level 4 HNC Diplomas in Horticulture and the Edexcel BTEC Level 5 HND Diplomas in Horticulture.

Each unit sets out the required learning outcomes, assessment criteria and content and may also include advice regarding essential delivery and assessment strategies.

This document also contains details of the teaching, learning, assessment and quality assurance of these qualifications. It includes advice about Edexcel's policies regarding access to its qualifications, the design of programmes of study and delivery modes.

Structure of the qualifications

Edexcel BTEC Level 4 HNC Diploma in Horticulture

The Edexcel BTEC Level 4 HNC Diplomas in Horticulture are qualifications with a minimum of 120 credits of which between 45 and 60 credits are mandatory (depending on pathway).

The Edexcel BTEC Level 4 HNC programme must contain a minimum of 65 credits at level 4.

Edexcel BTEC Level 5 HND Diploma in Horticulture

The Edexcel BTEC Level 5 HND Diplomas in Horticulture is a qualification with a minimum of 240 credits of which 60 credits are mandatory.

The Edexcel BTEC Level 5 HND programme must contain a minimum of 125 credits at level 5.

Rules of combination for Edexcel BTEC Levels 4 and 5 Higher National qualifications in Horticulture

The rules of combination specify the:

- total credit value of the qualification
- minimum credit to be achieved at the level of the qualification
- mandatory core unit credit
- specialist unit credit
- maximum credit that can be centre devised or imported from other QCF Edexcel BTEC Higher National qualifications.

When combining units for an Edexcel BTEC Higher National qualification it is the centre's responsibility to ensure that the following rules of combination are adhered to:

Edexcel BTEC Level 4 HNC in Horticulture

- 1 Qualification credit value: a minimum of 120 credits. (A maximum of 55 credits may be at level 5.)
- 2 Minimum credit to be achieved at the level of the qualification (level 4): 65 credits.
- 3 Mandatory core unit credit: 45-60 credits (depending on pathway).
- 4 Specialist unit credit: 60-75 credits (depending on pathway).
- 5 A maximum of 30 credits can be centre devised or imported from other QCF Edexcel BTEC Higher National qualifications to meet local needs. Level rules and mandatory core units must not be changed.

Edexcel BTEC Level 5 HND in Horticulture

- 1 Qualification credit value: a minimum of 240 credits.
- 2 Minimum credit to be achieved at the level of the qualification (level 5): 125 credits.
- 3 Mandatory core unit credit: 60 credits.
- 4 Specialist unit credit: 180 credits.
- 5 The requirements of the HNC have to be met.
- 6 A maximum of 60 credits can be centre devised or imported from other QCF Edexcel BTEC Higher National qualifications to meet local needs. Level rules and mandatory core units must not be changed.

Structure of the Edexcel BTEC Level 4 HNC in Horticulture

The Edexcel BTEC Level 4 HNC in Horticulture is a 120-credit qualification that consists of 45 mandatory credits, including a minimum of 15 credits from Group A and remaining credits from Groups A, B or C (subject to a maximum of 15 credits from Group C) that together provide for a combined minimum of 120 credits.

Unit number	Mandatory core units – both units must be taken	Unit credit	Unit level
1	Principles of Plant and Soil Science	15	5
3	Project Management for Land-based Industries	15	4
	Group A – choose units with a minimum credit value of 15 credits		
4	Enterprise and Financial Management for Land-based Industries	15	5
5	Human Resource Management	15	4
	Group B		
6	Research Project	20	5
7	Plant Environmental Adaptation and Physiology	15	5
8	Plant Selection and Establishment	15	4
9	Environmental Management	15	5
10	Biological Principles	15	5
11	Horticultural Technology	15	5
12	Garden Design Principles	15	5
13	Fruit and Vegetable Production Management	15	4
14	Nursery Stock Production	15	5
15	Hard Landscape Principles and Practice	15	5
16	Public Horticulture	15	4
17	Landscape and Garden Maintenance	15	5
18	Interior Landscape and Plant Displays	15	5
19	Plant Health and Environmental Relationships	15	5
20	Understanding Organic Soil Management	15	5
21	Organic Principles and Practice	15	5
22	Golf Course Design Principles	15	5
23	Management of Historic Parks and Gardens	15	5
24	Growing Media	15	4
25	Manage the Identification and Classification of Plants	15	4
26	Plan and Manage the Movement of Plants	15	5

Unit number	Group B (continued)	Unit credit	Unit level
27	Plan and Manage the Growth and Development of Crops	15	4
28	Plan and Manage the Harvesting, Preparation and Storage of Crops	15	4
29	Plan and Manage Protected Crops	15	4
	Group C – choose units with a maximum credit value of 15		
2	Work-based Experience	15	5
31	Small Business Enterprise	15	5
32	Sustainable Development	15	5
33	Research Methods for Land-based Industries	15	4
34	Land-based Business Planning	15	4
35	Event Management for Land-based Industries	15	4
30	Business Environment	15	4
36	Mechanisation for Land-based Industries	15	5
37	Land Use Issues and Regulation	15	5
38	Build and Maintain Effective Customer Relations	15	4
39	Health and Safety in the Land-based Workplace	15	4
40	Waste Management	15	5
41	Develop and Implement Plans for the Storage and Disposal of Inorganic Waste	15	4
59	Arboricultural Management	15	5

The Edexcel BTEC Level 4 HNC programme must contain a minimum of 65 credits at level 4.

Structure of the Edexcel BTEC Level 4 HNC in Horticulture (Garden Design)

The Edexcel BTEC Level 4 HNC in Horticulture (Garden Design) is a 120-credit qualification that consists of 60 mandatory core credits and remaining credits from Groups A or B (subject to a maximum of 15 credits from Group B) that together provide for a combined minimum of 120 credits.

Unit number	Mandatory core units – all three units must be taken	Unit credit	Unit level
8	Plant Selection and Establishment	15	4
42	Professional Garden Design Practice	15	4
43	Major Integrated Garden Design Project	30	5
	Group A		
1	Principles of Plant and Soil Science	15	5
6	Research Project	20	5
7	Plant Environmental Adaptation and Physiology	15	5
9	Environmental Management	15	5
10	Biological Principles	15	5
11	Horticultural Technology	15	5
12	Garden Design Principles	15	5
15	Hard Landscape Principles and Practice	15	5
17	Landscape and Garden Maintenance	15	5
18	Interior Landscape and Plant Displays	15	5
19	Plant Health and Environmental Relationships	15	5
20	Understanding Organic Soil Management	15	5
21	Organic Principles and Practice	15	5
26	Plan and Manage the Movement of Plants	15	5
44	Historical Influence in Garden Design	15	5
45	Graphic Skills for Garden Designers	15	5
46	Garden Styles and their Influence	10	4
47	Advanced Garden Design	10	4
48	Landscape Design Process	15	5
49	Planting Design	15	4
	Group B		
2	Work-based Experience	15	5
3	Project Management for Land-based Industries	15	4
4	Enterprise and Financial Management for Land-based Industries	15	5

Unit number	Group B (continued)	Unit credit	Unit level
5	Human Resource Management	15	4
30	Business Environment	15	4
31	Small Business Enterprise	15	5
32	Sustainable Development	15	5
33	Research Methods for Land-based Industries	15	4
34	Land-based Business Planning	15	4
36	Mechanisation for Land-based Industries	15	5
38	Build and Maintain Effective Customer Relations	15	4
39	Health and Safety in the Land-based Workplace	15	4
50	Contract Documentation and Management for Land-based Industries	15	5
51	Principles of Ecology	15	4
59	Arboricultural Management	15	5

The Edexcel BTEC Level 4 HNC programme must contain a minimum of 65 credits at level 4.

Structure of the Edexcel BTEC Level 4 HNC in Horticulture (Sports Turf Management)

The Edexcel BTEC Level 4 HNC in Horticulture (Sports Turf Management) is a 120-credit qualification that consists of 45 mandatory credits including a minimum of 15 credits from Group A and remaining credits from Groups A, B or C (subject to a maximum of 15 credits from Group C) that together provide for a combined minimum of 120 credits.

Unit number	Mandatory core units – both units must be taken	Unit credit	Unit level
3	Project Management for Land-based Industries	15	4
52	Quality and Performance Standards for Turf	15	5
	Group A – choose units with a minimum credit value of 15 credits		
4	Enterprise and Financial Management for Land-based Industries	15	5
5	Human Resource Management	15	4
	Group B		
1	Principles of Plant and Soil Science	15	5
6	Research Project	20	5
7	Plant Environmental Adaptation and Physiology	15	5
9	Environmental Management	15	5
10	Biological Principles	15	5
11	Horticultural Technology	15	5
19	Plant Health and Environmental Relationships	15	5
22	Golf Course Design Principles	15	5
53	Construction and Maintenance of Sports Turf Surfaces	15	4
54	Mechanisation Management – Turf	10	4
55	Grassland Management	15	4
56	Non-Grass Playing Surfaces	15	5
57	Golf Course Planning	15	4
58	Turf Irrigation Systems	15	4

Unit number	Group C – choose units with a maximum credit value of 15	Unit credit	Unit level
2	Work-based Experience	15	5
30	Business Environment	15	4
31	Small Business Enterprise	15	5
32	Sustainable Development	15	5
33	Research Methods for Land-based Industries	15	4
34	Land-based Business Planning	15	4
35	Event Management for Land-based Industries	15	4
36	Mechanisation for Land-based Industries	15	5
39	Health and Safety in the Land-based Workplace	15	4

The Edexcel BTEC Level 4 HNC programme must contain a minimum of 65 credits at level 4.

Structure of the Edexcel BTEC Level 5 HND in Horticulture

The Edexcel BTEC Level 5 HND in Horticulture is a 240-credit qualification that consists of 60 mandatory credits, including a minimum of 15 credits from Group A and remaining credits from Groups A, B or C (subject to a maximum of 45 credits from Group C) that together provide for a combined minimum of 240 credits.

Unit number	Mandatory core units – all three units must be taken	Unit credit	Unit level
1	Principles of Plant and Soil Science	15	5
2	Work-based Experience	15	5
3	Project Management for Land-based Industries	15	4
	Group A – choose units with a minimum credit value of 15		
4	Enterprise and Financial Management for Land-based Industries	15	5
5	Human Resource Management	15	4
	Group B		
6	Research Project	20	5
7	Plant Environmental Adaptation and Physiology	15	5
8	Plant Selection and Establishment	15	4
9	Environmental Management	15	5
10	Biological Principles	15	5
11	Horticultural Technology	15	5
12	Garden Design Principles	15	5
13	Fruit and Vegetable Production Management	15	4
14	Nursery Stock Production	15	5
15	Hard Landscape Principles and Practice	15	5
16	Public Horticulture	15	4
17	Landscape and Garden Maintenance	15	5
18	Interior Landscape and Plant Displays	15	5
19	Plant Health and Environmental Relationships	15	5
20	Understanding Organic Soil Management	15	5
21	Organic Principles and Practice	15	5
22	Golf Course Design Principles	15	5
23	Management of Historic Parks and Gardens	15	5
24	Growing Media	15	4
25	Manage the Identification and Classification of Plants	15	4

Unit number	Group B (continued)	Unit credit	Unit level
26	Plan and Manage the Movement of Plants	15	5
27	Plan and Manage the Growth and Development of Crops	15	4
28	Plan and Manage the Harvesting, Preparation and Storage of Crops	15	4
29	Plan and Manage Protected Crops	15	4
	Group C – choose units with a maximum credit value of 45		
30	Business Environment	15	4
31	Small Business Enterprise	15	5
32	Sustainable Development	15	5
33	Research Methods for Land-based Industries	15	4
34	Land-based Business Planning	15	4
35	Event Management for Land-based Industries	15	4
36	Mechanisation for Land-based Industries	15	5
37	Land Use Issues and Regulation	15	5
38	Build and Maintain Effective Customer Relations	15	4
39	Health and Safety in the Land-based Workplace	15	4
40	Waste Management	15	5
41	Develop and Implement Plans for the Storage and Disposal of Inorganic Waste	15	4
59	Arboricultural Management	15	5

The Edexcel BTEC Level 5 HND programme must contain a minimum of 125 credits at level 5.

Structure of the Edexcel BTEC Level 5 HND in Horticulture (Garden Design)

The Edexcel BTEC Level 5 HND in Horticulture (Garden Design) is a 240-credit qualification that consists of 60 mandatory core credits and remaining credits from Groups A or B (subject to a maximum of 45 credits from Group B) that together provide for a combined minimum of 240 credits.

Unit number	Mandatory core units – all three units must be taken	Unit credit	Unit level
8	Plant Selection and Establishment	15	4
42	Professional Garden Design Practice	15	4
43	Major Integrated Garden Design Project	30	5
	Group A		
1	Principles of Plant and Soil Science	15	5
6	Research Project	20	5
7	Plant Environmental Adaptation and Physiology	15	5
9	Environmental Management	15	5
10	Biological Principles	15	5
11	Horticultural Technology	15	5
12	Garden Design Principles	15	5
15	Hard Landscape Principles and Practice	15	5
17	Landscape and Garden Maintenance	15	5
18	Interior Landscape and Plant Displays	15	5
19	Plant Health and Environmental Relationships	15	5
20	Understanding Organic Soil Management	15	5
21	Organic Principles and Practice	15	5
26	Plan and Manage the Movement of Plants	15	5
44	Historical Influence in Garden Design	15	5
45	Graphic Skills for Garden Designers	15	5
46	Garden Styles and their Influence	10	4
47	Advanced Garden Design	10	4
48	Landscape Design Process	15	5
49	Planting Design	15	4
	Group B – Learners can select up to a maximum of 45 credits from this group.		
2	Work-based Experience	15	5
3	Project Management for Land-based Industries	15	4

Unit number	Group B (continued)	Unit credit	Unit level
4	Enterprise and Financial Management for Land-based Industries	15	5
5	Human Resource Management	15	4
30	Business Environment	15	4
31	Small Business Enterprise	15	5
32	Sustainable Development	15	5
33	Research Methods for Land-based Industries	15	4
34	Land-based Business Planning	15	4
36	Mechanisation for Land-based Industries	15	5
38	Build and Maintain Effective Customer Relations	15	4
39	Health and Safety in the Land-based Workplace	15	4
50	Contract Documentation and Management for Land-based Industries	15	5
51	Principles of Ecology	15	4
59	Arboricultural Management	15	5

The Edexcel BTEC Level 5 HND programme must contain a minimum of 125 credits at level 5.

Structure of the Edexcel BTEC Level 5 HND in Horticulture (Sports Turf Management)

The Edexcel BTEC Level 5 HND in Horticulture (Sports Turf Management) is a 240-credit qualification that consists of 60 mandatory credits including 15 credits from Group A and remaining credits from Groups A, B or C (subject to a maximum of 45 credits from Group C) that together provide for a combined minimum of 240 credits.

Unit number	Mandatory core units – all three units must be taken	Unit credit	Unit level
2	Work-based Experience	15	5
3	Project Management for Land-based Industries	15	4
52	Quality and Performance Standards for Turf	15	5
	Group A – choose units with a minimum credit value of 15 credits		
4	Enterprise and Financial Management for Land-based Industries	15	5
5	Human Resource Management	15	4
	Group B		
1	Principles of Plant and Soil Science	15	5
6	Research Project	20	5
7	Plant Environmental Adaptation and Physiology	15	5
9	Environmental Management	15	5
10	Biological Principles	15	5
11	Horticultural Technology	15	5
19	Plant Health and Environmental Relationships	15	5
22	Golf Course Design Principles	15	5
53	Construction and Maintenance of Sports Turf Surfaces	15	4
54	Mechanisation Management – Turf	10	4
55	Grassland Management	15	4
56	Non-grass Playing Surfaces	15	5
57	Golf Course Planning	15	4
58	Turf Irrigation Systems	15	4
	Group C – choose units with a maximum credit value of 45		
30	Business Environment	15	4
31	Small Business Enterprise	15	5
32	Sustainable Development	15	5

Unit number	Group C (continued)	Unit credit	Unit level
33	Research Methods for Land-based Industries	15	4
34	Land-based Business Planning	15	4
35	Event Management for Land-based Industries	15	4
36	Mechanisation for Land-based Industries	15	5
39	Health and Safety in the Land-based Workplace	15	4

The Edexcel BTEC Level 5 HND programme must contain a minimum of 125 credits at level 5.

Key features

Edexcel BTEC Higher Nationals are designed to provide specialist vocational programmes, linked to professional body requirements and National Occupational Standards where appropriate.

They offer a strong, sector-related emphasis on practical skills development alongside the development of requisite knowledge and understanding.

The qualifications provide a thorough grounding in the key concepts and practical skills required in their sector and their national recognition by employers allows direct progression to employment.

A key progression path for Edexcel BTEC HNC and HND learners is to the second or third year of a degree or honours degree programme, depending on the match of the Edexcel BTEC Higher National units to the degree programme in question.

Edexcel BTEC Higher Nationals in Horticulture have been developed to focus on:

- the education and training for a range of careers in horticulture and allied land-based industries
- opportunities for those employed within these industries to achieve a nationally recognised level 5 vocationally specific qualification
- opportunities for full-time learners to gain a nationally recognised vocationally specific level 5 qualification to enter employment within these industries at supervisory or management level or to progress to higher education vocational qualifications such as a full-time degree in horticulture or related subject area
- expansion of the knowledge, understanding and skills of learners from a horticultural or allied industry supervisor's or manager's viewpoint
- opportunities for learners to concentrate on the development of higher-level skills in a land-based context; and how their role and that of their business fits within the overall structure of the land-based industries, the national and international economy and the global overview
- opportunities for learners to develop a range of skills, techniques and attributes essential for successful performance in working life.

This qualification meets the needs of the above rationale by:

- giving individuals knowledge, understanding and skills for successful employment in the horticultural and allied industries
- enabling progression to an undergraduate degree or further professional qualifications in related areas
- providing opportunities for specialist study relevant to individual vocations and contexts
- developing the individual's ability in the horticultural and allied industries through effective use and combination of the knowledge and skills gained in different parts of the programme
- developing a range of skills and techniques, personal qualities and attributes essential for successful performance in working life and thereby enabling learners to make an immediate contribution to employment
- providing flexibility, knowledge, skills and motivation as a basis for future studies and career development in the horticultural and allied industries.

Professional body recognition

The Edexcel BTEC Higher Nationals in Horticulture have been developed with career progression and recognition by professional bodies in mind. It is essential that learners gain the maximum benefit from their programme of study.

Learners who have an HNC/D in Biological Science and who have had experience in responsible work in biological science or its application for at least five years subsequent to seven years prior to the award are eligible to apply for membership of the Institute of Biology.

Further details of professional body recognition and exemptions for Edexcel BTEC Higher Nationals are given in the *BTEC Higher Nationals – Professional Recognition and Progression Directory 2008* available from our website ([www.edexcel.com/I want to](http://www.edexcel.com/Iwantto)).

National Occupational Standards

Edexcel BTEC Higher Nationals in Horticulture are designed to relate to the National Occupational Standards in the environmental and land-based sector, which in turn form the basis of the Amenity and Production Horticulture Management Work-based Diplomas. Edexcel BTEC Higher Nationals do not purport to deliver occupational competence in the sector, which should be demonstrated in a work context. However, the qualifications provide underpinning knowledge for the National Occupational Standards, as well as developing practical skills in preparation for work and possible achievement of Work-based Diplomas in due course.

Annexe B contains mapping of the Higher National units in this specification against relevant level 4 Work-based Diplomas where appropriate.

Qualification Requirement

Edexcel has published Qualification Requirements as part of the revision of Edexcel BTEC Higher Nationals. Qualification Requirements set out the aims and rationale of the qualifications and provide the framework of curriculum content. They also identify the higher-level skills associated with the qualifications and any recognition by relevant professional bodies. The Qualification Requirement for the Edexcel BTEC Higher Nationals in Horticulture is given in *Annexe A*.

Edexcel standard specification titles are developed from the Qualification Requirements. Licensed centres comply with Qualification Requirements when developing Higher Nationals under these standard titles.

Qualification Requirements provide consistent standards within the same vocational area and identify the skills and knowledge that can be expected of any holder of an identical Edexcel BTEC Higher National. This will allow higher education institutions, employers and professional bodies to confidently provide progression opportunities to successful learners.

Higher-level skills

Learners studying for Edexcel BTEC Higher Nationals in Horticulture will be expected to be able to do the following:

- analyse, synthesise and summarise information critically
- read and use appropriate literature with a full and critical understanding
- think independently, solve problems and devise innovative solutions
- take responsibility for their own learning and recognise their own learning style
- apply subject knowledge and understanding to address familiar and unfamiliar problems
- design, plan, conduct and report on investigations
- use their knowledge, understanding and skills to evaluate and formulate evidence-based arguments critically and identify solutions to clearly defined problems of a routine nature
- communicate the results of their study and other work accurately and reliably using a range of specialist techniques
- identify and address their own major learning needs within defined contexts and to undertake guided further learning in new areas
- apply their subject-related and transferable skills in contexts where the scope of the task and the criteria for decisions are

Edexcel BTEC Level 4 HNC

The Edexcel BTEC Level 4 HNC in Horticulture provides specialist work-related programmes of study that cover the key knowledge, understanding and practical skills required in the amenity and production horticulture management sectors and also offers specialist emphasis through the choice of specialist units.

Edexcel BTEC Level 4 HNCs provide nationally recognised qualifications offering career progression and professional development for those already in employment and opportunities to progress into higher education. The qualifications are mode free but they are primarily undertaken by part-time learners studying over two years. In some sectors there are opportunities for those wishing to complete an intensive programme of study in a shorter period of time.

This specification gives centres a framework to develop engaging programmes for higher education learners who are clear about the area of employment that they wish to enter.

The Edexcel BTEC Level 4 HNC in Horticulture offers a progression route for learners who are employed in the amenity and/or production horticulture management.

Edexcel BTEC Level 5 HND

The Edexcel BTEC Level 5 HND provides greater breadth and specialisation than the Edexcel BTEC Level 4 HNC. Edexcel BTEC HNDs are mode free but are followed predominately by full-time learners. They allow progression into or within employment in the amenity and/or production horticulture management sectors, either directly on achievement of the award or following further study to degree level.

The Edexcel BTEC Level 5 HND in Horticulture provides opportunities for learners to apply their knowledge and practical skills in the workplace. Full-time learners have the opportunity to do this through formal work placements or part-time employment experience.

The qualification prepares learners for employment in the amenity and/or production horticulture management sectors and will be suitable for learners who have already decided that they wish to enter this area of work. Some adult learners may wish to make the commitment required by this qualification in order to enter a specialist area of employment in amenity and/or production horticulture management or progress into higher education. Other learners may want to extend the specialism that they followed on the Edexcel BTEC Level 4 HNC programme.

Progression from this qualification may well be into or within employment in the amenity and/or production horticulture management sectors where learners may work towards membership of The Institute of Biology.

Teaching, learning and assessment

Learners must achieve a minimum of 120 credits (of which at least 65 must be at level 4) on their programme of learning to be awarded an Edexcel BTEC Level 4 HNC and a minimum of 240 credits (of which at least 125 must be at level 5) to be awarded an Edexcel BTEC Level 5 HND.

The assessment of Edexcel BTEC Higher National qualifications is criterion-referenced and centres are required to assess learners' evidence against published learning outcomes and assessment criteria.

All units will be individually graded as 'pass', 'merit' or 'distinction'. To achieve a pass grade for the unit learners must meet the assessment criteria set out in the specifications. This gives transparency to the assessment process and provides for the establishment of national standards for each qualification.

The units in Edexcel BTEC Higher National qualifications all have a standard format which is designed to provide guidance on the requirements of the qualification for learners, assessors and those responsible for monitoring national standards.

NB Any level 3 units in Edexcel BTEC Higher National specifications will appear as they are found in the relevant level 3 specifications (minus references to personal, learning and thinking skills [PLTS] and functional skills [FS].) This means that their format and assessment requirements will be slightly different to level 4 and level 5 units. 'Links' within the level 3 units will relate to units found in the level 3 specification and not to those within the level 4 and level 5 specifications.

Unit format

Each unit is set out in the following way.

Unit title, unit code, QCF level and credit value

The unit title is accredited on the QCF and this form of words will appear on the learner's Notification of Performance.

Each unit is assigned a level, indicating the relative intellectual demand, complexity and depth of study, and learner autonomy. All units and qualifications within the QCF will have a level assigned to them, which represents the level of achievement. There are nine levels of achievement, from Entry level to level 8. The level of the unit has been informed by the QCF level descriptors and, where appropriate, the National Occupational Standards (NOS) and/or other sector/professional benchmarks.

Each unit in Edexcel BTEC Higher National qualifications has a credit value which specifies the number of credits that will be awarded to a learner who has achieved all the learning outcomes of the unit. Learners will be awarded credits for the successful completion of whole units.

Aim

The aim provides a clear summary of the purpose of the unit and is a succinct statement that summarises the learning outcomes of the unit.

Unit abstract

The unit abstract gives the reader an appreciation of the unit in the vocational setting of the qualification, as well as highlighting the focus of the unit. It gives the reader a snapshot of the unit and the key knowledge, skills and understanding gained while studying the unit. The unit abstract also highlights any links to the appropriate vocational sector by describing how the unit relates to that sector.

Learning outcomes

The learning outcomes identify what each learner must do in order to pass the unit. Learning outcomes state exactly what a learner should 'know, understand or be able to do' as a result of completing the unit. Learners must achieve all the learning outcomes in order to pass the unit.

Unit content

The unit content identifies the breadth of knowledge, skills and understanding needed to design and deliver a programme of learning to achieve each of the learning outcomes. This is informed by the underpinning knowledge and understanding requirements of relevant National Occupational Standards (NOS) where appropriate.

Each learning outcome is stated in full and then the key phrases or concepts related to that learning outcome are listed in italics followed by the subsequent range of related topics.

The information below shows how unit content is structured and gives the terminology used to explain the different components within the content.

- Learning outcome: this is given in bold at the beginning of each section of content.
- Italicised sub-heading: it contains a key phrase or concept. This is content which must be covered in the delivery of the unit. Colons mark the end of an italicised sub-heading.
- Elements of content: the elements are in roman text and amplify the sub-heading. The elements must also be covered in the delivery of the unit. Semi-colons mark the end of an element.
- Brackets contain amplification of elements of content which must be covered in the delivery of the unit.
- 'eg' is a list of examples used for indicative amplification of an element (that is, the content specified in this amplification that could be covered or that could be replaced by other, similar material).

It is not a requirement of the unit specification that all of the content is assessed.

Learning outcomes and assessment criteria

Each unit contains statements of the evidence that each learner should produce in order to receive a pass.

Guidance

This section provides additional guidance and amplification related to the unit to support tutors/deliverers and assessors. Its subsections are given below.

- *Links* – sets out possible links between units within the specification. Provides opportunities for the integration of learning, delivery and assessment. Links to relevant National Occupational Standards and Professional Bodies Standards will be highlighted here.
- *Essential requirements* – essential, unique physical and/or staffing resources or delivery/assessment requirements needed for the delivery of this unit are specified here.
- *Employer engagement and vocational contexts* – this is an optional section. Where relevant it offers suggestions for employer contact to enhance the delivery of the unit.

These subsections should be read in conjunction with the learning outcomes, unit content, assessment criteria and the generic grade descriptors.

The centre will be asked to ensure that essential resources are in place when it seeks approval from Edexcel to offer the qualification.

Learning and assessment

The purpose of assessment is to ensure that effective learning of the content of each unit has taken place. Evidence of this learning, or the application of the learning, is required for each unit. The assessment of the evidence relates directly to the assessment criteria for each unit, supported by the generic grade descriptors.

The process of assessment can aid effective learning by seeking and interpreting evidence to decide the stage that learners have reached in their learning, what further learning needs to take place and how best to do this. Therefore, the process of assessment should be part of the effective planning of teaching and learning by providing opportunities for both the learner and assessor to obtain information about progress towards learning goals.

The assessor and learner must be actively engaged in promoting a common understanding of the assessment criteria and the grade descriptors (what it is they are trying to achieve and how well they achieve it) for further learning to take place. Therefore, learners need constructive feedback and guidance about how they may improve by capitalising on their strengths and clear and constructive comments about their weaknesses and how these might be addressed.

Assessment instruments are constructed within centres. They should collectively ensure coverage of all assessment criteria within each unit and should provide opportunities for the evidencing of all the grade descriptors.

It is advised that assessment criteria and contextualised grade descriptors are clearly indicated on each assessment instrument to provide a focus for learners (for transparency and to ensure that feedback is specific to the criteria) and to assist with internal standardisation processes. Tasks/activities should enable learners to produce evidence that relates directly to the assessment criteria and grade descriptors.

When centres are designing assessment instruments, they need to ensure that the instruments are valid, reliable and fit for purpose, building on the application of the assessment criteria. Centres are encouraged to place emphasis on practical application of the assessment criteria, providing a realistic scenario for learners to adopt, making maximum use of work-related practical experience and reflecting typical practice in the sector concerned. The creation of assessment instruments that are fit for purpose is vital to achievement and their importance cannot be over-emphasised.

Grading Higher National units

The grading of Edexcel BTEC Higher National qualifications is at the unit and the qualification level.

Each successfully completed unit will be graded as a pass, merit or distinction.

A pass is awarded for the achievement of all outcomes against the specified assessment criteria.

Merit and distinction grades are awarded for higher-level achievement. The generic merit and distinction grade descriptors listed in *Annexe C* are for grading the total evidence produced for each unit and describe the learner's performance over and above that for a pass grade. They can be achieved in a flexible way, for example in a sequential or holistic mode, to reflect the nature of the sector concerned.

Each of the generic merit and distinction grade descriptors can be amplified by use of **indicative characteristics**. These give a guide to the expected learner performance, and support the generic grade descriptors. The indicative characteristics should reflect the nature of a unit and the context of the sector programme.

The indicative characteristics shown in the table for each of the generic grade descriptors in *Annexe C* **are not exhaustive**. Consequently, centres should select appropriate characteristics from the list **or construct others** that are appropriate for their sector programme and level.

It is important to note that each assessment activity does not need to incorporate all the merit and/or distinction grade descriptors.

Contextualising the generic grade descriptors

The generic merit and distinction grade descriptors need to be viewed as a qualitative extension of the assessment criteria for pass within each individual unit. The relevant generic grade descriptors must be identified and specified within an assignment and the relevant indicative characteristics should be used to place the required evidence in context.

Summary of grades

In order to achieve a pass in a unit	<ul style="list-style-type: none"> all learning outcomes and associated assessment criteria have been met
In order to achieve a merit in a unit	<ul style="list-style-type: none"> pass requirements achieved all merit grade descriptors achieved
In order to achieve a distinction in a unit	<ul style="list-style-type: none"> pass and merit requirements achieved all distinction grade descriptors achieved

Calculation of the qualification grade

Pass qualification grade

Learners who achieve the minimum eligible credit value specified by the rule of combination will achieve the qualification at pass grade (see section *Rules of combination for the Edexcel BTEC levels 4 and 5 Higher National qualifications*).

Qualification grades above pass grade

Learners will be awarded a merit or distinction qualification grade by the aggregation of points gained through the successful achievement of individual units. **The graded section of both the HNC and the HND is based on the learner's best performance in units at the level or above of the qualification to the value of 75 credits.**

The number of points available is dependent on the unit grade achieved and the credit size of the unit (as shown in the 'Points available per credit at specified unit grades' table below).

Points available per credit at specified unit grades

Points per credit		
Pass	Merit	Distinction
0	1	2

Qualification grades

Edexcel BTEC Level 4 HNC

Points range	Grade	
0-74	Pass	P
75-149	Merit	M
150	Distinction	D

Edexcel BTEC Level 5 HND

Points range	Grade	
0-74	Pass	P
75-149	Merit	M
150	Distinction	D

Annexe E gives examples of how qualification grades are calculated.

The grade achieved in units from an appropriate HNC may contribute to an HND grade.

If a learner moves from HNC to HND then credits from both the HNC and HND can contribute to the best 75 credits of the overall HND grade.

Recognition of Prior Learning

Recognition of Prior Learning (RPL) is a method of assessment (leading to the award of credit) that considers whether a learner can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills they already possess and so do not need to develop through a course of learning.

Edexcel encourages centres to recognise learners' previous achievements and experiences whether at work, home and at leisure, as well as in the classroom. RPL provides a route for the recognition of the achievements resulting from continuous learning.

RPL enables recognition of achievement from a range of activities using any valid assessment methodology. Provided that the assessment requirements of a given unit or qualification have been met, the use of RPL is acceptable for accrediting a unit, units or a whole qualification. Evidence of learning must be valid and reliable.

For full guidance about Edexcel's policy on RPL please see our *Recognition of Prior Policy* on our website. Please go to <http://www.edexcel.com/Policies/Documents/Recognition of Prior Learning.pdf>

Quality assurance of Edexcel BTEC Higher Nationals

Edexcel's quality assurance system for all BTEC higher level programmes on the QCF at Levels 4–7 will ensure that centres have effective quality assurance processes to review programme delivery. It will also ensure that the outcomes of assessment are to national standards.

The quality assurance process for centres offering Edexcel BTEC higher level programmes on the QCF at Levels 4–7 comprises three key components.

1) Approval process

Approval to offer Edexcel BTEC Higher National qualifications will vary depending on the status of the centre.

Centres that have a recent history of delivering Edexcel BTEC Higher National qualifications and have an acceptable quality profile in relation to their delivery will be able to gain approval through Edexcel Online.

Centres new to the delivery of Edexcel BTEC Higher National qualifications will be required to seek approval through the existing Edexcel qualification and centre approval process. Prior to approval being given, centres will be required to submit evidence to demonstrate that they:

- have the human and physical resources required for effective delivery and assessment
- understand the implications for independent assessment and agree to abide by these
- have a robust internal assessment system supported by 'fit for purpose' assessment documentation
- have a system to internally verify assessment decisions, to ensure standardised assessment decisions are made across all assessors and sites.

Such applications have to be supported by the head of the centre (principal, chief executive etc). and include a declaration that the centre will operate the programmes strictly as approved and in line with Edexcel requirements.

2) Monitoring of internal centre systems

Centres will be required to demonstrate ongoing fulfilment of the centre approval criteria over time and across all programmes. The process that assures this is external examination, which is undertaken by Edexcel's External Examiners. Centres will be given the opportunity to present evidence of the ongoing suitability and deployment of their systems to carry out the required functions. This includes the consistent application of policies affecting learner registrations, appeals, effective internal examination and standardisation processes. Where appropriate, centres may present evidence of their operation within a recognised code of practice, such as that of the Quality Assurance Agency for Higher Education. Edexcel reserves the right to confirm independently that these arrangements are operating to Edexcel's satisfaction.

Edexcel will affirm, or not, the ongoing effectiveness of such systems. Where system failures are identified, sanctions (appropriate to the nature of the problem) will be applied in order to assist the centre in correcting the problem.

3) Independent assessment review

The internal assessment outcomes reached for all Edexcel BTEC higher level programmes on the Qualifications and Credit Framework at Levels 4-7 are subject to an independent assessment review by an Edexcel-appointed External Examiner.

The outcomes of this process will be to:

- confirm that internal assessment is to national standards and allow certification
- or
- make recommendations to improve the quality of assessment outcomes before certification is released
- or
- make recommendations about the centre's ability to continue to be approved for the qualifications in question.

Additional arrangement for ALL centres

Regardless of the type of centre, Edexcel reserves the right to withdraw either qualification or centre approval when it deems there is an irreversible breakdown in the centre's ability either to quality assure its programme delivery or its assessment standards.

Programme design and delivery

Edexcel BTEC Higher National qualifications consist of mandatory core units and specialist units. The specialist units are designed to provide a specific focus to the qualification. Required combinations of specialist units are clearly set out in relation to each qualification in the defined qualification structures provided in this document.

In Edexcel BTEC Higher National qualifications each unit's credit value usually consists of multiples of 5 credits. Most units are 15 credits in value. These units have been designed from a learning time perspective. **Each 15-credit unit approximates to a learning time of 150 hours.**

These new Edexcel BTEC Level 5 HND qualifications are the same size as the Edexcel Level 5 BTEC Higher National Diplomas which were accredited onto the National Qualifications Framework (NQF). Therefore, it is expected that these Edexcel BTEC Level 5 HNDs, accredited onto the Qualifications and Credit Framework (QCF), will also require approximately 960 guided learning hours (GLH).

Consequently, using the above approach, the new Edexcel BTEC Level 4 HNCs, which are accredited onto the QCF, and are now half the size of the Edexcel BTEC Level 5 Higher National Diplomas, will require approximately 480 GLH.

Within the information relating to these units on the QCF, each 15-credit unit has been allocated a figure of 60 GLH to help guide centres (other units with smaller or larger credit values have figures calculated on a pro rata basis). Centres delivering these qualifications are required to use their professional expertise in the design and delivery of these qualifications within the overall guided learning hours for the qualification.

Guided learning hours are defined as all the time when a tutor, trainer or facilitator is present to give specific guidance towards the learning aim being studied on a programme. This definition includes lectures, tutorials and supervised study in, for example, open learning centres and learning workshops. It also includes time spent by staff assessing learners' achievements. It does not include time spent by staff in day-to-day marking of assignments where the learner is not present.

Learning time is defined as the time taken by learners at the level of the unit, on average, to complete the learning outcomes of the unit to the standard determined by the assessment criteria. It should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Centres are advised to consider this definition when planning the programme of study associated with this specification.

Annexe D provides information for centres and learners who wish to compare, for teaching and learning purposes, the units of the NQF Edexcel Level 5 BTEC Higher Nationals in Horticulture with the new units of the QCF Edexcel BTEC Higher Nationals in Horticulture.

Mode of delivery

Edexcel does not define the mode of study for Edexcel BTEC Higher National qualifications. Centres are free to offer the qualification(s) using any mode of delivery that meets the needs of their learners. This may be through traditional classroom teaching, open learning, distance learning or a combination of these. Whatever mode of delivery is used, centres must ensure that learners have appropriate access to the resources identified in the specification and to the subject specialists delivering the units. This is particularly important for learners studying for the qualification through open or distance learning.

Full guidance on our policies on 'distance assessment' and 'electronic assessment' are given on our website.

Learners studying for the qualification on a part-time basis bring with them a wealth of experience that should be utilised to maximum effect by tutors and assessors. Assessment instruments based on learners' work environments should be encouraged. Those planning the programme should aim to enhance the vocational nature of the Edexcel BTEC Higher National qualification by:

- liaising with employers to ensure that the course is relevant to learners' specific needs
- accessing and using non-confidential data and documents from learners' workplaces
- including sponsoring employers in the delivery of the programme and, where appropriate, in the assessment
- linking with company-based/workplace training programmes
- making full use of the variety of experiences of work and life that learners bring to the programme.

Resources

Edexcel BTEC Higher National qualifications are designed to prepare learners for employment in specific industry sectors.

Physical resources need to support the delivery of the programme and the proper assessment of the outcomes and, therefore, should normally be of industry standard.

Staff delivering programmes and conducting the assessments should be familiar with current practice, legislation and standards used in the sector concerned.

Centres will need to meet any specialist resource requirements when they seek approval from Edexcel.

Please refer to the *Essential requirements* section in individual units for specialist resource requirements.

Delivery approach

It is important that centres develop an approach to teaching and learning that supports the specialist vocational nature of the Edexcel BTEC Higher National qualification. Specifications contain a balance of practical skill development and knowledge requirements, some of which can be theoretical in nature. Tutors and assessors need to ensure that appropriate links are made between theory and practice and that the knowledge base is applied to the sector. This will require the development of relevant and up-to-date teaching materials that allow learners to apply their learning to actual events and activities within the sector. Maximum use should be made of the learner's experience.

Meeting local needs

Centres should note that the qualifications set out in these specifications have been developed in consultation with centres, employers and the Sector Skills Council (SSC) for the environmental and land-based sector.

The units are designed to meet the skill needs of the sector and the specialist units allow coverage of the full range of employment within the sector. Centres should make maximum use of the choice available to them within the specialist units to meet the needs of their learners, as well as the local skills and training needs identified by relevant organisations and local funding agencies.

Centres may not always be able to meet local needs using the units in this specification. In this situation, centres can seek approval from Edexcel to use units from other Edexcel BTEC Higher National qualifications on the QCF. Centres will need to justify the need for importing units from other specifications and Edexcel will ensure that the vocational focus of the qualification remains the same.

Locally-devised specialist units

There may be exceptional circumstances where even the flexibility of importing units from other specifications does not meet a particular local need. In this case, centres can seek permission from Edexcel to develop a unit(s) with us to meet this need. Permission will be granted only in a limited number of cases.

Edexcel will ensure that the integrity of the qualification is not compromised and that there is a minimum of overlap and duplication of content of existing units. Centres will need strong evidence of the local need and the reasons why the existing standard units are inappropriate. Edexcel will validate these units.

Limitations on variations from standard specifications

The flexibility to import standard units from other QCF Edexcel BTEC Higher National specifications and/or to develop unique locally-devised specialist units is **limited to a maximum of 30 credits in an Edexcel BTEC HNC qualification and a maximum of 60 credits only in any Edexcel BTEC HND qualification**. These units cannot be used at the expense of the mandatory core units in any qualification nor can the qualification rules of combination level rules be compromised.

Access and recruitment

Edexcel's policy regarding access to our qualifications is that:

- qualifications should be available to everyone who is capable of reaching the required standards
- qualifications should be free from any barriers that restrict access and progression
- there must be equal opportunities for everyone wishing to access the qualification.

Centres are required to recruit learners to Edexcel BTEC Higher National qualifications with integrity. This will include ensuring that applicants have appropriate information and advice about the qualifications and that the qualification will meet their needs. Centres should take appropriate steps to assess each applicant's potential and make a professional judgement about their ability to successfully complete the programme of study and achieve the qualification. This assessment will need to take account of the support available to the learner within the centre during their programme of study and any specific support that might be necessary to allow the learner to access the assessment for the qualification. Centres should also show regard for Edexcel's policy (see our website) on learners with particular requirements.

Centres will need to review the profile of qualifications and/or experience held by applicants, considering whether this profile shows an ability to progress to level 4 or level 5 qualifications. For learners who have recently been in education, the entry profile is likely to include one of the following:

- a BTEC level 3 qualification in horticulture
- a GCE Advanced level profile which demonstrates strong performance in a relevant subject or an adequate performance in more than one GCE subject. This profile is likely to be supported by GCSE grades at A* to C
- other related level 3 qualifications
- an Access to Higher Education Certificate awarded by an approved further education institution
- related work experience.

Mature learners may present a more varied profile of achievement that is likely to include extensive work experience (paid and/or unpaid) and/or achievement of a range of professional qualifications in their work sector.

Restrictions on learner entry

The Edexcel BTEC Higher National qualifications are accredited on the QCF for learners aged 18 years and over.

Access arrangements and special considerations

Edexcel's policy on access arrangements and special considerations for BTEC and Edexcel Work-based Diploma qualifications aims to enhance access to the qualifications for learners with disabilities and other difficulties (as defined by the Disability Discrimination Act 1995 and the amendments to the Act) without compromising the assessment of skills, knowledge, understanding or competence.

Further details are given on our website (www.edexcel.com).

Useful publications

Further copies of this document and related publications can be obtained from:

Edexcel Publications
Adamsway
Mansfield
Nottinghamshire NG18 4FN

Telephone: 01623 467 467
Fax: 01623 450 481
Email: publication.orders@edexcel.com

Related publications include:

- the current Edexcel publications catalogue and update catalogue
- Edexcel publications concerning the quality assurance system and the internal and external verification of vocationally-related programmes may be found on the Edexcel website and in the Edexcel publications catalogue.

NB: Most of our publications are priced. There is also a charge for postage and packing. Please check the cost when you order.

How to obtain National Occupational Standards

The National Occupational Standards for Amenity Horticulture Management and Production Horticulture Management can be obtained from:

Lantra Sector Skills Council
Lantra House
Stoneleigh Park
Near Coventry
Warwickshire
CV8 2LG

Telephone: 024 7669 6996
Email: standardsandquals@lantra.co.uk
Website: www.lantra.co.uk

Professional development and training

Edexcel supports UK and international customers with training related to BTEC qualifications. This support is available through a choice of training options offered in our published training directory or through customised training at your centre.

The support we offer focuses on a range of issues including:

- planning for the delivery of a new programme
- planning for assessment and grading
- developing effective assignments
- building your team and teamwork skills
- developing student-centred learning and teaching approaches
- building key skills into your programme
- building in effective and efficient quality assurance systems.

The national programme of training we offer can be viewed on our website (www.edexcel.com/training). You can request customised training through the website or by contacting one of our advisers in the Training from Edexcel team via Customer Services to discuss your training needs.

Our customer service numbers are:

BTEC and Work-based Learning 0844 576 0026

GCSE 0844 576 0027

GCE 0844 576 0025

The Diploma 0844 576 0028

DiDA and other qualifications 0844 576 0031

Calls may be recorded for training purposes.

The training we provide:

- is active – ideas are developed and applied
- is designed to be supportive and thought provoking
- builds on best practice.

Our training is underpinned by the former LLUK standards for those preparing to teach and for those seeking evidence for their continuing professional development.

Further information

For further information please call Customer Services on 0844 576 0026 (calls may be recorded for training purposes) or visit our website at www.edexcel.com.

Annexe A

Qualification Requirement

BTEC Higher Nationals in Horticulture

This Qualification Requirement will be read in conjunction with overarching guidance from Edexcel.

Rationale

The BTEC Higher Nationals in Horticulture have been designed to focus on:

- the education and training for a range of careers in horticulture and allied land-based industries
- opportunities for those employed within these industries to achieve a nationally recognised level 5 vocationally specific qualification
- opportunities for full-time learners to gain a nationally recognised vocationally specific level 5 qualification to enter employment within these industries at supervisory or management level or to progress to higher education vocational qualifications such as a full-time degree in horticulture or related subject area
- expansion of the knowledge, understanding and skills of learners from a horticultural or allied industry supervisor's or manager's viewpoint
- opportunities for learners to concentrate on the development of higher-level skills in a land-based context; and how their role and that of their business fits within the overall structure of the land-based industries, the national and international economy and the global overview
- opportunities for learners to develop a range of skills, techniques and attributes essential for successful performance in working life.

Aims of the qualification

This qualification meets the needs of the above rationale by:

- equipping individuals with knowledge, understanding and skills for successful employment in the horticultural and allied industries
- enabling progression to an undergraduate degree or further professional qualifications in related areas
- providing opportunities for specialist study relevant to individual vocations and contexts
- developing the individual's ability in the horticultural and allied industries through effective use and combination of the knowledge and skills gained in different parts of the programme
- developing a range of skills and techniques, personal qualities and attributes essential for successful performance in working life and thereby enabling learners to make an immediate contribution to employment

- providing flexibility, knowledge, skills and motivation as a basis for future studies and career development in the horticultural and allied industries.

Mandatory curriculum

The mandatory curriculum will give learners the opportunity to build on previous attainment while allowing them to progress and study a selection of optional curriculum. It will display the following features:

- understand and apply business management, eg record-keeping and planning techniques; human resource management, roles and responsibilities; financial management and analysis of performance; resource management; health and safety management; legislative requirements and responsibilities; external factors; marketing; use of sector-specific software packages for the management, collection, analysis and use of information; ICT skills used to obtain information from electronic sources and synthesise information
- develop and apply an understanding of the principles of plant and soil science; structure and function of plants and soils; plant physiology; relationships between plants and soils; soil management techniques and equipment
- extend and apply knowledge gained in other units by developing the learner's knowledge of the physiology of plants; plant adaptations; inter-relationships of plants and their environment; diagnosis of plant diseases; the range of biotic and abiotic causes of ill health in plants and their treatment; health and safety; relevant legislation
- develop a deeper understanding of the physiology of plants and their adaptations; the causes of adaptations; environmental influences; inter-relationships of plants and their environment
- understand basic evolution; classification methods; cell biology; structure and physiology of plants, homeostasis
- develop and apply knowledge of sustainability; organisational impact on the environment; waste management techniques, legislation and benefits; environmental management techniques, organisations, policies and legislation
- use of basic statistical techniques to support a range of experimental and production situations: reinforcement of numeracy requirements to ensure accuracy and precision in production and survey management.

Optional curriculum

- undertake real work experience within a business or organisation; practical health and safety; resource management; assist in aspects of supervisory and management practices overseeing various aspects of the working environment, eg financial management, production systems, customer care, environmental management.
- use of project management; implement a project plan including evaluation and review; importance of communications and presentation in project management; importance of identifying various sources and types of information.
- develop and apply knowledge of the principles of sustainability; the development of international conventions regarding sustainability; governmental and industrial responses to international conventions; individual responses to the principles of sustainable development.

- develop and apply an understanding of the range and use of technology in the horticultural industries; the design and operational requirements of horticultural technology; the influences of environmental protection and sustainability on horticultural technology design and use; costs; staff training; health and safety; relevant legislation.
- develop an understanding of the development of garden design in the UK; garden design principles and solutions; hard and soft landscaping; surveying and assessment methods; plants, water, natural and artificial materials; aids to design; horticultural shows; design equipment and technology; costs; health and safety; relevant legislation.
- develop an understanding of the historical influences in garden design; continental influences on UK designs; development of UK gardens; social history; styles of UK garden designers; development in garden design technology.
- develop and apply a deeper understanding of the principles of hard and soft landscaping in garden design; the range and use of natural and artificial materials; plants; water and light; maintenance regimes; equipment and technology; sources of plants and materials; costs; health and safety; relevant legislation.
- develop and apply an understanding of the principles used in interior design and for plant displays; main users of interior design and plant displays; the range and use of natural and artificial materials; plants; water and light; maintenance regimes; weed, pest and disease control; equipment and technology; plant rehabilitation techniques; sources of materials and plants; costs; health and safety; relevant legislation.
- understand the range of types and history of public horticulture; the financing and issues facing public horticulture; staffing requirements; public access issues; health and safety; relevant legislation.
- optional units will be available for fruit and vegetable production, nursery stock production and mechanisation used in production crops; develop and apply knowledge of the plants grown under these conditions; sources of stock; nutritional, environmental and storage requirements; facilities and technology; husbandry and management techniques; equipment; stock health management; staff training; marketing; costs; health and safety; relevant legislation.
- develop an understanding of the history of golf course design and development; sources of finance; management of golf courses; the range of types of golf clubs and membership categories; planning legislation, requirements and issues; staffing requirements; associated facilities; equipment and technology; develop and apply golf course design principles; techniques used to build golf courses; types of golf course; health and safety; relevant legislation.
- develop and apply knowledge of botanical, physical and physiological characteristics of grasses used for sports turf; methods of soil preparation; fertiliser requirements and application methods; costs; pollution control; weed, pests and disease diagnosis, control and treatment; mechanisation uses, costs and maintenance; methods of assessing turf quality; turf performance standards and their application; methods of improving, repairing and maintaining turf; irrigation requirements, regimes, equipment and systems; water supply management; health and safety; relevant legislation.
- develop and apply knowledge of the range of non-grass materials used for playing surfaces; sources; construction and design requirements; costs; pollution control; drainage; surface repair and maintenance requirements; equipment and technology; health and safety; relevant legislation.

- extend and apply knowledge gained in the core curriculum by developing the learners' knowledge of business planning and development; sources of finance; analysis of business performance; human resource management; enterprise and financial control; record keeping; external factors and issues facing the industry; relevant legislation.

Professional body recognition

Learners possessing an HNC/D in biological science and who have had experience of responsible work in biological science or its application at least five years subsequent or seven years prior to the award are eligible to apply for membership of the Institute of Biology.

Links to National Standards

There is the opportunity for the Edexcel BTEC HNC and HND Diplomas in Horticulture to provide much of the underpinning knowledge, understanding and skills necessary to meet the requirements of National Occupational Standards in Amenity and Production Horticulture Management.

Entry prerequisites

There are no particular entry requirements for these qualifications. Please refer to Edexcel guidance on entry requirements (to be developed). Learners who enter with at least one of the following are likely to benefit more readily from these Higher National programmes:

- a BTEC National in Horticulture or related subject
- a level 3 qualification in a related subject; at least one GCE A level pass in a relevant subject with supporting passes at GCSE would be advantageous for entry as would appropriate, relevant work experience.

Higher level skills and abilities

Learners will be expected to be able to do the following during the programme of study:

- analyse, synthesise and summarise information critically
- read and use appropriate literature with a full and critical understanding
- think independently, solve problems and devise innovative solutions
- take responsibility for their own learning and recognise their own learning style
- apply subject knowledge and understanding to address familiar and unfamiliar problems
- design, plan, conduct and report on investigations
- use their knowledge, understanding and skills to evaluate and formulate evidence-based arguments critically and identify solutions to clearly defined problems of a general routine nature
- communicate the results of their study and other work accurately and reliably using a range of specialist techniques
- identify and address their own major learning needs within defined contexts and undertake guided further learning in new areas

Annexe B

National Occupational Standards

Mapping against the level 4 Work-based Diplomas in Amenity and Production Horticulture Management

The grid below maps the knowledge covered in the level 4 Work-based Diplomas in Amenity and Production Horticulture Management against the underpinning knowledge of the QCF Edexcel BTEC Higher Nationals in Horticulture.

HNC/D titles	Unit 1: Principles of Plant and Soil Science	Unit 2: Work-based Experience	Unit 3: Project Management for Land-based Industries	Unit 4: Enterprise and Financial Management for Land-based Industries	Unit 5: Human Resource Management	Unit 6: Research Project	Unit 7: Plant Environmental Adaptation and Physiology	Unit 8: Plant Selection and Establishment	Unit 9: Environmental Management	Unit 10: Biological Principles	Unit 11: Horticultural Technology	Unit 12: Garden Design Principles	Unit 13: Fruit and Vegetable Production Management	Unit 14: Nursery Stock Production	Unit 15: Hard Landscape Principles and Practice	Unit 16: Public Horticulture	Unit 17: Landscape and Garden Maintenance	Unit 18: Interior Landscape and Plant Displays	Unit 19: Plant Health and Environmental Relationships	Unit 20: Understanding Organic Soil Management
Work-based Diploma unit titles																				
Production Horticulture National Occupational Standards																				
Unit CU107 Interview and recruit staff					✓															
Unit CU105 Monitor and assess the performance of colleague														✓						

HNC/D titles	Unit 1: Principles of Plant and Soil Science	Unit 2: Work-based Experience	Unit 3: Project Management for Land-based Industries	Unit 4: Enterprise and Financial Management for Land-based Industries	Unit 5: Human Resource Management	Unit 6: Research Project	Unit 7: Plant Environmental Adaptation and Physiology	Unit 8: Plant Selection and Establishment	Unit 9: Environmental Management	Unit 10: Biological Principles	Unit 11: Horticultural Technology	Unit 12: Garden Design Principles	Unit 13: Fruit and Vegetable Production Management	Unit 14: Nursery Stock Production	Unit 15: Hard Landscape Principles and Practice	Unit 16: Public Horticulture	Unit 17: Landscape and Garden Maintenance	Unit 18: Interior Landscape and Plant Displays	Unit 19: Plant Health and Environmental Relationships	Unit 20: Understanding Organic Soil Management
Work-based Diploma unit titles																				
Amenity Horticulture																				
National Occupational Standards																				
Unit D3 Recruit, select and keep colleagues (MSC)					✓															
Unit L26 Estimate resource requirements and programme work												✓	✓		✓		✓	✓		
Unit L27 Plan, monitor and evaluate the establishment and management of planted areas															✓		✓	✓		
Unit CU85 Design landscape areas and specify materials and component												✓			✓		✓			

HNC/D titles	Unit 1: Principles of Plant and Soil Science					
	Unit 2: Work-based Experience					
Work-based Diploma unit titles	Unit 3: Project Management for Land-based Industries					
	Unit 4: Enterprise and Financial Management for Land-based Industries					
	Unit 5: Human Resource Management					
	Unit 6: Research Project					
	Unit 7: Plant Environmental Adaptation and Physiology					
	Unit 8: Plant Selection and Establishment					
	Unit 9: Environmental Management					
	Unit 10: Biological Principles					
	Unit 11: Horticultural Technology					
	Unit 12: Garden Design Principles	✓	✓	✓		
	Unit 13: Fruit and Vegetable Production Management					✓
	Unit 14: Nursery Stock Production					
	Unit 15: Hard Landscape Principles and Practice	✓	✓	✓		
	Unit 16: Public Horticulture					
	Unit 17: Landscape and Garden Maintenance	✓	✓	✓		
	Unit 18: Interior Landscape and Plant Displays					
	Unit 19: Plant Health and Environmental Relationships					
	Unit 20: Understanding Organic Soil Management					

HNC/D titles	Unit 21: Organic Principles and Practice				
	Unit 22: Golf Course Design Principles	Unit 23: Management of Historic Parks and Gardens	Unit 24: Growing Media	Unit 25: Manage the Identification and Classification of Plants	Unit 26: Plan and Manage the Movement of Plants
Work-based Diploma unit titles	Unit 27: Plan and Manage the Growth and Development of Crops	Unit 28: Plan and Manage the Harvesting, Preparation and Storage of Crops	Unit 29: Plan and Manage Protected Crops	Unit 30: Business Environment	Unit 31: Small Business Enterprise
	Unit 32: Sustainable Development	Unit 33: Research Methods for Land-based Industries	Unit 34: Land-based Business Planning	Unit 35: Event Management for Land-based Industries	Unit 36: Mechanisation for Land-based Industries
Amenity Horticulture National Occupational Standards	Unit 37: Land Use Issues and Regulation	Unit 38: Build and Maintain Effective Customer Relations	Unit 39: Health and Safety in the Land-based Workplace	Unit 40: Waste Management	
Unit F6 Manage the use of physical resource (VSNT0)		✓	✓	✓	
Unit L26 Estimate resource requirements and programme work		✓			
Unit L27 Plan, monitor and evaluate the establishment and management of planted areas		✓	✓	✓	
Unit CU85 Design landscape areas and specify materials and component		✓			

HNC/D titles	Work-based Diploma unit titles																			
	Unit 21: Organic Principles and Practice	Unit 22: Golf Course Design Principles	Unit 23: Management of Historic Parks and Gardens	Unit 24: Growing Media	Unit 25: Manage the Identification and Classification of Plants	Unit 26: Plan and Manage the Movement of Plants	Unit 27: Plan and Manage the Growth and Development of Crops	Unit 28: Plan and Manage the Harvesting, Preparation and Storage of Crops	Unit 29: Plan and Manage Protected Crops	Unit 30: Business Environment	Unit 31: Small Business Enterprise	Unit 32: Sustainable Development	Unit 33: Research Methods for Land-based Industries	Unit 34: Land-based Business Planning	Unit 35: Event Management for Land-based Industries	Unit 36: Mechanisation for Land-based Industries	Unit 37: Land Use Issues and Regulation	Unit 38: Build and Maintain Effective Customer Relations	Unit 39: Health and Safety in the Land-based Workplace	Unit 40: Waste Management
	✓		✓	✓		✓	✓		✓										✓	
Unit CU92 Determine policies for the development of land-based site			✓	✓		✓	✓		✓											
Unit CU93 Plan, monitor and evaluate the management of land-based site			✓	✓		✓	✓		✓											
Unit CU106 Develop procedures for health and safety in the workplace																			✓	
Unit CU108 Develop plans to improve your marketing and sales															✓					
Unit CU109 Maintain and improve customer relationships			✓															✓		

HNC/D titles	Unit 21: Organic Principles and Practice	Unit 22: Golf Course Design Principles	Unit 23: Management of Historic Parks and Gardens	Unit 24: Growing Media	Unit 25: Manage the Identification and Classification of Plants	Unit 26: Plan and Manage the Movement of Plants	Unit 27: Plan and Manage the Growth and Development of Crops	Unit 28: Plan and Manage the Harvesting, Preparation and Storage of Crops	Unit 29: Plan and Manage Protected Crops	Unit 30: Business Environment	Unit 31: Small Business Enterprise	Unit 32: Sustainable Development	Unit 33: Research Methods for Land-based Industries	Unit 34: Land-based Business Planning	Unit 35: Event Management for Land-based Industries	Unit 36: Mechanisation for Land-based Industries	Unit 37: Land Use Issues and Regulation	Unit 38: Build and Maintain Effective Customer Relations	Unit 39: Health and Safety in the Land-based Workplace	Unit 40: Waste Management
Work-based Diploma unit titles	Unit CU119 Help teams to achieve their objective																			✓
	Unit CU124 Organise a straight-forward land-based project or event		✓			✓		✓	✓											
	Unit CU130 Produce and implement a business plan for the land-based business																			✓
	Unit A2 Manage your own resources and professional (MSC)																			✓

HNC/D titles										
	Work-based Diploma unit titles									
	Unit L27 Plan, monitor and evaluate the establishment and management of planted areas									
	Unit CU85 Design landscape areas and specify materials and component	✓	✓	✓						
	Unit CU93 Plan, monitor and evaluate the management of land-based site	✓	✓	✓						
	Unit CU109 Maintain and improve customer relationship	✓								
	Unit CU123 Manage information, knowledge and communications (MSC)									
	Unit 41: Develop and implement Plans for the Storage and Disposal of Inorganic Waste									
	Unit 42: Professional Garden Design Practice		✓	✓						
	Unit 43: Major Integrated Garden Design Project	✓	✓	✓						
	Unit 44: Historical Influence in Garden Design									
	Unit 45: Graphic Skills for Garden Designers									
	Unit 46: Garden Styles and their Influence									
	Unit 47: Advanced Garden Design									
	Unit 48: Landscape Design Process									
	Unit 49: Planting Design	✓	✓	✓						
	Unit 50: Contract Documentation and Management for Land-based Industries									
	Unit 51: Principles of Ecology									
	Unit 52: Quality and Performance Standards for Turf									
	Unit 53: Construction and Maintenance of Sports Turf Surfaces	✓	✓	✓						
	Unit 54: Mechanisation Management – Turf									
	Unit 55: Grassland Management									
	Unit 56: Non-Grass Playing Surfaces									
	Unit 57: Golf Course Planning									
	Unit 58: Turf Irrigation Systems									
	Unit 59: Arboriculture Management									

HNC/D titles Work-based Diploma unit titles		
	Unit D4 Provide information to support decision making (MSC 1997)	Unit F6 Manage the use of physical resource (VSNT0)
Unit 41: Develop and implement Plans for the Storage and Disposal of Inorganic Waste		
Unit 42: Professional Garden Design Practice		
Unit 43: Major Integrated Garden Design Project		
Unit 44: Historical Influence in Garden Design		
Unit 45: Graphic Skills for Garden Designers		
Unit 46: Garden Styles and their Influence		
Unit 47: Advanced Garden Design		
Unit 48: Landscape Design Process		
Unit 49: Planting Design		
Unit 50: Contract Documentation and Management for Land-based Industries		
Unit 51: Principles of Ecology		
Unit 52: Quality and Performance Standards for Turf		
Unit 53: Construction and Maintenance of Sports Turf Surfaces		
Unit 54: Mechanisation Management – Turf	✓	✓
Unit 55: Grassland Management		
Unit 56: Non-Grass Playing Surfaces		
Unit 57: Golf Course Planning		
Unit 58: Turf Irrigation Systems	✓	
Unit 59: Arboriculture Management		

Annexe C

Grade descriptors

Pass grade

A **pass grade** is achieved by meeting all the requirements defined in the assessment criteria for pass for each unit.

Merit grade

Merit descriptors	Exemplar indicative characteristics
	Centres can identify and use other relevant characteristics. This is NOT a tick list.
In order to achieve a merit the learner must:	The learner's evidence shows, for example:
<ul style="list-style-type: none">identify and apply strategies to find appropriate solutions	<ul style="list-style-type: none">effective judgements have been madecomplex problems with more than one variable have been exploredan effective approach to study and research has been applied
<ul style="list-style-type: none">select/design and apply appropriate methods/techniques	<ul style="list-style-type: none">relevant theories and techniques have been applieda range of methods and techniques have been applieda range of sources of information has been usedthe selection of methods and techniques/sources has been justifiedthe design of methods/techniques has been justifiedcomplex information/data has been synthesised and processedappropriate learning methods/techniques have been applied
<ul style="list-style-type: none">present and communicate appropriate findings	<ul style="list-style-type: none">the appropriate structure and approach has been usedcoherent, logical development of principles/concepts for the intended audiencea range of methods of presentation have been used and technical language has been accurately usedcommunication has taken place in familiar and unfamiliar contextsthe communication is appropriate for familiar and unfamiliar audiences and appropriate media have been used.

Distinction grade

Distinction descriptors	Exemplar indicative characteristics
In order to achieve a distinction the learner must:	Centres can identify and use other relevant characteristics. This is NOT a tick list.
<ul style="list-style-type: none"> • use critical reflection to evaluate own work and justify valid conclusions 	<p>The learner's evidence shows, for example:</p> <ul style="list-style-type: none"> • conclusions have been arrived at through synthesis of ideas and have been justified • the validity of results has been evaluated using defined criteria • self-criticism of approach has taken place • realistic improvements have been proposed against defined characteristics for success
<ul style="list-style-type: none"> • take responsibility for managing and organising activities 	<ul style="list-style-type: none"> • autonomy/independence has been demonstrated • substantial activities, projects or investigations have been planned, managed and organised • activities have been managed • the unforeseen has been accommodated • the importance of interdependence has been recognised and achieved
<ul style="list-style-type: none"> • demonstrate convergent/lateral/creative thinking 	<ul style="list-style-type: none"> • ideas have been generated and decisions taken • self-evaluation has taken place • convergent and lateral thinking have been applied • problems have been solved • innovation and creative thought have been applied • receptiveness to new ideas is evident • effective thinking has taken place in unfamiliar contexts.

Annexe D

Unit mapping overview

New QCF versions of the Edexcel BTEC Higher National units in Horticulture (specification start date 01/09/2011) mapped against the NQF BTEC Higher National units in Horticulture (specification end date 31/08/2010).

Unit number	QCF unit title	Maps to NQF unit number	Level of similarity between units
1	Principles of Plant and Soil Science	5	F
2	Work-based Experience	9	F
3	Project Management for Land-based Industries	12	F
4	Enterprise and Financial Management for Land-based Industries	13	F
5	Human Resource Management	16	F
6	Research Project	2	F
7	Plant Environmental Adaptation and Physiology	6	F
8	Plant Selection and Establishment	43	F
9	Environmental Management	7	F
10	Biological Principles	3	F
11	Horticultural Technology	10	F
12	Garden Design Principles	11	F
13	Fruit and Vegetable Production Management	17	F
14	Nursery Stock Production	18	F
15	Hard Landscape Principles and Practice	21	F
16	Public Horticulture	22	F
17	Landscape and Garden Maintenance	23	F
18	Interior Landscape and Plant Displays	24	F
19	Plant Health and Environmental Relationships	25	F
20	Understanding Organic Soil Management	27	F
21	Organic Principles and Practice	28	F
22	Golf Course Design Principles	29	F

Unit number	QCF unit title	Maps to NQF unit number	Level of similarity between units
23	Management of Historic Parks and Gardens	—	N
24	Growing Media	—	N
25	Manage the Identification and Classification of Plants	—	N
26	Plan and Manage the Movement of Plants	—	N
27	Plan and Manage the Growth and Development of Crops	—	N
28	Plan and Manage the Harvesting, Preparation and Storage of Crops	—	N
29	Plan and Manage Protected Crops	—	N
30	Business Environment	1	P
31	Small Business Enterprise	4	F
32	Sustainable Development	8	F
33	Research Methods for Land-based Industries	14	F
34	Land-based Business Planning	15	F
35	Event Management for Land-based Industries	26	F
36	Mechanisation for Land-based Industries	30	F
37	Land Use Issues and Regulation	44	F
38	Build and Maintain Effective Customer Relations	—	N
39	Health and Safety in the Land-based Workplace	—	N
40	Waste Management	—	N
41	Develop and Implement Plans for the Storage and Disposal of Inorganic Waste	—	N
42	Professional Garden Design Practice	—	N
43	Major Integrated Garden Design Project	—	N
44	Historical Influence in Garden Design	36	F
45	Graphic Skills for Garden Designers	—	N
46	Garden Styles and their Influence	—	N
47	Advanced Garden Design	—	N
48	Landscape Design Process	31	F
49	Planting Design	32	F
50	Contract Documentation and Management for Land-based Industries	35	F

Unit number	QCF unit title	Maps to NQF unit number	Level of similarity between units
51	Principles of Ecology	42	F
52	Quality and Performance Standards for Turf	34	F
53	Construction and Maintenance of Sports Turf Surfaces	33	F
54	Mechanisation Management – Turf	37	F
55	Grassland Management	38	F
56	Non-Grass Playing Surfaces	39	F
57	Golf Course Planning	40	F
58	Turf Irrigation Systems	41	F
59	Arboricultural Management	—	N

KEY

P – Partial mapping (some topics from the old unit appear in the new unit)

F – Full mapping (topics in old unit match new unit exactly or almost exactly)

X – Full mapping + new (all the topics from the old unit appear in the new unit, but new unit also contains new topic(s))

N – New unit

Unit mapping in depth

New QCF versions of the Edexcel BTEC Higher National units in Horticulture (specification start date 01/09/2011) mapped against the NQF BTEC Higher National units in Horticulture (specification end date 31/08/2010).

New QCF units		NQF units		Mapping/comments (new topics in <i>italics</i>)
Number	Name	Number	Name	
1	Principles of Plant and Soil Science	5	Principles of Plant and Soil Science	N/A
2	Work-based Experience	9	Land-based Industry Experience	New minimum 450 hour work experience stated
3	Project Management for Land-based Industries	12	Project Management for Land-based Industries	N/A
4	Enterprise and Financial Management for Land-based Industries	13	Enterprise and Financial Management for Land-based Industries	N/A
5	Human Resource Management	16	Human Resource Management	Learning Outcome 1 no longer views Human Resource Management as a new concept compared to Personal Management. The nature and development of human resource management has been removed from Learning Outcome 1. <i>Legal and regulatory framework</i> is now included in Learning Outcome 1.
6	Research Project	2	Investigative Project	<i>Understand how to formulate a research specification. Be able to implement the research project within agreed procedures and to specification.</i>
7	Plant Environmental Adaptation and Physiology	6	Plant Environmental Adaptation and Physiology	N/A
8	Plant Selection and Establishment	43	Plants in the Landscape	N/A
9	Environmental Management	7	Environmental Management	Fifth Learning Outcome added to Unit; <i>Be able to devise environmental policy in a land-based sector.</i>

New QCF units		NQF units		Mapping/comments (new topics in italics)
Number	Name	Number	Name	
10	Biological Principles	3	Biological Principles	<p>"Demonstrate the knowledge of fundamental biological principles and the ability to apply them through basic laboratory investigations" has been split into two Learning Outcomes.</p> <p>New Learning Outcomes:</p> <p><i>Be able to investigate fundamental biological principles in plants and/or animals.</i></p> <p><i>Understand basic biochemical principles in plant and/or animals.</i></p>
11	Horticultural Technology	10	Horticultural Technology	N/A
12	Garden Design Principles	11	Garden Design Principles	N/A
13	Fruit and Vegetable Production Management	17	Fruit and Vegetable Production	N/A
14	Nursery Stock Production	18	Nursery Stock Production	N/A
15	Hard Landscape Principles and Practice	21	Hard Landscape Principles and Practice	Intellectual and practical skills removed from unit and replaced with <i>Be able to plan hard landscape construction</i>
16	Public Horticulture	22	Public Horticulture	N/A
17	Landscape and Garden Maintenance	23	Landscape and Garden Maintenance	N/A
18	Interior Landscape and Plant Displays	24	Interior Landscape and Plant Displays	N/A
19	Plant Health and Environmental Relationships	25	Plant Health and Environmental Relationships	N/A
20	Understanding Organic Soil Management	27	Management of Organic Matter	N/A

New QCF units		NQF units		Mapping/comments (new topics in italics)
Number	Name	Number	Name	
21	Organic Principles and Practice	28	Organic Principles and Practice	Investigate non-mainstream philosophies and systems and Explain organic standards and certification removed from unit. Be able to plan an organic cropping system and <i>Understand how to maintain the healthy growth of organic crops</i> added to Unit.
22	Golf Course Design Principles	29	Golf Course Design Principles	N/A
23	Management of Historic Parks and Gardens	—	—	N/A
24	Growing Media	—	—	N/A
25	Manage the Identification and Classification of Plants	—	—	N/A
26	Plan and Manage the Movement of Plants	—	—	N/A
27	Plan and Manage the Growth and Development of Crops	—	—	N/A
28	Plan and Manage the Harvesting, Preparation and Storage of Crops	—	—	N/A
29	Plan and Manage Protected Crops	—	—	N/A

New QCF units		NQF units		Mapping/comments (new topics in italics)
Number	Name	Number	Name	
30	Business Environment	1	Principles of Land-based Business	Unit focus moved away from financial records and accounts with the focus moved onto business organisations and how they operate. <i>Understand the organisational purposes of businesses.</i> <i>Understand the nature of the national environment in which businesses operate.</i> <i>Understand the behaviour of organisations in their market environment.</i> <i>Be able to assess the significance of global factors that shape national business activities.</i>
31	Small Business Enterprise	4	Small Business Enterprise	N/A
32	Sustainable Development	8	Sustainable Development	N/A
33	Research Methods for Land-based Industries	14	Research Methods for Land-based Industries	N/A
34	Land-based Business Planning	15	Land-based Business Planning	N/A
35	Event Management for Land-based Industries	26	Event Management for Land-based Industries	N/A
36	Mechanisation for Land-based Industries	30	Mechanisation for Land-based Industries	N/A
37	Land Use Issues and Regulation	44	Land Use Issues and Regulation	N/A
38	Build and Maintain Effective Customer Relations	—		N/A

New QCF units		NQF units		Mapping/comments (new topics in italics)
Number	Name	Number	Name	
39	Health and Safety in the Land-based Workplace	—		N/A
40	Waste Management	—		N/A
41	Develop and Implement Plans for the Storage and Disposal of Inorganic Waste	—		N/A
42	Professional Garden Design Practice	—		N/A
43	Major Integrated Garden Design Project	—		N/A
44	Historical Influence in Garden Design	36	Historical Influence in Garden Design	N/A
45	Graphic Skills for Garden Designers	—		N/A
46	Garden Styles and their Influence	—		N/A
47	Advanced Garden Design	—		N/A
48	Landscape Design Process	31	Design Process	Addition of <i>Health and safety</i> topic to Learning Outcome 2: Understand the use of water and sculptures in private and public spaces.
49	Planting Design	32	Planting Design	N/A

New QCF units		NQF units		Mapping/comments (new topics in italics)
Number	Name	Number	Name	
50	Contract Documentation and Management for Land-based Industries	35	Contract Documentation and Management for Land-based Industries	Unit looks into greater depth contract documentation and how they are used in land-based project work. <i>Understand types of contract and associated documentation required for land-based projects.</i> <i>Understand how works are specified in contracts.</i> <i>Understand provisions of the contract documents required for land-based projects.</i> <i>Be able to apply the contract documents to all stages of land-based project work.</i>
51	Principles of Ecology	42	Principles of Ecology	N/A
52	Quality and Performance Standards for Turf	34	Quality and Performance Standards for Turf	N/A
53	Construction and Maintenance of Sports Turf Surfaces	33	Construction and Maintenance of Sports Turf Surfaces	N/A
54	Mechanisation Management – Turf	37	Mechanisation Management – Turf	Two Learning Outcomes – Investigate the range of tractors and power units available and Investigate the range of pedestrian and hand-held machinery and equipment available have been combined to create one Learning Outcome: <i>Be able to report on tractors and machinery.</i> Unit now consists of three Learning Outcomes.
55	Grassland Management	38	Grassland Management	N/A
56	Non-Grass Playing Surfaces	39	Non-Grass Playing Surfaces	N/A
57	Golf Course Planning	40	Golf Course Planning	N/A

New QCF units		NQF units		Mapping/comments (new topics in italics)
Number	Name	Number	Name	
58	Turf Irrigation Systems	41	Turf Irrigation Systems	N/A
59	Arboricultural Management	—		N / A

Annexe E

Calculation of the qualification grade

Pass qualification grade

Learners who achieve the minimum eligible credit value specified by the rule of combination will achieve the qualification at pass grade (see section *Rules of combination for the Edexcel BTEC levels 4 and 5 Higher National qualifications*).

Qualification grades above pass grade

Learners will be awarded a merit or distinction qualification grade by the aggregation of points gained through the successful achievement of individual units. **The graded section of both qualifications is based on the learner's best performance in units at the level or above of the qualification to the value of 75 credits.**

The number of points available is dependent on the unit grade achieved and the credit size of the unit (as shown in the 'Points available per credit at specified unit grades' table below).

Points available per credit at specified unit grades

Points per credit		
Pass	Merit	Distinction
0	1	2

Qualification grades

Edexcel BTEC Level 4 HNC

Points range	Grade	
0-74	Pass	P
75-149	Merit	M
150	Distinction	D

Edexcel BTEC Level 5 HND

Points range	Grade	
0-74	Pass	P
75-149	Merit	M
150	Distinction	D

Examples of possible learner profiles of the best 75 credits at the level of the qualification or above. These tables fit both HNC and HND qualifications.

Unit grade	Credits achieved at each unit grade	Points per credit	Points scored
Pass	30	0	0
Merit	30	1	30
Distinction	15	2	30
		Total	60
		Qualification grade	Pass

Unit grade	Credits achieved at each unit grade	Points per credit	Points scored
Pass	15	0	0
Merit	45	1	45
Distinction	15	2	30
		Total	75
		Qualification grade	Merit

Unit grade	Credits achieved at each unit grade	Points per credit	Points scored
Pass	30	0	0
Merit	15	1	15
Distinction	30	2	60
		Total	75
		Qualification grade	Merit

Unit grade	Credits achieved at each unit grade	Points per credit	Points scored
Pass	0	0	0
Merit	15	1	15
Distinction	60	2	120
		Total	135
		Qualification grade	Merit

Unit grade	Credits achieved at each unit grade	Points per credit	Points scored
Pass	0	0	0
Merit	0	1	0
Distinction	75	2	150
		Total	150
		Qualification grade	Distinction

HORTICULTURE

Specification

LEVEL

4

HNC

5

HND

Our most advanced specification to date

This new BTEC Higher Nationals specification has been completely revised and updated to bring it into line with the requirements of the Qualifications and Credit Framework (QCF), which comes into force from September 2010. All the units and qualifications covered in the specification have been reviewed by industry representatives and approved by the relevant Sector Skills Council. This means they are recognised as fit for purpose as high level vocational and work-related qualifications.

Each unit in the new specification is allocated a level and a credit value. Each unit in the specification has clearly stated learning outcomes and assessment criteria, so it is clear from the outset what learners must be able to do to achieve the unit.

BTEC Qualifications covered by this specification:

- Edexcel BTEC Level 4 HNC Diploma in Horticulture
- Edexcel BTEC Level 5 HND Diploma in Horticulture

A copy of this specification can be found online at:
www.btec.co.uk

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References

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